Contra Costa County

OFFICE OF THE SHERIFF

2022

Policy and Procedures Manual

Revised September 22, 2022



Contra Costa County

OFFICE OF THE SHERIFF



MISSION STATEMENT

The Office of the Sheriff works in partnership with our diverse community to safeguard the lives, rights and property of the people we serve. With unwavering dedication we provide innovative professional law enforcement services to our community. We accomplish this mission by maintaining our Core Values while always conducting ourselves with the highest ethical standards.

OFFICE OF THE SHERIFF
CONTRA COSTA COUNTY

POLICIES AND PROCEDURES MANUAL

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Contra Costa County

Office of the Sheriff

Policies and Procedures Manual

SECTION 1



Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter One:

Office of the Sheriff Manual

Contra Costa County **Office of the Sheriff** General Policy and Procedures	**CCCSO**	**NUMBER: 1.01.01**
	RELATED ORDERS:	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Manual Development and Maintenance**	

CCCSO Yellow Stripe Policy

I. POLICY.

A. The Office of the Sheriff maintains a Policy and Procedures Manual to provide employees with policies expressing the Office of the Sheriff's philosophy, goals, and operational procedures. The Policy and Procedures Manual shall be made available to all employees. Except with respect to those policies that are specifically directed at specialized functions within the Office of the Sheriff, our policies are applicable to all employees of this agency, whether sworn, general or volunteer.

1. This policy relates to the department-wide Policy and Procedures Manual and is not applicable to policies which are issued and maintained by Bureaus, Divisions, and Units.

II. DEFINITIONS.

A. E-Team: Executive staff of the Sheriff's Office, including Sheriff, Undersheriff and Assistant Sheriffs.

B. Manual: A compilation of policies and other reference materials detailing the goals, operations and procedures, and defining the expectations of the Office of the Sheriff.

C. Red Stripe Policy: Those policies that are critical knowledge for proper conduct during high-risk events that do not occur frequently. Personnel to whom a particular "Red Stripe" Policy applies must know the policy in total so that effective and correct action may be taken when there is no discretionary time available to reference the manual or other resources. (See Section III. D. 2.)

D. Yellow Stripe Policy: Those policies that are critical knowledge for proper conduct during high risk events that occur frequently, or occur infrequently, but in circumstances which allow the employee time and opportunity to make a proper decision. Personnel to whom that particular "Yellow Stripe" Policy applies must have a good working knowledge of the policy and know how to access and properly interpret the policy at the time needed so that effective and correct action may be taken. (See Section III. D. 3.)

III. GENERAL

A. POLICY AND PROCEDURES DEVELOPMENT

1. The Administrative Services Bureau through the Professional Standards Division's Research and Planning Unit is responsible for the Office of the Sheriff Manual development, review and maintenance. Continuous review of the Policies and Procedures Manual will be conducted by the Research and Planning Unit and by all Division Commanders with respect to those policies which directly relate to their respective divisions to ensure that policies express the Office of the Sheriff's current goals and objectives.

2. The Research and Planning Unit will seek and obtain input from the appropriate Bureau and Division Commanders for actual or potential problem areas. All employees of the Office of the Sheriff are encouraged to actively participate in policy and procedure development. The Research and Planning Unit may choose to solicit input on new or revised policies and procedures from personnel of other agencies including external agencies and subject matter experts such as specialized legal counsel, the Commission on Law Enforcement Accreditation, the National Institute of Corrections, and others as deemed beneficial.

3. Employees may contact the Sheriff in writing via the chain of command with suggestions or concerns about policies or procedures. Suggestions may also be sent via the chain of command directly to the Research and Planning Unit.

B. POLICIES AND PROCEDURES APPROVAL

1. The Research and Planning Unit is responsible for the final draft development of recommended policy and procedures. Following the final review by the Professional Standards Unit, the proposed document will be sent to the Sheriff via the E-Team for comment and review.

2. The Sheriff may approve, disapprove or defer action on the proposal.

3. When a policy or procedure is approved, the Sheriff or a designee will sign the original document and return it to the Research and Planning Unit, which will post the new or modified policy electronically on SPARKS (see below).

C. DISTRIBUTION AND MAINTENANCE

1. The Office of the Sheriff Manual will be available to all Office of the Sheriff employees as an electronic file. All staff with be advised of revisions and additions in a policy memo via E-mail. An up-to-date Manual (including all revisions) is available on the Sheriff's Personnel Administrative Record Keeping System ("SPARKS") under the button "Documents, Policies and Procedures." Each policy number and name hyperlinks to the respective policy.

    a. Once a year, the Research and Planning Unit will require all Sheriff's Office employees to acknowledge their understanding of, and compliance with, all policies.

2. The Research and Planning Unit will maintain a historical reference manual which contains all policies and procedures that have been revised for a period of ten years.

D. REVIEW OF POLICIES AND PROCEDURES

1. All Office of the Sheriff employees shall be familiar with and comply with the Office of the Sheriff Policies and Procedures and shall familiarize themselves in the use of the Manual for reference.

2. Those policies that are critical knowledge for proper conduct during high-risk events that do not occur frequently will be delineated as "Red Stripe" Policies. Personnel to whom a particular "Red Stripe" Policy applies must know the policy in total so that effective and correct action may be taken when there is no discretionary time available to reference the manual or other resources. Periodic training at the Division level will be scheduled to determine that Office of the Sheriff personnel to whom a particular "Red Stripe" Policy applies have a clear understanding of the applicable "Red Stripe" Policies and are able to articulate and apply those policies without reference to written materials or other resources. Employees who are unable to demonstrate a clear understanding of and the ability to articulate and apply those "Red Stripe" Policies that apply to their assigned positions will be provided reasonable remedial training. Any employee who is unable to demonstrate a clear understanding, and the ability to articulate and apply those "Red Stripe" Policies after reasonable remedial training, will be subject to counseling or discipline.

3. Those policies that are critical knowledge for proper conduct during high-risk events that occur frequently, or occur infrequently, but in circumstances which allow the employee time and opportunity to make a proper decision will be delineated as "Yellow Stripe" Policies. Office of the Sheriff personnel to whom a particular "Yellow Stripe" Policy applies must have a good working knowledge of the policy and know how to access and properly interpret the policy at the time needed so that effective and correct action may be taken. Periodic training at the Division level will be scheduled to determine that Office of the Sheriff personnel to whom a particular "Yellow Stripe" Policy applies have a clear understanding of it. Employees should be able to articulate and apply those policies with reference to written materials or resources in a reasonable manner and time. Employees unable to demonstrate a clear understanding of those "Yellow Stripe" Policies that apply to their assigned positions will be provided reasonable remedial training. Employees unable to demonstrate a clear understanding, articulation, and application of those "Yellow Stripe" Policies after reasonable remedial training may be subject to counseling or discipline.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.01.02
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Office of the Sheriff Manual Structure**	

I. POLICY.

A. The Office of the Sheriff's Manuals are organized into a standardized, multi volume format to provide information and direction in a clear useful form. All manuals produced within the Office of the Sheriff shall follow the format of the Policies and Procedures Manual.

II. DEFINITIONS

A. MANUAL: A collection of policies that explains the goals, operations and procedures and defines expectations of the Office of the Sheriff.

B. TABLE OF CONTENTS: A listing of the policies presented in the Manual.

C. APPENDICES: Additional information implementing policies.

III. GENERAL

A. POLICY SUBJECT FORMAT. The subjects addressed as policies are presented in a specific format to make the information presented more useful to the reader. The format is:

1. Subject. The name of the topic of the policy.
2. Policy. A definitive statement of the position of the Office of the Sheriff on an issue of significance to the Office. The policy will normally state why a topic is addressed and provide a concise statement of the position of the Office of the Sheriff. All personnel shall comport their actions to the Policies of this Office.
3. Definitions. Words or phrases used in the policy may be defined to aid the reader in better understanding the information presented. Inclusion of the definitions section is optional in each policy.
4. General Information. This section has a dual purpose. The first purpose is to present specific information. The second purpose is to provide direction of a general nature.

a. Specific information is given to further explain the stance of the Office of the Sheriff. This is done so the reader will know the need for the policy and the reasons for the position of the Sheriff's Office.

b. The general direction is provided to establish standards for Office of the Sheriff employees to follow. Directive statements in this section may include guidelines for meeting the goals and objectives of the policy being addressed. In some cases this general direction is all that is needed to meet the policy's objectives.

5. Procedures. This section provides a detailed description of the sequence of activities necessary to achieve the goals of the specific policy. Procedures shall be followed as closely as circumstances permit. Inclusion of the procedures section is optional in each policy.

6. References. Sources of information and requirements are listed here. Inclusion of the references section is optional in each policy.

B. APPENDIX. Appendices are included to give the reader additional necessary information.

C. BASIC STRUCTURE. The Office of the Sheriff's Policies and Procedures Manual structure is designed to aid the user in locating and using the information it contains. The Manual's major components are:

1. Table of Contents.

2. Subject Policies.

3. Appendix.

D. The Office of the Sheriff's Manuals shall consist of the following:

1. Volume 1: Office of the Sheriff Policies and Procedures. All policies shall be numbered beginning with "1."

2. Volume 2: Custody Services Bureau Policies and Procedures. All policies shall be numbered beginning with "2."

a. Detention Division

b. Court Security Division

c. Custody Alternative Division

3. Volume 3: Field Operations Bureau Policies and Procedures. All policies shall be numbered beginning with "3."

a. Patrol Division

b. Investigations Division

c. Special Operations Division

4. Volume 4: Support Services Policies and Procedures. All policies shall be numbered beginning with "4."

a. Crime Lab Policies and Procedures

b. Field Operations Guide (FOG)

c. Coroner's Division

5. Volume 5: Administrative Services. All policies shall be numbered beginning with "5."

   a. Professional Standards Division

   b. Training Division

   c. Personnel and Fiscal Division

6. Each Bureau shall designate a second number for each of its Divisions, Units and Details that maintain manuals. For example, a policy in the Patrol Division Manual will be numbered 3.1.xxx.

E. Each policy shall have a header utilizing a template in accordance with the following format.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.58**
	RELATED ORDERS: CCCSO 1.07.54	
ISSUE DATE: 12-30-11	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Social Media/Social Networking Policy**	

F. All Manuals shall be forwarded to the Administrative Services Bureau, both in hard copy and electronically, so that current, up-to-date versions of each Manual may be located in Administration.

Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter Two:

Law Enforcement Role and Authority

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.01
	RELATED ORDERS: Law Enforcement Code of Ethics; Penal Code Sections 830.1, 830.6, California Government Code; County Ordinances.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 5-18-2010	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Law Enforcement Role and Authority**	**SUBJECT:** **Office of the Sheriff**	

I. POLICY.

A. The Office of the Sheriff shall establish annual goals and objectives designed to enhance and improve the quality of service provided to the public. The Sheriff shall be responsible for the overall direction of the Office of the Sheriff while focusing on the mission of the Contra Costa County Office of the Sheriff as set forth in the Mission Statement.

II. GENERAL.

A. SHERIFF-CORONER: The Sheriff-Coroner is an elected position in Contra Costa County. The duties of the Coroner are set forth separately in the Coroner's Division Manual.

B. SHERIFF: The duties of the Sheriff as defined in the various sections of the California Government Code include:

1. The arrest of law violators.
2. The prevention and suppression of riots, insurrections, and breaches of the peace.
3. Investigation of public offenses.
4. Attendance at all sessions of the County Superior Courts by representative bailiffs.
5. Maintaining a County Detention Facility and furnishing proper custodial care for persons incarcerated.
6. Service of all processes of the courts in compliance with the Government Code.

C. DEPUTIES: The Government Code authorizes the Sheriff to appoint as many peace officers as necessary for the prompt and faithful discharge of the duties of the Office. Those persons who are regularly employed and paid by the County as Peace Officers may include the Sheriff, Undersheriff, Assistant Sheriffs, Captains, Chief of Forensic Services, Lieutenants, Deputy Sheriff Forensic Managers, Sergeants, Deputy Sheriff Forensic Supervisors, Deputy Sheriffs, Deputy Sheriff Criminalists and State certified Reserve Deputy Sheriffs, and they are defined by the California Penal Code as peace officers. The term Deputy

includes all individuals appointed as peace officers by the Sheriff of Contra Costa County.

1. The scope of authority for all duly appointed peace officers, enumerated in Sections 830.1 and 830.6 of the Penal Code, extends throughout the State:

    a. When the crime was committed in the agencies' jurisdiction;

    b. Exigent circumstances exist; or arrest occurred.

D. ADDITIONAL EMPLOYEES: The Sheriff may also appoint additional employees to assist in the above duties, functions and responsibilities. Any additional employees who are not peace officers are agents of the Sheriff and are subject to the same statutory limitations.

III. PROCEDURE 1.

A. As a Chief Executive Officer of a public service agency, the Sheriff encourages free-flowing communication between the public and the Office of the Sheriff to enhance the agency's ability to respond to the needs and concerns of the community and thereby enhance the support and cooperation of the Office of the Sheriff in the community it serves. Programs will be established by the Sheriff to facilitate and enhance communications by encouraging community interaction and communication through daily contact with employees including programs such as crime prevention and the Deputy in the classroom program. The Sheriff encourages all employees to be responsive to the public and likewise encourages all members of the public to convey their needs and/or concerns to the Office of the Sheriff.

B. The Sheriff will utilize the authority granted the position by the citizens of California to perform the duties, functions and responsibilities set forth in applicable state law. The Sheriff will establish and enforce policies and procedures to guide the Office of the Sheriff personnel in the performance of their duties, functions and responsibilities to achieve the overall goals and objectives of the Office of the Sheriff.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.02
	RELATED ORDERS: County Code 24-2-, 3405, California Government Code 23107, 24000, 26600 et seq., 26613, 26625, 27460 et. seq.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Law Enforcement Role and Authority**	**SUBJECT:** **Jurisdiction of the Office of the Sheriff**	

I. POLICY.

A. The Office of the Sheriff has countywide jurisdiction by virtue of the Sheriff serving as the Chief Law Enforcement Officer of the County. The Office of the Sheriff has primary responsibility for the enforcement of both state law and county ordinances in unincorporated territory and in cities contracting with the Office of the Sheriff for full police services including the enforcement of traffic regulations. Additionally, the Office of the Sheriff has authority and responsibility for attendance at all Superior Courts and service of legal and civil processes countywide.

B. While the Office of the Sheriff also has parallel jurisdiction within incorporated areas in Contra Costa County, the Sheriff is not required to duplicate city police services in enforcing state law within non-contract cities and may presume that proper police protection is being provided therein. If it comes to the Sheriff's attention from reliable sources that such duty is being neglected or that the forces available to such cities are inadequate to handle an emergency situation, the Sheriff must take immediate remedial action. The evaluation of circumstances to ascertain if the Sheriff must exercise police powers within incorporated areas is the responsibility of the Sheriff.

C. The enforcement of the California Vehicle Code in unincorporated areas of the County is the responsibility of the California Highway Patrol. Furthermore, the Sheriff is not empowered to expend funds to enforce Vehicle Code regulations. The safety of the community and protection of property may necessitate the enforcement of Vehicle Code regulations by the Sheriff in unincorporated areas.

II. DEFINITIONS.

A. CONTRACT CITIES: Cities contracting with the Office of the Sheriff for full police services including the enforcement of traffic regulations.

B. JURISDICTION: The limits of territory within which the Sheriff has the authority and responsibility to interpret and apply the law.

III. GENERAL.

A. JURISDICTION DISPUTES.

1. To minimize confusion and to efficiently execute the basic responsibilities of the peace officer function, jurisdictional disputes with other law enforcement agencies should be clarified at the administrative level.

IV. PROCEDURE 1.

A. JOINT JURISDICTION INCIDENTS.

1. Office of the Sheriff employees shall accept and handle incidents wherein a jurisdictional dispute has arisen with other law enforcement agencies.

2. Office of the Sheriff employees involved in a jurisdictional dispute shall promptly notify their Supervisor. The Supervisor shall prepare and forward a written memo via the chain of command describing the incident. This process will allow resolution at the administrative levels of the Office of the Sheriff and the other agency involved.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.22
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 8-26-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Law Enforcement Role and Authority	SUBJECT: Service Systems	

I. POLICY.

A. To better achieve effective law enforcement within and outside of Contra Costa County, the Sheriff's Office may actively participate in national, regional and statewide service systems designed to share law enforcement records, information communications functions and equipment on a regional or statewide level.

II. DEFINITIONS.

A. SERVICE SYSTEMS. Refers to those systems designed to share law enforcement records, information communications functions and equipment on a national, regional and statewide level.

III. GENERAL.

A. The systems that the Sheriff's Office actively participates in include:

1. California Law Enforcement Mutual Aid Radio System (CLEMARS). CLEMARS is a radio communications network that permits law enforcement agencies within the state to communicate with each other directly or through another agency or by means of a relay system.
2. Automatic Fingerprint Identification System (AFIS). AFIS is a centralized filing of fingerprints that provides greater opportunity for swifter identification and apprehension of criminal suspects.
3. Justice Automated Warrant System (JAWS). JAWS is a paperless and automated warrant database for warrants issued by Contra Costa County Courts.
4. Automated Regional Information Exchange System (ARIES). ARIES is a computer interface that allows members to securely share and analyze data. The ARIES System is owned and maintained by the Office of the Sheriff.
5. California Department of Justice (DOJ), Bureau of Criminal Statistics (BCS). The BCS is a statewide crime reporting system that provides information on trends in crime and arrest rates.

6. California Department of Justice (DOJ) Special Services Bureau (SSB). The SSB has several automated (Criminal Justice Information System: CJIS) and manual information files for use by criminal justice agencies including:

   a. Stolen Vehicle System (SVS): SVS is a file of records of stolen/felony/stored/impounded/lost/repossessed/pawned vehicles; stolen/lost/found/evidence//felony plates; stolen vehicle parts; and vehicles associated with wanted or missing persons.

   b. Automated Boat System (ABS): ABS is a file of records of boats that are stolen, lost, repossessed and stored, and boat parts that are stolen.

   c. Automated Firearms System (AFS): AFS is a file of records pertaining to the law enforcement status of serialized weapons stolen, lost, found; historical records with names of persons associated with serialized firearms - licenses to carry concealed weapons, dealer's record of sale, pawns and voluntary registration.

   d. Automated Property System (APS): APS is a file of records of serialized property stolen, lost, found, held for evidence, under observation or pawned, and bearing manufacturer's and/or owner-applied numbers.

   e. Wanted Persons System (WPS): WPS is a pointer system which pertains to arrest warrants maintained by state, local and federal criminal justice agencies in California.

   f. California Restraining and Protective order System (CARPOS) is a file of records of domestic violence restraining orders.

   g. Supervised Release File (SuRF): SuRF is a file of records of subjects on active parole or probation, required to register as sex offenders or arsonists, considered career criminals.

   h. Missing/Unidentified Persons Files (MUPS): MUPS is a file of reports containing information on missing persons from California agencies and unidentified persons (living and deceased) and body parts from California and surrounding states.

   i. Mental Health Firearms Prohibition System (MHFPS): MHFPS is a database containing mental health firearms eligibility information on persons prohibited from owning or possessing firearms.

   j. Criminal History System (CHS): CHS is a database containing criminal history information provided to agencies on a right-to-know and need-to-know basis.

   k. The following files are not automated and requests for information may be made by telephone or teletype:

      - Child Abuse Central Registry: The Child Abuse Central Registry is a statewide file of known and suspected child abuse cases reported to DOJ by investigating child

protective agencies (law enforcement, welfare, and probation agencies).

- Narcotic Registration: The Narcotic Registration Program maintains a statewide file on convicted persons required to register as narcotic offenders pursuant to Health and Safety Code Section 11590.

Former Policy Deleted

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.24
	RELATED ORDERS: California Government Code Section 54784; CCCSO Appendix 7; Joint Exercise of Powers Agreement	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 8-26-2013	**CLEARANCE:** Office of the Sheriff	
CHAPTER: Law Enforcement Role and Authority	**SUBJECT:** Cooperation With Other Agencies	

I. POLICY.

A. The law enforcement effort is enhanced by the cooperative efforts of all public service agencies. To facilitate the law enforcement function, guidelines for cooperation with other agencies and/or jurisdictions are established. All employees will strive to cooperate with other public service agencies in furtherance of common goals and objectives.

II. GENERAL.

A. COOPERATION WITH OTHER AGENCIES. Employees shall cooperate with all law enforcement agencies, other County departments and public service organizations, and shall give aid and information that those organizations are entitled to receive consistent with Office of the Sheriff policy.

B. ARREST FOR CRIMES IN ANOTHER JURISDICTION. A Deputy making an arrest within or adjacent to the jurisdiction of the Office of the Sheriff for a crime that just occurred in another jurisdiction, will immediately give the agency with jurisdiction custody of the suspect(s).

C. HOT PURSUIT.

1. When a crime occurs in the unincorporated area or in a Contract City of the County and Deputies pursue the suspect(s) into another agency's jurisdiction, the Deputies may take the suspect(s) into immediate custody. The arresting Deputy will notify the Patrol Sergeant and the outside agency of the incident. If requested by the outside agency, the scene will be secured until units from that agency arrive to assess the situation.

2. In those instances where a suspect(s) is pursued into another jurisdiction and becomes barricaded, is at large in the area, or otherwise is not under the control of a Deputy, the Deputy will notify the Patrol Sergeant and the outside agency of the incident.

   a. The outside agency will be afforded the opportunity to respond and assume command of the situation until the scene is under control and the suspect(s) is taken into custody or has escaped.

b. With concurrence of the outside agency, the Office of the Sheriff may retain overall responsibility and authority for all or part of the situation. All reports and evidence in the Deputy's control will be processed and retained by the Office of the Sheriff in the routine manner.

D. PLANNED OPERATIONS. When a planned operation such as a stakeout, undercover buy, surveillance, or service of a search warrant is to take place in an outside agency's jurisdiction, the responsible Supervisor shall insure that appropriate outside agencies are notified in advance. Agencies with jurisdictional authority will first be afforded first right of refusal in tactical operations such as high-risk search warrants or S.W.A.T. operations.

E. REFERRAL TO PROPER JURISDICTION.

1. In those situations where the legal remedy of a complainant lies outside the jurisdiction of the Office of the Sheriff, employees will politely advise the complainant of the fact and refer them to the proper agency.

2. When jurisdictional disputes arise between the Office of the Sheriff and another law enforcement agency, the Office of the Sheriff will accept and handle the case. Deputies handling the case will report the incident on an interoffice memo to the Sheriff via the chain of command. The jurisdictional issue will be settled at the administrative level of both the Office of the Sheriff and the other law enforcement agency.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.25
	RELATED ORDERS: California Government Code.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Law Enforcement Role and Authority**	**SUBJECT:** **Contractual Agreements for Law Enforcement Services**	

I. POLICY.

A. The ultimate goal of any governmental agency is to provide the highest level of service within the available resources. For some agencies intergovernmental contracts offer the most practicable means of accomplishing this goal. The Office of the Sheriff may provide a full spectrum of law enforcement services to those agencies at the request of a City Manager or Chief Executive Officer and upon the execution of a contract for such services.

II. GENERAL.

A. CONTRACTS FOR POLICE SERVICES.

1. The Office of the Sheriff provides contract police services to several cities and special districts within the County. A list of the cities with contracts with the Office of the Sheriff for full police services including the enforcement of traffic regulations is available from the Administrative Services Bureau.
2. Contract documents are administered through the Contracts Unit.
3. All contracts for police services shall contain the following provisions:
   a. Clear lines of responsibility.
   b. A statement that the Sheriff shall maintain authority over personnel.
   c. Specific services to be provided including payment provisions, level of service plan and duration of the contract.
   d. Clear documentation of any general and special conditions.

III. PROCEDURE 1.

A. Requests for contract police service proposals must comply with the following guidelines:

1. All requests for proposals should be in writing and directed to the Sheriff.

2. Requests for proposals should come from the City Manager or the equivalent or the Chief of Police.
3. Requests for proposals must be endorsed by a majority of the City Council or the equivalent.
4. Requests for proposals must be made public, at the time of request, by the requester.
5. A fee of $1,250.00 will be charged for proposals absent the signing of a contract.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.26
	RELATED ORDERS: California Government Code; State of California Mutual Aid Plan; Contra Costa County Police Chiefs Association Mutual Aid Agreement.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Law Enforcement Role and Authority**	**SUBJECT:** **Mutual Aid**	

I. POLICY.

A. The Office of the Sheriff may form cooperative agreements with neighboring agencies and counties to allow for augmentation of resources in emergency situations. The purpose of these agreements is to properly handle critical incidents which may be beyond the resources and expertise of a single agency.

II. DEFINITIONS.

A. EMERGENCY SITUATION. Circumstances which pose an actual or potentially imminent threat to life or property.

B. MUTUAL AID. A systematic plan for furnishing personnel and equipment facilitating the handling of an emergency situation beyond the capabilities of the affected agency.

III. GENERAL.

A. STATEWIDE MUTUAL AID PLAN. In 1980 the Office of the Sheriff adopted a multi-organizational plan for mutual aid. The plan is coordinated at a regional level and its implementation is part of a statewide system. Contra Costa County is part of Region II. Alameda County is the Regional Coordinator of Region II which includes the following counties: Alameda, Napa, Contra Costa, San Benito, Del Norte, San Francisco, Humboldt, San Mateo, Lake, Santa Clara, Marin, Santa Cruz, Mendocino, Solano, Monterey, and Sonoma.

B. COUNTYWIDE MUTUAL AID AGREEMENT. The law enforcement agencies of Contra Costa County have adopted a countywide Mutual Aid Agreement. The agreement describes the cooperative mobilization of these County agencies when necessary to control major problems in any of the concerned jurisdictions.

C. COUNTYWIDE MUTUAL AID FOR SPECIALIZED TEAMS. The use of specially trained personnel in Mutual Aid situations is specifically dealt with in Office of the Sheriff Policy Section 1.02.27, County Mutual Aid for Specialized Teams.

D. REQUEST FOR MUTUAL AID. Mutual Aid requests are made via the Mutual Aid Coordinator, Emergency Services Division.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.27
	RELATED ORDERS: CCCSO 1.02.26.	
ISSUE DATE: 2-1-2006 REVISION DATE: 12-20-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Law Enforcement Role and Authority	SUBJECT: County Mutual Aid for Specialized Teams	

I. POLICY.

A. To ensure an adequate countywide response to critical incidents, the Sheriff's Office and other Contra Costa County law enforcement agencies have agreed to assist each other when specially trained personnel from another jurisdiction are needed to properly handle critical incidents.

II. DEFINITIONS.

A. CRITICAL INCIDENT. A hostage situation, barricaded subject posing immediate threat to life, or any other unusual life-threatening circumstance in which the utilization of specially trained personnel is required.

B. HOSTAGE NEGOTIATION TEAM. Personnel trained to deal with the release of hostages and the surrender of suspects through the negotiation process.

C. K-9 UNIT. Teams of Deputies/Officers and dogs used for tracking, searching, apprehending, crowd control, officer protection, drug detection or locating persons or property.

D. S.W.A.T. (Special Weapons and Tactics) Team. Teams trained and equipped to deal primarily with armed persons. The definition includes acronyms utilized by various agencies for similarly trained and equipped units.

E. M.A.M.F.F. (Mutual Aid Mobile Field Force) Team trained and equipped to deal primarily with crowd control and other activities requiring a mutual aid response.

F. S.A.R. (Search and Rescue) Team trained and equipped to handle missing persons in wilderness and urban environments.

G. Air Squadron. Volunteer unit comprised of pilots and observers trained to assist with search and rescue, and provide general support missions for the Office of the Sheriff.

III. GENERAL.

A. AGREEMENT INTENT. The purpose of this countywide agreement is to properly handle critical incidents which may be beyond the resources and expertise of a single agency. It specifically pertains to those specially trained

personnel who are most capable of handling such incidents. Each participating agency has agreed to provide any requested assistance and accept the direction and orders of the requesting agency. However, a Command Officer or a designated Supervisor from the agency supplying the specialized personnel will make the final determination of whether or not the specialized personnel will carry out the directions of the Incident Commander. This determination will be based on tactical, political, legal, and safety considerations within their expertise. Due to the specialized nature of S.W.A.T. and hostage negotiation teams, participating agencies shall take the necessary steps to insure that their command and supervisory personnel are familiar with the capabilities and limitations of these specially trained teams.

B. AGREEMENT GUIDELINES. The Office of the Sheriff has agreed to coordinate all requests for outside assistance between the County's law enforcement agencies. The following guidelines have been accepted by the participating agencies.

C. REQUEST FOR OUTSIDE ASSISTANCE.

1. The requesting agency shall contact the Office of the Sheriff, designating the type and amount of assistance required. It is then the duty of the Sheriff's Office to contact the necessary participating agency or agencies.

2. It shall be the responsibility of the requesting agency to determine the type and amount of assistance needed based upon the totality of the situation.

3. Requests for S.W.A.T. assistance shall be for entire teams and not for individual officers.

4. Requests for K-9 assistance shall be for an Officer/dog team.

D. REPORTING PROCEDURES FOR RESPONDING AGENCIES.

1. Each responding agency will have its Officers report to a designated staging area.

2. Each responding agency shall also have a Command Officer or designated Supervisor accompany its personnel. This officer shall be in addition to any supervisory personnel assigned to the responding S.W.A.T. team(s), hostage negotiations team(s) or K-9 Unit. Their presence is to ensure the proper utilization of the agency's personnel and to assist the Incident Commander if needed. If a Command Officer or designated Supervisor does not respond, the team leader(s) of the special team(s) will ensure that their personnel are properly utilized.

E. COMMAND OF OPERATION.

1. The agency in whose jurisdiction the incident is occurring will be in charge of the operation unless it relinquishes that authority.

2. It will be the Incident Commander's responsibility to determine the tasks to be performed by the assisting personnel. It will be expected that the requesting agency will assign primary responsibilities to its own specialized personnel.

3. When assignments are made to outside agency personnel, the Incident Commander will make them in cooperation with the assisting agency's on-scene Command Officer or Supervisor.

4. The operation of the respective team is at the direction of the team commander or team leader.

IV. PROCEDURE 1.

A. PATROL DIVISION COMMANDER'S RESPONSIBILITY. The Patrol Division Commander or designee shall coordinate all requests for assistance of specially trained personnel from participating County agencies.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.02.28
	RELATED ORDERS: AB 4 (Trust Act), AB 2792 (Truth Act), SB 54 (California Values Act), Gov't. Code §§7282-7284.6, SB 29 Civil Code §1670.9,8 CFR 287.7, 8 USC §1101(a)(43), 8 USC §1373, 8 USC §1644	
ISSUE DATE: 12-3-2013 REVISION DATE: 7-15-2021	CLEARANCE: Office of the Sheriff	
CHAPTER: Law Enforcement Role and Authority	SUBJECT: IMMIGRATION STATUS	

I. POLICY.

A. No person shall be contacted, detained, or arrested solely on the basis of his or her immigration status.

B. The Contra Costa County Office of the Sheriff will equally enforce the laws and serve the public without regard to immigration status. Except as specifically set forth in this Policy, the immigration status of a person, and the lack of immigration documentation, should have no bearing on the manner in which Deputies execute their duties.

C. No Departmental funds nor personnel may be used to investigate, interrogate, detain, detect, or arrest persons *for immigration enforcement purposes*. Nevertheless, Office of the Sheriff personnel may send to, or receive from, immigration authorities (including ICE), information regarding the immigration status, lawful or unlawful, of any individual (8 USC §1373) (see IV.C.).

II. DEFINITIONS.

A. IMMIGRATION DETAINER.

An Immigration Detainer is a request by the U.S. Department of Homeland Security's Immigration and Customs Enforcement Agency (ICE) that law enforcement agencies advise ICE, prior to releasing an individual, in order for ICE to arrange to assume custody for the purpose of deportation. The ICE Detainer Request is presented on ICE Form I-247A. These requests are processed in accordance with IV.E. below.

III. GENERAL.

A. IMMIGRATION ENFORCEMENT JURISDICTION. ICE has primary responsibility to investigate and enforce federal immigration laws. Office of the Sheriff personnel shall not assist ICE in the enforcement of federal immigration laws except as set forth below. Assistance to ICE personnel

in personal distress will be provided. Notwithstanding "A" above:

1. Sheriff's Personnel may investigate, enforce, or detain upon reasonable suspicion of, or arrest for a violation of 8 USC 1326(a) – Illegal reentry by a previously deported or removed immigrant that may be subject to the enhancement specified in 8 USC 1326(b)(2) – Aggravated felony conviction that is detected during an unrelated law enforcement activity. Transfers to immigration authorities are permitted under this subsection only in accordance with California Government Code 7284.6(a)(4).

2. Sheriff's Personnel may respond to a request from immigration authorities for information about a specific person's criminal history.

3. Sheriff's Personnel may conduct enforcement or investigative duties associated with a joint law enforcement task force, including the sharing of confidential information with other law enforcement agencies for purposes of task force investigations, but only if the specific provisions set forth in Gov. Code §7284.6 (b)(3)(A) and (B) and (C) are met.

4. Sheriff's Personnel may grant immigration authorities access to interview an individual in our custody. All interview access shall comply with IV.H ("TRUTH Act Notifications").

5. Sheriff's Personnel may send to ICE, and receive from ICE information regarding the immigration status of any individual (see IV.C.). (Do not confuse information regarding immigration status with information regarding the anticipated release date of individuals with immigration status, which information may not be released except as set forth in this policy at IV.G. and IV.K.)

B. LAW ENFORCEMENT CONTACTS. Non-consensual contacts, detentions, and arrests shall be based on reasonable suspicion or probable cause. A Deputy shall not initiate any law enforcement action based on observations relating to immigration status (such as lack of documentation), but such issues may, as part of several factors, be relevant to the direction and analysis of an investigation.

C. THE CALIFORNIA VALUES ACT.

1. California law enforcement agencies shall <u>not</u>:

   a. Use agency moneys or personnel to investigate, interrogate, detain, detect, or arrest persons *for immigration law enforcement purposes*, including any of the following:

      1. Inquiring into an individual's immigration status (but see III.B. above, and IV.C. below);

      2. Detaining an individual on the basis of a hold request;

      3. Providing information regarding a person's release date or responding to requests for notification by providing release dates or other information *unless that information is available to the public*, or is in response to a Notification Request from ICE that satisfies the conditions set forth in IV.G. and IV.K.;

      4. Providing personal information about an individual, including, but not limited to, the individual's home address or work address *unless that information is available to the public*;

5. Making or intentionally participating in arrests based on civil immigration warrants;

6. Performing the functions of an immigration officer, whether pursuant to 8 USC 1357(g) or any other law, regulation, or policy, whether formal or informal;

b. Place peace officers under the supervision of federal agencies for the purposes of immigration enforcement.

c. Use Immigration Authorities as interpreters for law enforcement matters relating to individuals in custody.

d. Transfer an individual to immigration authorities unless authorized by a judicial warrant.

e. Provide office space exclusively dedicated for immigration authorities for use within a law enforcement facility.

2. Deputies retain discretion to cooperate with immigration authorities if doing so does not violate any Federal, state, or local law or policy, and only where permitted by the California Values Act. The California Values Act permits communications between Office of the Sheriff personnel and immigration authorities "regarding the citizenship or immigration status …of an individual" (see IV.C.).

D. FEDERAL DETAINEES. Wherever this policy refers to, or relates to, persons in Sheriff's Office custody, such policy provisions do not apply to individuals in the custody of the Department of Homeland Security who are detained in a county detention facility pursuant to a contract with the Federal government (Gov. Code §7310(b)).

IV. PROCEDURES.

A. IMMIGRATION VIOLATION COMPLAINTS.

1. If members of the public contact the Office of the Sheriff to report suspected immigration violations, such persons should be directed to ICE.

B. IMMIGRATION STATUS.

1. Sheriff's personnel shall not inquire about an individual's immigration status for the purpose of investigating or enforcing federal immigration laws. A deputy's suspicion or knowledge about any person's immigration status shall not be used as a sole basis to initiate contact, detain, or arrest that person.

2. Sweeps intended solely to locate and detain undocumented immigrants are not permitted. Deputies will not participate in ICE-organized sweeps to locate and detain undocumented aliens. Office of the Sheriff personnel shall not provide support services, such as traffic control, during an ICE operation.

C. COMMUNICATIONS WITH ICE.

Office of the Sheriff personnel may send to, or receive from, immigration authorities (including ICE), information regarding the immigration status, lawful or unlawful, of

any individual (8 USC §1373), including specifically any alien in the United States (8 USC §1644). Such information as is permitted to be sent or received pursuant to this subsection may be maintained and may be exchanged with any other Federal, State, or local government entity (8 USC §1373). (Compliance with 8 USC §1373 and 8 USC §1644 is specifically permitted pursuant to Gov. Code 7284.6(e)).

D. WITNESSES AND VICTIMS.

1. The immigration status of crime victims or witnesses should not be probed unless it is reasonably relevant to the investigation of a crime.

2. U-Visa Nonimmigrant Status. Federal law grants immigration benefits to victims of qualifying crimes who have been helpful to the investigation and/or prosecution of the case. A law enforcement certification is prepared and issued by specifically designated administrative personnel.

E. ICE DETAINER REQUESTS.

The Office of the Sheriff occasionally receives Immigration Detainer requests on ICE Form I-247A. A detainer serves to advise that ICE seeks both notification of the anticipated release of a removeable alien from custody and his or her continued detention in order for ICE to arrange to assume custody. The request to detain will ***not*** be honored (see IV.F.). The request to Notify will be honored only under the circumstances set forth in IV.G. and IV.K. below.

F. IMMIGRATION DETAINERS. Inmates who are eligible for release from custody shall ***not*** be held, pursuant to an immigration hold, beyond the time he or she would otherwise be released.

G. IMMIGRATION NOTIFICATION. The Office of the Sheriff will provide release information in response to individual-specific ICE requests for notification (ICE Form I-247A), but only in compliance with the conditions set forth in IV.K. ICE agents who are requesting to take custody of an inmate who meets the conditions set forth in IV.K. shall be asked to wait in the facility's public lobby without assistance from the Sheriff's Office. ICE agents are not to be allowed into the secured area of the facility to take custody of the inmate being released. No Sheriff's Office employees will walk the released inmate to awaiting ICE agents. If the released inmate flees to avoid detention from ICE, Sheriff's Office employees should not assist unless there is a compelling safety risk to the public, other Sheriff's Office employees or law enforcement officers, to include the ICE agents.

H. TRUTH ACT NOTIFICATION (Gov. Code 7283.1; AB-2792). Upon receiving any ICE notification request on Form I-247A, the named inmate shall be provided a copy of the respective form. If ICE is to be notified of the proposed release of an inmate, he or she shall be notified as well. Additionally, efforts will be made to notify the inmate's attorney or an additional person of the inmate's choosing.

1. Immigration authorities shall be granted access to interview inmates following compliance with the Truth Act notification provision: In advance of any interview between ICE and an inmate, the inmate shall be provided with a written consent form either consenting or declining to participate in the interview. Standardized copies of this form are available (under the heading AB 2792 Forms) at http://www.bscc.ca.gov/m_divisions.php

I. EQUALITY OF ACCESS. All persons arrested for a criminal offense and held in our custody will have equal access to custody programs if otherwise program-eligible.

J. COURT ORDERS. Court Orders and warrants are entirely separate and should not be confused with Form I-247A requests. Duly issued warrants will be honored.

K. CONDITIONS FOR ICE NOTIFICATION. ICE requests for notification of the anticipated release date of an inmate will be honored only with respect to inmates who are being held for certain charges or who have specific prior convictions.

1. These conditions include (but are not limited to) inmates who have been ***convicted*** of (i) of a **serious felony** [PC 1192.7(c)] or a **violent felony**, [PC 667.5(c)] (see listing below).

a. As used in PC 1192.7(c), "**serious felony**" means any of the following:

(1) murder or voluntary manslaughter
(2) mayhem
(3) rape
(4) sodomy by force, violence, duress, menace, threat of great bodily injury, or fear of immediate and unlawful bodily injury on the victim or another person
(5) oral copulation by force, violence, duress, menace, threat of great bodily injury, or fear of immediate and unlawful bodily injury on the victim or another person
(6) lewd or lascivious act on a child under 14 years of age
(7) any felony punishable by death or imprisonment in the state prison for life
(8) any felony in which the defendant personally inflicts great bodily injury on any person, other than an accomplice, or any felony in which the defendant personally uses a firearm
(9) attempted murder
(10) assault with intent to commit rape or robbery
(11) assault with a deadly weapon or instrument on a peace officer
(12) assault by a life prisoner on a non-inmate
(13) assault with a deadly weapon by an inmate
(14) arson
(15) exploding a destructive device or any explosive with intent to injure
(16) exploding a destructive device or any explosive causing bodily injury, great bodily injury, or mayhem
(17) exploding a destructive device or any explosive with intent to murder
(18) any burglary of the first degree
(19) robbery or bank robbery
(20) kidnapping
(21) holding of a hostage by a person confined in a state prison
(22) attempt to commit a felony punishable by death or imprisonment in the state prison for life

(23) any felony in which the defendant personally used a dangerous or deadly weapon
(24) selling, furnishing, administering, giving, or offering to sell, furnish, administer, or give to a minor any heroin, cocaine, phencyclidine (PCP), or any methamphetamine- related drug, or any of the precursors of methamphetamines
(25) any violation of PC 289(a) where the act is accomplished against the victim's will by force, violence, duress, menace, or fear of immediate and unlawful bodily injury on the victim or another person
(26) grand theft involving a firearm
(27) carjacking
(28) any felony offense, which would also constitute a felony violation of PC 186.22
(29) assault with the intent to commit mayhem, rape, sodomy, or oral copulation
(30) throwing acid or flammable substances
(31) assault with a deadly weapon, firearm, machinegun, assault weapon, or semiautomatic firearm or assault on a peace officer or firefighter
(32) assault with a deadly weapon against a public transit employee, custodial officer, or school employee
(33) discharge of a firearm at an inhabited dwelling, vehicle, or aircraft
(34) commission of rape or sexual penetration in concert with another person
(35) continuous sexual abuse of a child
(36) shooting from a vehicle
(37) intimidation of victims or witnesses
(38) criminal threats
(39) any attempt to commit a crime listed in this subdivision other than an assault
(40) any violation of PC 12022.53 [Enhancements for use of a firearm in 18 specified felonies]
(41) a violation of subdivision (b) or (c) of Section 11418
(42) any conspiracy to commit an offense described in this subdivision
(43) And any offense committed in another state, which if committed in California, would be punishable as a listed serious felony

b. As used in PC 667.5(c), "**violent felony**" means any of the following:

(1) Murder or voluntary manslaughter
(2) Mayhem
(3) Rape
(4) Sodomy
(5) Oral copulation
(6) Lewd or lascivious act

(7) Any felony punishable by death or imprisonment in the state prison for life
(8) Any felony in which the defendant inflicts great bodily injury on any person other than an accomplice which has been charged and proved, or any felony in which the defendant uses a firearm which use has been charged and proved
(9) Any robbery
(10) Arson
(11) Sexual penetration
(12) Attempted murder
(13) A violation of PC 18745, 18750, or 18755 (explosives)
(14) Kidnapping
(15) Assault with the intent to commit a specified felony, in violation of Section 220
(16) Continuous sexual abuse of a child
(17) Carjacking
(18) Rape, spousal rape, or sexual penetration
(19) Extortion, which would constitute a felony violation of PC 186.22
(20) Threats to victims or witnesses, which would constitute a felony violation of PC 186.22
(21) Any burglary of the first degree, wherein it is charged and proved that another person, other than an accomplice, was present in the residence during the commission of the burglary
(22) Any violation of PC 12022.53 [Enhancements for use of a firearm in 18 specified felonies]
(23) A violation of PC 11418(b) or (c)(weapon of mass destruction)
(24) And any offense committed in another state, which if committed in California, would be punishable as a listed violent felony

2. Notification requests will be honored for any conviction or prior conviction for a felony punishable by imprisonment in the state prison.

3. Notification requests will be honored for any person who is a current registrant on the California Sex and Arson Registry (CSAR) as a sex offender pursuant to PC 290 or as an arson offender pursuant to PC 457.1

4. Notification requests will be honored for (i) any **felony** conviction within the last 15 years, or (ii) any misdemeanor conviction within the past five years, that is punishable as either a misdemeanor or a felony (i.e.: "wobbler") involving the following specified crimes:

(A) Assault
(B) Battery
(C) Use of threats
(D) Sexual abuse, sexual exploitation, or crimes endangering children
(E) Child abuse or endangerment
(F) Burglary, robbery, theft, fraud, forgery, or embezzlement

(G) Driving under the influence of alcohol or drugs, but only for a felony conviction
(H) Obstruction of justice
(I) Bribery
(J) Escape
(K) Unlawful possession or use of a weapon, firearm, explosive device, or weapon of mass destruction
(L) Possession of an unlawful deadly weapon, under the Deadly Weapons Recodification Act of 2010 (PC 16000)
(M) An offense involving the felony possession, sale, distribution, manufacture, or trafficking of controlled substances
(N) Vandalism with prior convictions
(O) Gang-related offenses
(P) An attempt, or any conspiracy, to commit an offense specified in this section
(Q) A crime resulting in death, or involving the personal infliction of great bodily injury
(R) Possession or use of a firearm in the commission of an offense
(S) An offense that would require the individual to register as a sex offender
(T) False imprisonment, slavery, and human trafficking
(U) Criminal profiteering and money laundering
(V) Torture and mayhem
(W) A crime threatening the public safety
(X) Elder and dependent adult abuse
(Y) A hate crime
(Z) Stalking
(AA) Soliciting the commission of a crime
(AB) An offense committed while on bail or released on his or her own recognizance
(AC) Rape, sodomy, oral copulation, or sexual penetration (AD) Kidnapping
(AE) A violation of CVC 20001(c)

5. Notification requests should also be honored for any federal conviction of any crime that meets the definition of an aggravated felony as set forth in the Immigration and Nationality Act (8 U.S.C. Sec. 1101 at Section 1101(a)(43)(A) to (P). The full listing of specified crimes follows:

The term "aggravated felony" means –
(A) murder, rape, or sexual abuse of a minor
(B) illicit trafficking in a controlled substance
(C) illicit trafficking in firearms or destructive devices
(D) laundering of monetary instruments if the amount of the funds exceeded $10,000
(E) an offense relating to explosive materials
(F) a crime of violence, but not including a purely political offense for which the term of imprisonment is at least one year

(G) a theft offense or burglary offense for which the term of imprisonment is at least one year

(H) the demand for or receipt of ransom

(I) child pornography

(J) racketeer influenced corrupt organizations or gambling offenses, for which a sentence of one year imprisonment or more may be imposed

(K) owning, controlling, managing, or supervising of a prostitution business; peonage, slavery, involuntary servitude, and trafficking in persons

(L) gathering or transmitting national defense information relating to disclosure of classified information relating to sabotage, relating to treason, relating to protecting the identity of undercover intelligence agents or relating to protecting the identity of undercover agents

(M) fraud or deceit in which the loss to the victim or victims exceeds $10,000; tax evasion in which the revenue loss to the Government exceeds $10,000

(N) alien smuggling (except in the case of a first offense for which the alien has affirmatively shown that the alien committed the offense for the purpose of assisting, abetting, or aiding only the alien's spouse, child, or parent)

(O) an offense described in section 1325(a) or 1326 of this title committed by an alien who was previously deported on the basis of a conviction for an offense described in another subparagraph of this paragraph

(P) falsely making, forging, counterfeiting, mutilating, or altering a passport or instrument and for which the term of imprisonment is at least 12 months (except in the case of a first offense for which the alien has affirmatively shown that the alien committed the offense for the purpose of assisting, abetting, or aiding only the alien's spouse, child, or parent (and no other individual.)

Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter Three:

Division Organization and Function

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.01
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Organizational Structure**	

I. POLICY.

A. The organizational structure of the Office of the Sheriff is designed to facilitate the fulfillment of the major responsibilities and functions of the agency and its objectives. The organizational structure provides effective direction and control which enhances communication both up and down the chain of command.

II. GENERAL.

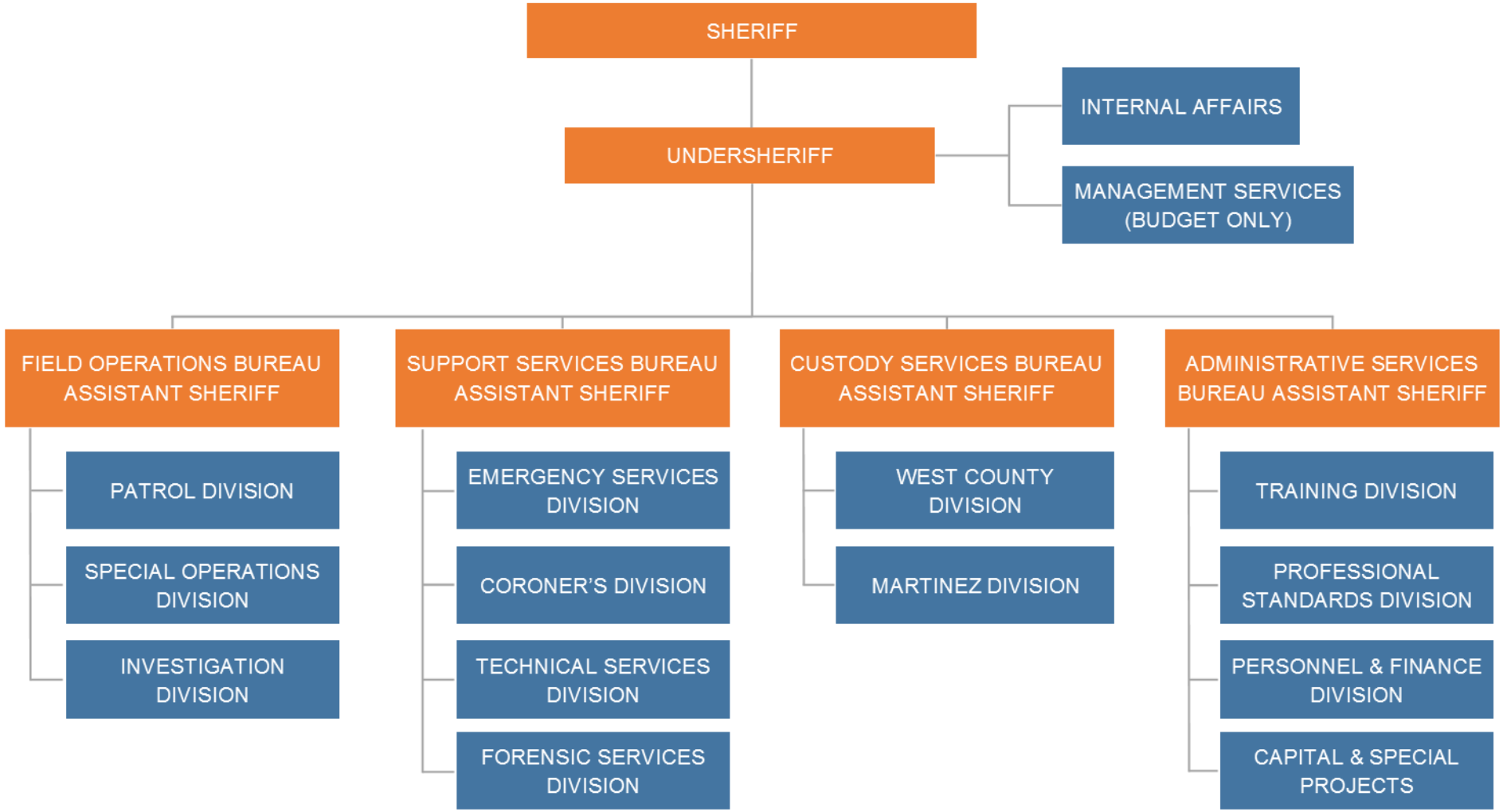
A. OFFICE OF THE SHERIFF ORGANIZATION.

1. The Office of the Sheriff is organized into Bureaus, Divisions, Units and Details, each having responsibility for specific functions. The coordinated efforts of each allow the Office of the Sheriff as a whole to meet its law enforcement objectives.

III. ORGANIZATION CHART. (SEE ATTACHED)

ORGANIZATIONAL CHART DIVISION LEVEL: Effective February 15, 2018

(Please see individual Division policies for unit level organization charts.)



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.02
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 8-30-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Command, Control and Responsibility**	

I. POLICY.

A. Each organizational component of the Sheriff's Office will be under the direct command of only one Supervisor. To achieve effective direction, and coordination, the number of employees under the immediate control of a Supervisor shall not be excessive. This will promote efficient handling of responsibility and accountability and to ensure employees are aware of what is expected of them.

II. DEFINITIONS.

A. CHAIN OF COMMAND: Lines of control permitting the delegation of authority, the placing of responsibility, the supervision of operations, and the coordination of effort established in conformity with the Sheriff's Office Organization Chart.

B. SPAN OF CONTROL: The principle that an appropriate number of employees under the immediate direction of a single Supervisor increases the efficiency of both the employees and the Supervisor.

C. SUPERVISOR: Includes employees of the Sheriff's Office designated as Managers, Sergeants or above, Supervisors, or employees designated as "officers-in-charge" or assigned temporarily as acting in any of those positions.

D. UNITY OF COMMAND: The principle that each individual in the organization has one, and only one, immediate Supervisor.

III. GENERAL.

A. AUTHORITY AND RESPONSIBILITY.

1. Each employee of the Sheriff's Office shall be aware of the responsibilities of their position. Employees shall be given necessary authority to effectively execute the responsibilities of their assignments.

2. Employees shall keep in mind the best interests of the Sheriff's Office when exercising their authority. Employees who are directed to act in capacities above their ordinary rank will, for the necessary time, possess the authority of their temporary rank. Authority shall be exercised by all members of the Sheriff's Office with firmness and impartiality. Under no circumstances shall personal attitudes be allowed to influence decisions.

Each employee will be held fully accountable for the reasonable use of delegated authority, as well as for the unreasonable failure to use it.

3. A Supervisor's span of control has an effect on their interpersonal relations with the work group and thus on the nature of the group's communications. A larger span of control requires a more formal communications link between the immediate Supervisor and the group. A narrow span of control does not in itself result in the development of a more cohesive work group. It does, however, afford Supervisors the opportunity to earn and maintain the leadership and respect required to fully discharge their supervisory responsibilities.

4. The principle of span of control implicitly assumes that a limited span of control enables Supervisors to control operations more effectively. This is based on the concept that if the Supervisor's span is sufficiently narrow, it will allow adequate time for the development and expression of meaningful personal interactions with employees in the group. These interactions should lead to closer communication and allow for closer attention to any tasks assigned to Sheriff's Office personnel. Supervisors shall not unnecessarily countermand orders of employees below their rank or position or needlessly interfere with the specific duties of employees ranking below them.

B. THE CHAIN OF COMMAND.

1. The chain of command is a series of positions, each of which is directly commanded by the one above it. Generally, official communications of the Sheriff's Office such as orders, requests, information, suggestions or complaints, moving upward or downward, shall be confined to official channels. Each link in the chain of command shall be respected in this regard. It shall be the responsibility of each echelon to forward communications to the next higher or lower echelon, with approval, disapproval and/or recommendations.

2. In circumstances where the matter cannot be handled by immediate Supervisors, due to their absence, the employee shall notify the next available higher ranking officer or Supervisor in the chain of command for direction.

    a. There may also be times when a Supervisor has to give direction to an employee outside their chain of command.

3. An employee has the privilege of going outside the chain of command to contact a Supervisor including the Sheriff or Undersheriff only on matters of a strictly personal nature or as allowed specifically by policies and procedures such as matters regarding job-based discrimination or harassment.

4. The chain of command for the Sworn employees of Contra Costa County Office of the Sheriff shall be as follows:

    a. Sheriff

    b. Undersheriff

    c. Bureau Assistant Sheriff

d. Captain/Chief of Forensic Services

e. Lieutenant/Deputy Sheriff Forensic Manager

f. Sergeant/Deputy Sheriff Forensic Supervisor

g. Deputy Sheriff/Criminalist

h. General employees and/or auxiliaries

5. The establishment of chain of command protocol for planned operations involving personnel of different organizational components (Joint Operations) will occur prior to the planning stage of the operation. Selection of the Operations Commander will be made by a Supervisor at least one command level higher than the designated Operations Commander. If the operation involves more than one Division, the selection will be made by the Sheriff, the Undersheriff or the appropriate Bureau Assistant Sheriff.

6. Established command protocols are already in place for dealing with certain specific concerns which are covered in the following Sheriff's Office policies. Additionally, the Division Manuals may contain established command protocols with which employees should be familiar. Refer to References Section at the end of this Policy.

C. DESCRIPTIONS OF COMMAND AND SUPERVISORY POSITIONS.

D. The following brief descriptions of the Sheriff's Office's Command and Supervisory positions provide clarification of the responsibilities of the major positions in the Sheriff's Office chain of command. This listing includes both sworn and non-sworn management.

1. Sheriff. The Sheriff is the Chief Executive Officer and the final authority in all matters of policy, operations and discipline. The Sheriff may exercise all lawful powers of that Office and issue such lawful orders as necessary to assure the effective performance of the Sheriff's Office. Through the direction of the Sheriff, the Sheriff's Office is responsible for the enforcement of all laws and ordinances within its legal jurisdiction. The Sheriff is the final authority in the Sheriff's Office with regard to all policies and procedures; the continued and efficient operation of the Sheriff's Office; and the enforcement of rules and regulations.

2. Undersheriff. The Undersheriff acts in the capacity of Chief Administrator and Executive to the Sheriff. Under general direction of the Sheriff, exercises administrative authority over all Sheriff's Office Bureaus and may be given other administrative and executive duties at the discretion of the Sheriff. During the Sheriff's temporary absence from duty, the Undersheriff automatically assumes all duties and responsibilities of the Sheriff.

3. Bureau Assistant Sheriff. A Bureau Assistant Sheriff performs both executive and administrative functions for the Sheriff. Under general direction, a Bureau Assistant Sheriff exercises administrative authority over a Bureau and its Divisions.

a. During the temporary absence from duty of both the Sheriff and Undersheriff, the Sheriff may select one or more Bureau Assistant Sheriffs to assume their duties and responsibilities.

4. Division Commander. A Division Commander commands the activities of a Division in accordance with the policies and procedures prescribed by the Sheriff. All Division Commanders will hold one of the following ranks: Captain, Chief of Forensic Services, Chief of Management Services and/or Lieutenant.

   a. Under general direction, a Division Commander administers and develops programs for the operation of a Division of the Sheriff's Office. Duties include: organizing and assigning work details within the particular Division, reviewing performance of subordinates, and other related work as required.

   b. A Captain is an executive of the Sheriff's Office and may act as an Assistant to the Bureau Assistant Sheriff when so directed.

   c. The Chief of Forensic Services is an executive of the Sheriff's Office, commanding the activities of the Forensic Services Division within the policies and procedures prescribed by the Sheriff.

   d. The Chief of Management Services is an executive of the Sheriff's Office, commanding the activities of Personnel and Finance within the policies and procedures prescribed by the Sheriff.

5. The Chief of Police-Contract Agency-Exempt. A Chief of Police commands all sworn and civilian personnel assigned to a Contract City and manages all municipal personnel assigned to the Police Department. He or she reports to the Special Operations Division Commander and to the respective City (or Town or Agency) Manager and/or City (or Town or Agency) Council/Board.

   a. If the Chief of Police holds the rank of Captain with the Sheriff's Office, then he or she will report to the Field Operations Assistant Sheriff. The Contract City will remain under the Special Operations Division.

6. Lieutenant/ Forensic Manager/Civilian Director. Under general direction, administers a Division or major activity within a Division of the Sheriff's Office.

   a. A Lieutenant may serve as the responsible official in charge of Sheriff's Office operations during non-duty hours of the Sheriff, Undersheriff, and Bureau Assistant Sheriff. The following Lieutenant/Supervising Criminalist assignments are noted because of their responsibility and position in the chain of command:

      - Assistant Division Commanders are assigned as second in command of a Division and are in charge during the Division Commander's temporary absence. Assistant

Division Commanders carry out the policies of the Office of the Sheriff and administer and supervise the work of various subdivisions.

- Watch Commander acts as highest authority in absence of Command Staff. The Watch Commander relinquishes authority to Captains and above. This authority and responsibility is not limited nor confined to Patrol Division, but shall include supervision over and responsibility for all personnel in the Office of the Sheriff.
- Station House Commanders and Facility Commanders may become the authority in absence of the Watch Commander.

b. Forensic Managers manage a Section composed of multiple technical units of the Forensics Services Division.

c. Civilian Directors manage support Units within the Sheriff's Office such as Inmate Services.

7. Sergeant/Civilian Supervisor. Supervisors are normally in charge of one or more employees. Additionally, a Supervisor with the rank of Sergeant may perform a variety of law enforcement responsibilities and activities, to include supervision of Deputy Sheriffs and/or other employees; the investigation of felony and misdemeanor crimes; or other specialized law enforcement assignments such as training, internal affairs, crime prevention, or related work as required.

a. Supervisors shall have a working knowledge of the duties and responsibilities of employees within their span of control. In addition, Sergeants assigned to work in the field shall respond to calls of serious emergencies, felonies in progress, assaults and others, unless actively engaged in a police incident. Supervisors shall observe the conduct of the assigned personnel and take charge when such action appears necessary under the circumstances known to the Supervisor at the time.

b. All Supervisors must exercise direct command in a reasonable manner that assures the good order, proper discipline and efficiency of Sheriff's Office employees. Exercise of command will extend to employees outside the usual sphere of supervision if the law enforcement objectives or best interests of the Sheriff's Office so require, or if no other provision is made for temporarily unsupervised personnel. This authority shall not be exercised unreasonably.

c. When a Supervisor requires an employee outside their span of control to leave a regular assignment or deviate from an established policy or procedure, that Supervisor will inform the

employee's immediate Supervisor as soon as possible of same and the reason therefore.

d. All Supervisors shall enforce the Sheriff's Office policies and procedures with the goal of achieving compliance. Supervisors are responsible for inspection of activities, personnel, and equipment under their supervision and initiation of appropriate action in the event of a failure, error, violation, misconduct or neglect of duty by an employee.

e. In the absence of a Supervisor for a particular employee, a Supervisor who becomes aware of matters involving compliance with Office of the Sheriff policies or procedures by an employee outside that Supervisor's span of control, shall take prompt action as warranted by the seriousness of the circumstances. Thereafter, that Supervisor shall promptly advise the immediate Supervisor of the involved employee. Additionally, the Supervisor shall promptly notify their own immediate Supervisor of the circumstances that warranted the notification. Such notification may be in writing or orally, pursuant to policy.

8. Deputy Sheriffs/Criminalists/all others. The duties and efforts of all other employees are of major importance to the fulfillment of the goals and objectives of the Sheriff's Office. Under supervision, employees will perform their duties as established and regulated by the Office of the Sheriff policies and procedures and Division Manuals, as well as those set forth by statute and/or ordinances.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.03
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Internal Affairs**	

I. POLICY.

A. The Office of the Sheriff is organized to enable Internal Affairs to report directly to the Undersheriff.

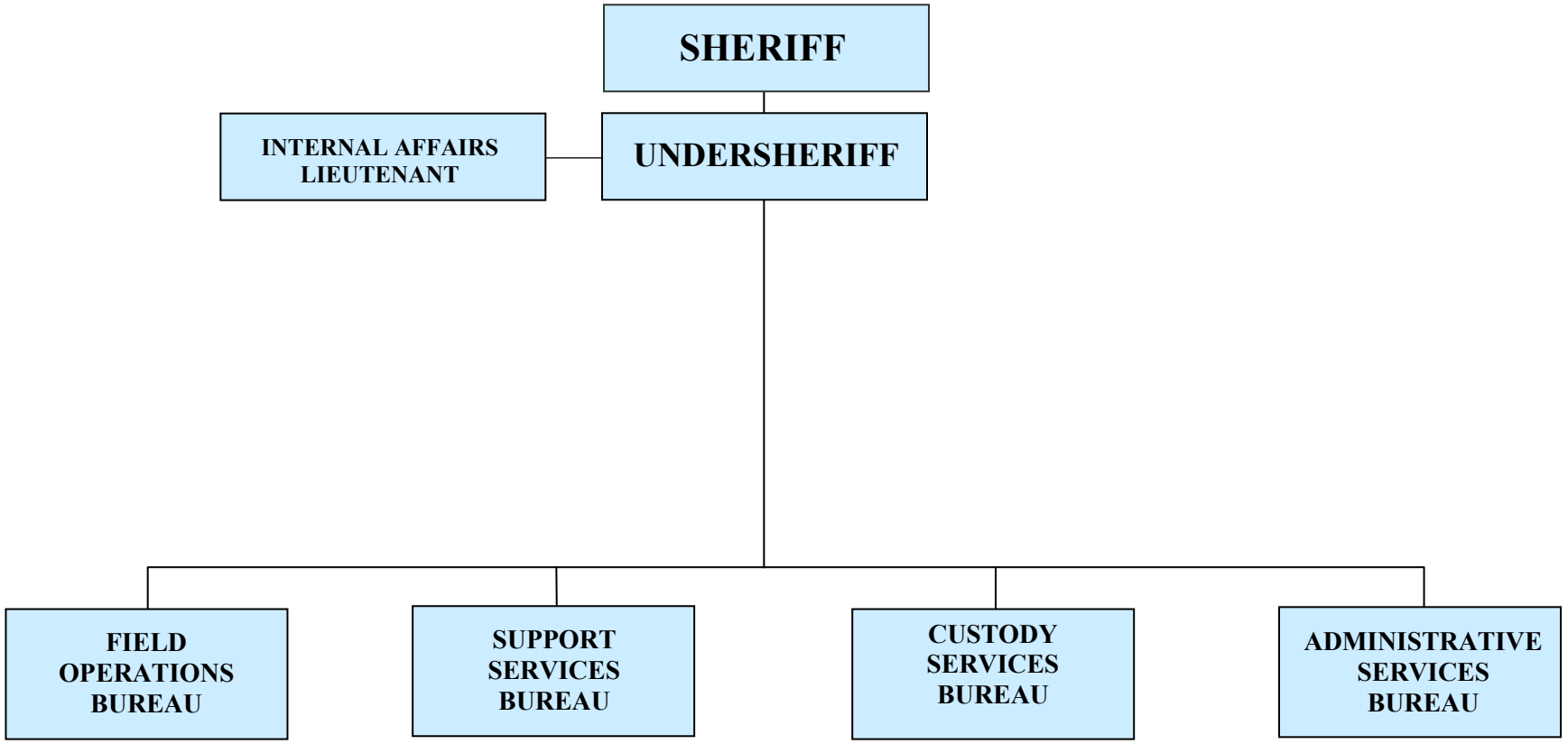
II. GENERAL.

A. Internal Affairs reports directly to the Undersheriff. This Unit is commanded by a Lieutenant and is responsible for conducting internal investigations in an effort to ensure adherence to and compliance with Federal and State laws and departmental policies and procedures. This unit is also responsible for concealed weapons licensing.

III. ORGANIZATION CHART. (SEE ATTACHED)

INTERNAL AFFAIRS

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.43
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Administrative Services Bureau: Personnel and Finance Division**	

I. POLICY.

A. The Personnel and Finance Division of the Administrative Services Bureau is responsible for personnel and fiscal management within the Office of the Sheriff and contract and grant administration.

II. GENERAL.

A. This Division is overseen by the Administrative Services Bureau Assistant Sheriff. Its daily operations are managed by the Chief of Management Services who is responsible for the following:

1. Personnel Services Unit. This Unit administers the Sheriff's Office personnel system, including processing hiring, promotion/demotion and separation actions, employee relations (including workers' compensation, temporary/modified duty assignments, and leaves; issuing employee identification cards).

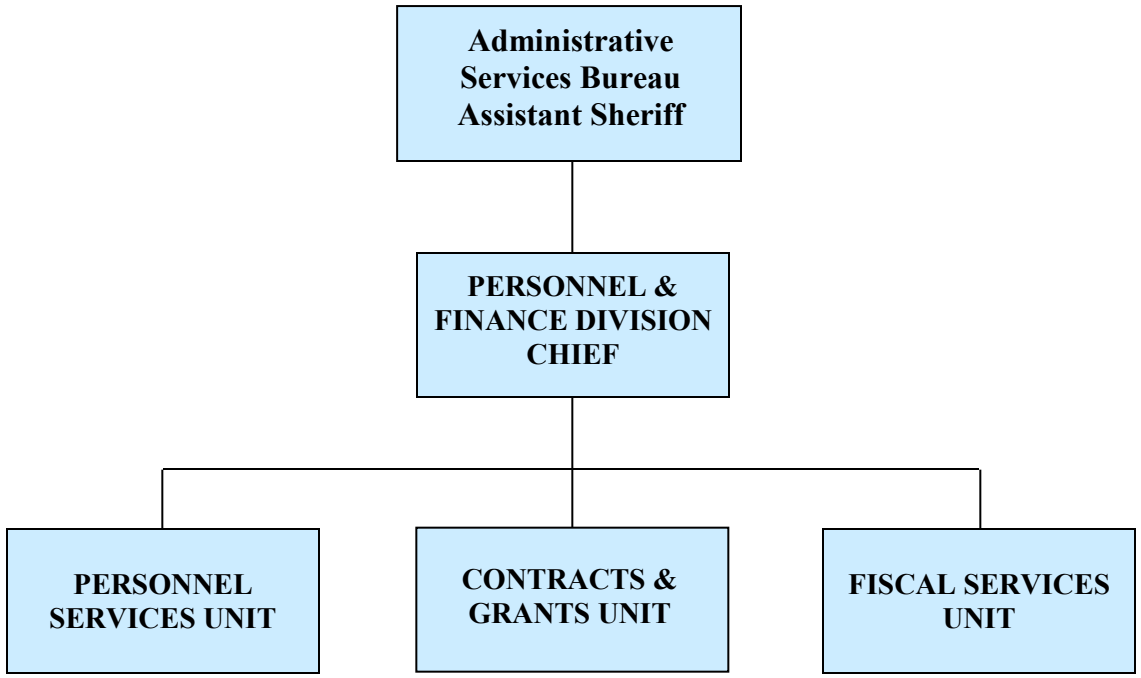
2. Fiscal Services Unit. This Unit prepares and monitors the Sheriff's Office budget. This Unit also conducts internal audits; provides oversight for all accounting activity; oversees all purchasing transactions; and acts as primary liaison with the County Administrator's Office and the Auditor's Office. The Unit also provides training, support and oversight for all employee payroll and acts as primary liaison with the Auditor's Office Payroll Division for all payroll issues.

3. Contracts and Grants Unit. This Unit prepares, administers and monitors all grants and contracts; conducts claiming functions and fiscal reporting; acts as primary liaison with County Counsel, the County Administrator's Office, and the Auditor's Office for grants and contracts.

III. ORGANIZATION CHART. (SEE ATTACHED)

PERSONNEL & FINANCE DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.44
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 4-10-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Administrative Services Bureau Professional Standards Division	

I. POLICY.

A. PROFESSIONAL STANDARDS DIVISION. The Professional Standards Division shall be responsible for the following functions within the Office of the Sheriff: hiring and recruiting processes, background investigations, public affairs/photography, planning and research tasks.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Professional Standards Division are commanded by a Captain.

1. Professional Standards. This Division is comprised of three units. The functions of the Professional Standards Division are carried out through the Employment Services Unit, Planning and Research Unit, and Public Affairs Unit.

a. Employment Services. This Unit is commanded by the Professional Standards Division Captain and is comprised of the Recruiting Detail, the Backgrounds Detail, and the Hiring Detail.

- Recruiting. This Detail is responsible for organizing and/or attending special events with the purpose of introducing potential employees to available opportunities in the Office of the Sheriff. Recruiting also administers the entrance examination and tracks recruits as they continue through the hiring process.
- Background. This Detail is responsible for conducting background investigations on Sheriff's Office candidates.
- Hiring. This Detail is responsible for the overall hiring process including documentation and scheduling of events, tracking of candidates, and the coordination of events between individual Units and Details relating to hiring.

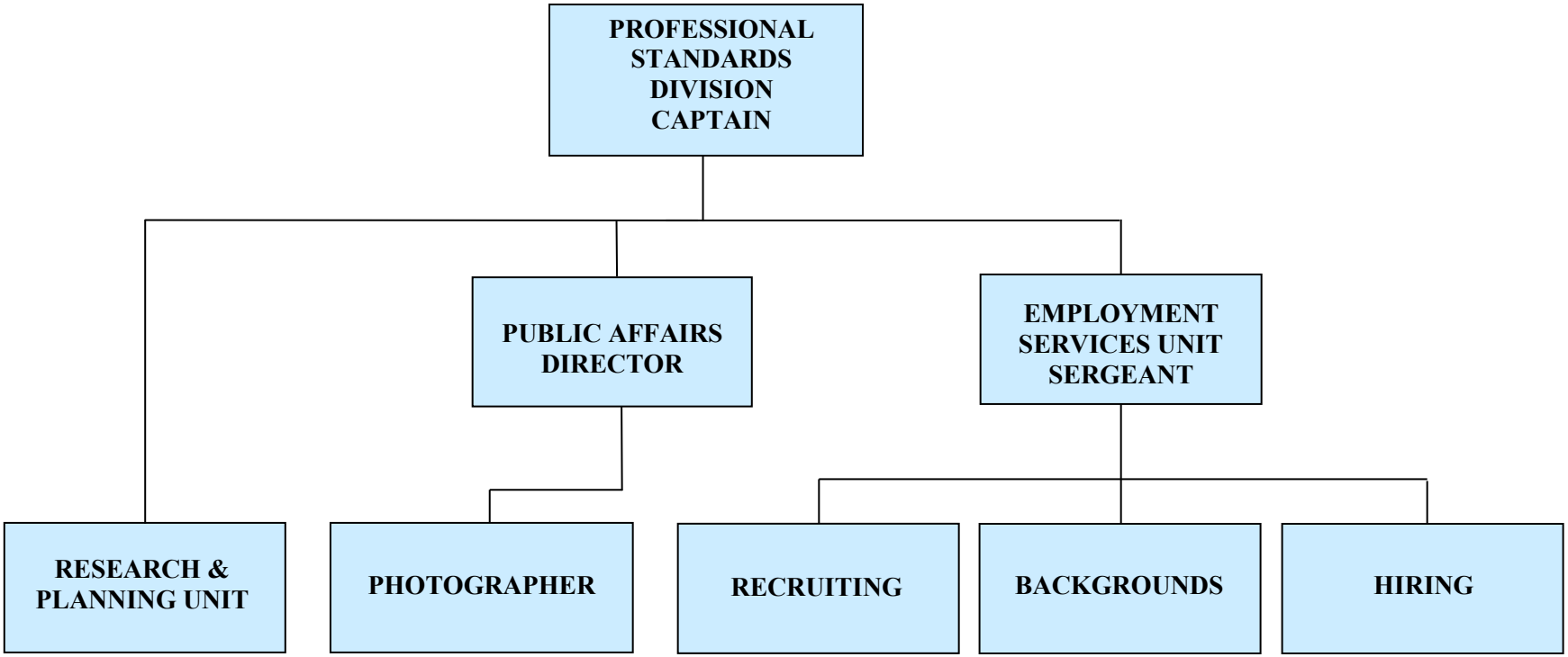
b. Planning and Research. Commanded by the Professional Standards Division Captain, this unit is comprised of a Sheriff's Specialist and a Special Assistant to the Sheriff. The functions of the Unit include special projects, strategic planning, and various administrative tasks, projects and functions, as assigned. This Unit maintains the Policy and Procedures Manual. This position is the Sheriff's Office liaison for juvenile justice, the Department of Motor Vehicles, the State Legislature and the California State Sheriffs' Association, as well as the County's

District Attorney, Public Defender, and County Counsel's Offices. The unit also handles Public Record Requests not handled at the Division level, U-Visa applications, and diverse administrative functions relating to claims and lawsuits, bloodborne pathogen exposure cases, Injury and Illness Prevention Program, and weapons confiscations.

III. ORGANIZATION CHART. (SEE ATTACHED)

PROFESSIONAL STANDARDS DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.45
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 4-10-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Administrative Services Bureau: Training Division	

I. POLICY.

A. The Training Division is housed in the Law Enforcement Training Center (L.E.T.C.) and is responsible for the coordination of the training of personnel for the Sheriff's Basic Law Enforcement Academy operations, and for in-service training.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Training Division are administered under the direction of the Training Division Captain.

1. Training. This Division is comprised of two Units. The functions of the Training Division are carried out through the Academy and Training Units.

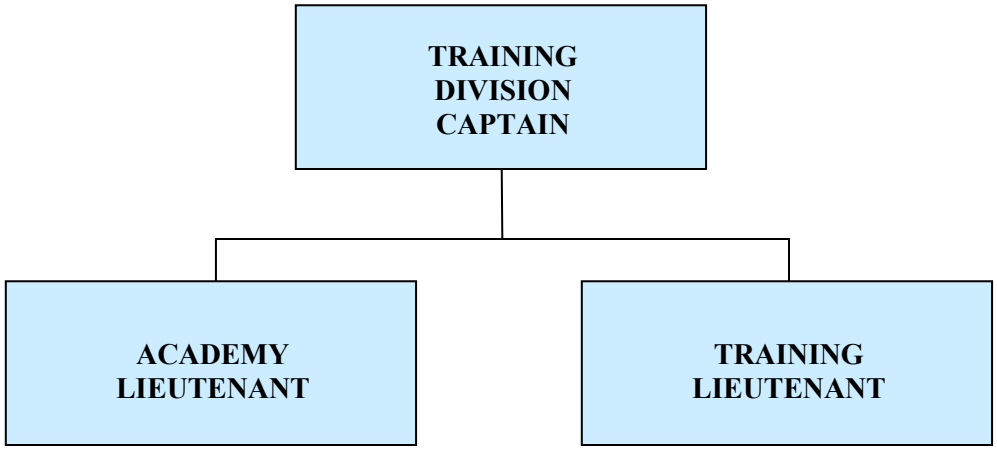
   a. Academy. This Unit is responsible for the operations of the Sheriff's Basic Law Enforcement Academy in accordance with P.O.S.T. regulations.

   b. Training. This Unit is responsible for coordination of the Office of the Sheriff's training and mandated peace officer and corrections training, associated record keeping, coordination of Incentive Pay and Service Award Programs, coordination of Office of the Sheriff ceremonies, management of the range, law enforcement courses for outside agencies, and issuance of law enforcement safety equipment. This unit is commanded by the Training Lieutenant. For P.O.S.T. purposes, the Training Lieutenant is the "Training Manager".

III. ORGANIZATION CHART. (SEE ATTACHED)

TRAINING DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.51
	RELATED ORDERS: California Administrative Code, Title 15.	
ISSUE DATE: 2-1-2006 REVISION DATE: 2-15-2022	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Custody Services Bureau: Martinez Detention Division	

I. POLICY.

A. Custody Services Bureau is comprised of two Detention Divisions, the Martinez Detention Division and the West County Detention Division. The Detention Divisions' primary function shall be to constitutionally, humanely and professionally provide housing and custody for all sentenced and unsentenced inmates arrested and/or remanded to the Office of the Sheriff by law enforcement agencies and courts within the County.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Detention Division are commanded by a Captain.

1. Detention. The Detention Division is comprised of Administrative Services, Court Services, Martinez Detention Facility, and Marsh Creek Detention Facility.

a. Administrative Services. This Unit is responsible for Bureau administrative duties, Classification Detail, Transportation Detail, and the County Administration Building Security Unit.

- Classification Detail. This Detail is responsible for determining the custodial classification of inmates.
- Transportation Detail. This Detail is responsible for the safe movement of inmates between County Detention Facilities, to the State Department of Corrections, and between Contra Costa County and other counties throughout the state.
- County Administration Building Security Unit. This Unit is responsible for providing security and other law enforcement services to county employees and the public at the County Administration Building, located at 1025 Escobar Street, Martinez.

b. Court Services. Court Services primary function is to constitutionally provide humane and professional security to court staff, inmates and the public during court proceedings.

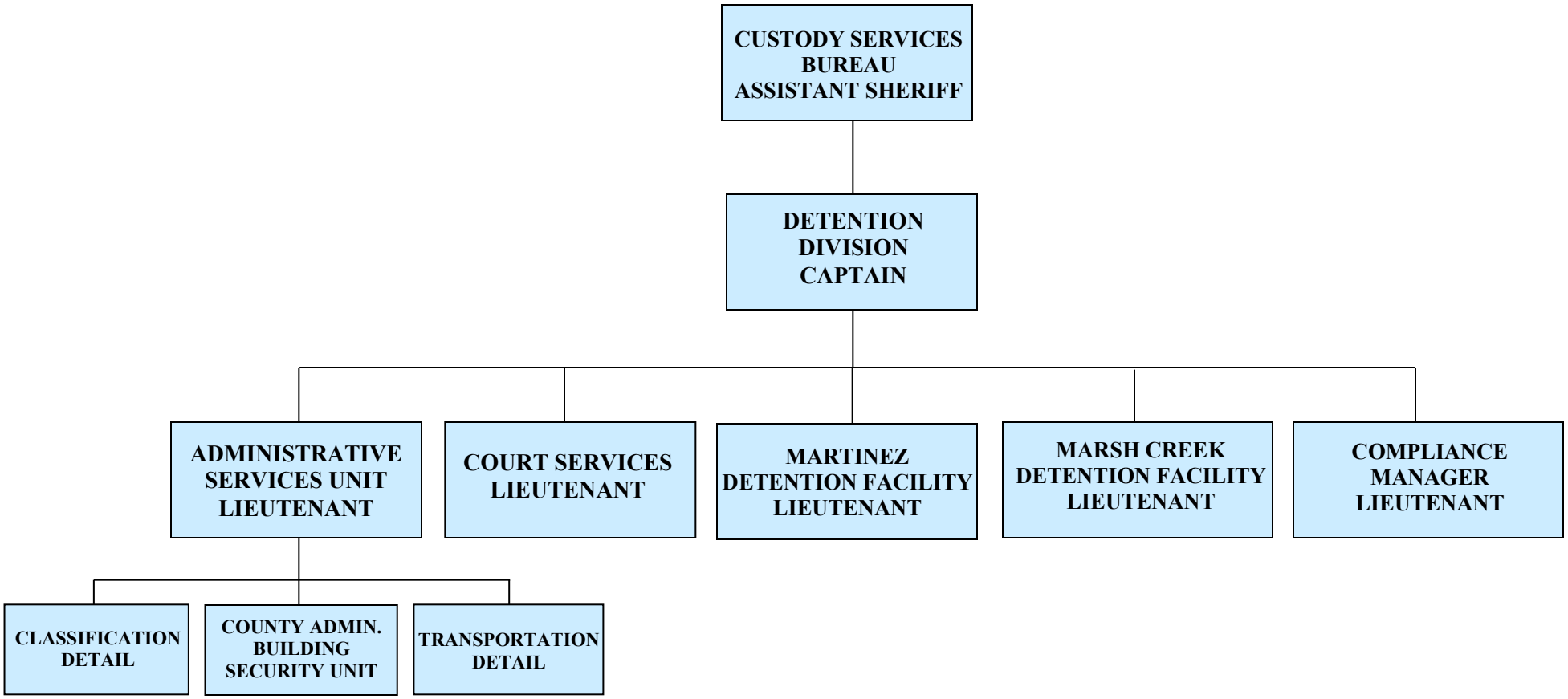
c. Martinez Detention Facility. This facility is a Type II "new generation" maximum security facility built to house pre-sentenced inmates and sentenced inmates not qualifying for less restrictive environments. The Martinez Detention Facility houses the Division's Administration.

d. Marsh Creek Detention Facility. This facility is a type III facility, responsible for the care, custody and control of minimum security sentenced male inmates.

III. ORGANIZATION CHART. (SEE ATTACHED)

MARTINEZ DETENTION DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.52
	RELATED ORDERS: California Administrative Code, Title 15.	
ISSUE DATE: 2-1-2006 REVISION DATE: 2-15-2022	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Custody Services Bureau: West County Detention Division	

I. POLICY.

A. Custody Services Bureau is comprised of two Detention Divisions, the Martinez Detention Division and the West County Detention Division. The Detention Divisions' primary function shall be to constitutionally, humanely and professionally provide housing and custody for all sentenced and unsentenced inmates arrested and/or remanded to the Office of the Sheriff by law enforcement agencies and courts within the County.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Detention Division are commanded by a Captain.

1. Detention. The Detention Division is comprised of the Custody Alternative Facility, Food Services Unit, Inmate Services Unit, and West County Detention Facility.

a. Custody Alternative Facility. The Custody Alternative Facility is responsible for administering the various programs for which selected inmates may qualify as an alternative to incarceration.

b. Food Services. The Food Services Unit manages meal services for inmates.

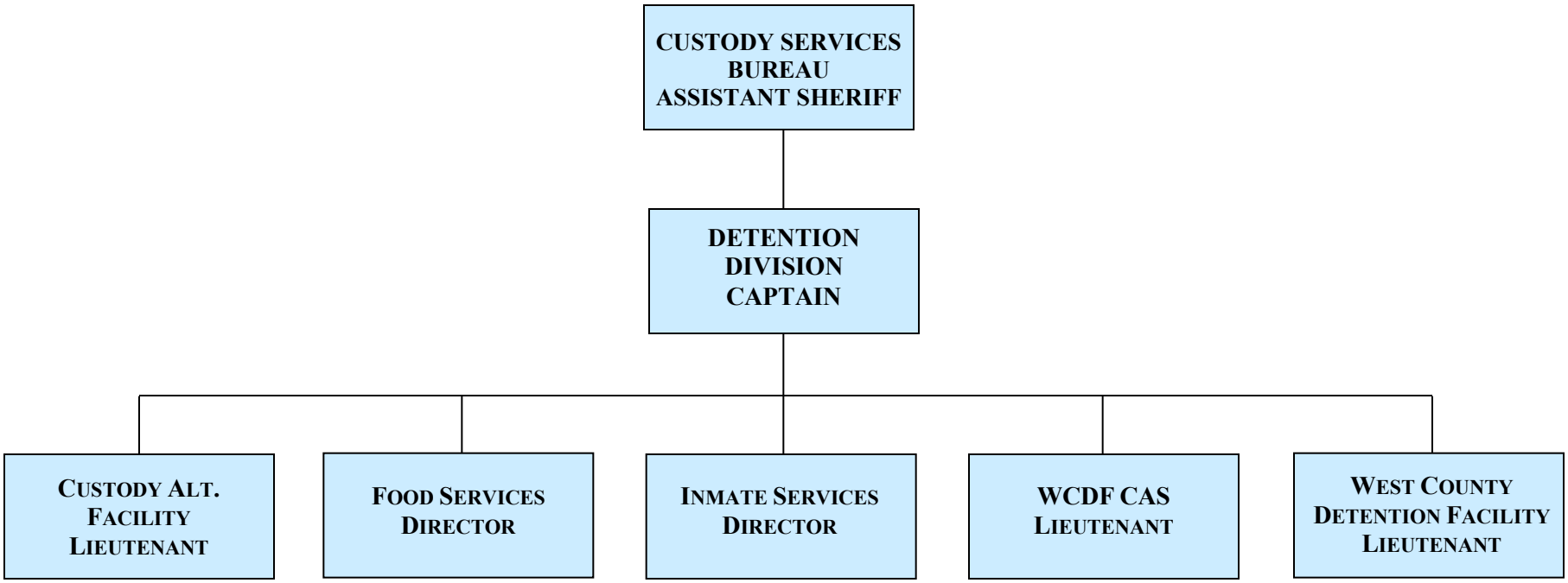
c. Inmate Services. The Inmate Services Unit provides various services for inmates.

d. West County Detention Facility. The West County Detention Facility is a Type II direct supervision, medium security, new generation jail designed to operate as a program-oriented facility.

III. ORGANIZATION CHART. (SEE ATTACHED)

WEST COUNTY DETENTION DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.62
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 8-3-2021	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Field Operations Bureau: Investigation Division	

I. POLICY.

A. Field Operations Bureau shall be comprised of the Investigation Division, Special Operations Division, and Patrol Division. The responsibility of the Investigation Division is to conduct follow-up investigations of all reported felony offenses and certain misdemeanor offenses which occur in the unincorporated area of Contra Costa County, and the cities and districts that contract for law enforcement services with the Office of the Sheriff. The Division also provides extraditions and civil functions.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Investigation Division are commanded by a Captain.

1. Investigations. The objectives of investigations are the protection of lives, the identification and prosecution of criminals, and the protection and recovery of stolen property. The Investigation Division is comprised of three units: two operational and investigatory units and one Community Services Unit.

a. Investigations. This Unit is responsible for the investigation and preparation of evidence for the prosecution of adult and juvenile offenders involved in both felony and misdemeanor crimes. The investigative process is accomplished through four teams:

- General Investigations, Homicide, Special Victims, and the Violence Suppression Unit.

b. Civil Unit. The Civil Unit performs complex and varied functions concerning civil law, as well as special details directed by the courts. The Civil Unit handles money judgments, attachments of wages, levies on bank accounts, and seizures and subsequent sales of personal and business property, serves civil bench warrants and civil subpoenas. This Unit is also responsible for extraditions, rendering of persons in custody locally who are wanted by another state, and arrest of persons with outstanding local and out-of-state warrants.

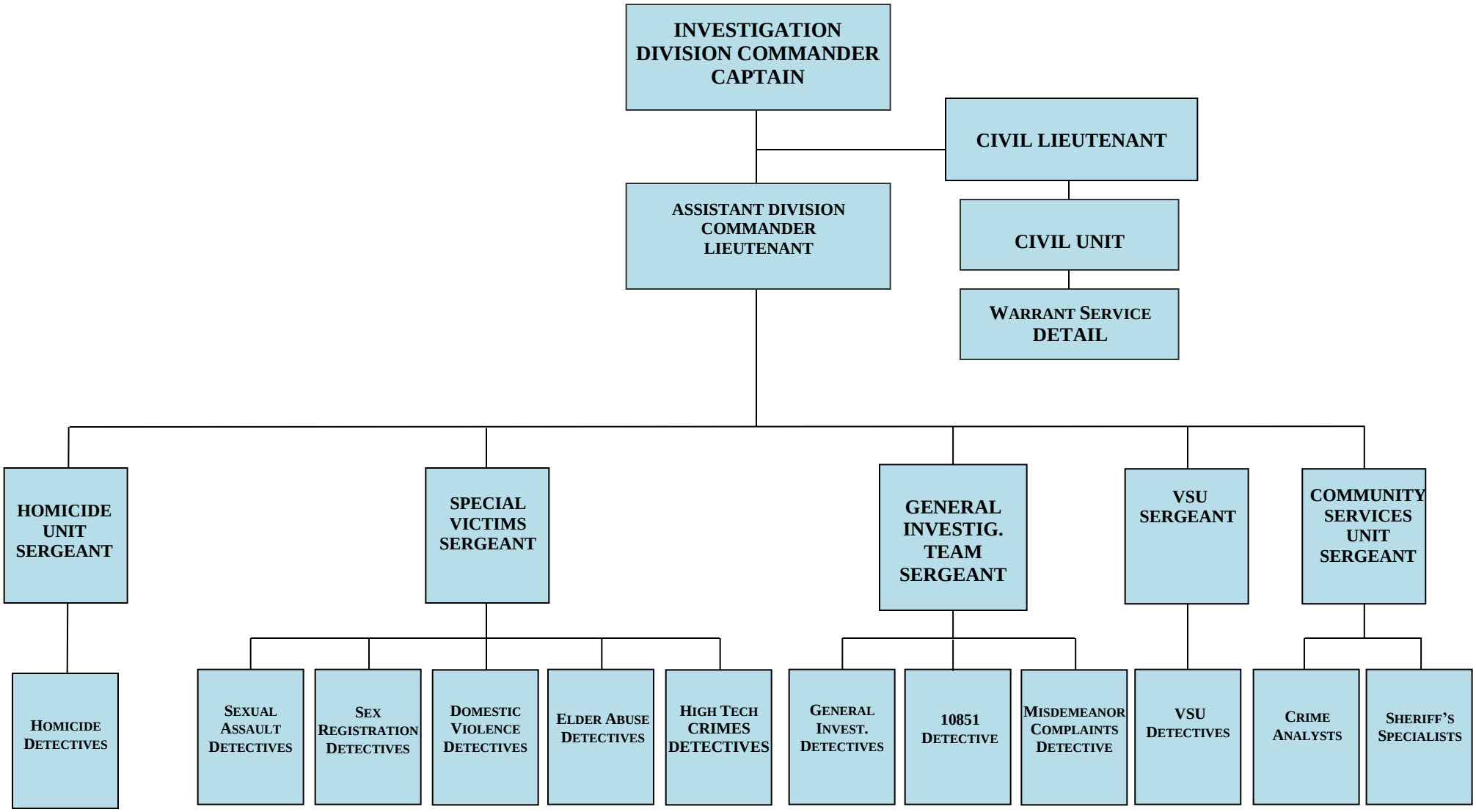
- Warrant Service Detail. The Warrant Service Detail is a collaboration between the Contra Cost County Office of the Sheriff and the United States Marshals Service. This Unit is responsible for the service of warrants within Contra Costa County, and the service of Contra Costa County warrants outside of the county. The Warrant Service Detail also assists the United States Marshal's regional Fugitive Task Force on operations within and outside of Contra Costa County.

c. Community Services / Crime Prevention Unit. This unit promotes and provides specialized crime prevention services and expertise to support the safety and well-being of the public throughout unincorporated Contra Costa County. This unit is responsible for building community partnerships, improving public safety through education, and coordinating and participating in community events in an effort to engage and educate everyone in preventing crime and enhancing public safety.

III. ORGANIZATION CHART. (SEE ATTACHED)

INVESTIGATION DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.63
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Field Operations Bureau:** **Patrol Division**	

I. POLICY.

A. Field Operations Bureau is comprised of the Patrol Division, Special Operations Division, and the Investigation Division. The Patrol Division shall provide 24-hour law enforcement services to the unincorporated areas of the County, Special Police Districts, and other law enforcement contracts.

II. DEFINITIONS.

A. RESIDENT DEPUTY. The Resident Deputy Program is one aspect of community-based law enforcement. The Resident Deputy works in specified areas of responsibility. The Deputy assists with local issues by acting as a problem-solving conduit to the Sheriff's Office, county government, and other agencies. The Resident Deputy is also expected to provide public protection and take direct police action as circumstances dictate.

B. SPECIAL POLICE DISTRICT. A specific geographical tract within the unincorporated area of the County which receives extended police protection. Such a District is formed by resolution of the County governing body and popular vote of the District. A special tax is levied upon residents of the District to cover costs of the extended service.

III. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Patrol Division are commanded by a Captain.

1. Patrol. This Division is comprised of the Administration and Patrol Units.

a. Administration. The administrative functions of the Division are carried out through the following Details.

- Clerical Support. This Detail is responsible for clerical support for the Patrol Division.
- CSOs (Community Service Officers) and Student Workers provide non-sworn Patrol services that support the Field Operations Bureau.

- Parking Enforcement. This Detail is responsible for parking enforcement in specified areas of the County.
- Special Enforcement. These teams include the K-9 Unit, the J-Team, and the SWAT Team, which provide directed enforcement and are assigned duties as deemed necessary to support Patrol functions.
- Training. This Detail conducts and/or coordinates Division training, with emphasis on the Field Training Program for new Patrol Deputies.

b. Patrol - Station Houses. The Patrol Division's responsibility is carried out through four geographically situated station houses. Each station house is commanded by a Lieutenant. The station house concept places police services geographically closer to the communities the Office of the Sheriff serves.

- Bay Station. Bay Station is located in Richmond and serves the unincorporated areas of the western portion of the County, which includes the unincorporated areas of El Sobrante, Rodeo, North Richmond, Crockett and San Pablo.
- Delta Station. Delta Station is located in Oakley and serves the unincorporated areas in the eastern portion of the County which includes the unincorporated areas of Oakley, Knightsen, Bethel Island, Byron and Discovery Bay.
- Muir Station. Muir Station is located in Martinez and serves the unincorporated areas of the northern central portion of the County, which includes unincorporated areas of Pacheco, Bay Point, Martinez, Concord, Clyde and Lafayette.
- Valley Station. Valley Station is located in Alamo and serves the unincorporated areas of the southern central portion of the County, which includes the unincorporated areas of Alamo, Diablo and Blackhawk, Walnut Creek, Pleasant Hill, Concord and Canyon.

c. Patrol - Contract Police Services. In addition to providing law enforcement services in the unincorporated areas, Patrol Division provides police services of Special Districts through contract agreements.

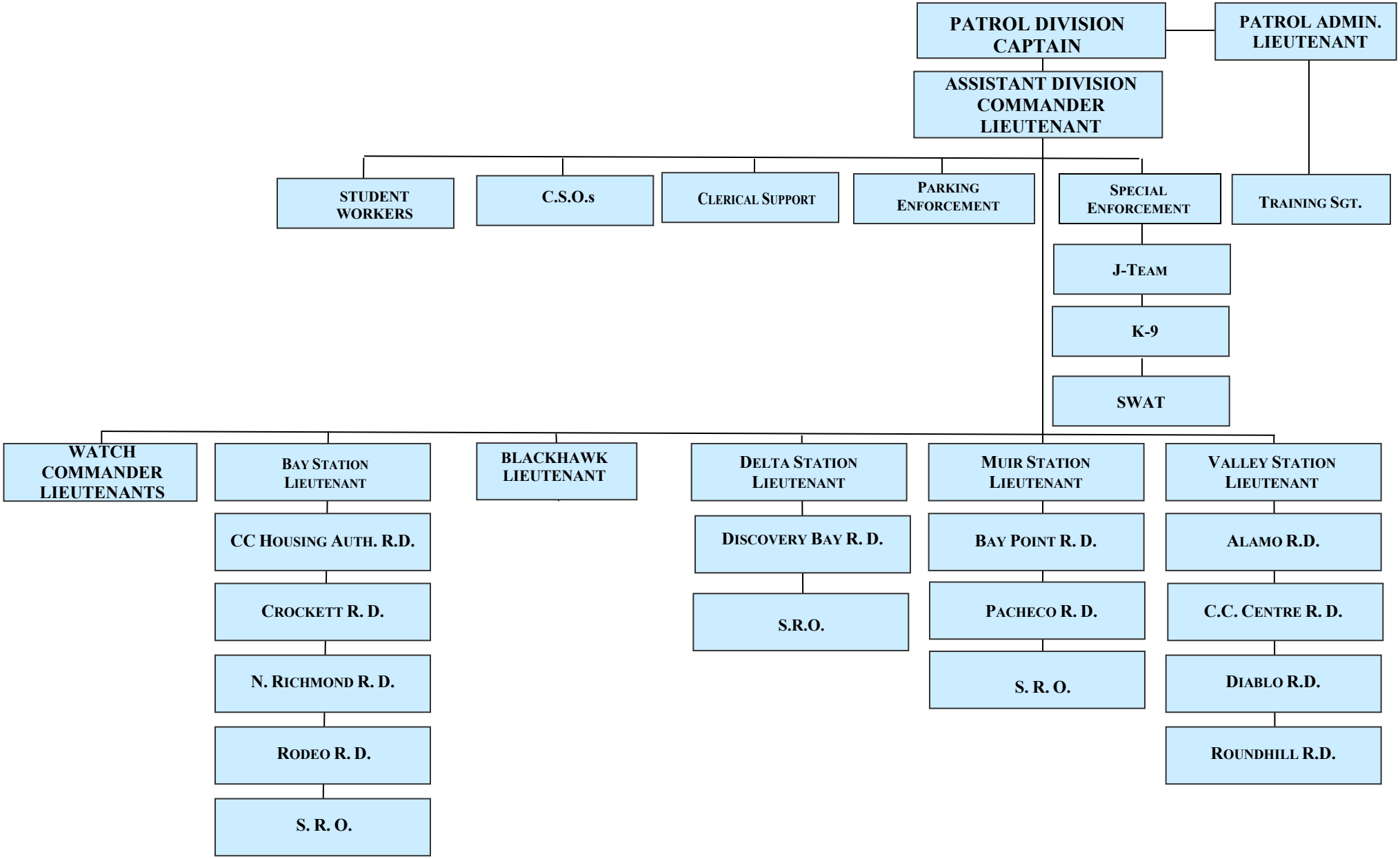
- Special Police Districts in which the Office of the Sheriff provides Patrol functions are:
  - P-1 Crockett
  - P-2A Blackhawk
  - P-2B Alamo
  - P-3 Diablo
  - P-5 Roundhill

d. Patrol – Watch Commander. To ensure command continuity, Watch Commanders are assigned to shifts during non-business hours to respond in the event of critical incidents or major crimes and to provide direction at the command level as needed.

IV. ORGANIZATION CHART. (SEE ATTACHED)

PATROL DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.64
	RELATED ORDERS: None.	
ISSUE DATE: 9-30-2014 REVISION DATE: 2-15-2022	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Field Operations Bureau: Special Operations Division	

I. POLICY.

A. The Field Operations Bureau is comprised of the Patrol Division, Investigation Division, and the Special Operations Division. The Special Operations Division shall provide 24-hour law enforcement services to the incorporated cities and Special Districts through contract agreements and other law enforcement contracts. Additionally, the Special Operations Division encompasses the Marine Services Unit, the Air Support Unit, and the Health Services Security Unit.

II. DEFINITIONS.

A. SPECIAL POLICE DISTRICT. A specific geographical tract within the unincorporated area of the County which receives extended police protection. Such a District is formed by resolution of the County governing body and popular vote of the District. A special tax is levied upon residents of the District to cover costs of the extended service.

III. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Special Operations Division are commanded by a Captain.

B. CONTRACT CITIES. Contract Police Services. In addition to providing law enforcement services via the Marine Services Unit and the Air Support Unit, the Special Operations Division provides the overall police management of incorporated cities, the Health Services Security Unit, and the AC Transit District through contract agreements.

1. Incorporated cities, as an alternative to establishing their own police agencies, may contract for law enforcement services from the Office of the Sheriff.

2. Cities to which the Office of the Sheriff provides police services, pursuant to a police services contract, are:

   a. Danville

   b. Lafayette

   c. Orinda

3. Air Support Unit. The Air Support Unit is located at Buchanan Field in Concord. The Air Support Unit operates two STARR helicopters capable of performing a variety of missions to assist Sheriff's Patrol and Marine Patrol deputies in their efforts to protect the lives and property of the citizens of Contra Costa County.

4. Marine Services Unit. The Marine Services Unit is comprised of the Marine Patrol and the Infrastructure Protection Team. The Marine Patrol is located in Oakley and patrols over 200 miles of linear coastline from Richmond to Discovery Bay. The Infrastructure Protection Team is located at the Military Ocean Terminal Concord (MOTCO) and provides a sustained security presence in and around the critical infrastructure and key resources located within the county. The Marine Services Unit is also responsible for providing contractual law enforcement services to the Contra Costa Water District at the Los Vaqueros Reservoir.

5. Health Services Security Unit. The Health Services Security Unit is responsible for the security of both Contra Costa Health Services and Contra Costa Employment and Human Services Divisions.

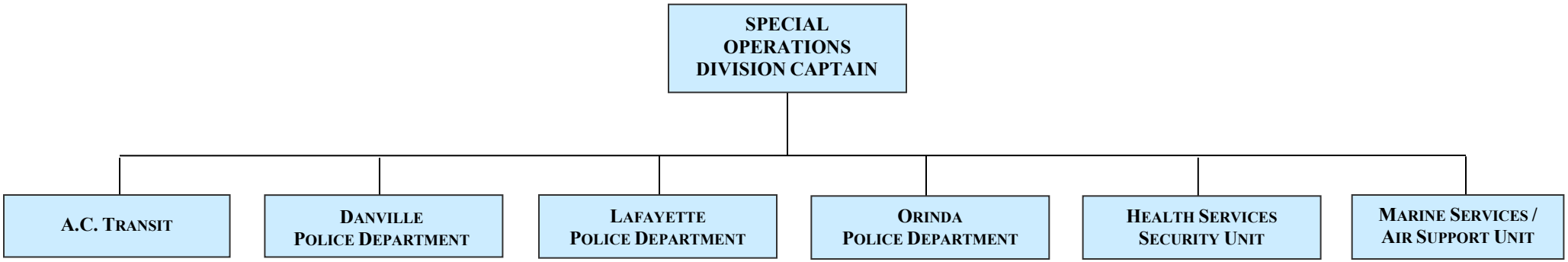
6. Other Special Operations functions include:

   a. A.C. Transit

IV. ORGANIZATION CHART. (SEE ATTACHED)

SPECIAL OPERATIONS DIVISION

ORGANIZATIONAL CHART



Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.03.72**
	RELATED ORDERS: California Government Code, Title 2, Division 1, Chapter 7, Section 8550	
ISSUE DATE: 2-1-2006 **REVISION DATE: 10-2-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Support Services Bureau:** **Emergency Services Division**	

I. POLICY.

A. Emergency Services Division provides assistance to emergency response agencies and the general public in preparing for and coping with the aftermath of natural and man-made disasters.

II. GENERAL.

A. DIVISION FUNCTIONS. The responsibilities and functions of the Emergency Services Division are commanded by a captain, with individual components managed by a lieutenant or professional manager.

1. The Emergency Services Division consists of the following major components:

   a. Office of Emergency Services (OES)

   - Planning
   - Homeland Security
   - Northern California Regional Intelligence Center (NCRIC)
   - Mutual Aid

   b. Emergency Services Support Unit (ESSU)

   - Volunteer Services

   c. Community Warning System (CWS)

   d. Grants

B. Office of Emergency Services (OES):

1. Planning: Is responsible for emergency preparedness, disaster management, and response and recovery planning for the county. Planning coordinates information and resources among county agencies, local governments and special districts. Planning serves as a link between the California Office of Emergency Services (CALOES) and the counties, cities, and special districts. Planning conducts technical studies, analyzes the potential for emergencies/disasters, and develops plans. Additionally, Planning performs community outreach, holds planning meetings and conducts training. Lastly, Planning maintains the Operational Area Emergency Operations Center (EOC) and the Emergency Management Team for activation during emergencies.

2. Homeland Security: Is responsible for developing and maintaining positive partnerships between the Office of the Sheriff, its infrastructure partners, and other local, state and federal agencies in order to share critical information to safeguard persons and property. Homeland Security reviews tips and leads to ensure appropriate agencies and resources are notified.

3. Northern California Regional Intelligence Center (NCRIC): This position is assigned to the Northern California Regional Intelligence Center (NCRIC or Fusion Center) and serves within the Terrorism Liaison Officer Outreach Program (TLOOP). This position also has direct links to the FBI's Joint Terrorism Task Force (JTTF) and other state and federal agencies, which facilitate information dissemination.

4. Mutual Aid: Primary liaison between the Law Enforcement Region II (Alameda County Sheriff's Office), the California Office of Emergency Services (formerly the California Emergency Management Agency – CALEMA), and the agencies within Contra Costa County. The Law Enforcement Mutual Aid Coordinator receives requests for law enforcement mutual aid, identifies the appropriate resources and dispatches those resources to the requesting agency, while tracking costs for reimbursement. The Law Enforcement Mutual Aid Coordinator serves as the administrative coordinator of the county's Mutual Aid Mobile Field Force (MAMFF). The Law Enforcement Mutual Aid Coordinator schedules training, maintains the active roster and team statistics, as well as member certifications, and maintains an updated, county-wide Mutual Aid Agreement, which is signed/approved by the Sheriff and each Law Enforcement Agency Chief.

C. Emergency Services Support Unit (ESSU):

1. Volunteer Services: Provides equipment, personnel and other logistical support, 24/7, to support planned and unplanned Sheriff's Office operations, as well as other agencies throughout the operational area. The Emergency Services Support Unit coordinates activities for the following volunteer branches:

    a. Air Squadron – Pilots and observers provide air operations support to the Office of the Sheriff. Pilots provide their own

aircraft and pay for all maintenance to their aircraft. Services include transportation, surveillance, logistics and disaster response.

b. Cadets – The program offers our youth and young adults experience and training regarding law enforcement. Cadets participate in public events, search and rescue, traffic enforcement, and annual tactical competitions.

c. Chaplains – The Chaplaincy Program provides support and comfort to the law enforcement community and the public. Chaplains are available to provide guidance and counseling in times of crisis.

d. Communications Unit – The Unit provides alternate communication to the operational area via licensed amateur radio operators in the event of an emergency or disaster. Members also support Search and Rescue, the County Fair Contract, and other ESSU public outreach events.

e. Dive Team – Members are accomplished and certified rescue divers available to assist the Office of the Sheriff with events that necessitate the need to dive into bodies of water. Services include evidence collection, victim recovery, hazardous object removal, inspections, and disaster response.

f. Food Service Unit – The unit provides food service to support field operations of the Office of the Sheriff during training or actual events.

g. Mutual Aid Mobile Support Team (MAMST) – This unit provides support in the form of deployment and equipment supply and maintenance for the Mutual Aid Mobile Field Force, Search and Rescue, and the Special Weapons and Tactics Team.

h. Reserve Deputy Sheriffs – Members have varied levels of training and experience. Reserve Deputy Sheriff's volunteer time in a capacity set by California Commission on Peace Officer Standards and Training (P.O.S.T) and Sheriff's Policy guidelines. Reserves assist with in-custody transportation, patrol and detention augmentation, and special patrol programs (DUI checkpoints, off road patrol, etc.), and other special events.

i. Search and Rescue – Members are trained volunteers who can be summoned to assist the Sheriff's Office during events such as missing or at-risk persons, evidence collection, public events, and disaster response.

j. Sheriff's All Volunteer Extended Services (SAVES) – Members with different skill sets who assist our office with delivery of logistical and clerical support, mostly in field operations and administrative assignments.

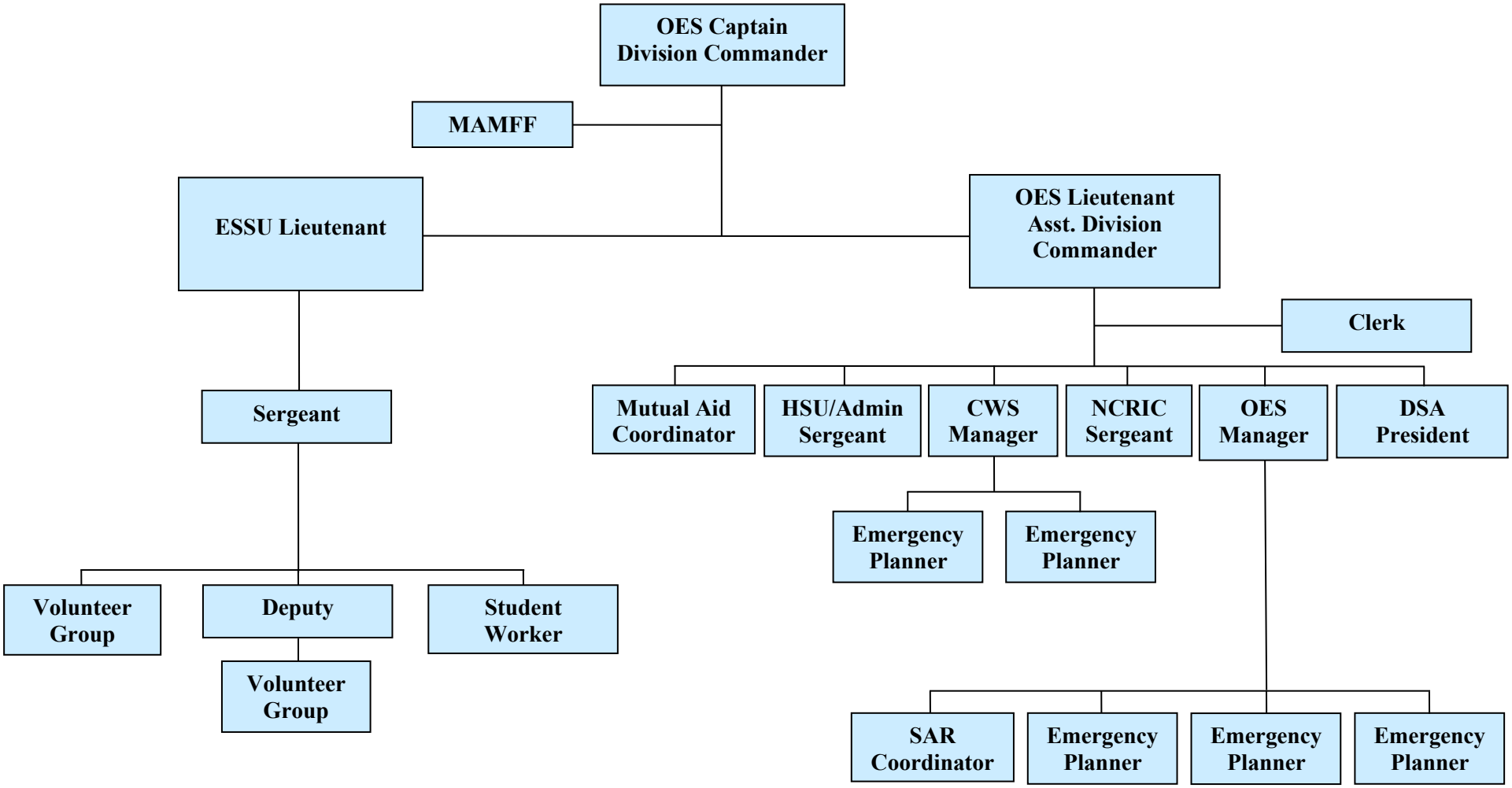
D. Community Warning System (CWS): Is a comprehensive, integrated system for alerting the public in Contra Costa County of *imminent threats to life or health.* The CWS is available to any incident commander, 24/7, and may use alerting devices such as the Telephone Notification System (TENS), social media and messaging systems, 49 Safety Sirens, the Emergency Alert System (EAS) over broadcast radio and television, the California Emergency Digital Alert System (EDIS), and the CWS website.

E. Grants: Supports the Operational Area through the project management of several grants. These grants assist the Contra Costa Operational Area prepare for natural and man-made disasters. Grant proposals focus on programs that enhance first-responder and emergency management capabilities.

III. ORGANIZATION CHART. (SEE ATTACHED)

EMERGENCY SERVICES DIVISION

ORGANIZATIONAL CHART



Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.03.73**
	RELATED ORDERS: California Government Code, Title 2, Division 1, Chapter 7, Section 8550.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** **8-30-2016**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Support Services Bureau:** **Forensic Services Division**	

I. POLICY.

A. The Forensic Services Division is composed of three major sections: Criminalistics, Drug, Alcohol and Toxicology, and Property and Evidence Services.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Forensic Services Division are commanded by a Chief.

1. Forensic Services. The Division is subdivided into the Criminalistics Section, Drug, Alcohol and Toxicology Section, and Property and Evidence Services.

a. Criminalistics Section. The Criminalistics Section is managed by a Forensic Manager and is comprised of four technical units: Forensic Biology, Comparative Evidence, Latent Prints, and Crime Scene Investigation

- Forensic Biology examines evidence for the presence of physiological fluids and tissues and generates DNA profiles. Unknown DNA profiles are uploaded into CODIS to search the State and National database of convicted offenders and felony arrestees.
- Comparative Evidence handles firearms and tool mark related examinations, shoe and tire impression comparisons, along with any type of physical match analysis.
- Latent Prints processes physical evidence using a variety of chemical methods for fingerprints and other areas of friction ridge detail, and identifies the individual who left the print. Unknown prints are uploaded and searched in a variety of AFIS databases: local, regional, national and international.
- Crime Scene Investigation supports the Office of the Sheriff and all local law enforcement agencies with

major crimes scenes, such as homicides and officer-involved shootings.

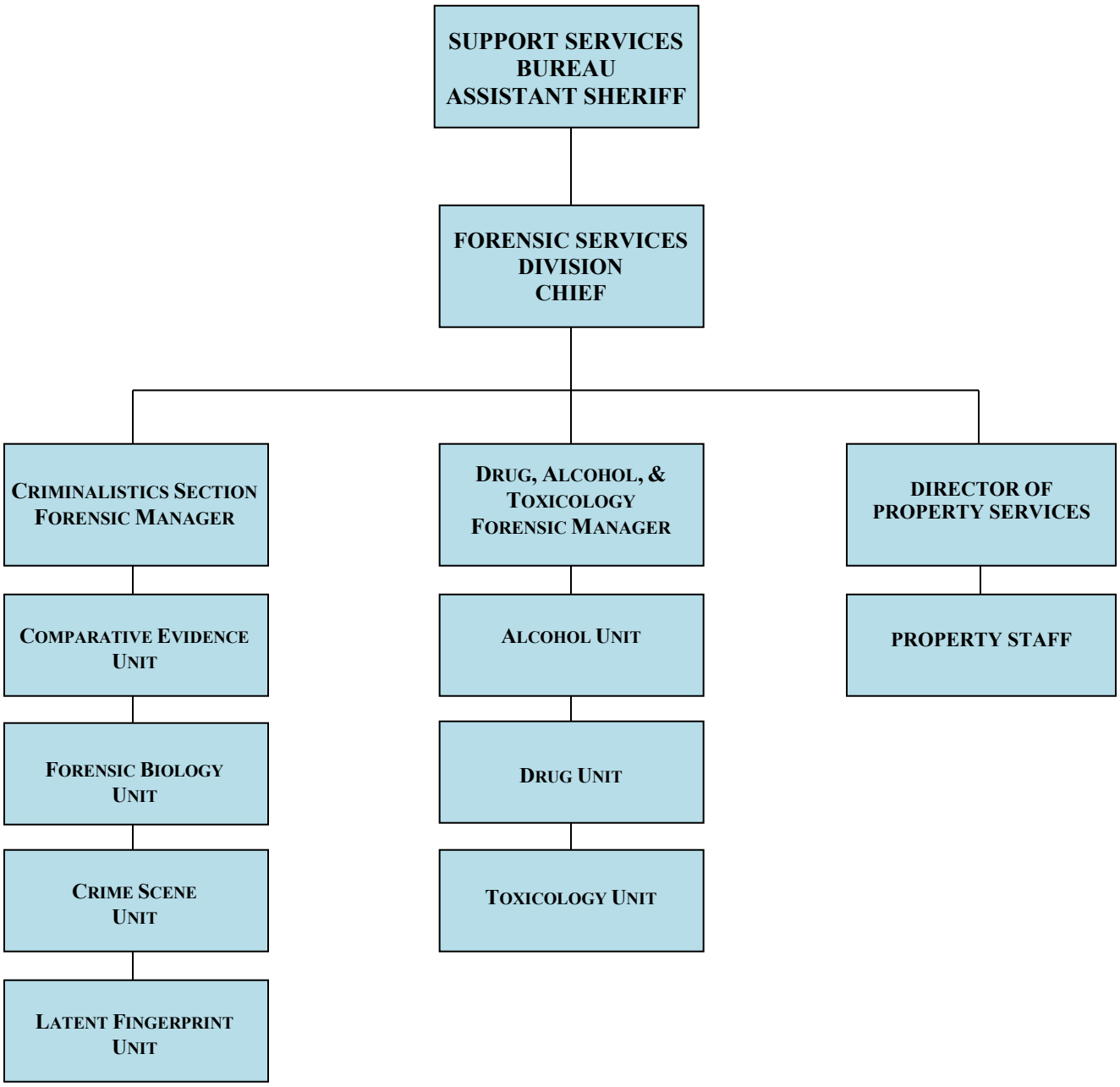
b. Drug, Alcohol and Toxicology Section. This Section is managed by a Forensic Manager and has three major Units: Alcohol Analysis, Drug Analysis, and Toxicology. This Section's principle tasks include the analysis of controlled substances, analysis of blood and breath samples for alcohol content, analysis of blood and urine samples for drugs and the analysis of chemicals seized from clandestine drug manufacturing sites.

c. Property Services. This Unit is responsible for the storage, tracking, disposition, and record keeping of seized, confiscated and found property and evidence for the Office of the Sheriff, Contract Cites.

III. ORGANIZATION CHART. (SEE ATTACHED)

FORENSIC SERVICES DIVISION

ORGANIZATIONAL CHART



Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.03.74**
	RELATED ORDERS: Government Code Sections 26603 and 26625.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** **8-30-2016**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Division Organization and Function**	**SUBJECT:** **Support Services Bureau:** **Technical Services Division**	

I. POLICY.

A. The Technical Services Division provides an essential communications link for the public and operational Units of the Office of the Sheriff. This includes radio dispatching and the processing of computer information requests. The Division also provides fleet management, maintenance of crime reports, criminal history information, warrant files, and maintenance.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Technical Services Division are commanded by a Captain.

1. Technical Services. This Division is comprised of three units, the Information Technology Unit, Fleet Services Unit, and Administrative/Clerical Unit. All three units are commanded by the Assistant Division Commander (Lieutenant).

a. Information Technology. This Unit is comprised of three Details and falls under the supervision of the Information Systems Project Manager.

- CAD/RMS/JMS System Support Detail. This Detail is responsible for managing the Computer Aided Dispatch System (CAD), Management Information System (MIS), Jail Management System (JMS), Records Management System (RMS) and Automated Report Writing System (ARS), including coordinating changes and upgrading the system and geofile updates.
- Network System Support Detail. This Detail provides direction for system development within the Sheriff's Office, and coordinates data processing with other law enforcement agencies. This Detail maintains PC's and networks.
- Telecommunications Detail. This Detail identifies ways to adopt technological advances for varied Sheriff's

Office functions and acts as the liaison to General Services.

b. Fleet Services. This Unit manages the Sheriff's Office fleet vehicles and equipment including vehicle repair and maintenance, removing vehicles from the fleet, processing maintenance records, and acquisition of new vehicles and related equipment.

c. Administrative/Clerical. This Unit provides clerical support to the Division. Additionally, this Unit is responsible for ordering, updating, and maintaining all cellular phone and tablet devices.

2. Records and Identification. Records and Identification consists of three 24 hour Details.

- Identification Detail. The primary responsibility of Identification Detail is to verify AFIS identification of Livescanned prints from Custody and other local agencies. The Identification Detail also collects electronic fingerprints from individuals required to register for certain offenses, applicants for certain types of employment, and for CCW permits.
- Records Detail. This Records Detail is responsible for receiving, filing, retrieving, maintaining, and the release of information of all Sheriff's Office reports and supplements. The Detail also compiles crime statistics, criminal histories, maintains booking records, issues permits and licenses in accordance with County Ordinances, and enters all County issued Restraining Orders.
- Warrants Detail. The Warrants Detail is responsible for receiving, updating, and modifying arrest warrants from the courts, maintaining necessary files and responds to warrant inquiries for public safety personnel. The Warrant Detail also makes entries and inquiries into various automated data bases at local, State and Federal levels, including Restraining Orders.

3. Communication Center. The Communication Center consists of two Details:

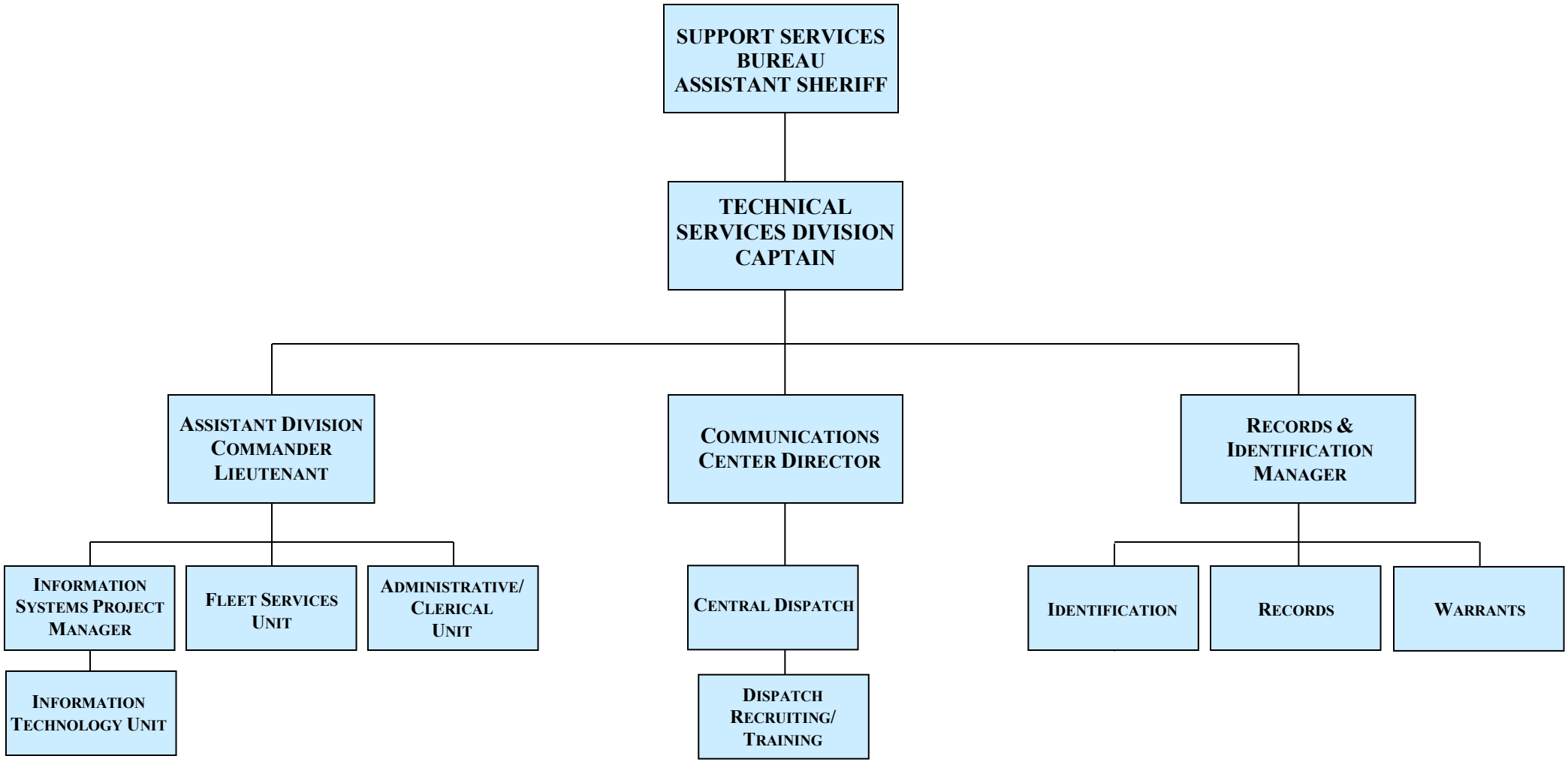
- Central Dispatch Detail. This Detail is responsible for dissemination of information to operational units on numerous radio channels and between the citizen and public safety services. The dispatch center provides communications to Sheriff's Office units and other specified agencies throughout the county. The center is managed by a Communications Center Director who has 24 hour responsibility for the operation of the center.
- Recruiting/Training Detail. This Detail is responsible for active recruiting of dispatch candidates. This Detail is

also responsible for coordination of training, development of new programs, and maintenance of policies and procedures for the Technical Services Division.

III. ORGANIZATION CHART. (SEE ATTACHED)

TECHNICAL SERVICES DIVISION

ORGANIZATIONAL CHART



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.03.75
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 4-10-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Division Organization and Function	SUBJECT: Support Services Bureau: Coroner's Division	

I. POLICY.

A. The Support Services Bureau is comprised of the Emergency Services Division, Technical Services Division, Forensic Services Division, and the Coroner's Division. The primary function of the Coroner's Division is to inquire into and determine the circumstances, manner and cause of all sudden, violent, unusual and unattended deaths that occur in the county. Additionally, the Coroner's Division will determine the extent of inquiry to be made into any death occurring under natural circumstances and falling within the provisions of the Government Code. Coroner's Division staff shall strive to serve the community in the most responsive, compassionate and professional manner possible.

II. GENERAL.

A. DIVISION FUNCTIONS. The functions and responsibilities of the Coroner's Division are commanded by a Captain. The Assistant Division Commander is a Sergeant.

1. The Coroner's Division is comprised of a Clerical Support Unit and an Investigation Unit. The Division contracts with Forensic Pathologists and other specialists as needed. The Coroner's Division operates from a central morgue facility 24 hours a day, 365 days a year.

   a. Clerical Support. This Unit's primary function is to transcribe autopsy protocols, prepare and amend death certificates, and collate and compile mandated statistical information relating to the cases handled by the Division. The Clerical Support Unit also handles general clerical duties associated with the Division.

   b. Coroner's Investigation. This Unit's primary function is to determine the extent of inquiry to be made into all reported deaths and investigate and determine the manner of all sudden, violent, unusual and unattended deaths that occur in the county. The Coroner's Investigator will make removal of the deceased from the place of death and transport them to the Central Morgue in cases which require examination by a pathologist. The Coroner's Investigator will determine the manner of death through examination of evidence, scene investigation,

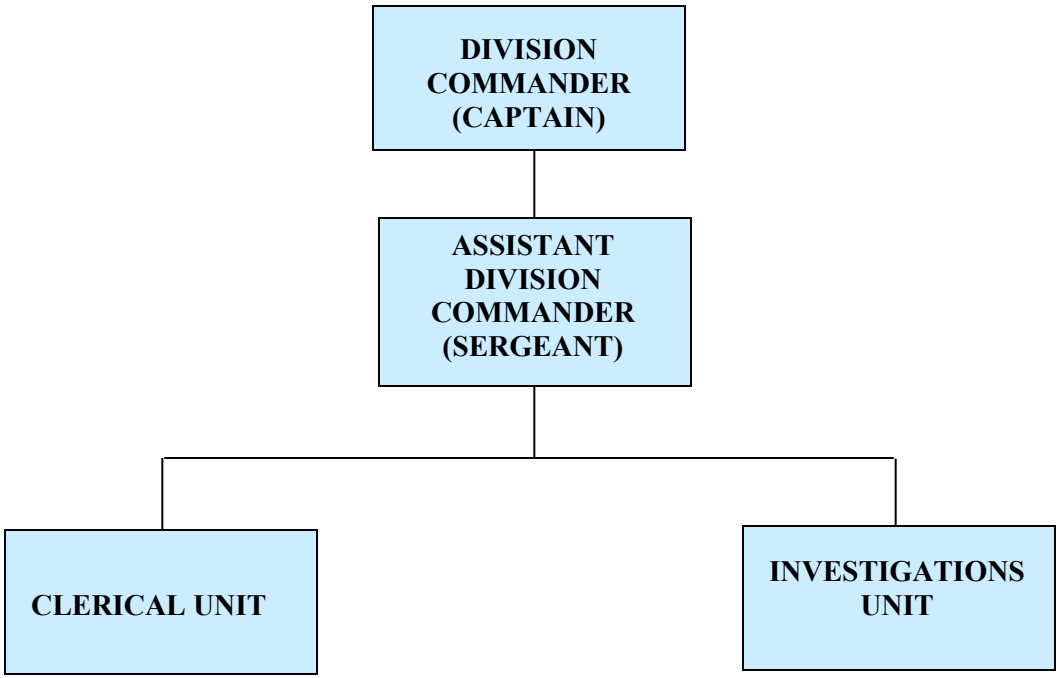
interviewing witnesses and doctors, researching the decedent's medical history, autopsies and/or conducting Coroner Inquests. The information developed by the Coroner's Investigators, Crime Scene Investigators, Investigators from law enforcement agencies having jurisdiction over the death, Criminalists and Fingerprint Examiners is used by the Coroner's Investigator to develop the cases.

c. Medical Contractors. The Forensic Pathologists primary function is to determine the Cause of Death regarding all sudden, violent, unusual or unattended deaths that occur in the county.

III. ORGANIZATION CHART. (SEE ATTACHED)

CORONER'S DIVISION

ORGANIZATIONAL CHART



Contra Costa County

OFFICE OF THE SHERIFF

Policies and Procedures Manual

SECTION 2



Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter Four:

Employee Benefits and Assistance

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.11
	RELATED ORDERS: Contra Costa County Personnel Regulations; Penal Code Section 830 et seq.; California Administrative Code, Title 11, Division 2, Article 1.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Recruitment and Hiring of Deputy Sheriffs**	

I. POLICY.

A. The Office of the Sheriff will follow specified processes in recruiting and hiring Deputy Sheriffs in order to assure fairness to applicants and quality candidates for the Office of the Sheriff. The Administrative Services Bureau Assistant Sheriff has the primary responsibility for hiring both Deputy Sheriffs and general employees for the Office of the Sheriff and will work closely with the County Human Resources Department to ensure all Federal and State laws and all county policies and procedures are followed.

II. DEFINITIONS.

A. DEPUTY SHERIFF - LATERAL ENTRY. Those candidates who have satisfactorily completed a POST-approved California Peace Officer Academy or have successfully completed the Basic Course Equivalency Examination administered by the California Commission on Peace Officers Standards and Training.

B. DEPUTY SHERIFF RECRUIT. Those candidates who do not possess a valid California Peace Officer Academy graduation certificate or equivalent. Upon employment with the Sheriff's Office, recruits are assigned to the Office of the Sheriff's Law Enforcement Training Center for completion of the P.O.S.T. basic academy.

C. DEPUTY SHERIFF - PER DIEM. A limited term or limited function Deputy who is employed on a non-permanent basis to address a particular staffing issue.

III. GENERAL.

A. APPLICATION AND TESTING. Deputy Sheriff Recruit testing will be conducted on an on-going basis, as needed. Applicants who successfully complete the recruit testing process will be placed on a Deputy Sheriff Recruit employment list. The following steps are included in the recruit testing process:

1. Submit an application to the County Human Resources Department;
2. Pass a written examination;
3. Pass a physical agility test;
4. Pass an oral interview with an appraisal board;

5. Pass a polygraph examination;

6. Pass a background investigation;

7. Executive interview upon passing background investigation. If selected, applicant will receive a conditional job offer;

8. Once the applicant has received a letter from the Office of the Sheriff stating its intention to hire, the applicant will be required to successfully pass an oral and written psychological examination and a medical examination.

9. Final interview.

B. DEPUTY SHERIFF - LATERAL ENTRIES. Deputy Sheriff Lateral recruiting will be conducted periodically, as needed. Candidates for Lateral Entry must submit an application through the County Human Resources Department. Lateral candidates must successfully complete the Office of the Sheriff's standard physical agility test prior to being hired as a permanent employee. When lateral hiring is open, qualified applicants must successfully complete an interview with Office of the Sheriff personnel, a psychological test, a polygraph examination, a medical examination and a background investigation and, if successful, are then placed on an employment list.

C. NON-PERMANENT DEPUTY SHERIFF PERSONNEL. The Sheriff has the authority to hire Deputy Sheriff personnel on a non-permanent basis as needed by the Sheriff to supplement Office of the Sheriff operations. The two categories of non-permanent Deputy Sheriffs are as follows:

1. Per Diem Deputy Sheriffs are former Deputy Sheriffs, former peace officers from other agencies, those that otherwise meet the criteria for Deputy Sheriff-Lateral or Reserve Deputy Sheriffs.

   a. Per Diem Retired Deputies. The Sheriff may re-employ its former Deputies who have retired from the Office of the Sheriff with a service retirement with the approval of the Human Resources Director. Retired Deputies may, under the applicable Government Code provisions, work a maximum of 120 days or a total of 960 hours per fiscal year, whichever is greater. All such Deputies from this agency may require a full background investigation.

   b. Per Diem Deputies hired from outside agencies. Former sworn law enforcement personnel from other agencies may also be hired as Per Diem Deputy Sheriffs provided they meet all of the requirements for lateral candidates (see General B, above). All who are hired from outside agencies will require full background investigations in all cases, whether or not there is a break in service.

   c. Per Diem Reserve Deputies. Personnel who have previously qualified as a Reserve Deputy Sheriff for Contra Costa County and who are currently in the Reserve Program may be "activated" into a paid "per diem" assignment through the procedure described herein. Appointments by the Sheriff are exempt from the Merit System regulations and are normally

approved for a specific project or contract, such as the County Fair. Reserve personnel who are activated into a paid "per diem" assignment will be compensated at the first step of the Deputy Sheriff pay range.

D. AUTHORIZATION FOR EMPLOYMENT OF NON-PERMANENT DEPUTIES. The Sheriff may authorize the employment of non-permanent Deputy Sheriffs under the following conditions:

1. Under terms of a reimbursable or revenue producing contract or agreement which would be difficult to staff with permanent personnel. Examples of this type of agreement are the hiring of Per Diem Deputy Sheriffs to operate under the Marine Patrol grant or the hiring of Reserves for the annual County Fair.

2. To keep overtime expenditures at or below budgeted levels, non-permanent Deputy Sheriffs may be hired by the Sheriff if the hours they are assigned will reduce the number of overtime hours expended. The reduction of overtime hours must be a cost benefit; i.e., the pay and benefits received by the non-permanent Deputy Sheriff must cost less than the overtime expenditure required without the employment of the non-permanent Deputy Sheriffs.

3. As an operational or emergency measure required by the Sheriff for the more efficient operation of the Office of the Sheriff, the use of non-permanent Deputy Sheriffs may be authorized directly by the Sheriff or the Undersheriff. This will normally involve a special project or assignment which benefits from the utilization of non-permanent Deputy Sheriffs.

E. SEPARATION OF NON-PERMANENT DEPUTY SHERIFFS.

1. Non-permanent Deputy Sheriffs may be separated from service at will. This may occur, as an example, when the service is no longer a priority for the Office of the Sheriff or when the costs are no longer beneficial in reducing overtime or generating revenue. A Per Diem Deputy Sheriff who is not performing satisfactorily will be separated from service. Retired Deputy Sheriffs who have been rehired will not be permitted to exceed the 120-day/960-hour limitation per fiscal year.

2. Division Commander Responsibility. The Division Commander is responsible for notifying the non-permanent Deputy Sheriff and the Sheriff's Chief of Management Services when the non-permanent Deputy Sheriff's services are no longer required. However, when a non-permanent Deputy Sheriff is to be separated due to misconduct, the non-permanent Deputy Sheriff is entitled to an administrative hearing and the Administrative Services Bureau Assistant Sheriff shall be contacted by the Division Commander prior to separation.

IV. PROCEDURE 1.

A. DEPUTY SHERIFF BACKGROUND PROCESS.

1. Determination of Need.

a. A decision will be made by management regarding the number of persons to hire during a given period based upon the needs of

the Office of the Sheriff. The Chief of Management Services will then seek certification of an appropriate number of names from the Human Resources Department, utilizing either or both the recruit and lateral lists.

2. Processing Candidates.

   a. Recruit candidates who have successfully completed the written examination and the physical agility test, and lateral candidates of interest will be interviewed by a qualifications appraisal board consisting of at least two sworn members at the rank of Deputy Sheriff or higher.

   b. The interviewers will evaluate the candidates and rate them on a standard form. Formal interview scores for candidates ranking on the employment list will be delivered to the Human Resources Department by the Director of Personnel Services.

   c. If a candidate receives a qualifying score in the qualifications appraisal interview, a Professional Standards Division POST Personal History Statement will be obtained from the candidate. If disqualifying information is not disclosed by the candidate in the PHS, the candidate will be invited to a pre-background interview. Those most qualified applicants that do not provide disqualifying information in the pre-background interview will be scheduled for a polygraph examination. Unsuccessful applicants will be so notified by the Captain or designated representative.

   d. Eligibility of candidates for selection (see section 3, below) depends on the successful completion of all tests administered and the suitability of the candidate's background investigation results.

3. Selection.

   a. When all preliminary reports and testing results have been completed, the Professional Standards Division Commander and the Administrative Services Bureau Assistant Sheriff will review all data relative to the candidates. The Sheriff has the ultimate decision-making authority for hiring purposes. His authority in this regard is commonly designated to the Undersheriff or the Administrative Services Bureau Assistant Sheriff.

   b. A candidate completing all phases of the examination without disqualification will not necessarily be recommended for hiring. County certification rules allow persons to be qualified, and yet be "passed over" in favor of a more qualified candidate. Persons "qualified, but passed over" will remain as candidates to be considered against future candidates from the same eligibility list.

   c. The Backgrounds Office will maintain records placing all non-hired candidates into one of the following categories:

      - Unsuccessful (Inactive) - Unavailable for hire at this time;

- Removed for Cause - Memo submitted to the Human Resources Department recommending removal from the employment list for cause per Merit Regulations;
- Hold - Placed on temporary medical exam hold by the County Health Department or placed on Sheriff's Office medical exam hold pending further background investigation;
- Qualified, pending - Is qualified for hire but must be evaluated against other qualified candidates.
- Unsuccessful (Not Qualified) - Recommendation against hire, but no cause for removal from list.

V. PROCEDURE 2.

A. PROCESSING NON-PERMANENT DEPUTY SHERIFFS.

1. Division Request.

   a. The Division Commander or designee shall request employment of a non-permanent Deputy Sheriff based on the criteria outlined in "Authorization for Employment of Non-Permanent Deputies" herein.

   b. The request for employment of a non-permanent Deputy Sheriff will be made via the Bureau Assistant Sheriff to the Chief of Management Services. The Division may indicate a need for a particular skill, ability, or bonafide occupational qualification (male-female). The Division may also request a particular former employee or Reserve Deputy. A mutual decision will be made regarding the type of temporary employee to hire.

2. Examination Requirements.

   a. Once a non-permanent candidate has been identified, the Chief of Management Services will process the candidate through the testing process. Note that former employees returning for temporary service are not exempt from such testing.

3. Limitations of Newly-Hired Per Diem Deputies.

   a. Per Diem Deputies, including Sheriff's Reserves hired as Per Diem Deputies, possess peace officer powers only when on duty and when performing the function for which they were employed.

   b. The Chief of Management Services shall ensure that each newly-hired temporary Deputy is aware of the limits of his or her authority by use of the following:

      - A statement signed by the Per Diem Deputy acknowledging the limits of his or her authority.
      - An identification card issued to the Per Diem Deputy which clearly identifies the Deputy as a "Deputy Sheriff-Reserve" or "Deputy Sheriff - Per Diem".

VI. PROCEDURE 3.

A. HIRING OF PERMANENT OR NON-PERMANENT DEPUTY SHERIFFS

1. Once it is determined that an applicant is a viable candidate upon selection as set forth in Procedure 1, 3. ("Selection"), the applicant will be sent a conditional hire letter. This letter will state the intention of the Office of the Sheriff to hire that individual upon successful completion of the following:

   a. A written and oral psychological examination.

   b. A P.O.S.T. approved medical examination will be conducted to determine compliance with the basic health requirements for appointment as a permanent Deputy Sheriff. A candidate with a recent P.O.S.T. approved examination may not be required to test again.

VII. PROCEDURE 4.

A. BACKGROUND INVESTIGATION.

1. Government Code section 1031(d) requires that peace officers must be "of good moral character, as determined by a thorough background investigation." The Background Investigations Detail in the Professional Standards Division shall conduct a complete background investigation of every candidate to assure that he or she meets this requirement as well as all other lawful requirements for employment as a peace officer.

2. Pursuant to law, certain information, such as a personal medical history, cannot be requested until a "conditional job offer" has been extended to the candidate. Other issues pertaining to the candidate may not be practical to resolve prior to the "conditional job offer." Still other issues may arise subsequent to the "conditional job offer." Investigation into all such matters will be made during the background investigation.

B. HIRING.

1. A candidate who has received a "conditional job offer," must successfully complete all conditions to be hired. Successful completion includes:

   a. A thorough review and consideration of the candidate's Background Investigation and a positive determination by the Sheriff or his designee that the candidate is legally qualified and otherwise suited and appropriate to be hired by this Office; and

   b. Successful resolution of all other matters set forth in the "conditional job offer."

2. A candidate who has received a "conditional job offer" and who has successfully completed or resolved all conditions, and for whom no disqualifying issue or potentially disqualifying issue has arisen, will be extended an offer of employment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.12
	RELATED ORDERS: County Personnel Management Regulations; County Employee Memoranda of Understanding.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 6-9-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Personnel Assignments and Promotions**	

I. POLICY.

A. The Office of the Sheriff personnel process shall be conducted in accordance with established County policy, applicable State codes and current Memoranda of Understanding. Personnel assignments and promotions will be administered according to standards set forth by the Office of the Sheriff to ensure efficiency and effectiveness.

II. DEFINITIONS.

A. CLASSIFICATION. A description of the different kinds of work performed in an agency and consolidation of similar positions into classes based upon similarity of duties and responsibilities.

B. JOB ANALYSIS. A systematic examination of the duties and responsibilities of each job class as it relates to the knowledge, training and skills required to perform the task or duties of the job.

III. GENERAL.

A. APPOINTMENT AND SELECTIONS. The Sheriff is the appointing authority and will make selections based on the County Human Resources Department rules and regulations.

B. JOB CLASSIFICATIONS. The County Human Resources Office provides classification, pay, recruitment, and selection assistance for all County Departments. The Office of the Sheriff through its Personnel and Finance Division, works closely with the County Human Resources Department in those areas. Job analysis and classification for each Office of the Sheriff position are done by the County Human Resources Department, with assistance and input from the Chief of Management Services.

C. SCREENING FOR VACANT CLERICAL, DEPUTY (SPECIALIZED POSITIONS), SHERIFF'S AIDES, SHERIFF'S RANGERS, AND SHERIFF'S SPECIALISTS POSITIONS. The Office of the Sheriff Division Commander where a vacancy exists, will screen applicants for vacant positions at the Deputy Sheriff level and for clerical staff, Sheriff's Aides, Sheriff's Rangers, and

Sheriff's Specialists. This is done for inter-divisional vacancies and intra-divisional vacancies.

D. PROMOTIONS. Promotion procedures in the Office of the Sheriff are governed by and done at the discretion of the Sheriff except as limited by County Personnel Management Regulations and Memoranda of Understanding.

E. MINIMUM QUALIFICATIONS FOR SPECIALIZED POSITIONS. Minimum qualifications have been established which employees must meet in order to qualify for various specialized positions within the Office of the Sheriff. Those minimum qualifications are designed to provide job-related realistic standards and to provide maximum flexibility for movement within the Office of the Sheriff.

F. DEPUTY ROTATIONS BETWEEN DIVISIONS. The Sheriff has authority and discretion to transfer all classes and all Divisions, except as limited by MOU's. Deputy Sheriffs will be rotated into and out of Patrol and Detention Divisions based on an agreement between the Office of the Sheriff and the Deputy Sheriffs' Association, as stated in the Memorandum of Understanding.

G. SPECIAL ASSIGNMENTS DURATION.

1. For the assignments listed below, the assignment duration is generally 18-24 months unless specified in a MOU.

   a. Mental Health Unit Deputy
   b. HSSU Deputy
   c. AC Transit Deputy
   d. CAF Deputy
   e. Marine Patrol Deputy
   f. ASU Deputy
   g. Recruit Training Deputy
   h. Volunteer Services Deputy
   i. Investigation Deputy
   j. K-9 Deputy
   k. Coroner
   l. Court Security
   m. Classification
   n. Transportation

2. In the event a vacancy in a position listed in this section is filled by "forcing," the assignment duration will end at the next shift change. Should the "forced" employee desire to remain in the assignment after shift change, and should his or her performance in the position and the needs of the Sheriff's Office warrant an extension, then the assignment may be extended so that the "forced" term and the extended term together equal the assignment duration shown above for the assignment.

IV. PROCEDURE 1.

A. SELECTION PROCESS.

1. When an opening occurs for Clerical, Deputy (specialized position), Sheriff's Aide, Sheriff's Ranger, or Sheriff's Specialist in any Division, a notification will be made to all employees at that rank by the Chief of

Management Services who is responsible for preparing the vacancy announcement and distributing copies to all Divisions.

2. Qualified and interested individuals must submit to the Chief of Management Services a letter of interest detailing previous experience, specific qualifications, training and education and any pertinent information they wish to be considered.

3. The Division Commander where the vacancy exists will convene an in-person meeting with the following people to review the applicants:

   a. The Deputy Sheriffs' Association President or designee (non-voting) for positions represented by the DSA.

   b. A Shop Steward (non-voting) for clerical positions.

   c. The Unit Manager where the vacancy exists

4. The Division Commander will consider the following criteria in determining a ranking of qualified candidates and those deemed unqualified:

   a. Whether the applicant meets the minimum qualifications for the position

   b. Job performance, skills, and abilities relevant to the new position

   c. Training and education

   d. Non-FMLA sick leave usage

   e. Seniority

   f. Current assignment

5. Upon review of each applicant, the Assistant Sheriff where the vacancy exists, will provide the Sheriff/Undersheriff with a memo ranking the applicants, along with a list of applicants not ranked for the position. The memo should minimally include criteria a-f. This process is advisory only to the Sheriff/Undersheriff and is in place to furnish quality input.

6. The Sheriff/Undersheriff will then select an individual from among the applicants.

7. All applicants will be notified by the Division Commander when the Sheriff/Undersheriff has made a decision. Applicants interested in comments regarding their non-selection should make a request through their Division Commander or through the DSA or Union Representative who participated in the meeting.

B. ELIGIBILITY LIST.

1. The Eligibility List for special assignments shall expire after 90 days from being promulgated unless the Assistant Sheriff where the vacancy exists approves an extension.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.13
	RELATED ORDERS: CCCSO 1.04.12 CCCSO 1.04.71 County Employee MOU; County Personnel	
ISSUE DATE: 7-25-2019 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Transfers and Shift Sign-Ups**	

I. POLICY

A. Transfers and Shift Sign-Ups are governed by the Memorandum of Understanding. It is used to determine transfers, select assignment, work location, shifts and/or days off. The Sheriff's Office Field Operation Bureau and Custody Services Bureau shall use the following procedure to determine transfers and assign personnel to work locations and shift preference.

II. DEFINITIONS

A. SHIFT: A regularly assigned tour of duty with an established starting and ending time for each work day.

B. TRANSFER: The process of an employee moving from one Bureau or Division to another.

III. PROCEDURE

A. TRANSFERS FROM/TO BUREAU OR DIVISION

1. Prior to the bidding process taking place, the appropriate designee from each Division will ask for notification from any Sergeant or Deputy requesting to be transferred from/to a different Division than the one they are currently assigned to.
2. Requests from Deputies will be evaluated in accordance with County Employee MOU.
3. Requests from Sergeants will also be evaluated in accordance with the County Employee MOU and CCCSO Policy 1.06.04 "Sergeant Development / Mentoring Philosophy."
4. If a request is granted, the Sergeant or Deputy who made the request will be notified prior to the bidding process.
5. The Sergeant or Deputy will be placed in the appropriate bidding location in the Division they will be assigned to at the start of the new shift based on their seniority prior to the bidding process.

6. Sergeants and Deputies not assigned to the Patrol, Special Operations, and Detention Divisions should submit their request to transfer to their chain of command at least 70 days prior to the start of the new shift.

7. The Sheriff will have final approval in granting the transfer requests.

B. SHIFT BIDDING PROCESS AND TRANSFERS

1. Sergeants and Deputies are eligible to transfer from their assigned shift, days off, and respective station house or detention facility at shift change. Personnel must indicate the station house or detention facility and shift preference during the shift bidding process occurring at the semi-annual sign-up.

2. Situations may arise where a vacancy is required to be filled and no transfer requests have been submitted. In instances where vacancies cannot be filled, these positions will be filled, as needed based upon the needs of the Office of the Sheriff.

C. ELIGIBILITY TO BID

1. Personnel assigned to the Patrol Division, Special Operations Division, and Custody Services Bureau prior to the completion of the sign-up will be allowed to bid as outlined in their union M.O.U. Shift bidding for Sergeants and Deputies will be based on seniority, with any combination of station house and available shift if in the Patrol Division and any combination of facility and available shift if assigned to the Custody Services Bureau.

2. Personnel assigned to the Patrol Division, Special Operations Division, or Custody Services Bureau after the completion of the sign-up will be assigned as needed by the Division Commander.

3. A Sergeant or Deputy who is on a leave of absence more than thirty (30) days, or scheduled to be on a leave of absence of more than thirty (30) days at the time of a sign-up, shall not be allowed to bid on a shift. Upon return, the Sergeant or Deputy shall be placed in an available shift, at the Office of the Sheriff's discretion.

D. BID PROCESS

1. Sergeants and Deputies will be allowed to bid for shifts, days off, and station house or detention facility semi-annually.

2. The appropriate designee from each Division will make available, a list of all available shifts and days off for bid. Personnel eligible for bidding will be requested to submit multiple shift preferences; failing to do so prior to the published deadline or failing to provide enough station house/facility and shift preferences will result in the employee losing their seniority ranking for the current shift bidding process.

3. Sergeants and Deputies in the Special Operations Division will have their shift bidding process handled by the appropriate designee for the area in which they work.

E. FEMALE DESIGNATED POSITIONS IN THE CUSTODY SERVICES BUREAU

1. Within the Custody Services Bureau, a specified number of female position must be staffed for proper facility operations and to comply with state and/or federal Minimum Jail Standards. All female positions to be filled will be posted during each bid process.

   a. During each bid group, the number of female designated positions to be filled will be posted, along with a list of female employees available to fill those positions based on seniority.

   b. At the conclusion of the bid, designated female vacancies will be filled by the least senior female employee of the required job classification who did not bid for a female designated vacancy.

F. TIMELINE

1. In an effort to ensure that both the requests for transfers and the shift bidding process is done in a manner to allow a sufficient amount of time for a Sergeant or Deputy to make transfer or bid requests, the following timeline will be used during the transfer and bid process:

   a. Seventy-five (75) days prior to the start of the new shift, Sergeants and Deputies desiring to transfer to/from a Division will be asked to submit a memo requesting the transfer to the appropriate Division designee. Five (5) days will be given to respond to request for transfers.

   b. Sixty (60) days prior to the start of the new shift, the Sergeants and Deputies whose request for a transfer has been approved will be notified of the approval.

   c. Forty-five (45) days prior to the start of the new shift, the Sergeant bidding process will begin. Sergeants will have five (5) days to submit their request for which station house/facility, and shift they wish to sign-up for. Sergeants eligible for bidding will be requested to submit multiple shift preferences; failing to do so prior to the published deadline or failing to provide enough station house/facility and shift preferences will result in the Sergeant losing their seniority ranking for the current shift bidding process.

   d. Thirty-nine (39) days prior to the start of the new shift, the finalized list showing the station house/facility and shift each Sergeant has been assigned to will be made available.

   e. Thirty-eight (38) days prior to the start of the new shift, the Deputy bidding process will begin. Deputies will have five (5) days to submit their request for which station house/facility, and shift they wish to sign-up for. Deputies eligible for bidding will be requested to submit multiple shift preferences; failing to do so prior to the published deadline or failing to provide enough station house/facility and shift preferences will result in the

Deputy losing their seniority ranking for the current shift bidding process.

f. The finalized list showing the station house/facility and shift to which each Deputy has been assigned will be made available no later than thirty (30) days prior to start of the new shift.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.21
	RELATED ORDERS: County Ordinance 36-10.202, 36-10.204, 36-10.206; Administrative Bulletin 310.2.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **County Service Employee Award Program**	

I. POLICY.

A. Office of the Sheriff employees shall receive official recognition for specified lengths of service in the employment of the County.

II. GENERAL.

A. ELIGIBLE EMPLOYEES. The Human Resources Department will notify the Office of the Sheriff when an employee has qualified to receive a County Service Award.

B. FREQUENCY OF AWARDS. The first service award shall be awarded after ten years of service. A new and distinguishable award shall be awarded after each additional five years of service.

1. Ten Year Service Award. The Office of the Sheriff will be responsible for the ordering and purchase of lapel pins for employees with 10 years of service. The Division Commander or designee will make the presentation of the lapel pin for 10 years of service.

2. Fifteen or More Years of Service Awards. Employees eligible for 15 or more years of service awards will receive a personalized packet containing a service award brochure and an order form direct from a private vendor under contract to Contra Costa County. It is the responsibility of the employee to complete the order form and return it as directed.

   a. The Sheriff's Office will receive, on a quarterly basis, the selected awards and a status report showing the date packets were sent, the order form returned, what the employee ordered and the shipping date.

   b. Employees receiving 15 year service award as defined above and each 5 year increment thereafter, are entitled to a day off with pay within 30 days of their anniversary date. The date of the day off with pay is subject to approval by Division Commander.

C. PRESENTATION OF AWARDS. The Sheriff or designee will present the service awards at the quarterly award ceremony for those employees with 15 years or more service.

1. Employees with 20 or more years of service may voluntarily elect to go before the Board of Supervisors to accept their award. The award ceremony will be held the last Tuesday of every month. The Sheriff's Service Award Coordinator will notify the Human Resources Department Labor Relations, at least two weeks prior to the selected Board date the employee has requested. The Service Award Coordinator will notify the Sheriff as to the date and time of the ceremony of the employee(s) scheduled to have their award presented before the Board of Supervisors.

2. Those eligible employees not desiring to appear before the Board of Supervisors may elect to voluntarily have their award presented by the Sheriff or designee at the quarterly award ceremony; or may receive their award without a ceremony.

D. CALCULATING SERVICE. Length of service shall date from the beginning of the last period of continuous County employment including temporary, provisional, permanent status and during approved leaves of absence. Employees who have separated from a permanent position in good standing and within two years are re-employed in a permanent County position shall be credited with all service accumulated at time of separation not including the period of separation.

E. SERVICE AWARD COORDINATOR. The position of Sheriff's Service Award Coordinator shall consist of civilian volunteers selected by Administrative Services. The responsibilities of the Service Award Coordinator include:

1. Upon notice of an employee's eligibility for a service award from the Human Resources Department, the Service Award Coordinator will verify the date of hire and length of service.

2. Upon receipt of the awards from the vendor, determine in what manner the employee wishes the award to be presented.

3. Notify the respective Division Commander of employees eligible for ten-year service lapel pins and provide them.

4. Contact the Training Deputy to arrange date and time of the quarterly award ceremony for awards of 15 years or more and request the Training Deputy arrange for photographs to be taken.

5. Notify the Service Award Administrator for the Human Resources Department of those employees eligible who have requested award presentation before the Board of Supervisors at least two weeks prior to the selected board date. The award ceremony will be held the last Tuesday of every month.

6. Solicit and secure biographical information about each employee receiving an award before the Board of Supervisors or at the quarterly ceremony and provide it to the Training Deputy.

7. Notify the Sheriff as to the date and time of the ceremony and the names and biographies of employees who have been chosen to receive the Service Award before the Board of Supervisors or at the quarterly awards ceremony.

8. Prepare all awards for presentation by the Sheriff, beginning with employees who have the longest time in service and supply a photograph to the employee.

F. FORM OF AWARDS.

1. The service award for ten years of service shall be a lapel pin.

2. Service awards for fifteen years and over shall be selected from the service award brochure which will be sent by the vendor in the personalized packet containing an order form directly to the eligible employee at the last known address as provided by the employee.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.22
	RELATED ORDERS: CCCSO 1.04.31.	
ISSUE DATE: 2-1-2006 REVISION DATE: 3-5-2010	CLEARANCE: Office of the Sheriff	
CHAPTER: Employee Benefits and Assistance	SUBJECT: Office of the Sheriff Medal of Valor Program	

I. POLICY.

A. The Office of the Sheriff will strive to officially recognize and honor Deputy Sheriffs and Deputy Sheriff Reserves who distinguish themselves by conspicuous bravery or heroism above and beyond the normal demands of police service. To be awarded the Medal of Valor, a Deputy would have performed a heroic act displaying extreme courage while facing imminent danger.

II. GENERAL.

A. Simply performing an expected task in an exceptional manner is not justification for receiving a Medal of Valor. The Medal of Valor award may also be bestowed upon a peace officer of another law enforcement agency who, while assisting a member of the Office of the Sheriff, performs in the following meritorious manner:

1. MEDAL OF VALOR AWARDS.

a. Gold Medal of Valor. The Office of the Sheriff's highest award for valor. It is awarded in recognition of acts involving extreme personal risk that are clearly above and beyond the call of duty, and is merited when the following elements exist:

Outstanding bravery above and beyond that expected in the line of duty.

Where failure to take such action would not justify censure.

Where risk of life actually existed and the nominee had sufficient time to evaluate that risk.

Where the objective is of sufficient importance to justify the risk.

Where the nominee accomplished the objective or was prevented from accomplishing the objective by incurring a disabling injury or death.

Where the necessity for the act of bravery was not created by the nominee's use of poor judgment or procedure.

b. Silver Medal of Valor. The Office of the Sheriff's second highest award for valor. It is awarded in recognition of acts involving great personal risk, and is merited when the following elements exist:

Where the nominee manifests outstanding bravery in the performance of duty under circumstances not within the provisions required for a Gold Medal of Valor.

Where the nominee risks his or her life with full and unquestionable knowledge of the danger involved, or where a reasonable person would assume his or her life was in great danger.

Where the objective is of sufficient importance to justify the risk.

Where the nominee accomplished the objective, or was prevented from accomplishing the objective by circumstances beyond his or her control.

Where the necessity for the act of bravery was not created by the nominee's use of poor judgment or procedure.

c. Bronze Medal of Valor. The Office of the Sheriff's third highest award for valor. It is rewarded in recognition of acts involving laudatory (as opposed to foolhardy) unusual personal risk. Acts of heroism warranting this award must meet all the standards of the Silver Medal, but to a lesser degree. The element of an admirable act displaying intentional bravery, coupled with knowledge of personal risk in the face of potential imminent danger must be prominent.

2. SHERIFF'S COMMENDATION.

a. This Commendation is granted in accordance with Office of the Sheriff's Policy Section 1.04.31 The Sheriff or Undersheriff awards this "Official Commendation" to employees for service which has been rendered in a manner which is a credit to the employee's personal integrity and dedication and has reflected professional pride in every employee of the Office of the Sheriff. The Awards Committee may also grant this Commendation for noteworthy acts which, in their judgment, do not fall within the criteria of the Medal of Valor. After approval by the Sheriff/Undersheriff, the Commendation will become a part of the employee's permanent personnel record.

3. BUREAU ASSISTANT SHERIFF'S COMPLIMENTARY REPORT.

a. This Commendation or letter of appreciation is granted in accordance with Office of the Sheriff Policy Section 1.04.31. The Bureau Assistant Sheriff or Division Commander awards this letter of appreciation to an employee who performs his/her duty in a manner showing dedication and service above that normally demanded by the Office of the Sheriff, but not meeting the qualifications necessary for a Medal of Valor or Sheriff's Commendation. The Awards Committee may also grant this Commendation for noteworthy acts which, in their judgment, do not fall within the criteria of the Medal of Valor or Sheriff's Commendation but which are deserving of a complimentary report of the incident to the Sheriff. After approval by the Sheriff/Undersheriff, the report will become a part of the employee's permanent personnel record.

4. NOMINATING GUIDELINES.

a. Time Limits. Except when specifically exempted by the Sheriff, nominations for a Medal of Valor must be submitted no later than 60 days after the occurrence of the action for which the application has been made.

b. Nominator. Nominations can be made by sworn supervisors or Deputy Sheriffs may nominate themselves.

5. SUCCESSIVE AWARDS.

a. Successive awards for Medals of Valor will be accompanied by bronze stars placed on the ribbon. A silver star will signify five awards of the same type, and a gold star 10 or more.

6. AWARDS COMMITTEE.

a. Composition. The Awards Committee will be appointed by the Sheriff and may consist of the following:

Undersheriff (Acting as the Chairperson);

One Bureau Assistant Sheriff;

One Division Commander;

Professional Standards Lieutenant;

The senior Lieutenant in the Office of the Sheriff; and

The Sergeant Major.

b. Rules. The Awards Committee will be governed by the following rules:

Four members will constitute a quorum.

Applications will be heard and voted upon separately. However, if two or more members are nominated for awards resulting from joint actions, their applications may be heard and voted upon at the same time.

Two-thirds of the members must agree upon a specific grade of award.

All applications endorsed by the Awards Committee will be forwarded to the Sheriff for approval.

7. PROCEDURES.

a. Nomination Process.

Nomination/Memorandum. The nomination must be submitted on a memorandum forwarded to the member's Division Commander or Contract Police Manager. The memorandum must describe in detail the actions of the nominee, showing how those actions fall within the criteria established by this Policy.

Review. The member's Division Commander or Contract Police Manager will review the nomination and conduct an investigation to determine if the award is warranted. If not, it shall be returned to the nominating member with the reasons for rejection.

Division Commander's Memorandum. If the Division Commander or Contract Police Manager endorses the nomination, they shall prepare a memorandum to the Sheriff requesting the type of award.

Forwarding. The Division Commander or Contract Police Manager making the recommendation must send the completed nomination package (nomination, memoranda and any supporting documents) to the Awards Committee Chairperson via the chain of command.

b. Awards Committee Meeting.

Package. After receipt of the recommended applications, the Undersheriff will send a copy of each nomination package to the members of the Award Committee at least 14 days before the meeting.

Summary. At the Awards Meeting, the Division Commander or Contract Police Manager will present to the Awards Committee a summary of the application.

The Awards Committee may call witnesses who can provide relevant information.

c. Presentation.

Presentation of awards will be made in whatever manner is deemed appropriate by the Sheriff or designee.

When circumstances dictate that a Medal of Valor has been granted and the medal award presentation cannot be made, the Sheriff/Undersheriff may grant the

receiving member the authority to wear the appropriate ribbon. In such case, the medal will be presented at a later appropriate time.

The Training Unit will be responsible for preparation of certificates and citations, will arrange for engraving of medals and will maintain a file of all awards presented.

Each medal will be accompanied by an appropriate certificate, as well as a citation recounting the circumstances or incident upon which the recognition is awarded. Each medal will be accompanied by a matching ribbon for uniform wear.

d. Display.

The Medal of Valor shall be displayed in the following manner:

- Medal for personal mounting: Gold, Silver or Bronze Star bordered by a wreath and topped with an eagle over a ribbon displaying four stars. The word "VALOR" will be raised at the top center of the star. Below that will be the title "Sheriff" and under that will be "Contra Costa County." All engraved lettering will be in black enamel. The four stars on the Gold Medal of Valor will be represented by four diamonds. The four stars on the Silver and Bronze Medal of Valor will be in black enamel.
- A Valor Ribbon, as issued by the Office of the Sheriff, will be worn on the uniform immediately above the left breast pocket on the outermost uniform garment, centered under the Sheriff's Badge. When appropriate, the Silver or Bronze Valor Award Ribbon will be worn second to the Gold. The Bronze Valor Award Ribbon will be worn second to the Silver. When all three Valor Award Ribbons have been earned, the Gold Valor Award Ribbon will be centered with the Silver Ribbon on its right and the Bronze Ribbon on its left. It shall be mandatory to wear the ribbon on the Dress Uniform and optional on the Duty Uniform.
- A suitable device or lapel pin as issued by the Office of the Sheriff is optional on non-uniform attire.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.23
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-22-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Employee of the Year/Officer of the Year**	

I. POLICY.

A. Each year selected employees of the Sheriff's Office shall be officially recognized for outstanding job performance. This program rewards meritorious service and defines goals for Sheriff's Office employees.

II. DEFINITIONS.

A. ELIGIBLE EMPLOYEES. Deputy-level peace officers and general, non-management employees.

B. OFFICER OF THE YEAR. For the purpose of this section "Officer of the Year" shall mean a Deputy-level peace officer.

C. PROFESSIONAL EMPLOYEE OF THE YEAR. For the purpose of this section, "Professional Employee of the Year" shall mean a professional employee in the following job categories: All clerical classifications, to include supervisors, administrative assistants, administrative aides, and secretary classifications.

D. TECHNICAL EMPLOYEE OF THE YEAR. For the purpose of this section, "Technical Employee of the Year" shall mean an employee in the following job categories: All non-sworn Sheriff employees not listed in Section C.

III. GENERAL.

A. DIVISION SELECTION PROCESS. Each Division Commander will select a "Professional Employee of the Year," a "Technical Employee of the Year," and a "Peace Officer of the Year" for their Division. Small Divisions with few Deputies, or professional and technical employees may elect not to choose an Employee or Officer of the Year. The Division Commanders shall advise the Sheriff's Office Selection Committee Chair, the Undersheriff, of their division nominees by the third Monday in January. The Division Commanders may employ any fair and impartial selection process which meets the following criteria:

1. The process must consider the nine behavioral traits accepted for performance evaluation.

    a. Performance

b. Job Knowledge

c. Judgment

d. Relations

e. Communications

f. Initiative

g. Dependability

h. Attitude

i. Demeanor

2. Nominations should be solicited from first-line supervisors and employees of the eligible rank. Division Commanders must select individuals who have provided direct or indirect benefit to the Office of the Sheriff and the community. The employee's efforts should be meritorious and recognizable and the selection should not be made solely on popularity among peers or supervisors.

B. SELECTION OF THE OFFICE OF THE SHERIFF'S PROFESSIONAL, TECHNICAL EMPLOYEE AND PEACE OFFICER OF THE YEAR. The Sheriff shall appoint an Office of the Sheriff's Selection Committee to evaluate Division selections.

1. The Selection Committee will normally consist of the following:

a. Undersheriff

b. One Lieutenant

c. One Sergeant

d. One Professional or Technical Manager

e. One Professional employee

f. One Technical employee

g. The previous year's "Professional Employee of the Year"

h. The previous year's "Technical Employee of the Year"

i. The previous year's "Peace Officer of the Year"

j. The President of the Deputy Sheriff's Association

As written, there are five sworn members and five non-sworn members. The Undersheriff would be the tie breaker, if needed.

2. The Selection Committee will only consider those nominees whose performance has been properly documented as superior and deserving of specific recognition. Both written and oral presentations will be considered for the purpose of determining the Office of the Sheriff "Professional Employee of the Year," "Technical Employee of the Year," and "Peace Officer of the Year." Responsibility for articulation of specific examples of meritorious service rests within the employee's Division Commander. The Committee will solicit oral presentations from the Bureau Assistant Sheriff or designee.

3. The same basic criteria used for the Division selection will be used for selection of the "Professional Employee of the Year," "Technical Employee of the Year," and "Peace Officer of the Year." Time constraints usually do not allow additional input from nominees' peers and in the absence of other expedient means, length of service may be considered to break a deadlock.

4. The Committee will make a recommendation to the Sheriff by February and will arrange for the award presentations. The Sheriff will make a final selection from the nominees, and subsequently make the award presentations to the selected employees.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.31
	RELATED ORDERS: CCCSO 1.05.92.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Commendations**	

I. POLICY.

A. A commendation or letter of appreciation is a recognition of the worth for a particular effort. This recognition shall be made part of the employee's department personnel file.

II. DEFINITIONS.

A. OFFICIAL COMMENDATION. A letter of commendation from the Sheriff/Undersheriff which displays the seal of the Office of the Sheriff.

III. GENERAL.

A. A commendation or letter of appreciation is an expression of praise which applauds the manner and extent of services rendered. Such letters may be generated by and/or received by any employee of the Contra Costa County Office of the Sheriff.

1. The Office of the Sheriff does not draw a distinction between a letter of appreciation and a commendation.
2. Copies of all letters of appreciation and commendations received from the Office of the Sheriff, the public and other agencies shall be placed in the employee's personnel file. This makes the letters available to:
   a. The Sheriff/Undersheriff
   b. Transfer and selection committees
   c. Other agencies (if a waiver is signed)
3. The original letter shall be given to the employee to whom it is directed. Such letters will be accompanied by a brief recognition in writing from the employee's Division Commander. This may be a short handwritten note. A copy of the letter may be posted as well.
4. The Sheriff/Undersheriff has the option of awarding an "Official Commendation" in cases where service has been rendered in a manner which is a credit to the employee's personal integrity and dedication and has reflected professional pride in every employee of the Office of the Sheriff.

a. An Official Commendation will be on the Office of the Sheriff letterhead, signed by the Sheriff/Undersheriff and will display the seal of the Office of the Sheriff.

b. The Official Commendation will be reported fully in the Office of the Sheriff newsletter.

5. Letters of appreciation and commendation or praise will be reported in the Office of the Sheriff newsletter by listing the names of recipients. If the number received is small, each may be accompanied by a brief description of the surrounding circumstances.

B. Intra-office commendations or letters of appreciation shall:

1. Be written on an inter-office memo directed to the employee via the Sheriff/Undersheriff;

2. Outline the circumstances surrounding the employee's actions and specifically describe the exemplary employee performance being praised.

C. Employees wishing to initiate a letter of appreciation or commendation for a person outside the Office of the Sheriff will follow the procedures in accordance with Office of the Sheriff Policy Section 1.05.92, Official Correspondence/Communication.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.32
	RELATED ORDERS: Contra Costa County Personnel Regulations, Part 10.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Promotional Ceremony**	

I. POLICY.

A. Office of the Sheriff employees receiving a promotion shall be recognized during a promotional ceremony to officially honor the promoted employee's achievement.

II. DEFINITIONS.

A. PROMOTION. The act of being raised in position or rank as defined by the County Personnel Regulations.

III. GENERAL.

A. PROMOTIONAL ACHIEVEMENT. The Sheriff recognizes the importance of an employee promotion which may be a once in a lifetime occurrence of great personal significance to the employee. The promotional ceremony allows the Sheriff the opportunity to personally congratulate the promoted employee on their achievement and officially notify the rest of the Office of the Sheriff and the public of the event.

1. Promotion. Promotions are important, not only to those receiving the honor, but to all who share in the activities of their division. Circumstances do not always allow lengthy notification of a promotional process. Therefore, the Sheriff will normally make the promotion as soon as the decision to promote is made. The employee will receive as much advance notice as circumstances allow and may have family and friends attend. Available administrative personnel will also be present to witness the event.

2. Promotional Ceremony. At the time of a promotion, a future date and place will be set for the promotional ceremony. Normally, such dates will be set quarterly and will be announced well in advance. The location will be in the Board of Supervisors' Chambers. Family, friends and off-duty employees are encouraged to attend. Available on duty Command Staff and other employees with approval of their Supervisor may attend. Photographs will be taken and a copy provided to the promoted employees.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.33
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Employee Recognition Awards**	

I. POLICY.

A. The purchase at Office of the Sheriff expense of plaques, trophies or awards associated with Office of the Sheriff activities other than for recognition of Deputy, Dispatcher or General Employee of the month must be authorized by the Sheriff or Undersheriff.

II. GENERAL.

A. A request must be forwarded via the chain of command to the Sheriff or Undersheriff to receive authorization for the purchase at Office of the Sheriff expense of plaques, trophies or awards associated with department activities other than for recognition of Deputy, Dispatcher or General Employee of the month. The following information should be included in the request:

1. The employee's name;
2. A brief statement regarding purpose of recognition, as well as date of anticipated presentation; and
3. A description and cost of plaque.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.34
	RELATED ORDERS: CCCSO 1.04.71, 1.04.12, 1.04.21, 1.04.22.	
ISSUE DATE: 2-1-2006 REVISION DATE: 11-18-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Employee Benefits and Assistance	SUBJECT: Sergeant Recognition and Designation as a Sheriff's "Sergeant Major"	

I. POLICY.

A. The Office of the Sheriff shall designate and recognize the Sergeant who has the most seniority at the rank of Sergeant. This individual shall wear the rank, and hold the honorary title of "Sheriff's Sergeant Major."

II. GENERAL.

A. It has long been recognized that a Sheriff's Sergeant is an integral part of this Organization and is key to the overall success of the daily operations in law enforcement. The Sergeant's professionalism, dedication to duty, and ability to elicit the support and respect of superiors, peers and subordinates is paramount in the completion of any assignment or task. These abilities are essential in shaping the future of the Office of the Sheriff. The recognition of the individual who has been able to diligently conduct these duties for a career, serves as a reminder to us all of the effectiveness and importance of the Sheriff's Sergeant.

III. PROCEDURE 1.

A. OFFICE OF THE SHERIFF RESPONSIBILITIES.

1. The Sheriff's administrative clerical staff shall determine which active Sergeant has the most Office of the Sheriff's seniority at the rank of Sergeant and provide this information to the Sheriff and Undersheriff on an annual basis.

2. The Sheriff or designee shall schedule a date with the Training Unit for an official ceremony recognizing this individual as the Sheriff's Sergeant Major. The designated Sergeant will be advised of this date via memo.

3. The designated Sergeant will be authorized to use this honorary title and wear the rank of Sheriff's Sergeant Major, until such time as the Sheriff designates another person as Sergeant Major, the Sergeant retires or is promoted to the next rank.

4. The Sergeant Major designation is an honor that does not include any additional pay or benefits.

IV. PROCEDURE 2.

A. SERGEANT MAJOR'S UNIFORM.

1. The Office of the Sheriff Sergeant Major insignia is characterized as three gold chevrons over three gold rockers, and with a gold star in the center on a black background. Gold Sergeant Major insignia may be worn on the collar in lieu of the cloth. The Sergeant Major insignia shall be the rank commonly recognized as the U.S. Army insignia of "Sergeant Major." This insignia shall be worn in the same location as the standard Sergeant insignia described in Office of the Sheriff Policy Section 1.07.22, Rank and Service Insignia.

2. The Office of the Sheriff Sergeant Major insignia is characterized as three gold chevrons over three gold rockers, and with a gold star in the center on a black background. Gold Sergeant Major insignia may be worn on collar in lieu of the cloth insignia worn on the short sleeve uniform shirt.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.35
	RELATED ORDERS: California Government Code; County Employee Memoranda of Understanding; Contra Costa County Personnel Management Regulations, Part 10; CCCSO 1.07.22.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-20-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Sheriff's Corporal Non-Promotional Rank**	

I. POLICY.

A. The Office of the Sheriff recognizes the extraordinary value of a Deputy Sheriff who is an exceptional employee. These individuals may choose not to promote but serve most or even their entire career at the Deputy level. Their displayed skills and experience often make them deserving of special recognition. Whenever possible the Office of the Sheriff seeks to identify this kind of invaluable employee.

II. GENERAL.

A. DISTINGUISHING CHARACTERISTICS. Under direction, a Corporal working in any of the four Bureaus, or within the Executive Office, will perform assignments primarily oriented to specialized law enforcement activities which may include, but are not limited to, the following:

1. Performing as a Field Training Officer;
2. Providing a "unique" skill or ability with a high degree of complexity and independence;
3. Providing specialized training for other employees;
4. Displaying extraordinary professional passion and commitment;
5. Being frequently viewed by either peers or supervisors as performing above the norm.

B. SELECTION AND TENURE. Candidates for the rank of Corporal must possess strong leadership traits; a high degree of maturity, integrity and good judgment; and the ability to keenly observe and provide detailed, accurate descriptions. Candidates must demonstrate effective oral and written communication skills and work effectively under pressure or stress.

1. Incumbents performing specialized law enforcement assignments in the position of Corporal do so exclusively at the discretion of the Sheriff.
2. Permanent status in this position is not obtainable.

3. Designated Corporal positions will normally not exceed 5% of authorized Deputy Sheriff strength, both department wide and at the division/work unit level, such as contract cities and the like.

4. All Corporal positions will be selected annually to determine those employees that should obtain the Corporal rank.

    a. A Corporal differs from a Sheriff's Sergeant, the next higher level, in that a Sergeant will have full, first-line supervisory responsibility and is a permanent status, not requiring annual re-selection.

5. The Corporal designation is not a supervisory position, and Corporals will not be routinely assigned as acting Supervisors. However, a Corporal may on occasion be assigned as an Acting Sergeant in the same manner that another Deputy may be so designated. Corporals may be assigned lead responsibilities to include, but not limited to, providing technical and professional direction to less experienced Deputies. The Corporal may frequently be called upon to adapt quickly and efficiently in emergency situations to control a situation until the arrival of a Supervisor.

C. EXAMPLES OF DUTIES. The information listed below is meant to serve as a guideline for potential job duties or responsibilities which may be completed by a Corporal. This list is neither inclusive nor exclusive, but indicative of several types of duties performed. Consequently, the following duties do not reflect essential job functions for any given assignment as a Corporal.

1. Performs work in specialized law enforcement activities such as:

    a. Crime Analysis

    b. Special Investigations

    c. Administration

    d. Training

    e. School Resource

    f. Community Relations

    g. Intelligence

    h. Planning and Research

    i. Warrant / Fugitive

    j. Civil

    k. Detention

    l. Patrol

2. May be assigned as a Field or Facility Training Officer to train new employees in various assignments.

3. May share specific skills or provide unique and special training.

4. May be utilized in the role of “Mentor” for employees who have completed initial training and are now ready to develop career lasting, positive work habits and ethics.

5. Organize a crime scene to ensure the identification, preservation, and collection of evidence. He/she may conduct interviews, ascertain facts or interrogate suspects involved in criminal activity.

6. Develop expertise and stay informed regarding the operations or whereabouts of known violent criminals or their associates, hang-outs, modus operandi, and other pertinent information.

7. Coordinate the exchange of crime related or general information. Develop and maintain unique relationships with the general public.

8. May possess unique or unusual experience which would qualify him/her as an “expert witness” for criminal prosecution(s).

9. May organize various groups of people involved in community policing, civil demonstrations, labor disputes or recreational community gatherings.

10. May be responsible for writing search warrants and preparing briefings for the service of search warrants or press release(s) regarding unusual events.

D. MINIMUM QUALIFICATIONS.

1. Experience: Should have at least four (4) years of full-time, paid professional law enforcement experience, which should include experience in both the Custody and Field Operations Bureaus.

2. Certification: Should have possession of a valid Intermediate Certificate issued by the State of California, Department of Justice, the Commission of Peace Officer Standards and Training.

3. Education: Should have continuing job-related qualification training through P.O.S.T. or PORAC - approved advanced officer seminars or accredited college, working toward a professional expertise. Job related training must be attained during the course of employment with the Sheriff’s Office.

4. Character: Should have a commendable history of above-average employee performance, with a satisfactory record of reliability in the fields of attendance and Office contributions.

5. Physical Fitness: Should maintain a professional uniformed appearance and an excellent level of physical fitness.

6. Sick Leave: Should have a minimum of 60% of sick leave accruals.

E. AUTHORIZED INSIGNIA. Following authorization for assignment as a Corporal, Training Division will issue the employee the following insignia:

1. Black and gold two-stripe chevrons to be worn on the sleeve of each arm of the uniform shirt, centered under the Sheriff’s Office patch.

   a. Alternate insignia, (gold two-stripe metal collar devices) may be authorized at the discretion of the Division Commander,

however, the employee may not wear both the sleeve and collar insignias on the same uniform shirt.

2. Immediately upon official notification that the employee is no longer required as a Corporal, the employee must remove the insignia and will no longer be entitled to wear such insignia unless re-selected via official notification.

F. INTER-DIVISION TRANSFERS. Transfers from one Division to another, whether voluntary or otherwise, may cancel the employee's status of Corporal and the authorization to wear the insignia if specialized skills are no longer needed in the new assignment, as determined by the Division Commander of the Division into which the employee is transferred. Employees who have not retained the Corporal rank due to a transfer may appeal the decision to the Bureau Assistant Sheriff within which the newly assigned Division exists.

G. PROFICIENCY PAY. Incentive pay will be authorized for employees who are designated a Corporal.

1. The position and accompanying proficiency pay must be recommended by the employee's Bureau Assistant Sheriff and approved by the Sheriff or his/her designee.

2. All proficiency pay for Corporal duties will cease upon notification in writing from the employee's Bureau Assistant Sheriff that service as a Corporal is no longer required or that he/she was not re-selected to the position.

3. The amount of proficiency pay will be determined by the current DSA MOU agreement. (An employee cannot receive incentive pay for both Training Officer and Corporal at the same time.)

H. SENIORITY ISSUES. The rank of Corporal is a non-promotional position and is authorized at the discretion of the Sheriff. A Corporal will retain the same seniority as his/her seniority as a Deputy Sheriff.

1. This rank will in no way alter or change the manner in which the Corporal uses his/her existing seniority rights or benefits.

2. Corporal shift sign-ups and vacation sign-ups shall remain inclusive in the Deputy Sheriff's shift and vacation sign-ups. Separate sign-up for either shifts or vacations will not be authorized under any circumstances.

I. TRAINING. Upon assignment to the rank of Corporal, the employee may be scheduled to attend the following schools:

1. P.O.S.T. certified Field or Facility Training Officer School; and/or

2. P.O.S.T. certified Supervisor School.

J. SELECTION PROCESS.

1. The Sheriff's Executive Team shall meet once annually to review the number of authorized Corporal positions department-wide, and select candidates for recommendation to the rank of Corporal.

a. The Sheriff or his/her designee must approve the final selection.

b. The Deputy Sheriff's Association may have a non-voting representative present during the E-Team selection process.

2. Bureau Assistant Sheriffs shall nominate the candidates from their Divisions to be considered by the E-Team.

   a. Assistant Sheriffs shall consider qualified candidates based upon the minimum requirements prescribed and after a thorough review of the candidates' evaluations, report writing skills, Supervisor recommendations, special recognitions (Employee of the Year, letters of commendation, etc).

3. Deputies may also nominate themselves or peers. Nominations are to be forwarded via chain of command to the Bureau Assistant Sheriff for consideration.

4. Nominations shall be submitted in writing, on Sheriff's memoranda, and will include specific information pertaining to the candidate's minimum qualifications.

5. A physical fitness assessment may be required as part of the selection process.

III. PROCEDURE 1.

A. SHERIFF'S OFFICE RESPONSIBILITY.

1. The Sheriff or his/her designee will authorize the appointment to the rank of Corporal via a memorandum. A copy of the selection memo will be routed to the Payroll Unit.

2. The Division may develop a written examination covering the specific unique skills required for the "Technical Specialist" position. The candidate for Corporal must attain a passing score of at least 70%.

3. Each November, Bureau Assistant Sheriffs will review the number and status of each Corporal in his/her command. Bureau Assistant Sheriffs must nominate those Corporals to be recommended for re-selection for the subsequent year.

   a. Incumbents serve at the discretion of the Sheriff and will not be automatically re-selected as a Corporal.

4. Verification of minimum requirements shall be the sole responsibility of the Bureau Assistant Sheriff.

5. Upon conclusion of his/her review to verify the minimum requirements, the Bureau Assistant Sheriff will provide the Undersheriff a memorandum identifying the employee(s) he/she recommends for the rank of Corporal.

6. The Undersheriff will be responsible for scheduling the meeting of the E-Team for the selection process and will ensure all background information is available.

7. The Sheriff or his/her designee retains final approval of all appointments to the rank of Corporal.

8. Employees will be notified in writing when their services as a Corporal are no longer needed.

   a. The letter should be on standard Office of the Sheriff letterhead and signed in accordance with Office of the Sheriff Policies and Procedures.

   b. The content of the letter shall inform the employee that his/her services as a Corporal are no longer required or that the employee has not been re-selected as a Corporal.

      - This will normally be automatic upon transfer or reassignment unless the Corporal status is continued by Office of the Sheriff letter authorizing the rank in the new assignment.
      - Delivery of the letter(s) to the employee will normally be the responsibility of the Division or Unit Commander.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.41
	RELATED ORDERS: Health & Safety Code Section 1797.188; CCCSO Directive; Appendix 10, Bloodborne Pathogens Exposure Control Plan.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Employee Health Screening**	

I. POLICY.

A. Medical screening is available to employees, upon request, following exposure to blood or other bodily fluids in order to provide early detection of infectious diseases.

II. GENERAL.

A. BIOLOGICAL AGENT SCREENING.

1. Employees are trained in a number of techniques to reduce the chance of exposure to infectious disease through contact with physiological specimens. However, accidents such as needle sticks, cuts by bloody glass or blood contact on an open wound do occur in the course of duty. Of primary concern for Office of the Sheriff employees are Hepatitis and the AIDS virus. In addition, there are other potential infectious agents which may be of concern.

2. Any employee who experiences a work related body fluid to body fluid exposure (through needle sticks, cuts by infected material, spilling blood on a wound, etc.) shall report the exposure to their Supervisor to ensure proper documentation and follow-up.

3. The Supervisor will complete the Supervisor's Report of Occupational Injury or Illness (Form AK30) and forward it through the appropriate channels.

4. A copy of the report will be reviewed by a County Health Services physician. Employees should be referred immediately for health evaluation and not wait for paperwork to reach a County Health Services physician. The physician, after review of the incident, may request the employee to submit to baseline tests and/or screen test for Hepatitis, AIDS or another infectious disease.

5. Testing is strictly voluntary and is offered for the protection and peace of mind of the employee.

B. NOTIFICATION OF EXPOSURE.

1. In addition to the above, there are other potential types of exposures to infectious disease. They include:

   a. Blood from a subject on skin, eyes or mouth.

   b. Contact of skin with another's feces or urine.

   c. Unprotected mouth to mouth breathing (CPR).

   d. Contact with a subject's seminal, vaginal or other body fluids.

   e. Bites.

   f. Punctures.

2. The Supervisors of employees who are exposed to one of the above situations are required to report the possible exposure. A Notification of Possible Disease Exposure Form (Contra Costa Health Services - Public Health Form No. EMS-6) is available for this purpose in all County Emergency Departments.

3. The receiving hospital will forward the completed form to the County Health Officer. The Health Officer will then notify the employee if the person with whom the contact was made was found to have a reportable communicable disease.

4. The employee may contact the Health Department for recommendations regarding prevention or treatment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.42
	RELATED ORDERS: Administrative Bulletin 322; Occupational Health Services, Inc.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Employee Assistance Program**	

I. POLICY.

A. The Contra Costa County Office of the Sheriff is concerned about the welfare of employees. The Employee Assistance Program is provided to ensure employees and their families of confidential assistance available when needed for personal problems.

II. GENERAL.

A. EMPLOYEE ASSISTANCE AND COUNSELING PROGRAM.

1. The Office of the Sheriff has contracted with Managed Health Network for the Employee Assistance Program (EAP).

2. Types of Assistance. The program offers assistance to employees and their families on a range of human problems: marriage, substance abuse, alcoholism and problem drinking, financial management, family/child difficulties, child care, elder care, emotional stress and other personal problems.

a. Scope of Assistance.

- The program includes brief counseling, problem identification, discussion of options to resolve the problem, resource information and referral to outside resources if further assistance is needed.
- The contract provides for up to twelve visits per fiscal year for a total family unit, at the discretion of the EAP provider. The visits can be for individual counseling, information or referral. If there is a need for continued specialized professional help, the cost paid by the employee depends on the specific referral resource chosen by the employee.

b. Participation.

- Employees and/or their families may call the Employee Assistance Program for an appointment.

- Supervisors or Managers may refer employees to the Employee Assistance Program through the Director of Personnel Services who has been designated the Employee Assistance Coordinator. Such referrals are to be made only when it is determined an employee's work performance fails to meet minimum standards and only for personal or medical/behavioral problems affecting job performance, or when a Supervisor believes that an employee's personal problems may be interfering with work performance.
- Supervisors and Managers shall require referrals as outlined in Office of the Sheriff Policy Section 1.06.62, Police Involved Fatal or Serious Injury Incidents Policy.

c. Voluntary Referrals.

- Employees may make appointments for off-duty time. The County will not be advised of such appointments.
- Employees may schedule appointments using accrued vacation, accrued compensatory time, or if necessary, sick leave. If sick leave is used, the employee must authorize the program to release attendance verification as required by sick leave procedures. Use of sick leave will be denied if the employee refuses to authorize attendance verification.
- Except as authorized for attendance verification, strict confidentiality will be maintained about employee problems, sources, treatment and/or disposition.

d. Management Referrals.

- If employee appointments conflict with regularly scheduled work hours, counseling may be attended on work time.
- The EAP will report the employee's attendance to the Sheriff's Office Personnel Officer. No details of the employee's personal life or medical/behavioral problem diagnosis will be revealed.
- The employee may sign a release allowing general information about their progress and their work performance improvement plan to be reported to the Office of the Sheriff.

e. Management Encouraged Voluntary Referral.

- Supervisors/Managers may urge employees to attend counseling:
  - Should negative changes in the employee's work habits be noted; or

- Should the employee mention a problem that is apparently beginning to affect work performance.

- Attendance may be accomplished off-duty or with use of vacation, accrued compensatory time or sick leave.
- At the Division Commander's discretion, employees may attend counseling on work time.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.04.43**
	RELATED ORDERS:	
ISSUE DATE: 4-1-2014 **REVISION DATE:** **8-30-2016**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Critical Incident Stress Management**	

I. POLICY.

A. PURPOSE AND SCOPE. The Contra Costa County Office of the Sheriff recognizes that many of its employees may be exposed to stressful and/or traumatic events. These incidents may result in stress-related symptoms that can adversely affect their personal well-being and ability to perform their assigned duties. The Office of the Sheriff has established standard procedures related to critical incidents and other traumatic events to provide employees with professional assistance in dealing with the potential consequences of those events.

B. The purpose of the Critical Incident Stress Management (CISM) program is to provide a peer support system for employees, enabling them to more effectively manage symptoms of stress resulting from personal or professional critical incidents or traumatic events. The Office of the Sheriff will follow the model developed by the International Critical Incident Stress Foundation.

II. OBJECTIVE.

A. We are dedicated to providing employees with continued training and support in the area of stress management, so that such incidents do not adversely impact a career. This philosophy is kept vital through our commitment to provide intervention and structured support activities, which educate personnel and their families about stress and stress management. Such activities can occur prior to an incident in the form of training; during an incident to identify early warning signs of stress-related symptoms; or after an incident in the form of debriefings and follow-up referrals.

B. One of our goals is to keep the mental health and personal well-being of our employees as strong as possible by providing peer assistance through difficult times. The objective is to mitigate the likelihood, or the length, of stress reactions that may arise out of exposure to a single critical or traumatic incident, or cumulative stressful incidents.

C. The CISM program is an adjunct to professional medical, psychological, spiritual or referral services. It is not intended to replace the counseling or any mental health benefit provided by the employees' health plan.

D. It shall be the policy of the Contra Costa County Office of the Sheriff to provide departmental employees with voluntary and confidential resources of support and assistance relating to personal, work, and/or critical incident stress.

III. CORE COMPONENTS.

A. Pre-incident preparation and education. This includes stress management education, stress resistance, and crisis mitigation training for both individuals and organizations.

B. Strategic planning, psychological triage and organizational consultation for purposes of assessment of needs of operational personnel, their work units and members of their families.

C. Large Group Crisis Intervention and Consultation including:

- Demobilizations for large group rescue or recovery response
- Respite/Rehab Sectors for disaster first responders
- Crisis Management Briefings (CMB)

D. Small Group Crisis Intervention and Consultation including:

- Defusing (small group crisis intervention with immediate working unit)
- Critical Incident Stress Debriefing (CISD) refers to the "Mitchell model" *(Mitchell and Everly, 1996)* 7-phase, structured group discussion, usually provided 1 to 10 days post crisis, and designed to mitigate acute symptoms, assess the need for follow-up, and if possible provide a sense of post-crisis psychological closure.
- Small group Crisis Management Briefing (CMB).

E. One-on-one crisis intervention or psychological support throughout the full range of the crisis spectrum.

F. Family critical incident stress management (CISM).

G. Pastoral crisis intervention and chaplaincy.

H. Follow-up and referral mechanisms for assessment and treatment, as necessary.

IV. CONFIDENTIALITY.

A. One of the most important responsibilities of the Peer Support Team is the promotion of trust, anonymity and confidentiality for employees who seek assistance from the Peer Support Team. Communication between a Peer Support Team member and an employee is considered "privileged" by the department except for matters that involve violations of the law or misconduct. Members of the Peer Support Team shall operate under the following guidelines:

(a) It shall be mandatory that Peer Support Team members maintain strict confidentiality in matters discussed in debriefings, defusings, one-on-one meetings, and training, except as provided in subparagraph (1), below.

(1) Types of information that are not protected by confidentiality include:

(a) Information about child, spouse, or elder abuse per Penal Code section 11165.

(b) Threats of suicide or homicide.

(c) Admission of criminal conduct.

(d) Threats to harm another person.

(e) Witness to a crime.

(f) Policy and statutory violations, other misconduct.

(2) Such matters shall be referred up the chain of command where appropriate. Confidentiality of communications shall be expected with other members of this Office and members of the public.

(b) Peer Support Team members shall not discuss debriefings, whom has been debriefed, or provide any information about the team's activities except in the instances listed above or incidents of serious misconduct after consultation with the Peer Support Team coordinator, liaison and/or mental health professional.

(c) The Peer Support Team is not an investigative unit of the Sheriff's Office; therefore, it will not be the policy of this agency to question Peer Support Team members, or any other participant involved in a CISM debriefing or defusing of a critical incident, concerning the content of such discussion, except as required by law, and except as to the matters set forth in subparagraph (1) a-f, above.

V. DEFINITIONS.

A. TRAUMATIC EVENT**:** Any event that may temporarily overwhelm an individual's usual methods of coping or produce unusually strong reactions. It is important to note an individual's reaction to a traumatic event is individual-specific based on the totality of circumstances in that individual's life (i.e., the degree of involvement, cumulative events, personal likeness, children, etc.).

B. INTERNATIONAL CRITICAL INCIDENT STRESS FOUNDATION (ICISF): ICISF is a worldwide organization dedicated to the prevention and mitigation of disabling stress through education, training, and support services for all emergency services professions.

C. PEER SUPPORT TEAM (PST): PST is a partnership between mental health professionals, clergy and Sheriff's Office employees, who are interested in preventing and mitigating the negative impact of acute stress on them and their peers.

D. CISM: Critical Incident Stress Management.

E. DEBRIEFING, DEFUSINGS AND/OR DEMOBILIZATIONS: Different types of meetings designed to mitigate the psychological impact of a traumatic event, prevent the subsequent development of a post-traumatic stress disorder, and serve

as an early identification mechanism for individuals who may require additional support or mental health follow-up. Debriefings, Defusings, and Demobilizations are structured group meetings or discussions during which personnel are given an opportunity to discuss their thoughts and reactions concerning a traumatic event in a controlled environment under the direction of a mental health professional and peer support personnel.

F. DEBRIEFING: A debriefing is a mental health guided, peer driven, group discussion of a traumatic event for directly involved first responders. It is a process that should generally be conducted within 72 hours of the traumatic event. The debriefing usually lasts two to three hours depending on the number of participants. It is not an investigative inquiry.

G. DEFUSING: A defusing is a shortened version of the debriefing generally lasting less than one hour. A defusing is a peer guided discussion that should take place as soon as possible after the traumatic event and before involved personnel are released (within 8 hours).

H. DEMOBILIZATION: Demobilization is a brief informational session applied when operational units have been released from service at a major incident/disaster that requires unusually large numbers of personnel or lengthy periods of deployment.

I. FOLLOW-UP: Phone calls and/or home visits, when appropriate, to monitor the progress and well-being of the employee(s) and family members. Referrals to the appropriate resources can be initiated during a follow-up.

J. PEER ASSISTANCE: Peer assistance is process by which trained personnel provide emotional support and referrals for a colleague during a crisis or when they are under stress. Generally, peer assistance is sought by the employee in need, or suggested by the employee's peer(s) or supervisor. Peer assistance does not replace the need for structured group intervention following trauma. Peer assistance or support is a necessary adjunct to professional mental health guidance and leadership in trauma support services. Peer assistance should not replace the department's contracted Employee Assistance Program (EAP).

K. EMPLOYEE ASSISTANCE PROGRAM (EAP): The Contra Costa County Office of the Sheriff Employee Assistance Program is a consulting/counseling service for a variety of personal and/or work related issues.

VI. CALL-OUT PROTOCOL FOR PEER SUPPORT TEAM.

A. Trauma takes a variety of forms and cannot be accurately or exhaustively quantified in description. However, certain events are of such magnitude that they should be considered disruptive to nearly anyone involved. For purposes of the Office of the Sheriff response criteria, those incidents include, but are not limited to:

- Line of duty death.
- Officer involved shootings.
- Serious line of duty injury.
- Suicide of an employee.

- In custody death
- Employee death.
- Disaster/multi-casualty incidents.
- Injury or death to civilian as a result of operational procedures.
- Unusual or violent death of a child.
- Any other incident determined by the program liaison and/or mental health professional to warrant a call-out.

B. When the above listed incidents occur, the supervisor/Watch Commander will see that the Peer Support Team liaison is notified. The mental health professional and clergy shall be contacted immediately following any of the above-defined incidents. The need for group intervention or immediate peer support will be accessed at that time.

VII. PROGRAM PROCESS.

A. REQUEST FOR PEER ASSISTANCE: Lists of the names of Peer Support Team members will be available on the Office of the Sheriff's Personnel Administrative Record Keeping System ("SPARKS"). Any Sheriff's Office employee in need of peer assistance may select a Peer Support Team member of their choice.

B. CISM ACTIVATION: In the event that a critical incident occurs, the supervisor of the employee should notify Dispatch, who in turn will contact the peer support liaison. If the peer support liaison is not available, a call will be placed to a team coordinator(s) or the designated mental health professional, as soon as possible, until notification is made. The peer support liaison and the mental health professional will then confer with the supervisor and assess whether or not the incident warrants the need for a formal on-scene response or group crisis intervention. The final decision as to whether a debriefing or defusing is warranted will be made by the mental health professional in collaboration with the Peer Support Team liaison.

(a) When making the notification, the supervisor or manager should attempt to utilize an on-duty Peer Support Team member in the absence of the Peer Support Team coordinator or liaison.

(b) In the unlikely event that the supervisor and Peer Support Team liaison disagree as to whether or not a debriefing or defusing is warranted, the peer support liaison and/or mental health professional will make the determination. In any event, when an employee requests intervention, that request will be granted.

1. This program is dependent upon the identification of all critical incidents, large and small, to help reduce the emotional impact and to avoid the effects of post traumatic stress.

2. The critical incident stress debriefing should include any sworn and/or non-sworn personnel directly involved in the incident. If the debriefing to be conducted is for an incident described in this order, attendance will be encouraged, but not required, for those involved. Active participation

in the discussion is not a requirement. Anyone not directly involved in the incident, may not attend the critical incident stress debriefing. Peer support personnel will be in attendance.

3. Critical incident stress defusing may be used to determine the need for debriefing and/or other services, and are typically conducted by a Peer Support Team member. Defusing will be offered to all employees to assist in identifying any stress or trauma experienced during the incident and should be held as soon as practical after the incident.

C. REFERRALS TO MENTAL HEALTH PROFESSIONALS: Members of the Peer Support Team are trained to be effective listeners and to provide feedback, clarify issues, and assist employees in identifying options for problem resolution; however, they are not therapists. When problems are acute or appear to require specialized assistance, information on referral resources will be made available to employees.

D. A list of available professionals shall be available to the team coordinator and liaison to assist employees in making a choice if a referral is made. This list should include EAP providers as well as private practice professionals.

VIII. TEAM COMPONENTS: DESCRIPTION AND RESPONSIBILITIES.

A. The Peer Support Team will be comprised of Office of the Sheriff employees who have been selected by their peers. The team members will receive specialized training in assisting peers and their families in dealing with the adverse psychological effects of a traumatic incident.

B. MENTAL HEALTH PROFESSIONAL

(a) A licensed mental health professional(s) under County contract with specific expertise, experience, education, and training in the field of trauma services with special emphasis on Office of the Sheriff personnel.

(b) The role of the contract mental health professional (MHP) is to provide team leadership and training and to consult as requested with command and supervisory staff regarding the psychological well-being of employees and responders. In addition, the mental health professional will conduct all group crisis intervention services and assess the need for follow-up referrals. The contracted MHP shall provide psychological oversight and leadership for the Peer Support Team and provide initial and on-going peer support training. In partnership with members of the Peer Support Team the MHP will prepare and provide training for other members of the department as requested.

C. TEAM LIAISON

(a) A Lieutenant, appointed by the Sheriff will act as the primary liaison between the team, the mental health professional and management staff.

(b) The liaison will be responsible for the team budget, authorizing overtime as necessary, approving team deployment in extraordinary circumstances, and maintaining team training standards.

i. Overtime will be approved by the team liaison or on-duty Watch Commander.
ii. Overtime will be charged to respective team member's bureau of assignment.

(c) Supervise and coordinate Peer Support Team applicants.

D. TEAM COORDINATORS

(a) The role of the team coordinator is to manage, maintain and coordinate the program. They will act as liaison between Peer Support Team personnel, outside resource persons and the organization.

(b) Team Coordinators will be selected by the Team Liaison and approved by the Sheriff.

(c) Coordinate training of Peer Support Team personnel.

(d) Will assist in arranging and conducting all group crisis interventions, assess the need for follow-up referrals, and assist in teaching stress management.

(e) Create a list of qualified referral sources for the use of the Peer Support Team personnel. Referral sources will be researched fully by the team liaison prior to being included on the list.

(f) Will be responsible for determining the continued training needs of the Peer Support Team and for the scheduling of initial and continuing training.

(g) Will be responsible for applying for certification through ICISF once the Peer Support Team membership has met the required level of training.

E. TEAM MEMBERS

(a) Will participate as requested in group crisis interventions, assist in assessing the need for follow-up referrals

(b) Will provide one-on-one peer assistance to affected employees at the request of either the individual employee, or as referred by a supervisor or the team coordinator.

F. CHAPLAIN

(a) The Chaplains will be trained in Critical Incident Stress Management and Pastoral Crisis Intervention and attend quarterly update team meetings along with their peer counterparts.

(b) Chaplains will assist, when requested by the team coordinator and/or liaison, in group crisis interventions, follow-up referrals, and to assist in teaching stress management.

IX. RECORD KEEPING.

A. Record keeping will be for the utilization of statistical information only. Names or identification numbers of employees will not be used. Peer Support Team members shall keep a monthly tally of the number of contacts and hours involved in peer assistance. No identifying information regarding peer contact or group debriefing services will be collected.

B. The Peer Support Team activity summary shall be submitted to the team coordinator by the tenth day of the following month and then forwarded to the team liaison.

X. TEAM MEMBER SELECTION.

A. When an opening occurs for team membership, a notification will be made to all sworn and non-sworn employees by the Chief of Management Services who is responsible for preparing the vacancy announcement and distributing copies to all Divisions.

B. Qualified and interested employees must submit to the Chief of Management Services a letter of interest detailing previous experience, specific qualifications, training and education, and express a voluntary desire to be a team member for a minimum commitment of three years.

C. Qualified and interested employees must additionally have their immediate supervisor submit a letter of recommendation to the Chief of Management Services.

D. During the selection process for team membership, selections will be made utilizing the following criteria:

a. Must be a full-time non-probationary paid employee of the Office of the Sheriff or an Emergency Services Support Unit Volunteer Chaplain.
b. Not currently the subject of a serious or major investigation or suffering from serious personal or psychological stress.
c. Must have consistently displayed solid judgment and strong interpersonal communication skills throughout their careers.

E. The current team members, team coordinators and team liaison will conduct a selection process meeting in conjunction with a quarterly training day to make final selection recommendations to the executive team. The selection(s) will be made by the executive team and approved by the Sheriff. The need for new team members will be evaluated annually, with a program goal of maintaining 25 certified peer support team members.

F. A peer support team member may be removed for cause by the peer support team liaison and/or at the discretion of the Sheriff and/or his designee. A breach of

confidentiality by any peer support team member shall be cause for immediate removal from the Peer Support Team.

XI. TRAINING.

A. The Peer Support Team coordinator is responsible for monitoring the training status of peer support personnel to insure appropriate preparedness of team members. The team coordinator will be responsible for the scheduling of initial team training and as well, updated training for team members.

B. Peer Support Team members should receive the following training within the first 6 months of appointment:

- ICISF-Individual Crisis Intervention and Peer Support
- ICISF-Group Crisis Intervention

C. Peer Support Team members should receive the following training within the first 60 months of appointment:

- ICISF-Suicide Prevention, Intervention, and Postvention
- ICISF-Advanced Critical Incident Stress Management
- ICISF-Strategic Response to Crisis

D. Peer support counselors are encouraged to become members of the International Critical Incident Stress Foundation (ICISF) where volumes of resource materials and recommended readings, etc. may be located (www.icisf.org).

E. This agency will be following the Critical Incident Stress Management (CISM) protocol endorsed by the International Critical Incident Stress Foundation.

(a) The initial training shall be a minimum of a three-day (27 hour) Basic Group Crisis Intervention and Peer Support Course

(b) Initial training is intended to provide a basic understanding of and the skills using the Critical Incident Stress Management protocol endorsed by the International Critical Incident Stress Foundation, which include, but are not limited to the following areas:

1. Developing rapport with person being assisted.
2. Facilitating and supportive listening skills.
3. Grief and Bereavement.
4. Nutrition and Exercise.
5. Crisis identification.
6. Assessment Skills.
7. Crisis Intervention techniques.
8. Relationship problems.
9. Alcohol and substance abuse.
10. Depression and Suicide.

11. Post critical incident syndrome.

12. Knowledge of abnormal behavior.

13. Job related problems.

14. Group Crisis Intervention Techniques (CMB, CISD, Defusing)

(c) Required Annual Update Training:

1. Quarterly training which shall include 4-hour sessions covering a variety of CISM subjects with emphasis on increasing peer support knowledge and skills.

2. Continuing education may take place on an on-going basis and may include intermediate and advanced CISM courses and workshops, as well as in-house training by appropriate guest speakers/trainers. All team members are required to attend a minimum of three quarterly trainings to maintain their status on the team.

XII. COMPENSATION.

A. Peer Support Team members must understand that being a member is voluntary and must be prepared to answer calls for help on a twenty-four hour basis.

B. In most cases, peer assistance should take on a form of an on-duty meeting of a relatively short duration. Prolonged peer assistance, such as debriefings and defusings, should be scheduled on-duty whenever possible.

C. In the event off-duty overtime is required, the Peer Support Team member shall secure prior approval from the peer support liaison, Peer Support Team coordinator, or Watch Commander. Any unscheduled overtime authorization that may be necessary will be subject to approval by the team member's supervisor or the Watch Commander.

D. Peer Support Team members will be compensated for their off-duty time, as provided in the employee's MOU, and in accordance with the Office of the Sheriff and County policies and procedures.

Former Policy Deleted

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.52
	RELATED ORDERS: County Ordinance 36-6.402, 36-6.404, 36-8.1002, 36-8.2008; County Administrative Bulletin 215.2; County Employee Memoranda of Understanding.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Overtime Pay and Regulations**	

I. POLICY.

A. Qualified employees shall be compensated for authorized service time in excess of their normal work week hours.

II. DEFINITIONS.

A. CALL BACK TIME. One hour of overtime pay as compensation for the time needed to respond to unscheduled overtime duty. The employee called back is paid for actual time worked plus the "call back hour", but not less than two hours for each call back.

B. NORMAL WORK WEEK. The normal work week is 40 hours between 12:01 a.m., Monday to 12:00 midnight, Sunday. The actual work schedules are defined in the various County Employee Memoranda of Understanding (MOU). The Coroner's Office has a 24 hour shift assignment that creates a normal work week of more than 40 hours. Other work weeks may be defined depending on type of schedule.

C. ON-CALL TIME. Any period of time an employee is not actually on duty and the employee must be available to their superior on a 10 to 20 minute notice.

D. OVERTIME. Any authorized service time performed in excess of the normal work week.

E. OVERTIME PAY RATE. Increased pay rate for overtime service. This rate is one and one half times the employee's basic hourly salary.

III. GENERAL.

A. OVERTIME. Overtime may be scheduled in advance to fill known vacancies or ordered to fill unexpected vacancies, or to meet immediate operational needs. All overtime must be authorized by a Supervisor prior to the employee working the extra hours. Supervisors are accountable to their Division Commander for any overtime authorized by them.

B. ON-CALL TIME. There are different on-call time compensation methods established by the various Memoranda of Understanding. Employees will be compensated according to the terms of their MOU.

C. CALL BACK. The employee called back is paid for actual time worked plus the "call back hour" but not less than two hours total for each call back.

D. MINIMUM COURT TIME.

1. Employees attending court on their day off or off-duty time on a work day are paid at least the established minimum or they are paid for the actual time worked, whichever is more.

2. Employees attending court while on vacation or sick leave do not receive overtime pay. Instead, the actual court time is deducted from the vacation or sick leave for that day. The deduction is based on the regular pay rate and not the overtime rate.

3. Refer to the various Memoranda of Understanding for minimum court overtime hours.

E. MAXIMUM OVERTIME. With the exception of emergency staff shortages or Division Commander's approval, no employee shall work more than 18 consecutive hours or more than 100 hours of overtime in a calendar month.

F. QUALIFIED EMPLOYEES. Employees qualified to receive overtime pay include:

1. Permanent Status Employees who are paid on both a monthly and hourly basis.

2. Permanent-Intermittent and Limited Term Status Permanent-part time and hourly employees qualified for overtime pay by working in excess of 40 hours per week.

3. County Approved Status: Employees authorized to schedule work time for themselves or others shall not receive overtime pay. Exceptions for some specific situations may be made with prior approval of the County Administrator.

G. SERGEANT OVERTIME AT DEPUTY SHERIFF LEVEL RESPONSIBILITIES. Sergeants may volunteer for overtime at Deputy Sheriff level assignments. This procedure shall only be authorized when efforts to assign overtime to Deputy Sheriffs have been exhausted.

1. Sergeants will not self assign overtime without prior approval from their Supervisor.

2. Sergeants will be compensated at the next Deputy Sheriff salary step below that of the volunteering Sergeant.

IV. PROCEDURE 1.

A. EMPLOYEES.

1. Employees who volunteer to work overtime have the responsibility of ensuring that they are sufficiently rested and are fit for duty.

2. Employees working overtime will complete an overtime card. The card shall list the actual hours worked; the minimum call back or minimum court time, if applicable; and justification for the overtime.

3. The employees shall promptly route the completed overtime card to their Division Commander via the chain of command.

4. Any overtime situation that will cause the employee to exceed the 100 hour monthly limit or the 18 hour consecutive limit must be brought to the attention of the Supervisor authorizing the overtime prior to final authorization.

V. PROCEDURE 2.

A. SUPERVISORS' RESPONSIBILITIES.

1. Prior to authorizing overtime, the Supervisor should consider:

   a. Relative needs of filling a position on overtime as opposed to leaving it vacant.

   b. Minimum number of hours necessary to cover need, i.e., less than a full shift.

   c. Appropriate option for selecting employee to fill overtime need.

      - Call in off-duty employee;
      - Hold on-duty employee over;
      - Or call next shift in early.

2. Supervisors should be alert to obvious signs of fatigue associated with working too many consecutive hours or not having received enough sleep between shifts.

3. Absent exigent circumstances, an employee will not be allowed to work more than 18 consecutive hours, nor more than 100 hours of overtime per month.

4. Should an employee be required to work extended overtime, against their will, consideration should be given to providing transportation to the employee's home if the situation warrants it.

5. Supervisors will review and initial their employee's overtime cards to ensure the overtime was pre-authorized.

6. Supervisors will promptly forward approved overtime cards to the Division Commander.

VI. PROCEDURE 3.

A. DIVISION COMMANDERS' RESPONSIBILITIES.

1. The Division Commander will approve valid overtime cards.

2. The Division Commander will route overtime cards to the Division Payroll Clerk.

VII. PROCEDURE 4.

A. SERGEANTS' RESPONSIBILITIES.

1. Sergeants working overtime at Deputy Sheriff's level responsibilities will complete an overtime card. This card will list the actual hours worked followed by "D.S." and will name the employee being replaced.

2. The Sergeant shall route the completed overtime card to the Division Commander via the chain of command.

VIII. PROCEDURE 5.

A. DIVISIONAL PAYROLL CLERK RESPONSIBILITIES.

1. Payroll Clerks enter the approved overtime hours in black on the Divisional Time Sheet.

2. Overtime worked by a Sergeant at the Deputy level will be indicated by "D.S." following the number of hours worked.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.54
	RELATED ORDERS: County Ordinance 36-4.1402; Administrative Bulletin 319.2; County Employee Memoranda of Understanding.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 7-31-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Pay for Work in a Higher Classification**	

I. POLICY.

A. With approval of the Sheriff, employees who on an interim basis assume full responsibility for a higher paid classification shall be paid at the higher classification rate after the designated time. Acting employees as defined will not receive higher compensation.

II. DEFINITIONS.

A. ACTING ASSIGNMENT. An employee performing limited duties of a higher paid classification for a brief period of time without compensation.

B. INTERIM ASSIGNMENT. An interim assignment is an individual selected and assigned by the Sheriff or designee, to assume the full duties of a higher paid classification for which he/she is compensated at the higher level after the required period of time.

III. GENERAL.

A. DESIGNATION OF EMPLOYEES IN AN ACTING CAPACITY.

1. When Supervisors or Managers are not available to perform certain duties, they may designate with approval of the Division Commander, another qualified employee to perform certain limited duties. Examples of an acting assignment would include assignment of work or approval of reports when the Supervisor or Manager is away from the office.

2. Acting employees are not entitled to higher pay due to the length of assignment, or because they are not assuming the full duties of the higher paid assignment.

B. DESIGNATION OF EMPLOYEES IN AN INTERIM CAPACITY. Circumstances allowing pay for work in higher classification:

1. Interim assignments may be authorized as a short-term remedy to temporarily replace an incumbent of a position who is not available to perform the duties of the position for a period exceeding 10 days, or as otherwise indicated in the Employee Memoranda of Understanding.

2. Assignment must be in a program, service or activity established by the Board of Supervisors, the duties of which are assigned to the incumbent of a permanent position classified to the basic salary schedule.

3. The interim employee assigned must become fully responsible for the duties assigned to the higher classification.

4. The employee selected is expected to meet the minimum qualifications of the higher classification.

5. This procedure shall not be used as a substitute for regular Merit System appointment or promotional procedures.

C. CRITERIA FOR SELECTION.

1. In selecting an employee to fill an interim assignment the following criteria should be considered:

   a. Assignment to the same Division, facility or work location as the higher classification.

   b. Assignment to the same shift as the higher classification.

   c. Familiarity with the job duties of the higher classification.

   d. The employee's name appears on the current promotional list for the higher classification.

2. Interim assignment of an employee to a position is not an indication that the employee will be selected for promotion to the higher classification.

D. REQUIREMENTS FOR AN INTERIM ASSIGNMENT.

1. Follow the language in the appropriate MOU for employees working in a higher paid classification.

2. If an assignment in a higher classification is terminated and re-approved, follow the language in the appropriate MOU.

3. The Sheriff/Undersheriff or a designee shall submit to the County Administrator a written request for any employee who will be assigned to a higher classification. This request shall cite the nature of the operational exigency, the effects of ignoring the exigency, the specific time period needed (not to exceed six months), and why the exigency cannot be handled by the present authorized staff.

4. Requests for higher classification pay should be completed and forwarded to the Human Resources Department at least 15 days before the expiration of the waiting period (County Form AK13).

E. PAY RATE.

1. The employee shall be paid at the next higher pay level that is at least 5% above the employee's usual pay, except that the new pay shall not exceed the maximum step for the higher class.

   a. Allowable overtime pay, shift differentials and/or work location differentials will be computed from the higher classification pay rate.

b. Any incentive accruing to the employee in the permanent position shall continue unless the employee is no longer performing duties that warrant the differentials.

IV. PROCEDURE 1.

A. DIVISION COMMANDER RESPONSIBILITIES.

1. Approve or deny use of an acting employee to fulfill the limited duties of a higher classification for a limited period of time.

2. Evaluate any position expected to be vacant more than ten working days and decide if it is necessary to have a lower paid classification assume the full duties of the higher classification for a period as an interim assignment.

3. If it is necessary to designate an employee for an interim assignment, determine which employees are qualified and available for the interim assignment to the higher classification.

4. Make a recommendation via the chain of command to the Sheriff/Undersheriff for assignment to the interim position. The recommendation must include a justification for the interim assignment and the expected length of the assignment.

V. PROCEDURE 2.

A. SHERIFF/UNDERSHERIFF RESPONSIBILITIES. Receive and review recommendations for interim assignments.

1. If an interim assignment is deemed necessary, select the employee for the higher classification.

2. The Chief of Management Services will process the interim assignment as appropriate.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.55
	RELATED ORDERS: County Salary Regulations - Section 17; County Ordinance 36-8.8; PC 13500; California Administrative Code, Chapter 2, Title II Deputy Sheriffs' Association MOU; County - Management and Unrepresented Employee Salary Resolution; CCCSO Appendix 6, Post Certificate Regulations.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 7-1-2010	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Career Incentive**	

I. POLICY.

A. The Career Incentive Program has been developed to attract highly qualified peace officers and encourage the professional development of the Office of the Sheriff current peace officers.

II. DEFINITIONS.

A. CAREER INCENTIVE ALLOWANCE REFERENCE CHART. A chart showing the available incentive payments. The chart is attached to this Policy.

B. CAREER INCENTIVE ALLOWANCE REQUALIFICATION FORM. Sheriff's Office form used to document requalification efforts of Sheriff's Office management peace officers.

C. CERTIFICATE APPLICATION. Commission on Peace Officer Standards and Training Form No. 2-116.

D. INTERMEDIATE/ADVANCED/MANAGEMENT/EXECUTIVE CERTIFICATES. Certificates as defined in the regulations of the Commission on Peace Officer Standards and Training.

III. GENERAL.

A. GENERAL SPECIFICATIONS.

1. Allowance. No incentive allowance will be paid for possessing a P.O.S.T. certificate required by the minimum qualifications of the position in which the peace officer has permanent status. Incentive allowances shall be in addition to regular compensation and not be part of the base pay compensation.

   a. Office of the Sheriff Management peace officers will initially be allowed that percentage amount of allowance for which their combined P.O.S.T. certificate and education qualifies them for, as specified below:

2. Eligibility. Office of the Sheriff peace officers who are permanent full-time paid peace officers are eligible.

B. INTERMEDIATE CERTIFICATE - (Deputies, Deputy Sheriff Criminalists, Deputy Sheriff Forensic Supervisors, and Sergeants). Every officer below the rank of Lieutenant shall receive a Career Incentive Allowance of two and one-half percent of base pay per month for the possession of a valid Intermediate P.O.S.T. Certificate. Initial eligibility for the Career Incentive Allowance entitles the peace officer to receive the monthly allowance commencing the first day of the month following the date of the certificate as issued by P.O.S.T.

C. ADVANCED CERTIFICATE - (Deputies, Deputy Sheriff Criminalists, Deputy Sheriff Forensic Supervisors, and Sergeants). Every officer below the rank of Lieutenant shall receive a Career Incentive Allowance of two and one-half percent of base pay per month for the possession of a valid Advanced P.O.S.T. Certificate. This is in addition to the two and one-half percent allowance for the Intermediate Certificate. Those establishing a first time eligibility for Career Incentive Allowance are entitled to receive the monthly allowance commencing the first day of the month following the date of the certificate as issued by P.O.S.T.

D. ADVANCED CERTIFICATE - (Lieutenants and Deputy Sheriff Forensic Managers).

1. Every peace officer at the rank of Lieutenant or Deputy Sheriff Forensic Manager possessing a valid P.O.S.T. Advanced Certificate and a Bachelor's Degree shall receive a permanent Career Incentive Allowance of two and one-half percent of their monthly base pay.

2. Every peace officer at the rank of Lieutenant or Deputy Sheriff Forensic Manager possessing a valid P.O.S.T. Advanced Certificate and a Master's Degree shall receive a permanent Career Incentive Allowance of five percent of their monthly base pay. This is in lieu of any other permanent Career Incentive Allowance.

E. MANAGEMENT/EXECUTIVE CERTIFICATE. (Captains and above).

1. Every peace officer above the rank of Lieutenant or Deputy Sheriff Forensic Manager, including the Sheriff, shall receive a Career Incentive Allowance of two and one-half percent of their base pay per month for the possession of a valid Management/Executive P.O.S.T. Certificate and by successfully completing the continuing eligibility requirements. This allowance is separate from and in addition to any permanent allowance described in 2 and 3 below.

2. Every peace officer above the rank of Lieutenant or Deputy Sheriff Forensic Manager possessing a valid Management/ Executive P.O.S.T. Certificate and a Bachelor's Degree shall receive a permanent Career Incentive Allowance of two and one-half percent of their monthly base pay.

3. Every peace officer above the rank of Lieutenant or Deputy Sheriff Forensic Manager possessing a valid Management/ Executive P.O.S.T. Certificate and a Master's Degree shall receive a permanent Career Incentive Allowance of five percent of their monthly base pay. This is in lieu of any other permanent Career Incentive Allowance.

CAREER INCENTIVE ALLOWANCE

DEPUTY/DEPUTY SHERIFF CRIMINALIST
SERGEANT/DEPUTY SHERIFF FORENSIC SUPERVISOR

Intermediate Certificate ……2½ %

Advanced Certificate ……5 %

LIEUTENANT/DEPUTY SHERIFF FORENSIC MANAGER

Advanced Certificate + Bachelor's.....2½ %

Advanced Certificate + Master's.....5 %

CAPTAIN AND ABOVE

Management/Exec. Cert. + Bachelor's.....2½ %

Man/Exec. Cert. + Master's.....5 %

(04/97)

IV. PROCEDURE 1.

A. ALL ELIGIBLE SWORN PERSONNEL RESPONSIBILITIES.

1. Complete the application for the applicable P.O.S.T. Certificate. Assistance and forms may be obtained from the Training Unit.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.56
	RELATED ORDERS: Deferred Compensation Plan booklet.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **County Deferred Compensation Plan**	

I. POLICY.

A. Contra Costa County maintains a plan in which employees may defer a portion of their salary into a long term savings account administered by the County Office of the Sheriff employees have the option of enrolling in this plan.

II. GENERAL.

A. ADMINISTRATION AND PARTICIPATION.

1. The Deferred Compensation plan is administered by the County Human Resources Department.
2. Participation is voluntary.
3. All County employees are eligible to participate in the program, except temporary and permanent intermittent employees.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.61
	RELATED ORDERS: Government Code, Part 2.8, Section 12900, et. seq. County Employee MOU; U.S. Family and Medical Leave Act of 1993; Workers' Compensation Labor Code 4850; CCCSO 1.04.62.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 8-26-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Leaves of Absence**	

I. POLICY.

A. When considering a request for a leave of absence, the Sheriff will make a concerted effort to balance the needs of the Office and the needs of the employee.

II. GENERAL.

A. LEAVES OF ABSENCE WITH PAY.

1. Leaves of absence with pay may be granted for the following in accordance with specific policies and laws pertaining thereto:

   a. Workers' Compensation injuries. Employees will generally receive either disability benefits or 4850 compensation. Under Workers' Compensation Labor Code 4850, safety members are entitled to a leave of absence without loss of salary in lieu of temporary disability payments. This leave of absence is limited to a period of one year.

   b. Vacation and sick leaves.

   c. Floating holidays and compensation time.

   d. Administrative leave.

   e. The Family Medical and Leave Act (FMLA). A leave of absence for permanent employees and for those temporary employees employed for at least 12 months and employed for at least 1250 hours of service during the 12-month period preceding the commencement of the leave. Below are some of the types of conditions covered by this type of leave of absence.

      - Birth of an employee's child.
      - Placement of child in an adoptive or foster care home with an employee.
      - A serious health condition of employee’s relatives (includes child, parent or spouse);
      - A serious health condition of the employee where they are unable to perform their job.

B. LEAVES OF ABSENCE WITHOUT PAY.

1. The Sheriff will grant leaves in an unpaid status for the following reasons:

   a. Pregnancy disability based upon medical documentation as required by State law;

   b. Military duty orders that exceed 30 calendar days of leave per fiscal year. Employees may use accrued vacation time then accrued compensation time, in that order.

   c. An employee pending retirement who has filed, or for whom the Sheriff's Office has filed retirement papers with the County Retirement Office.

   d. FMLA - as set forth above.

2. The Sheriff may, at the Sheriff's discretion, grant leaves without pay for the following reasons:

   a. To undertake a course of study or for other personal reasons acceptable to the Sheriff. This category is designed to provide the Sheriff maximum flexibility in managing the Office of the Sheriff. Each case will be evaluated individually by the Sheriff, who may consider leaves for personal or family emergencies.

   b. An employee may be placed on a leave of absence voluntarily or Involuntarily if the Sheriff believes that employee to be temporarily or permanently physically or mentally incapacitated for the performance of their duties. The employee shall be given notice of the proposed leave of absence by letter or memorandum delivered in person or by certified mail as outlined in the Memoranda of Understanding. This leave will continue in effect until the Sheriff has determined that the employee is fit for duty. The employee may use accumulated sick leave during an imposed leave of absence.

      - Duration. The Sheriff will not grant leaves of absence in excess of three (3) months except in unusual circumstances such as pregnancy disability and FMLA.
      - Vacation and Sick Leave Accruals. An employee who is on leave without pay, or who is otherwise absent without pay, shall not accrue vacation or sick leave during such time.
      - Absence. Leave of absence decisions of the Sheriff may be appealed to the Director of Human Resources, Contra Costa County.

III. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITH PAY.

1. Submit an Absent Report Form (AF-23) in accordance with Sheriff's Office Policy.

2. Upon return from an approved paid leave period, the employee must notify Personnel.

B. EMPLOYEE RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITHOUT PAY.

1. Submit a Request for Leave of Absence Form (AK14) via the chain of command to their Bureau Assistant Sheriff at least thirty days prior to the commencement of the leave of absence. If an emergency situation should arise, a verbal approval may be obtained from the appropriate Division Commander for leaves of 15 days or less. Verbal approval does not negate the requirement to submit a Request for Leave of Absence Form (AK14) to cover the period of the emergency leave. All Request for Leave of Absence Forms will include:

   a. Dates and duration of the requested leave.

   b. Reason for the leave. If the leave is for a medical reason, a doctor's statement must be attached. If the leave is for military reasons, orders must be attached.

2. Upon return from any approved Leave of Absence, the employee must notify Personnel. Upon return from a medically related leave, the employee must also provide their Division Commander with a return to duty medical authorization.

3. If an employee wishes to return to work before the expiration date of an approved Leave of Absence, the employees must conform to County policy and submit a written request to their Division Commander fifteen (15) days prior to the date of the proposed return date. Due to extenuating circumstances, an employee may be allowed a shorter notification period.

4. If an extension to a Leave of Absence is requested, the employee must submit a written request to their respective Bureau Assistant Sheriff via the chain of command at least thirty (30) days in advance of the desired extension date. Extension notifications of less than thirty (30) days will be considered based upon the emergency situation which caused the shortened notification.

C. DIVISION COMMANDERS' RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITH PAY.

1. Division Commanders will review all Absent Report Forms (AF-23) and make a recommendation before forwarding it to the Bureau Assistant Sheriff for action. This review will include verifying whether or not the absence qualifies for Family and Medical Leave status. If FMLA applies, Division Commanders will check the qualifying condition.

D. DIVISION COMMANDERS' RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITHOUT PAY.

1. Division Commanders will review all Requests for Leave of Absence and make a recommendation before forwarding it to the Bureau Commander for action.

2. Upon the return of an employee from any absence without pay, Division Commanders or their designated representative will ensure that Personnel is notified via their respective Bureau Assistant Sheriff. Personnel will complete a Notice of Return to Work form (AK24).

E. BUREAU ASSISTANT SHERIFFS' RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITH PAY.

1. Bureau Assistant Sheriffs will review all Absence Report Forms (AF-23) and indicate approval or disapproval. The Administration (white) copy of the Absence Report Form must be sent to the Office of the Sheriff Payroll Clerk. For approved/pending FMLA leave, the Payroll Clerk will email the ARF to the Personnel Unit.

F. BUREAU ASSISTANT SHERIFFS' RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITHOUT PAY.

1. Bureau Assistant Sheriffs will review all Request for Leave of Absence Forms (AK14) from their operational areas.

   a. Leave Requests or Extension Requests of fifteen (15) days or less may be approved/denied by the Bureau Assistant Sheriff. Approved Leave Requests will be forwarded via the chain of command to the Chief of Management Services, and the Office of the Sheriff Payroll Clerk.

   b. Leave Requests or Extension Requests of sixteen (16) days or more will be forwarded, along with a recommendation for approval/denial by the Bureau Assistant Sheriff, to the Undersheriff via the Chief of Management Services.

2. Division Commanders will notify the employee of the result of the request.

3. Upon the return of an employee from any absence without pay, Division Commanders of their designated representative will ensure a Notice of Return to Work Form (AK24) is completed and forwarded via their respective Bureau Assistant Sheriff to the Chief of Management Services.

G. SHERIFF'S RESPONSIBILITY REGARDING LEAVES OF ABSENCE WITHOUT PAY.

1. The Sheriff or designee will approve/deny all Request for Leave of Absence Forms (AK14) or Extension Requests of sixteen (16) days or greater. Approvals/denials will be based upon the guidelines listed within the General Information of this Policy.

2. When a request or extension is approved, the Sheriff or their designee will notify:

   a. The employee's Bureau Assistant Sheriff;

   b. Chief of Management Services;

   c. The Human Resource Department;

   d. The Division Timekeeper; and

e. The Office of the Sheriff Payroll Clerk.

3. When a request or extension is denied, the Sheriff or the Sheriff's designee will notify the appropriate Bureau Assistant Sheriff.

H. SHERIFF'S OFFICE PAYROLL CLERK'S RESPONSIBILITY. When notified of an approved leave of absence without pay or leave of absence extension without pay, the Sheriff's Office Payroll Clerk will list the employee as "Absent Without Pay" during the approved leave period.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.62
	RELATED ORDERS: County Ordinance 32-2.006, 36-6.602, 36-10, 36-2.010, 36-6.603; County Employee MOU.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 7-31-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Vacation Accrual and Use**	

I. POLICY.

A. Employees in permanent positions are entitled to vacations with pay. Vacation accrual and use of vacation time is established for the mutual benefit of the employee and the Sheriff's Office.

II. GENERAL.

A. ACCRUAL. Accrual is by hours of working time per calendar month of service and begins on the date of appointment to a permanent position.

1. Increased accruals granted in recognition of years of service begin on the first of the month following the month in which the employee qualifies for the corresponding service award.
2. Accrual for a portion of a month shall be in minimum amounts of one hour calculated on the same basis as for partial month compensation.
3. Vacation credits may be used only after completion of six months service in a permanent position. However, credits may be used to supplement exhausted sick leave accrual in cases of absence during the first six months.
4. No credits will be allowed in excess of actual accrual at the time vacation is taken.
5. On separation from service, an employee shall be paid for any unused vacation credits at their current pay rate.
6. Employees in permanent part-time and permanent-intermittent positions shall accrue vacation benefits on a prorated basis.
7. Employees on leave without pay or unpaid military leave shall not accrue vacation credit during the time of such leave, nor shall an employee who is absent without pay accrue vacation credit during the absence.
8. Vacation accrual rates for employees are established by the various County Employee Memoranda of Understanding.

B. VACATION SCHEDULING.

1. Division Commanders will be responsible for all vacation scheduling and the proper relief within their commands.

2. In Divisions with established annual vacation sign-up consistent with this Policy and Memoranda of Understanding, the deadline for sign up shall be December 15. Employees will be allowed to sign up in week blocks up to their annual vacation accruals. Additional weekly and one day vacation requests are granted at the discretion of the Division Commander.

3. It is the responsibility of the employee to bring to the attention of their Supervisor any vacation related problems associated with an inter-division transfer.

4. The Division Commander shall make every effort to accommodate previously scheduled vacations. Transferee's do not have the absolute right to exercise their seniority for a previously approved vacation.

   a. In some instances, the employee has the option of waiving the transfer pursuant to Memoranda of Understanding and/or Sheriff's Office Policy if it creates a temporary hardship.

   b. When transfers occur due to Sheriff's Office needs, the employee shall, in writing, notify the new Division Commander of the scheduled vacation period. Notification shall be prior to the transfer if possible, but never later than seven days.

      - If the vacation is scheduled 60 days or longer after the transfer, honoring the vacation shall not result in the expenditure of overtime funds.

C. VACATION - MANAGEMENT REIMBURSEMENT.

1. Some employees in management classifications designated by Board Resolution may choose reimbursement for up to one-third of the annual vacation accrual.

   a. See the MOU/Resolution for frequency details.

   b. Payment shall be made on an hourly rate determined by dividing the employee's monthly salary by 173.33.

   c. See table in County Ordinance 36-6.603 for maximum number of hours which may be reimbursed as dictated by date of hire and years of service.

D. VACATION REQUEST FORMS.

1. An Absent Report Form (AF-23) will be used for the purpose of reporting and requesting vacation leave.

   a. The lower section of the form will be used to record vacation requests.

   b. Upon approval by the Division Commander, the vacation approval section will be completed and a copy of the ARF given to the employee. Division Commanders shall respond to

vacation requests of Local 2700 AFSCME employees within ten work days of receipt.

c. The remaining section will be routed to the Sheriff's Office Payroll Clerk.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.63
	RELATED ORDERS: Administrative Bulletin 311.5; County Ordinance 36-6.604; Employee County MOU; Labor Code Section 4850-4855; CCCSO 1.05.58, 1.05.70.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 11-4-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Sick Leave**	

I. POLICY.

A. To insure against loss of pay for temporary absences due to illness, injury or other approved reasons, permanent employees accrue sick leave credits.

II. DEFINITIONS.

A. IMMEDIATE FAMILY. The immediate family shall be restricted to the spouse, son, stepson, daughter, stepdaughter, father, stepfather, mother, stepmother, brother, sister, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law of an employee, depending on the employee's MOU. For purposes of this policy, "immediate family" shall include an employee's "domestic partner" as such term is defined in Family Code Section 297.

B. SICK LEAVE FORM. Refers to Office of the Sheriff Form (AF-23), Absence Report Form.

C. SICK LEAVE ABUSE. The use of sick leave when no illness, injury or authorized condition exists. Authorized sick leave is limited to those situations covered in this Policy.

D. WORKER COMPENSATION "4850 TIME". Paid leave of absence for full-time safety employees, who are members of the Contra Costa County Employees' Retirement Association or subject to the County Employees Retirement Law of 1937, and disabled, whether temporarily or permanently, by injury or illness arising out of and in the course of an on-duty incident.

III. GENERAL.

A. SICK LEAVE OVERVIEW.

1. The primary purpose of paid sick leave is to insure employees against loss of pay during temporary absences from work due to illness or injury. This payment is not granted automatically. Use of sick leave credits is a privilege extended by the County and may be used only as authorized.

2. As an employer, the Office of the Sheriff has a reasonable expectation that employees will be at work when scheduled. This expected attendance is necessary to the effective and efficient operation of the

Office of the Sheriff. Abuse or excessive use of the sick leave privilege can have a major impact on employee attendance. Therefore, Office of the Sheriff management will closely monitor sick leave use. Employees shall be aware of the following:

a. Sick leave is not paid time off which may be used for personal activities.

b. Abuse or excessive use of sick leave by an employee may be cause for Corrective Counseling, or utilization of the Personnel Management Regulations.

3. Employees are encouraged to utilize their sick leave only when necessary and for valid reasons. It benefits the employee to save sick leave credits whenever possible because:

a. A serious, unexpected illness or injury can sometimes extend beyond the employee's accumulated sick leave credits, leaving the employee without any income.

b. Accumulated sick leave credits are applied as additional time to the employee's service time for the purpose of retirement benefits.

B. VALID REASONS FOR USE OF SICK LEAVE.

1. Temporary Illness or Injury. Absences longer than three days shall require a physician's statement. Any frequent or habitual absences may also require a physician's statement.

2. Communicable Disease. When the employee's presence would endanger the health of others, a physician's statement may be required.

3. Medical and Dental Appointments.

a. To keep personal medical and dental appointments.

b. To attend medical and dental appointments for immediate family members.

c. Employees are responsible for obtaining advance approval from their Supervisor for the scheduled time of pre-arranged medical and dental appointments.

4. Medical Care of Family. Accrued sick leave may be used in cases of illness or injury to immediate family members. Alternative arrangements for the family member's care are encouraged.

5. Death of Immediate Family Member. Sick leave use shall not exceed three working days, plus two working days for necessary travel.

6. Pregnancy Disability. Employees whose disability is caused or contributed to by pregnancy, miscarriage, abortion, childbirth, or recovery there from, may use sick leave credits the same as for any temporary illness or injury. In situations involving extended sick leave and/or leave without pay, the following conditions apply:

a. Application is made, supported by a physician's statement, addressing the employee's physical condition relative to the

employee's work. The statement must indicate the date sick leave is to start and the anticipated date of return to work.

b. If the employee does not apply for leave and the Sheriff or designee believes the employee is unable to perform the employee's duties or the employee's general health is impaired, the employee shall be required to undergo a physical examination by a County selected physician. The cost of such examination will be borne by the County. Should such examination report recommend it, a mandatory leave shall be imposed on the employee for the duration of the disability.

c. If after application for leave and thereafter, all accrued credits are exhausted, the employee shall be considered to be on an approved leave without pay. The courts have recognized that 16 weeks leave is standard; however, in other than "routine pregnancies" with a doctor's statement, this time may be extended.

7. Disability. Leave due to temporary or permanent disability shall not limit the employee's right to use sick leave, vacation or any other benefit the employee is entitled to other than regular salary.

a. Employees who are unable to perform their duties due to physical or mental incapacity are subject to dismissal, suspension or demotion. Sick leave credits may be used by permanently disabled employees until all credits are exhausted, or until the employee is officially retired by the Retirement Board, subject to the following conditions:

- An application for retirement has been filed with the Retirement Board by the date that the accrued credits expire or Workers' Compensation "4850 Time" lapses.
- Satisfactory medical evidence of such disability is received by the Sheriff or designee within 30 days of the start of sick leave usage.
- Such medical evidence is subject to review by the Sheriff or designee, who may terminate such sick leave if it is demonstrated the employee is not disabled, or when the medical evidence is insufficient, or where the above conditions are not met.

b. The Sheriff or designee may require the employee to undergo a physical, medical and/or psychiatric examination by a County selected physician. The cost of the examination will be borne by the County. If the examining physician recommends that treatment and/or leave are in the best interest of the County or the employee to overcome any disability, the Sheriff may direct the employee to take such leave and/or undergo such treatment. The Sheriff or designee may require the employee to undergo a physical, medical and/or psychiatric examination by a County

selected physician if there is reason to believe that an employee has physical or mental health conditions which endangers the health or safety of the employee, other employees, the public, or impairs the employee's performance of duty.

c. Before an employee returns to work from any absence for illness, injury, disability leave or other leave of absence, exceeding two weeks in duration, the Sheriff may order the employee to undergo at County expense a physical, medical and/or psychiatric examination by a licensed physician. If the report shows that such employee is physically or mentally incapacitated for duty, the Sheriff may take the necessary action in accordance with the applicable Memorandum of Understanding.

8. Baby Bonding. Up to 12 weeks of unpaid, job protected leave to be used within the first year, to bond with a newborn, or child placed with employee for adoption or foster care.

9. Sick Leave Use While on Vacation. Use of sick leave while on vacation will not be allowed except under extenuating circumstances and with the approval of the County Administrator and the Sheriff or designee. Request for such approval must be submitted and approved through appropriate supervisory channels.

C. INVALID REASONS FOR SICK LEAVE USAGE.

1. Tiredness, restlessness, muscular fatigue, etc., are not valid reasons.

2. Self-caused illness such as intemperance (hangover), self-inflicted injuries, or illness or injury resulting from willful misconduct are not valid reasons unless special approval is granted by the Bureau Assistant Sheriff, Undersheriff or Sheriff.

D. ACCRUAL OF SICK LEAVE.

1. Sick leave credits accrue at the rate of eight working hours credit for each completed month of service. Employees who work a portion of a month are entitled to a pro-rata share of the monthly sick leave credit computed on the same basis as partial month compensation.

a. Employees with permanent status and employed on a regular part-time basis receive sick leave credits in the same ratio as full-time employees based on the number of hours worked.

b. Permanent part-time employees employed periodically and irregularly at hourly pay are not entitled to sick leave.

2. Unused sick leave credits accumulate from year to year.

3. Upon retirement, an employee's accrual is converted to service time on the basis of one day of service credit for each day of accrual.

4. Upon separation, other than through retirement or lay-off, an employee's sick leave shall be canceled. Sick leave credits will be restored if the employee is reemployed from a layoff in a permanent position within their eligibility period.

E. ADMINISTRATION OF SICK LEAVE.

1. The Office of the Sheriff is entitled to the assurance that the sick leave privilege is being properly used. To ascertain the propriety of claims, the Office of the Sheriff management may use one or more of the following procedures:

   a. Call the employee, the employee's family or attending physician to verify employee's medical visit;

   b. Obtain the employee's signature on the Absence/Overtime Record to legitimize the claim;

   c. Obtain a physician's certificate covering the absence(s) indicating the employee was incapacitated;

   d. Obtain a periodic statement of progress and medical certification in absences of an extended period;

   e. Write a letter of inquiry to the absent employee, enclosing a form to be completed, signed, and returned; and/or

   f. Require an employee to have a physical examination performed by a County doctor.

   g. A Division Commander may require any employee to provide a medical verification of illness for use of sick leave.

2. A medical certificate may be required for any duration if an employee is absent from duty frequently or habitually or there is reason for suspecting the privilege is being excessively used.

3. The Office of the Sheriff is entitled to notification of an employee's whereabouts while on sick leave.

4. A holiday occurring while an employee is on sick leave will be counted as a holiday and not sick leave.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITIES.

1. Employees of a 24-hour Division or Unit shall notify their Supervisor as soon as it is apparent they will not be able to report for their shift. By Division:

   a. Patrol Division: Station Commander/Station Sergeant

   b. Detention Division:

   - Martinez Detention Facility - Operations Sergeant or Shift Supervisor.
   - Marsh Creek Detention Facility - Shift Supervisor, Deputy on duty.
   - West County Detention Facility - Operations Sergeant or Processing/Custody Sergeant.

   c. Technical Services Division: Unit Manager, Shift Supervisor, Dispatcher on duty.

d. Coroner's Division: Deputy on duty.

e. Forensic Services Division: Unit Manager, Lead on duty.

2. Employees in Divisions or Units not staffed 24 hours shall call their respective Manager or Supervisor as soon after the opening time as possible. If the Supervisor is unavailable, employees will leave a phone number where they may be reached.

3. Employees who are not able to reach their respective Supervisor/Manager will call the Sheriff's Central Communications Center, leaving a phone number for contact or a reason why they cannot be contacted when the Supervisor/Manager is able to call back. It will be the responsibility of the Dispatcher receiving a sick call from an employee to notify the appropriate Supervisor/Manager as soon as possible.

4. Employees are expected to keep their Division Commander informed of the current status of their injury, illness or disability, and to provide an estimated return to duty date so replacement scheduling can be accomplished.

5. Text messages, emails and other such electronic notifications are not acceptable means of notification, Employees must speak to a supervisor or manager when calling in sick.

V. PROCEDURE 2.

A. SUPERVISOR RESPONSIBILITIES.

1. Recording Sick Leave.

a. Supervisors receiving notification from an employee reporting an absence for proper sick leave usage shall:

- Ensure a sick leave form (AF-23) is completed.
- Forward the completed form to the Division Commander.
- Obtain employees' signature upon their return.

b. Call Back Procedure:

- Upon notification from another source that an employee called in sick, the Supervisor will call the employee to ascertain the length of illness.

VI. PROCEDURE 3.

A. DIVISION COMMANDER RESPONSIBILITIES. The Division Commander will monitor sick leave usage and take appropriate action to correct and prevent any excessive use of the sick leave privilege.

1. The payroll clerk will be directed to record approved sick leave.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.64
	RELATED ORDERS: Contra Costa County Light Duty Policy; Labor Code Section 4850.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 10-30-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Temporary Modified Duty Assignments**	

I. POLICY.

A. The Sheriff provides Temporary Modified Duty (TMD) to facilitate the return of employees unable to perform their job to full duty. The specific purpose of this Policy is to efficiently coordinate the placement of these employees into assignments by establishing a protocol. All employees who have suffered industrial injuries or illness are governed by Contra Costa County's "Return To Work Policy for Industrial Injury or Illness."

II. DEFINITIONS.

A. GENERAL EMPLOYEE. Refers to permanent employees who are not safety personnel.

B. PHYSICIAN'S STATEMENT OF ABILITY TO WORK. County Form AK142.

C. SAFETY EMPLOYEE/PERSONNEL. Refers to a Deputy Sheriff or Deputy Sheriff Sergeant.

D. TEMPORARY MODIFIED DUTY. Temporary Modified Duty (TMD) is a temporary work assignment provided to employees who cannot perform their regular job duties. The assignment will be for a maximum of nine months, and is provided while an employee is pregnant with a serious health condition, or recuperating from an injury, major illness, or medical impairment. TMD shall be for those employees with a specific return to work date.

E. TEMPORARY MODIFIED DUTY ASSIGNMENT AND EXTENSION FORM. County Form AK143 (Modified)

F. TEMPORARY MODIFIED DUTY COORDINATOR. Director of Personnel Services as designated by the Sheriff.

G. TEMPORARY STATEMENT OF ABILITY TO WORK. Refers to a physician's or hospital's form stating an employee can work on a limited basis. This statement may be used temporarily until an AK142 can be completed.

III. GENERAL.

A. The Temporary Modified Duty Policy of the Sheriff's Office has been established in conjunction with and conforms to the County Light-Duty Policy.

1. The general purpose of the TMD policy is to facilitate the return of employees who are unable to perform their jobs to full duty by providing safety personnel meaningful work assignments which have been identified as a high priority by the Sheriff/Undersheriff and providing general employees with temporary modification of tasks within their position.

    a. Safety personnel who are injured on the job under the provisions of Labor Code Section 4850, general employees with industrial injuries, and employees with non-industrial injuries or medical impairments shall be eligible for TMD.

2. In addition to efficiency, the Sheriff believes that an effective TMD policy can benefit morale. Most employees want to remain useful and return to productive employment as soon as possible. There is a physical and psychological advantage to the employee being assigned to useful, productive work. This Policy will provide opportunities for the employee to contribute to the Sheriff's Office.

3. The Office of the Sheriff may temporarily modify the duties or location of an injured or medically impaired general employee, to allow that employee to work in his/her same position for the duration of the injury or medical impairment, if it is mutually beneficial. The modification or moving of work assignment for a general employee must be reported to the TMD Coordinator and approved by the Sheriff/Undersheriff. The same time frames for review and duration will apply. TMD may be denied if the employee cannot perform an essential task or job function. The AK142 and AK143 Forms are to be submitted as required by this Policy.

B. Medically impaired employees will be entitled to consideration for a TMD Assignment when released by a physician. It will require completion of an AK142 Form by the attending physician with a projected return-to-work date.

C. An employee will be assigned to TMD according to the Sheriff's Office needs as determined by the TMD Coordinator and approved by the Sheriff/Undersheriff. Sworn personnel on TMD will not have their time counted as patrol or detention time.

D. TMD assignment records will be available to Supervisors and involved employees at any time.

E. If TMD within the prescribed medical limitations is offered but refused by the employee, the Sheriff may restrict sick leave, continuing pay, disability benefits, or take other action in accordance with County policy.

F. If a conflict in medical opinion exists regarding the employee's capacity for TMD, the Sheriff or Undersheriff shall determine if the employee will be offered TMD, or if a third medical opinion will be solicited.

    1. If an employee is disabled due to psychological factors, the employee will not be assigned to TMD until evaluated to determine his/her ability to perform the function of the TMD position.

G. There are no permanent TMD assignments in the Sheriff's Office. TMD is a temporary duty provided to employees whose medical prognosis contains a

specific return to work date. TMD may be provided on a part-time as well as full-time basis. Part-time duty will not be less than two (2) hours per day.

H. Injuries or disabilities two weeks or less are inappropriate for a TMD assignment. Division Commanders are responsible for modified duty assignments of less than two weeks. However, all modified duty assignments are to be reported to the TMD Coordinator on the AK143 Form.

I. APPLICATION FOR TEMPORARY MODIFIED DUTY.

1. Any time an employee is injured, or otherwise unable to perform a full duty assignment, the Division Commander will report this information to the TMD Coordinator using the Form AK143.

2. A designated TMD pool is established for safety employees who are expected to be medically impaired for more than a two week period.

3. It is the responsibility of the employee to obtain medical/work status reports describing the medical restrictions and prognosis of the injury, and complete all forms defined in this Policy.

4. Employees shall obtain and submit a Physician's Statement of Ability to Work Form or Work Status Report after each medical appointment. In non-industrial cases, any fee charged for completion of these forms will be paid for by the employee. The Physician's Statement of Ability to Work Form/Work Status Report must be submitted by the employee to the Division Commander and the TMD Coordinator immediately after each medical appointment. The form/report must be delivered to the TMD Coordinator before TMD can be authorized. A TMD assignment may be started based on a physician's preliminary statement of ability to work when completion of the Physician's Statement of Ability to Work Form is delayed.

5. Deputies with an industrial injury or medical impairment less than two weeks will not be placed in the TMD pool, but may be assigned as needed within their Division. These short duration injuries and assignments must be reported to the TMD Coordinator at the time of assignment via email. Should the injury or medical impairment extend beyond the two weeks, the Deputy shall be placed in the designated TMD pool.

6. The TMD Coordinator is responsible for updating the condition of the employee at appropriate intervals through contact with Risk Management and/or recommending the scheduling of medical examinations to the Sheriff's Chief of Management Services.

J. TEMPORARY MODIFIED DUTY ASSIGNMENTS.

1. Upon receipt of both the AK142 and AK143 Forms, and prior to assignment, the TMD Coordinator will evaluate and determine if the employee meets TMD requirements. The TMD Coordinator’s decision will be final.

2. The employee may be assigned to any shift or schedule to meet the needs of the position and the Office of the Sheriff.

3. The TMD Coordinator will make TMD assignments for Deputies on the following criteria:

   a. Qualifications of Deputy to handle a particular assignment (skill and experience);

   b. Matching those Deputies with longer term medical conditions with assignments where continuity of personnel is important.

4. TMD assignments will be made in 90 day blocks by the TMD Coordinator after final approval is given by the appropriate Commander. Review will occur after each successive ninety (90) days. In no event will any TMD period exceed a combined total of nine months in any 18 month period.

IV. PROCEDURE 1.

A. EMPLOYEE'S RESPONSIBILITY. Employees shall inform their Division Commander and TMD Coordinator when they are not capable of fully performing assigned duties.

1. The employee will obtain and have his/her physician complete a Physician's Statement of Ability to Work Form or Work Status Report.

2. The employee will submit the completed form/report to his/her Division Commander and TMD Coordinator immediately after being released for limited duty.

V. PROCEDURE 2.

A. DIVISION COMMANDER RESPONSIBILITIES.

1. The Division Commander or designee will ensure the employee submits the Physician's Statement of Ability to Work/Work Status Report and determines the employee's eligibility for TMD.

2. Once a medical determination is made that an employee is capable and eligible for TMD, the information and documentation must be reported to the TMD Coordinator.

   a. For employees, if the injury or impairment is for two weeks or less, the Division Commander will make a Division assignment. A Temporary Modified Duty and Extension Form will be completed and submitted with the Physician's Statement of Ability to Work Form to the TMD Coordinator via the Bureau Assistant Sheriff.

   b. For employees, if TMD is for more than two weeks, the Division Commander will submit the Physician's Statement of Ability to Work Form/Work Status Report via the Bureau Assistant Sheriff to the TMD Coordinator.

   c. When any Division Commander has an employee in need of a TMD assignment of more than two weeks, he/she will complete a Temporary Modified Duty Assignment and Extension Form, and forward it, via the Bureau Assistant Sheriff to the TMD Coordinator.

d. Extensions of TMD assignments require a new Physician's Statement of Ability to Work Form/Work Status Report. The extension must be approved by the appropriate Bureau Assistant Sheriff.

VI. PROCEDURE 3.

A. TEMPORARY MODIFIED DUTY COORDINATOR'S RESPONSIBILITIES.

1. The TMD Coordinator will maintain a log and coordinate all TMD assignments of more than two weeks for general members and safety employees.

2. For assignments of more than two weeks, the TMD Coordinator will determine if an identified position is available and if the employee possesses the training and skills for the temporary assignment or will be able to acquire the skills in a short period of time.

3. If more than one position is available for an employee, priority will be given to a position which will reduce overall expenditures. Final approval of the assignment is the responsibility of the Undersheriff.

4. Once an assignment has been selected, the TMD Coordinator will have the appropriate Division Commander notified and a signed copy of the Temporary Modified Duty Assignment and Extension Form sent to the employee and the Supervisor of the TMD assignment.

5. The TMD Coordinator will provide copies of all forms and report all issues of conflicting medical opinions, employee refusals, and pay restrictions to County Risk Management.

   a. The TMD Coordinator will monitor each TMD assignment on a monthly basis to determine the appropriateness of continuing the assignment.

   b. The TMD Coordinator is responsible for monitoring the employee's condition at appropriate intervals and reporting any changes to the Bureau Assistant Sheriff/Division Commanders involved.

   c. When the employee has recovered and is cleared for full duty, the TMD Coordinator will direct a reassignment memo to the employee and route copies to the involved Division Commanders, via the Bureau Assistant Sheriff, and to Risk Management.

   d. The TMD Coordinator must review and approve modification of job assignments for employees.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.65
	RELATED ORDERS: U.S. Family and Medical Leave Act of 1993; California Family Rights Act of 1993; Employee County MOU Labor Code Section 4850; CCCSO 1.04.21, 1.04.63.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 11-12-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Family Medical Leave Act (FMLA)**	

I. POLICY.

A. Permanent and certain temporary employees are entitled to up to a total of 12 weeks of unpaid leave per "rolling" 12-month period for qualifying events as defined in the Federal Family and Medical Leave Act of 1993 (FMLA). It is the employee's responsibility to request FMLA. Certain bargaining units allow for up to 18 weeks in a "rolling" 12-month period. It is the Office of the Sheriff's responsibility to determine when a leave request qualifies as FMLA and to inform the employee, in writing, of that designation, even if the leave is not specifically requested as FMLA leave by the employee.

II. DEFINITIONS.

A. CHILD. A biological, adopted or foster child, stepchild, legal ward, conservatee or a child who is under eighteen (18) years of age for whom an employee stands in loco parentis or for whom the employee is the guardian or conservator, or an adult dependent child of the employee who is incapable of self-care due to a mental or physical disability.

B. COMPARABLE POSITIONS. A position with the same or similar duties and pay which can be performed at the same or similar geographic location as the position held prior to the leave.

C. DOMESTIC PARTNER. An unmarried person, eighteen (18) years or older, to whom the employee is not related and with whom the employee resides and shares the common necessities of life.

D. FMLA MEDICAL CERTIFICATION. Refers to Sheriff's Office Form FMLA Certification of Health Care Provider/FMLA Verification of Illness of Employee.

E. PARENT. A biological, foster or adoptive parent, a step-parent, legal guardian, conservator, or other person standing in loco parentis to a child.

F. SERIOUS HEALTH CONDITION. An illness, injury, impairment, or physical or mental condition that involves one of the following:

1. Hospital Care - Inpatient care (i.e., an overnight stay) in a hospital, hospice or residential medical facility, including any period of incapacity or treatment in connection with or consequent to the inpatient care.

2. Absence Plus Treatment - A period of incapacity of more than three consecutive calendar days that also requires treatment two or more times by a health care provider or treatment plus a regimen of continuing care under the supervision of the health care provider.

3. Pregnancy - Disability due to pregnancy and prenatal care.

4. Chronic Conditions Requiring Treatment - Requires periodic visits for treatment by a health care provider, continues over an extended period of time and may cause episodic rather than continuing periods of incapacity (e.g., asthma, diabetes, epilepsy).

5. Permanent/Long-Term Conditions Requiring Supervision - Incapacity which is permanent or long-term due to a condition for which treatment may not be effective (e.g., Alzheimer's, a severe stroke, or the terminal stages of disease).

6. Multiple Treatments (non-chronic conditions) - Includes treatment and period of recovery from treatment for restorative purposes after an injury, or for prevention of a condition that would likely result in a period of incapacity of more than three consecutive days without intervention or treatment (e.g., chemotherapy, physical therapy, dialysis).

7. Unless complications arise, a common cold, flu, earaches, upset stomach, minor ulcers, non-migraine headaches, routine dental or orthodontia problems, and periodontal disease are not ordinarily considered "serious health conditions."

G. SPOUSE. A partner in marriage as defined in California Civil Code Section 4100.

III. GENERAL.

A. FAMILY AND MEDICAL LEAVE ACT (FMLA) OVERVIEW.

1. County permanent or temporary employees may be eligible if they have been employed with the County for at least 12 months and have worked 1250 hours within the 12 months immediately preceding the commencement of leave.

2. Qualifying reasons for FMLA leave are:

   a. Employee's own serious health condition which renders the employee unable to perform the essential functions of the position.

   b. To care for employee's seriously ill child, parent, spouse or domestic partner.

   c. To care for employee's newborn within one year of birth.

   d. To care for employee's adopted or foster child within one year of placement.

3. FMLA Medical Certification will be required for leaves involving the serious health condition of the employee or employee's family member.

4. Maximum FMLA leave available for an eligible employee is 12 or 18 weeks in a "rolling" 12-month period, depending on the employee's M.O.U. Leave may be taken on an intermittent regular or irregular basis, or may include reduced work schedules depending on the specific circumstances and situations surrounding the request for leave.

5. Leave designated as Pregnancy Disability Leave is not considered part of the 12 or 18 week FMLA leave.

6. Employees receiving Workers' Compensation Disability benefits under Labor Code 4850 will not have their leave considered part of the 12 week FMLA leave.

7. When both mother and father work for the County, leave based on the birth, adoption or foster care of a child is limited to a total of 12 or 18 weeks. Employees covered under DSA are entitled to 12 weeks each in any "rolling" 12- month period.

8. The employee is entitled to unpaid leave. It is the employee's decision to use accruals. Accruals may be used as follows and will count toward the 12 or 18 week entitlement:

    a. Sick leave accruals can only be used as allowed under Office of the Sheriff Policy Section 1.04.63, Sick Leave.

    b. Sick leave accruals must be used first for an employee's own serious health condition and may be used for family care if allowed under Office of the Sheriff Policy Section 1.04.63, Sick Leave.

9. If FMLA leave is unpaid, the County will continue its contribution for the employee's health care coverage, provided that the employee was a member of one of the group health plans prior to the commencement of FMLA leave and that the employee makes timely payments of his or her health care contribution. A Request for Leave of Absence Form (AK14) must be submitted by the employee.

10. The employee will be reinstated to the same or comparable position if return to full duty is after no more than 90 work days or 720 hours if on a reduced or intermittent work schedule, including accruals.

11. Employees are entitled to 12 or 18 weeks of FMLA leave in a "rolling" 12-month period looking back from the first day of the new leave period being requested. In other words, any time an employee requests FMLA leave, his or her entitlements should be any remaining balance of the 12 or 18 weeks which had not been used during the immediately preceding 12 months.

12. Additional Information regarding leave for active duty of a family member and leave to care for an injured or ill service member may be obtained from the Personnel Unit.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITIES.

1. To request FMLA leave, or when determined by the Office of the Sheriff that a Leave qualifies as FMLA, an Absence Report Form (AF-23) must be submitted with the FMLA section completed. When foreseeable, the form must be submitted 30 days in advance of the leave, or as soon as practical when leave is not foreseeable.

2. If all or a portion of the FMLA leave is unpaid and the unpaid leave exceeds two weeks in duration, the employee is responsible for submitting a Request for Leave of Absence Form (AK14) to his or her Supervisor.

3. FMLA Medical Certification from a health care provider for leave taken for the serious health condition of the employee or a family member must be submitted in advance if foreseeable. If Sheriff's Office FMLA form is not used, a medical certification signed by an acceptable health practitioner must include the following:

   a. For employee's own serious health condition, certification must include the serious health condition that applies to the employee, date of commencement of health condition, and probable duration of employee's incapacity. The Sheriff's Office may require an employee to obtain a second and third opinion by a County doctor regarding the need for medical leave.

   b. For a family member's serious health condition, certification must include beginning and probable duration of condition, estimated time employee is needed to render care or supervision, and statement that a family member is needed to provide care during this period of treatment or supervision.

   c. FMLA medical certification must be submitted within 15 days of the request for such leave. If certification is not received, leave can be delayed or denied.

4. When submitting for FMLA leave due to the birth, adoption or placement of a child into foster care, employee must advise his or her Supervisor if both mother and father (wife or husband) work for the County.

5. If leave is taken for an FMLA reason but the Sheriff's Office was not aware of the reason, and the employee desires that the leave be counted as FMLA leave, the employee must notify the Sheriff's Office within two business days of returning to work of the reason for the leave.

6. Employees are responsible for keeping their Supervisor apprised of their status during their leave.

7. Supervisors shall afford any individual identified in an employee's communications with the Office of the Sheriff regarding that employee's FMLA leave or benefits under other programs permitting an employee to take time off from work for the care of another, including but not limited to family members, domestic partners, or others, the same manner, type

and level of privacy protection as is afforded by law to employees with respect to their own medical information.

V. PROCEDURE 2.

A. DIVISION COMMANDER'S RESPONSIBILITIES.

1. Immediately forward all FMLA leave requests to the Personnel Unit's Director of Support Services.

2. If an employee requests FMLA leave, but is unable to sign the FMLA section of the Absence Report Form, the Division Commander will note that on the FMLA employee signature line.

3. If the Division Commander knows the reason for the leave, but is waiting for confirmation that the leave qualifies under FMLA, or for a requested FMLA Medical Certification, that information shall be forwarded to the Personnel Unit's Director of Support Services.

4. The Division Commander will inform the Director of Support Services of all pertinent information regarding an employee's continued eligibility for FMLA leave.

5. The Division Commander shall afford to any individual identified in an employee's communications with the Office of the Sheriff regarding that employee's FMLA leave or benefits under other programs permitting an employee to take time off from work for the care of another, including but not limited to family members, domestic partners, or others, the same manner, type and level of privacy protection as is afforded by law to employees with respect to their own medical information.

B. PERSONNEL UNIT RESPONSIBILITIES.

1. The Personnel Unit's Director of Support Services shall give written approval or denial of FMLA leave within two business days of receipt of the request.

2. If the reason for the leave is known, but the Division is awaiting confirmation that the leave qualifies under FMLA, or for a requested FMLA Medical Certification, a "preliminary designation" of FMLA leave should be made which becomes final when the requisite information is received. If the requisite information is not received, the FMLA designation will be withdrawn with written notice to the employee.

3. If an employee is already on paid leave for an FMLA qualifying event when the Personnel Unit learns the reason for the leave, the Personnel Unit will notify the employee that the paid leave is designated and will be counted as FMLA leave.

4. The Personnel Unit may designate leave as FMLA leave after the employee has returned to work only if the employee was absent for an FMLA reason and the Personnel Unit did not learn the reason for the absence until the employee returned. Within two business days of the employee's return to work, the Personnel Unit must designate the leave

retroactive to the first day of the leave with appropriate notice to the employee.

5. A copy of all approved, preliminarily approved, and disapproved FMLA leave requests will be maintained by the Personnel Unit.

6. FMLA leave shall not be considered as a negative factor in employment, promotions or disciplinary decisions.

7. The Personnel Unit shall afford to any individual identified in an employee's communications with the Office of the Sheriff regarding that employee's FMLA leave or benefits under other programs permitting an employee to take time off from work for the care of another, including but not limited to family members, domestic partners, or others, the same manner, type and level of privacy protection as is afforded by law to employees with respect to their own medical information.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.66
	RELATED ORDERS: Administrative Bulletin Number 212; California Government Code; California Veterans Code 395 XX Civil Service Rules and Regulations, Article XII, Section 2; County Employee MOU; National Committee for Employer Support of the Guard and Reserve Public Law 93-508, Section 2024(d) U.S. Code, Title 38, Section 2024(d); U.S. Government Code, Chapter 43, Title 36.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 1-7-2011	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **United States Military Reserve Forces and State National Guard Cooperation and Coordination**	

I. POLICY.

A. The Sheriff supports the rights and requirements of Veterans and Military Reserve employees.

II. GENERAL.

A. MILITARY RESERVIST OBLIGATIONS. To fulfill the obligations of active duty training, a Military Reservist or National Guardsman must perform a minimum of two weeks annual active duty and is expected to attend one drill weekend each month (I.D.T.: Inactive Duty Training).

B. DEPARTMENT RESPONSIBILITIES.

1. The Sheriff's Office provides up to 171 hours (for 40 hour/week employees) and up to 240 hours (for 56 hours/week employees) of paid military leave each fiscal year. Active duty military leave must be supported by appropriate orders placing the employee on active duty. If additional military leave is required, the employee, upon request, may use his/her vacation or similar accruals in lieu of being absent without pay (A.W.O.P.). Sick leave accruals cannot be used.

2. Drill weekends are not routinely supported by orders placing the employee on active duty. An employee may request the use of accrued leave or shift trades to attend drill weekends. Organizational impacts (replacement by overtime, workload, etc.) must be assessed before approval of the request.

3. If the organizational impact is replacement by overtime then the employee may be released absent without pay (A.W.O.P.) or accrued leave.

C. MILITARY RESERVE LIAISON COORDINATORS. The Sheriff strongly supports the National Committee for Employer Support of the Guard and Reserve (NCESGE), and therefore has established a collateral duty position within the Sheriff's Office organization. This position is designed to assist all employees in matters relating to Military Reserve and Guard. Should there be a

problem in this area; contact should be made with the Military Reserve Liaison Coordinator. Problems should be addressed through the employee's chain of command. The Chief of Management Services will maintain a list of those currently designated as Military Reserve Liaison Coordinators.

III. PROCEDURE 1.

A. EMPLOYEE/RESERVIST RESPONSIBILITIES. Employees will provide their Division Commander via the chain of command with:

1. A DD214 or written documentation of military reservist affiliation (i.e., branch of service, unit, etc.);
2. A Schedule of Annual Active Leave, as well as, Weekend Drills;
3. Complete and submit a Request for Leave of Absence Form (AK14) for all active duty periods; and
4. Provide the Division Commander via the chain of command with military orders for active duty as soon as they are available.

B. EMPLOYEE RESPONSIBILITY. All attempts should be made to provide as much prior notification regarding your leave as possible. Lack of prior reasonable notice could result in a forfeiture of military leave benefits.

IV. PROCEDURE 2.

A. SERVICE VERIFICATION. Employees will provide to the Personnel Services Unit, Administrative Services Bureau, a copy of their military "Leave and Earnings Statement" ("LES") showing payment for Reserve duty on the dates of their approved military leave.

B. PAYROLL DEDUCTION. No deduction shall be made from an employee's otherwise due and payable payroll for non-receipt of the LES until such form is still outstanding for 45 days from the earliest approved military leave date. Upon the submission of the LES, showing appropriate Reserve service, any amounts deducted from the employee's pay will be reinstated in the next scheduled payroll.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.67
	RELATED ORDERS: B&P 7521, 7522; County Ordinance Section 36-6.802 Private Investigator and Adjustment Act; California Government Code Section 1126.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 3-7-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Outside Employment**	

I. POLICY.

A. Employees shall only engage in secondary employment or business activities that are not prohibited, with approval of the employee's Division Commander and Bureau Assistant Sheriff.

II. GENERAL.

A. Working secondary employment is a privilege, not a right, and will require approval from an employee's Division Commander, Bureau Assistant Sheriff, and the Undersheriff. Approval will be contingent upon the employees carrying out their duties to the satisfaction of the Bureau Assistant Sheriff.

B. Employees engaging in secondary employment must recognize that their primary obligation is to the Office of the Sheriff. Employees are subject to call at any time for emergencies, special assignments or overtime duty. Secondary employment must not infringe on these obligations.

III. PROCEDURE 1.

A. EMPLOYEE'S RESPONSIBILITIES.

1. Application. Employees seeking approval for outside employment or private business enterprises must submit an Outside Employment Application.

a. The Form will contain the following information:

- The employee's name, employee number and Division assigned.
- The name, address and telephone number of the prospective employer/private business/independent contractor.
- The number of hours per day and per week dedicated to the outside employment/business.
- A brief resume of the type of work to be performed or, in the case of private business, the type of products and services provided.

- Space for approval of the application.

2. Written Permission. Employees will not engage in secondary employment or any other business or calling without prior written permission from their Division Commander and Bureau Assistant Sheriff.

3. Changes. Permission to engage in secondary employment will be solely for the specific employment for which the request is submitted and approved. Permission remains valid for one year or until revoked by the Bureau Assistant Sheriff, or the employment has ended. If there is a change of an employer or a substantial or material change in the duties of the employment, the employee will immediately submit a new request.

4. Routing. The Application for Outside Employment/Private Business Form shall be routed to the employee's Division Commander and Bureau Assistant Sheriff via the chain of command.

5. Application Renewals. Applicants shall be responsible for seeking renewal by submitting a new request prior to December 31st of each calendar year.

6. Appeals. If the employee's request for secondary employment is denied, the employee may appeal the decision in writing to the Undersheriff. The decision of the Undersheriff will be final.

7. Attention to Duty. During normal work hours, employees will devote their entire time and attention to the efficient performance of Sheriff's Office business and not engage in any other business or calling. Sheriff's Office phone numbers are not to be used as a referral number concerning secondary employment.

8. Labor Disputes. Employees will not accept secondary employment in a business or occupation where the employees are on strike or are "locked out" by their employer. Employees presently working as security guards or in positions requiring security responsibilities are advised that during a strike or labor disturbance at their place of secondary employment, they will neither continue to work nor will they engage in any picketing.

IV. PROCEDURE 2.

A. APPROVAL OR DENIAL.

1. The request requires the approval of the employee's Division Commander, Assistant Sheriff and the Undersheriff . The request may be denied for any of the reasons set forth in Procedure 4.

   a. The original request will be placed in the employee's personnel file.

2. Requests indicating a possible conflict of interest will be reviewed by County Counsel for approval or denial.

3. Bureau Assistant Sheriffs will continuously review the performance of their employees who engage in secondary employment. If any employee does not fulfill their responsibility to the Office of the Sheriff satisfactorily, the Bureau Assistant Sheriff will recommend cancellation of secondary employment.

V. PROCEDURE 3.

A. ADMINISTRATIVE SERVICES RESPONSIBILITIES.

1. A complete list of employees engaged in outside employment/private business will be maintained by the Personnel Unit.

2. The list will be reviewed on a regular basis.

VI. PROCEDURE 4.

A. BASIS FOR DENIAL OR REVOCATION. A request for secondary employment will be disapproved or an approved request revoked for any of the following reasons:

1. Disclosure of Records/Documents/Files. The employment causes or is likely to cause the employee to use or disclose official Sheriff's records, documents or files.

2. Legal Process. The employment involves service of legal process.

3. Obligations. There is evidence that the employment would impair or interfere with the employee's ability to efficiently discharge their Sheriff's Office obligations, including the ability to work reasonably anticipated overtime assignments.

4. Conflicts. The employment would create a conflict of interest regarding the employee's performance in the Sheriff's Office or would violate policies and procedures of the Sheriff's Office.

5. Private Investigations. The employment is of a private investigative nature or connected with a private investigation agency.

6. Bail Bondsman. The employment involves working for a bail bond agency.

7. Debt Collection. The employment involves the collection of debt.

8. Taverns/Sale of Intoxicating Beverages. The employment is directly or indirectly connected with the operation of a tavern or sale of intoxicating beverages. For this paragraph, "indirectly" will mean any on-site activity relating to the operation of a tavern or sale of intoxicating beverages.

9. Hours. The employment is for more than twenty (20) hours in any week. Normally, total secondary employment and Sheriff's Office overtime cannot exceed 100 hours in any single month, unless there are extenuating circumstances and the Division Commander authorizes the exception.

B. SECURITY GUARD. Requests to engage in secondary employment as a security guard will be reviewed by the Bureau Assistant Sheriffs on an individual basis. Should a request be granted, the employee will be required to comply with Business & Professions Code Section 7582 et seq. (Senate Bill 1375, Chapter 710 (1996)), if applicable. This section of the Bill requires the following:

1. Active Duty Peace Officer as ARMED Security Guard or Bodyguard must possess a private investigator's license and a firearm permit or a security guard registration and a firearm permit from the Bureau of

Security and Investigative Services. The officer must have a Private Patrol Operator license to contract directly with consumers.

2. Active Duty Peace Officer as UNARMED Security Guard is exempt from licensing and registration. The employee should contact the Bureau of Security and Investigative Services directly for an application and current information and requirements:

Bureau of Security and Investigative Services

P.O. Box 989002
West Sacramento, CA 95798-9002 (916) 322-4000
www.dca.ca.gov/bsis

VII. PROCEDURE 5.

A. EMPLOYEE RESTRICTIONS.

1. Display and Use of Office of the Sheriff Issued Equipment.

   a. Equipment. Office of the Sheriff issued equipment will not be used when an employee is engaged in secondary employment.

   b. Office of the Sheriff Uniform. Employees engaged in secondary employment will not wear an Office of the Sheriff uniform or article that would readily identify them as an employee of the Office of the Sheriff without prior approval of the Undersheriff.

   c. Badge and Identification Card. Employees will not display their badge or identification card while engaged in secondary employment, except when necessary to perform an arrest that is not directly related to the secondary employment.

2. Access to Information. While engaged in secondary employment, employees will not call Warrants, Dispatch or Records, or use Office of the Sheriff computers to obtain information concerning those under arrest or those who might be placed under arrest.

3. Conflict of Interest.

   a. An employee will not engage in any employment, activity or enterprise for compensation that is inconsistent, incompatible, in conflict with or contrary to their duties and responsibilities of employment with the Office of the Sheriff.

   b. An employee is prohibited from engaging in the use of County time, facilities, equipment, supplies, badge, uniform, prestige or influence for private gain.

4. Sick, Disability or Temporary Modified Duty.

   a. Sick or Disability Leaves. Employees will not engage in any business or calling while on sick leave with pay or disability leave with pay, unless prior written permission has been received and approved by a Bureau Assistant Sheriff prior to the leave.

   b. Temporary Modified Duty. Employees on TMD may engage in secondary employment. However, the employment will be

carefully reviewed to ensure that it does not interfere with an employee's recovery and return to full duty.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.68
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-18-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Shift Trade Policy**	

I. POLICY.

A. Shift trades are at the prerogative of the Office of the Sheriff and are provided for qualified employees as a means to meet the unexpected personal needs of the employee. These transactions are to be considered a privilege and not a right.

II. DEFINITIONS.

A. PAYBACK PERIOD. The allowable time between the first and second half of a shift trade.

B. QUALIFIED EMPLOYEES. Employees involved in a shift trade who are determined by the Supervisor/Manager to be competent and trained to work in a specified work assignment. Factors for consideration include classification of position, and disqualification due to prior identified performance or behavior problems dealing with trades.

C. SHIFT TRADE. An agreement between two employees assigned to the same Division/Facility and qualified to perform each other's duties. Each employee agrees to work one scheduled shift of the other on an agreed upon date.

D. THREE-WAY SHIFT TRADES. A shift trade involving more than two employees.

III. GENERAL.

A. Shift trades are limited to transactions between employees in the same classification and assigned to the same Division/Facility. Each of the two participating employees must be qualified to perform the other's duties.

B. Three-way shift trades are prohibited.

C. The Supervisor will approve or deny shift trade requests within seventy-two (72) hours of receipt.

D. The shift trade must be completed by both employees within 60 days.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITY. An employee wishing to initiate a shift trade is responsible for identifying and securing an agreement from a qualified, participating employee. The employee requesting the trade will complete the

necessary document according to instructions and submit it to his/her immediate Supervisor for approval. In the event the requested shift trade involves two shifts that overlap, the participating employees shall also submit Absence Report Forms to account for the overlap period.

V. PROCEDURE 2.

A. SUPERVISOR RESPONSIBILITY. Upon receipt of a shift trade request, the Supervisor, after consulting the other involved Supervisor, will either approve or deny it. Denial may be based upon the operational needs of the Office of the Sheriff. If approved, the Supervisor shall forward a copy of the shift trade agreement to the employees, the appropriate Division Payroll Clerk, and to the second employee's Supervisor.

1. Reasons for denial may include:

   a. Failure to comply with a previous shift trade agreement;

   b. If more than twelve shift trades have been approved during a shift period;

   c. Supervisor's assessment that the shift trade subjects one or both employees to working long hours without a break (i.e. triples, etc.);

   d. Supervisor's assessment that the employees are circumventing the regular sign up system; and

   e. Needs of the Office of the Sheriff.

VI. PROCEDURE 3.

A. FAILURE TO MEET TRADE COMMITMENT. Any employee agreeing to an approved shift trade and failing to meet the commitment may:

1. Be charged for sick leave, if the employee called in sick, or

2. Be A.W.O.P. for the actual shift hours if the failure to report resulted in overtime; and

3. Be subject to Corrective Counseling placement and any further consideration for shift trades shall be subject to review during the course of the phase.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.71
	RELATED ORDERS: County Employee MOU; County Personnel Management Regulations; County Ordinance 36-4.402.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Seniority (Anniversary Dates and Bridged Service)**	

I. POLICY.

A. Employee seniority records are maintained to provide a basis for seniority credits on promotional examinations, the order of layoffs should they occur, and vacations and shift schedules.

II. DEFINITIONS.

A. COUNTY SENIORITY. Promotional examination seniority credits are determined by the total County service time. Layoff and displacement seniority is determined by adding the employee's length of service in the class in question to the employee's service time in other classes at the same or higher salary level. The actual ranking of personnel is determined by county regulations and the employees' Memoranda of Understanding.

B. LATERALS. Lateral entry Deputies' seniority begins from date of hire. For lateral candidates hired the same day, their respective positions on the lateral hiring list will determine seniority. If the laterals are hired and recruits sworn in on the first day of a month, the recruits shall have seniority over the laterals.

C. RECRUITS. Recruits are normally sworn in as Deputy Sheriffs upon graduation from the Basic Academy. For seniority purposes, their seniority status does not begin until the first day of the next calendar month, unless they were sworn in on the first day of the month. Sheriff's Office seniority among graduated recruits is determined by their final overall standing in the Basic Academy.

D. SENIORITY. Seniority is a ranking of personnel based on the length of continuous service with the County by which certain rights and privileges are attained.

E. SHERIFF'S OFFICE SENIORITY. Office of the Sheriff seniority is determined by the time in rank or job classification. Office of the Sheriff seniority is the primary consideration for vacation schedules. When governed by Memoranda of Understanding, it is used to select assignments, work location, shifts and/or days off.

III. GENERAL.

A. COMPUTING SENIORITY.

1. County Seniority.

    a. County seniority is the basis for the computation of layoff lists should they occur and seniority credits for promotional examinations.

    b. Seniority credits are computed at .05% percent for each completed month of continuous service as a permanent County employee preceding the final application filing date for the promotional examination, up to 5% percent total.

2. Office of the Sheriff Seniority. When governed by Memoranda of Understanding, Office of the Sheriff seniority is used to select assignments, work location, shift and/or days off. Sheriff's Office seniority is also the primary consideration for vacation scheduling within Divisions. Refer to Division manuals for vacation scheduling procedures.

    a. Vacations are scheduled by each Division, after considering Office of the Sheriff needs.

    b. In the event employees are transferred from one Division to another, their rank seniority from date of employment or promotion will remain the determining factor for vacation scheduling.

    c. The Division Commander receiving a transferred employee will try to accommodate vacations previously scheduled for the transferred employee.

3. Bridged Service Seniority Credits. Employees who have separated from a permanent position in good standing and are reemployed in a permanent position within two years are allowed to bridge County service time for purposes of calculating vacation accruals and service awards, but not for County seniority.

    a. The reemployed employee will receive credit for the total years of permanent County service, not including the period of separation.

    b. Office of the Sheriff seniority is utilized under certain Memoranda of Understanding for vacation and shift bidding and is not necessarily equivalent to County seniority. An employee who separates in good standing from the Office of the Sheriff and is subsequently hired again by the Sheriff, within two years, will be allowed to bridge their seniority for shift and vacation bidding.

4. Anniversary Dates. Each permanent employee has an anniversary date for pay purposes.

    a. New Employees.

        - Six month probation: The anniversary date is the first day of the next calendar month after successful completion of the probation period. If work began on the first scheduled workday of the month, the anniversary

date is the first calendar day of the month probation is successfully completed.

- Probation over six months: The anniversary day is the first day of the next calendar month after successful completion of six months service. If work began on the first scheduled workday of the month, the anniversary date is the first day of the sixth calendar month when the employee successfully completes six months service.

b. Promotion. The anniversary of a promoted employee is determined in the same manner as for a new employee.

c. Demotions. The anniversary date of a demoted employee is the first day of the calendar month after the demotion is effective.

d. Transfers and Reclassifications. The anniversary date of a transferred employee or one whose position has been reclassified in the same salary range remains unchanged.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.72
	RELATED ORDERS: CCCSO 1.07.33; California Government Code Section 31581.1; PC 12027 et. seq.; PC 26300(c)(2); PC 26305; County Employee MOU; Employees Retirement Association.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 9-5-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Retirement**	

I. POLICY.

A. The Retirement Program is a major employment benefit. Qualified employees automatically become members of the County Retirement Association (1937 County Retirement Act).

II. DEFINITIONS.

A. DEPUTY SHERIFF. Shall refer to all safety employee classifications to include: Deputy Sheriff, Sergeant, Lieutenant, Captain, Criminalist, Supervising Criminalist, Chief Criminalist, Assistant Sheriff, Undersheriff.

B. HONORABLY RETIRED. Includes all peace officers who have qualified for, and have accepted, a service or disability retirement. Honorably Retired does not include an officer who has agreed to a service or disability retirement in lieu of termination.

III. GENERAL.

A. COUNTY RETIREMENT.

1. Civilian employees as general members in the retirement system are covered by the Federal Social Security Program.

2. Deputy Sheriffs, as safety members in the retirement system, are not covered by the Federal Social Security Program.

3. General members and safety members are governed by separate deductions and retirement qualifications, based on membership and retirement age.

4. The Retirement Program is administered by the Retirement Association. The County Treasurer's Office is a trustee with specific statutory obligations.

B. DEPUTY SHERIFF RETIREE EQUIPMENT.

1. Badges and firearms shall be returned to the Training Unit.

a. At no cost to the employee, the badge will be refurbished, and a ribbon installed at the bottom of the badge that states "retired".

b. Deputy Sheriffs retiring with a Corporal designation, shall receive a retiree badge indicating “Corporal”.

2. Retiring Deputy Sheriffs shall turn in all Sheriff’s Office issued equipment to the Issuing Division.

a. To Training:

- Handgun
- Three Magazines
- Trigger Lock
- Gun Case
- Flashlight/Battery/Chargers
- Two Sets of Handcuffs
- O.C. (Pepper) Spray
- Leather Duty Belt
- Holster
- Magazine Pouch
- Two Handcuff Cases or One Double Handcuff Case
- OC Pouch
- Key Holder
- Radio Holder
- Four Keepers
- Baton/ASP
- Baton Holder (brass or plastic)/ASP Holder
- Respirator Mask
- Ballistic Vest
- Rain Gear
- Locked Container (Hornady Lockbox)
- Taser/Cartridge/Battery/Taser Holster
- Gas Mask/Filters/Holder

b. To FOB:

- FOB Card
- Report Writing Manual

c. To Your Duty Station:

- Department Keys
- Patrol Rifle/Magazine Holder/Three 30 Round Magazines (Patrol Division)
- Active Shooter Kit (Patrol Division

Any Additional Duty Station Equipment Assigned

3. Department employee identification cards shall be returned to Sheriff's Administration.

4. The Office of the Sheriff may sell assigned firearms to an honorably retiring Deputy Sheriff, pursuant to the procedure set forth in Policy 1.07.33 ("Purchase of Office of the Sheriff Firearms.") The Training Unit will process the transfer transaction.

C. RETIREES IDENTIFICATION CARD AND CCW ENDORSEMENT.

1. Sheriff's Administration will issue the Honorably Retired Deputy Sheriff a new identification card that shall have an endorsement stating "CCW Approved." The identification card authorizing the retired Deputy to carry a concealed and loaded firearm or an endorsement on the identification card may be revoked or denied by the issuing agency only upon showing of good cause. Good cause shall be determined at a hearing by procedures as set forth by Penal Code Section 12027.1.

2. A Retired Deputy Sheriff may have his or her endorsement to carry a concealed and loaded firearm revoked or denied by violating any departmental rule, or state or federal law that, if violated by an officer on active duty, would result in that officer's arrest, suspension, or removal from the agency.

3. A Retired Deputy Sheriff may have his or her endorsement to carry a concealed and loaded firearm immediately and temporarily revoked when his or her conduct compromises public safety.

4. A Deputy Sheriff who has retired in lieu of termination will not be issued an identification card or CCW endorsement. A Deputy Sheriff will be considered to have retired in lieu of termination if, at the time of retirement, he/she:

   a. Has been served with a Skelly Notice proposing termination;

   b. Is aware that he/she is the subject of an Internal Affairs Investigation based on conduct likely to lead to termination; or has started a course of events likely to lead to termination.

5. Deputy Sheriffs retired prior to January 1, 1981 are authorized to carry a concealed and loaded firearm unless the identification card states otherwise.

6. Retirees' identification card renewal dates shall be determined by Sheriff's Administration.

7. Retiree identification cards are not issued to Deputies who have resigned, nor to those who have deferred retirement, nor those who have activated retirement after deferral.

8. A Retiree identification card will be issued to a Retired Level 1 Reserve Deputy Sheriff who, after 10 or more years of aggregate service, leaves the Office of the Sheriff on or after January 3, 2011. Pursuant to PC §26300(c)(2), the retiree identification card shall include "CCW approved." The retiree identification card for Level 2 and 3 Reserve Deputy Sheriffs shall not include "CCW approved" unless the retiree has applied for, and been issued, a current CCW Permit by the Sheriff. The Sheriff shall have the ultimate discretion to revoke or deny any CCW endorsement issued under this subdivision pursuant to PC §26305.

D. IDENTIFICATION CARD AND CCW ENDORSEMENT RENEWAL.

1. It is the responsibility of the Retiree to ensure their identification card and CCW endorsement is renewed upon expiration.

   a. Retirees must complete the Retired Peace Officer's Worksheet when renewing their CCW endorsement with Sheriff's Administration.

   b. Retirees are required to complete the CCW Firearms Qualification course every three years and present proof of their qualification to Sheriff's Administration. This qualification course is determined by the Training Unit. However, the retiree can qualify with an Official Range Master at a location of their choice.

   c. Ammunition costs will be the responsibility of the retiree.

   d. Special retiree shoots will be scheduled two times each year by the Training Unit. One of those qualification shoots will correspond with the DSA "Old Timers Night".

   e. A CCW endorsement will not be issued without the completed Worksheet or Firearm Qualification Form.

   f. Documentation of the above items will be maintained by Sheriff's Administration in an Identification card/CCW File until notification of the Retiree's death.

E. RETIREMENT MEMO TO DIVISION.

1. It is suggested that each employee submit a memo to his/her Division Commander not less than 30 days prior to retirement advising of the employee's intention to retire, in order that retirement paychecks not be delayed.

2. It shall then be contingent upon the Division Commander to ensure that the Undersheriff, the Administrative Services Bureau Assistant Sheriff, the Training Division Captain, the Professional Standards Captain, and the Chief of Management Services receive a copy of the memo immediately.

F. INTERNAL AFFAIRS LIEUTENANT'S RESPONSIBILITIES.

1. Review and approve or deny the completed Retired Peace Officer Worksheet.

2. Ensure a completed qualification form was submitted by the Retiree and verify the qualification shoot if necessary.

3. Provide above documentation to clerical staff for renewal of identification card and CCW endorsement.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.04.73
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 9-25-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Employee Benefits and Assistance**	**SUBJECT:** **Employment Recognition Program**	

I. POLICY.

A. The Sheriff is honored to recognize the dedicated employees of the Office of the Sheriff who have served this Office and Contra Costa County with dedication and enthusiasm. The employees to be recognized have served nobly for a significant portion of their lives, providing valuable services to the community they serve. An Employee Recognition Program is a way for the Sheriff to express his sincere thanks for the contributions of these outstanding employees. Therefore, the Office of the Sheriff has established this program to honor these remarkable people from all job classifications upon their well-deserved retirements.

II. DEFINITIONS.

A. ALL JOB CLASSIFICATIONS. All employees in the Office of the Sheriff to include all sworn and general personnel.

B. HONORABLY RETIRED. All employees who have qualified for, and have accepted, a service or disability retirement. This does not include an employee who has agreed to a service or disability retirement in lieu of termination.

C. RETIREMENT RECOGNITION COMMITTEE. The Committee will be made up of: The Sheriff's Executive Assistant, the Deputy Sheriffs' Association Executive Assistant, and other committee members as designated by the Sheriff or his designee.

III. GENERAL.

A. RETIREMENT RECOGNITION.

1. Sworn employees must have a minimum of ten years law enforcement experience with five of those years being with the Office of the Sheriff.

2. General employees must have ten years with Contra Costa County with five of those years in the Office of the Sheriff.

3. The employee must be honorably retired.

4. The decision to recognize any honorably retired Office of the Sheriff employee shall be at the sole discretion of the Sheriff.

5. All employees being recognized will receive the same recognition regardless of job classification or rank.

B. RECOGNITION CEREMONY.

1. An annual recognition ceremony will be held.

2. Each employee will be recognized by an introduction and a brief synopsis of his/her career and given a plaque of recognition.

3.

C. RETIREES RESPONSIBILITIES.

1. The retiree shall notify the Chairman of the Retirement Recognition Committee within two weeks of receiving the invitation if they choose to participate in the dinner/award ceremony.

Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter Five:

Personnel Management and Employee Relations

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.01
	RELATED ORDERS: California Administrative Code, Title 15, Subchapter 1 Contra Costa County Training Institute; PC 832, 832.3, 832.4; P.O.S.T. Administrative Manual; S.T.C. Manual Cal OSHA; CCCSO 1.03.05, Appendix 5.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-18-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Training - Organization and Administration**	

I. POLICY.

A. The Sheriff is committed to providing and encouraging Office of the Sheriff employees to participate in training and advanced education on a continuing basis, regardless of position, within the boundaries and dictates of deployment requirements, budgeting restraints and legal mandates. Such training shall provide the knowledge and skills necessary to the successful operation of the Office of the Sheriff, as well as enhance employee development.

II. DEFINITIONS.

A. COMMISSION ON PEACE OFFICER STANDARDS AND TRAINING (POST). POST was established for the purpose of improving the level and quality of law enforcement and professionalism by raising the level of competence among peace officers and improving the administration, management and operation of law enforcement agencies.

B. DESIRABLE TRAINING. Training that advances career development and benefits the overall service to the public by the Office of the Sheriff.

C. DIVISION TRAINING COORDINATOR. One employee from each Division, designated by the Division Commander, responsible for coordinating and scheduling the training requirements of the Division to include acting as the liaison to the Training Lieutenant.

D. E.E.O./A.A. Equal Employment Opportunity/Affirmative Action.

E. ESSENTIAL TRAINING. Training which is necessary to improve the Office of the Sheriff.

F. MANDATED TRAINING. Training which is prescribed by POST, STC., Office of the Sheriff Policies and Procedures, and other governmental agencies.

G. OFFICE OF THE SHERIFF INSTRUCTORS. Those instructors selected, trained and certified by the Training Unit.

H. SPECIALIZED TRAINING. Training which is necessary for the performance of specialized tasks or positions.

I. STANDARDS AND TRAINING FOR CORRECTIONS (S.T.C.). The mission of the S.T.C. program is to raise the level of competence of state correction and

probation personnel and assist local agencies in ensuring that highly qualified selected employees maintain proficiency through training.

J. TRAINING LIEUTENANT. The Lieutenant commanding the Training Unit of the Training Division

III. GENERAL.

A. The training of Office of the Sheriff personnel is decentralized, with the functions shared between Division Training Coordinators and the Training Unit. Each employee is expected to maintain a working knowledge of legal and procedural updates within law enforcement in order to optimize job performance. This will be completed by participating in Office of the Sheriff- sponsored or self-initiated training programs, as well as by training bulletins, posted notices and current publications.

1. Training Unit. Under the direct supervision of the Training Lieutenant, this Unit is responsible for the coordination of all of the mandated, essential, desirable and specialized training for employees. The Unit will advise Division Training Coordinators on scheduled mandated training to ensure compliance. The Unit will maintain required training materials and training records pertaining to training provided through the Training Unit as well as other training certified by the Training Unit as meeting Office of the Sheriff course and content requirements.

B. TRAINING LIEUTENANT'S RESPONSIBILITIES. The Training Lieutenant for the Office of the Sheriff will oversee and administer training programs in a manner designed to meet training needs. He/she will chair the Training Advisory Committee for the Office of the Sheriff. All training involving Office of the Sheriff personnel will be coordinated with the Division Commanders through the various Division Training Coordinators and the Training Lieutenant will advise on matters related to training.

C. TRAINING RESPONSIBILITIES OF DIVISION COMMANDERS. Division Commanders will appoint a Division Training Coordinator to actively participate in the Office of the Sheriff training program. The Division Commanders will notify the Bureau Assistant Sheriffs regarding major conflicts in release time for instructors. The Bureau Assistant Sheriffs will make the final determination pertaining to the resolution of the conflict in release time for any instructor. Division Commanders will ensure that all Office of the Sheriff instructors within their command honor their training assignments regardless of promotion or transfer. Division Commanders will also ensure the completion of mandated training for all Division employees, as well as the completion of Office of the Sheriff Orientation within one year of their date of hire. (See section F.)

D. TRAINING RESPONSIBILITIES OF DIVISION TRAINING COORDINATORS. The Division Training Coordinators shall be members of the Training Advisory Committee. Division Training Coordinators will coordinate essential training for all employees in each of their respective Divisions and ensure that Division training is being completed in a timely and efficient manner. For example, the Detention Training Coordinator will ensure that all employees in the Detention Division receive training to conform to STC standards and other applicable standards, including POST and Office of the Sheriff requirements. Each Division Training Coordinator will act as a liaison to the Training

Lieutenant to ensure mandated training is scheduled and completed for each Division in a timely manner. Specialized training or training which the Division determines to be reasonably necessary to accomplish the job function or as required by law will be scheduled by the Division Training Coordinators and coordinated with the Training Lieutenant.

E. LAW ENFORCEMENT TRAINING CENTER INSTRUCTORS. The Office of the Sheriff is committed to ensuring the highest quality of instruction at the Law Enforcement Training Center. To this end, the Office of the Sheriff shall make every effort to locate and utilize the very best available instructors from this Office and other agencies. Instructors will be trained and certified by the Training Unit to meet the high degree of excellence required by this Office. Instructors will maintain required qualifications in their field of expertise through continual training. Requests to become an instructor are to be directed to the Training Lieutenant via the chain of command.

F. SHERIFF'S OFFICE TRAINING ADVISORY COMMITTEE (T.A.C.). The Training Advisory Committee is composed of one Division Training Coordinator from each Division, the Training Lieutenant or designee from the Training Unit and a Deputy Sheriffs' Association representative. The Committee will meet on a quarterly basis to identify Sheriff's Office training requirements, keep abreast of current legal mandates and teaching techniques affecting training, and exchange recent information regarding available training programs. Minutes of the T.A.C. meetings will be distributed to all committee members, Division and Bureau Assistant Sheriff, the Undersheriff and the Sheriff.

G. RESPONSIBILITIES FOR SHERIFF'S OFFICE ORIENTATION TRAINING. All newly appointed employees will receive orientation to the role, purpose, goals, policies and procedures of the Office of the Sheriff. In addition, working conditions, regulations, responsibilities and rights of employees will be included in orientation. The responsibilities for completion of employee orientation will be as follows:

1. The Chief of Management Services or designee will provide information pertaining to benefits, payroll procedures and associated forms.

2. The Training Unit will provide familiarization with Office of the Sheriff policies and procedures and the various operations and locations of Sheriff's Office facilities.

3. The applicable Division Training Coordinator will provide familiarization with Division policies and procedures and will ensure that all employees are sent to or provided with the complete Office of the Sheriff Orientation and Training Program.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.05.21**
	RELATED ORDERS: Sheriff's Office Directive, Appendix 4, Employee Evaluations.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 01-17-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Performance Evaluations**	

I. POLICY.

A. The Office of the Sheriff must be able to depend upon satisfactory work performance from its employees to achieve Office of the Sheriff objectives. Performance evaluations are the supervisory measurement of the employee's performance. The primary purpose of performance evaluations is to identify strengths and deficiencies of personnel and establish realistic goals and objectives. Performance evaluations will be completed on all non-probationary employees below the rank of Assistant Sheriff on an annual basis.

II. DEFINITIONS.

A. PROBATIONARY EMPLOYEE. A probationary employee is one who is hired as a permanent employee, or one who has been promoted into a classification above their previous classification, but must complete a specified period of satisfactory performance. The probation period is the final phase of the examination process and is used by the Office of the Sheriff for the observation and evaluation of the employee. The probation period may also be utilized for the rejection of an employee whose performance is unsatisfactory. All probationary employees will receive monthly evaluations for the duration of their probationary period.

III. GENERAL.

A. Performance evaluations provide a vehicle for communication within the organization relative to employee performance concerns and allow for recognition of special skills and training possessed by various personnel. Information generated through performance evaluations may also be useful to encourage an employee to enter into a self-improvement program.

B. STANDARDIZED EVALUATION GUIDELINES.

1. Evaluation standards for Deputy, Sergeant, and non-management general employees are divided into specific areas designed to measure performance in their respective positions. Performance ratings shall be based on, and measured against, the objective guidelines set forth in the performance standards. Ratings in each performance area will be ranked and supplemented by written comments when appropriate. Procedures and instructions for evaluating Deputies, Sergeants, and non-

management general employees will be set forth in the evaluation packages for each respective position. Evaluation forms are located and accessible in SPARKS.

2. In the course of evaluating a subordinate, Supervisors will conduct an evaluation interview with each employee that will include a discussion of identified strengths and weaknesses and establish goals to be met during the next evaluation cycle.

C. TIMELINESS OF EVALUATIONS.

1. Annual evaluations for all employees will be completed each January. Division Commanders will ensure evaluations are properly completed by the end of January.

2. Probationary employees will receive evaluations monthly for the duration of their probationary period.

3. Division Commanders shall be responsible for scheduling evaluations for probationary personnel and will ensure original evaluations are forwarded to Administrative Services for placement in personnel files.

4. An exit evaluation is required at the time of inter-division transfer if four months have passed since the last evaluation.

5. At the discretion of the Division Commander, a more frequent evaluation schedule can be implemented.

6. A performance evaluation may be requested by the Sheriff in conjunction with an employee's consideration for a promotional opportunity.

D. MAINTENANCE AND UTILIZATION OF PERFORMANCE EVALUATIONS.

1. Evaluation Forms will be maintained in the Office of the Sheriff personnel file for the individual employee. Performance evaluations may be used to review an employee's performance in conjunction with any or all of the following:

a. The promotional process;

b. Transfers;

c. Disciplinary action; and

d. Probationary assessment.

E. REQUEST FOR REVIEW OF EVALUATION

1. An employee who is not satisfied with their evaluation may request a review through their chain of command.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.22
	RELATED ORDERS: CCCSO 1.07.21, 1.07.22, 1.07.24.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Sheriff's Annual Inspection Ceremony**	

I. POLICY.

A. The Office of the Sheriff uniform is symbolic of the reputation and authority of the Office of the Sheriff. If properly maintained and displayed, it serves to promote the good name and professional image of both the Office of the Sheriff and its personnel. To celebrate this symbol of professional pride, the Sheriff will conduct an annual inspection ceremony. This special day will honor the Office of the Sheriff uniform, various ranks, history and the esprit de corps associated with being a member of the Contra Costa County Office of the Sheriff.

II. GENERAL

A. ANNUAL INSPECTION CEREMONY.

1. The Sheriff's Annual Inspection Ceremony is an occasion on which the Sheriff will review uniformed personnel. Sworn personnel will wear the Class "A" Inspection Uniform. General uniformed employees will wear their uniform as described in the Office of the Sheriff Manual. The ceremony will be organized by the Sheriff's Office Uniform Committee and will be held annually on the third Friday in May. A social gathering for employees, families and friends will be held in conjunction with the ceremony.

B. DIVISION REPRESENTATIVES.

1. Each Division will be represented at the ceremony. Division Commanders will represent their respective Divisions, accompanied by at least 10% of their uniformed employees.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.31
	RELATED ORDERS: Constitution of the State of California; Constitution of the United States of America.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Constitutional Rights**	

I. POLICY.

A. Employees have the duty to maintain the integrity of constitutional rights established for the public and individuals alike. The preservation of these rights is at the very heart of maintaining and improving the criminal justice system.

II. DEFINITIONS.

A. CONSTITUTIONAL RIGHTS. Rights guaranteed by the Constitutions of the State of California and the United States of America.

B. DUTY. The moral obligation to respect the rights of another.

C. RIGHT. The moral power to demand the action or inaction of another.

III. GENERAL.

A. Employees shall respect and protect the constitutional rights of the public and individuals alike. Employees shall respect and protect the rights of all members of the public and fellow employees, except when such action would violate the constitutional rights of another. Employees will not knowingly and willfully violate the constitutional rights of any member of the public or fellow employees.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.32
	RELATED ORDERS: PC 13519.4; PC 12525.5; Racial and Identity Profiling Act of 2015 (AB 953); CCCSO 01/01/2021 RIPA Training Bulletin	
ISSUE DATE: 2-1-2006 **REVISION DATE: 12-15-2020**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Equality of Enforcement / Racial and Identity Profiling Act of 2015 (RIPA)**	

I. POLICY.

A. To earn the public's trust, confidence and support, and to effectively meet Office of the Sheriff responsibilities, law enforcement and other Office of the Sheriff services will be provided without prejudice.~~.~~

B. This policy contains Addendum A – Contra Costa County Sheriff's Training Bulletin: Racial and Identity Profiling Act (Assembly Bill 953). The goal of this training bulletin is to provide guidance and instructions on data collection and use of the application.

II. GENERAL.

A. EQUALITY OF ENFORCEMENT / BIAS-FREE POLICING.

1. As a public service agency, the Office of the Sheriff has a basic obligation to provide services in a consistent and equitable manner to all members of the public. The Office of the Sheriff also has the duty to protect the public from any misuse of law enforcement authority and to provide equality of law enforcement.

2. Employees will conduct themselves in a fair, impartial manner while conducting Office of the Sheriff business. All Office of the Sheriff services will be delivered without discrimination as to race, color, national origin, ancestry, physical handicap, medical condition, marital status, sex, gender, gender identity, gender expression, sexual orientation or age.

III. DATA COLLECTION AND ANALYSIS.

A. As required by the California Racial and Identity Profiling Act (RIPA) of 2015, the Office of the Sheriff is required to collect data on perceived demographic and other detailed data regarding pedestrian and traffic stops. The Sheriff's Office must report this data to the California Department of Justice. All sworn staff will provide this data as directed.

IV. PROCEDURE

A. Effective January 1, 2021, any sworn staff member who conducts any enforcement stop, either self initiated or to where they were dispatched, upon a member of the public is required by law and this policy to enter stop-data into a digital form within an application provided to you by the Sheriff's Office (Addendum A).

B. For purposes of this policy, “stop” means any detention by a peace officer of a person, or any peace officer interaction with a person in which the peace officer conducts a search, including a consensual search, of the person’s body or property in the person’s possession or control.

C. For motor vehicle stops, generally the RIPA requirement will only apply to the driver, unless any of the following actions are taken:

1. The peace officer asked for consent to search the passenger(s).
2. The peace officer searched the passenger(s) or any property belonging to the passenger.
3. The peace officer seized any property belonging to the passenger(s).
4. The passenger(s) detained as defined in section IV.B. of this policy.

D. If more than one peace officer performs a stop, only one officer is required to collect and report RIPA information.

E. Listed below is the information staff are required to collect and enter into the RIPA application. Several of the reporting requirements require that staff provide “perceived” information related to the stop. Staff will not ask the member of the public any questions to confirm their perceptions. The data entered into the RIPA form is based on initial perception of that individual, regardless of any additional information received during the investigation.

1. ORI number (CA0070000)
2. Date, time, and duration of the stop
3. Location of stop
4. Perceived race or ethnicity of person stopped
5. Perceived gender of person stopped
6. Person stopped perceived to be LGBT
7. Perceived age of person stopped
9. Perceived or known disability or person stopped
10. Reason for stop
11. Stop made in response to a call for service
12. Actions taken by the officer during the stop
13. Results of stop
14. Officer's Identification (ID) Number- Application will provide this data
15. Officer's years of experience

16. Type of assignment of officer

F. Sworn staff shall make every attempt to ensure the information provided is accurate. Stop-data shall be entered into the RIPA application and submitted prior to closing out your enforcement stop, when feasible, or by the end of shift.

G. RIPA requirements do not apply to detention facility settings.

CONTRA COSTA COUNTY SHERIFF'S TRAINING BULLETIN
RACIAL AND IDENTITY PROFILING ACT
ASSEMBLY BILL 953

On **January 1, 2021**, the Sheriff's Office will be implementing the Racial and Identity Profiling Act (RIPA). State Law mandates this implementation for the collection of statistical data during law enforcement contacts. RIPA will affect all sworn staff who have interactions with the public.

What is RIPA?

The Racial and Identity Profiling Act was created as part of Assembly Bill 953 (Weber, 2016). As a result of this bill, a Racial and Identity Profiling Advisory Board (RIPA Board) was formed. This board included a diverse group of members representing the public, law enforcement, and educators. At the Legislature's direction, the board's directive was to eliminate racial and identity profiling, and improve diversity and racial identity sensitivity in law enforcement. The RIPA Board aims to strengthen law enforcement-community relations in California through collaboration, transparency, and accountability. The California Department of Justice, Office of the Attorney General, has the primary oversight of the RIPA Board.

One of the responsibilities of the RIPA Board was to develop the stop-data collection process. The stop-data collection process set by the RIPA Board requires sixteen points of information to be collected. The stop-data collection process affects all sworn staff interacting with members of the public (RIPA requirements do not apply to detention facility settings).

How does the stop-data collection process affect Sworn Staff?

Effective January 1, 2021, any sworn staff member who conducts any enforcement action, either self-initiated or dispatched to, with a member of the public, is required by law to enter stop-data into a digital form within an application provided by the Sheriff's Office. Stop-data must be collected on all parties involved in the enforcement action with some exceptions.

Example: You conduct a traffic enforcement stop on a vehicle with four passengers. Suppose you ask to search any of the four passengers. In this example, you must fill out an individual form for the driver and any of the passengers you asked to search.

A simple greeting or consensual encounter will not trigger the RIPA requirement.

What type of information is required to be entered into the form?

Listed below is the information you are required to collect and enter:

1. ORI number (CA0070000)
2. Date, time, and duration of the stop
3. Location of stop
4. Perceived race or ethnicity of person stopped
5. Perceived gender of person stopped
6. Person stopped perceived to be LGBT
7. Perceived age of person stopped

8. Person stopped has limited or no English fluency
9. Perceived or known disability or person stopped
10. Reason for stop
11. Stop made in response to a call for service
12. Actions taken by the officer during the stop
13. Results of stop
14. Officer's Identification (ID) Number- The application will provide this data
15. Officer's years of experience
16. Type of assignment of officer

- Deputies will not ask the member of the public any questions to confirm their perceptions. The data you enter into the RIPA form is based on your initial perception of that individual, regardless of any additional information, you receive during your investigation.
- "Stop" for purposes of these regulations means (1) any detention, as defined in these regulations, by a peace officer of a person; or (2) any peace officer interaction with a person in which the officer conducts a search, as defined in these regulations.
- The Deputies Identification (ID) Number will be provided by the application without your need to enter the information. The number provided to the DOJ will not be your employee number. It is a unique number that will be generated by the program, and will only be associated to the user name.

When do I enter the stop-data?

Stop-data shall be entered into the application prior to closing out your stop, if possible.

Where can I find the application?

The Technical Service Unit has installed the below icon on each MDC and desktop computer within the Sheriff's Office. This will allow for easy access to the application even if you are not at your own office or computer. If you do not have this application on your computer or MDC, please notify the Technical Services Unit, and they will ensure that it is installed.



How do I fill out this digital form?

Detailed instructions have been attached to this bulletin.

Where can I find additional information regarding RIPA?

1. https://oag.ca.gov/sites/all/files/agweb/pdfs/ripa/stop-data-reg-final-text-110717.pdf?
2. https://post.ca.gov/Racial-and-Identity-Profiling-Act
3. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB953
4. https://oag.ca.gov/sites/all/files/agweb/pdfs/ripa/ripa-board-report-2020.pdf

*****Additional training will be provided by the Training Division via Target Solutions. *****

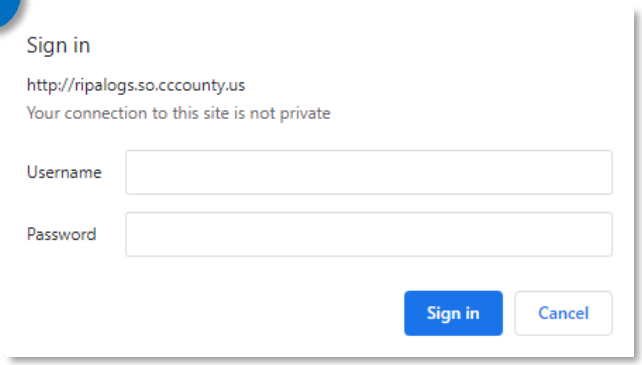
1



The RIPA AB953 LOG icon (shortcut) has been installed on each MDC and desktop computer within the Sheriff's Office. This will allow for easy access to the application, even if you are not at your own computer.

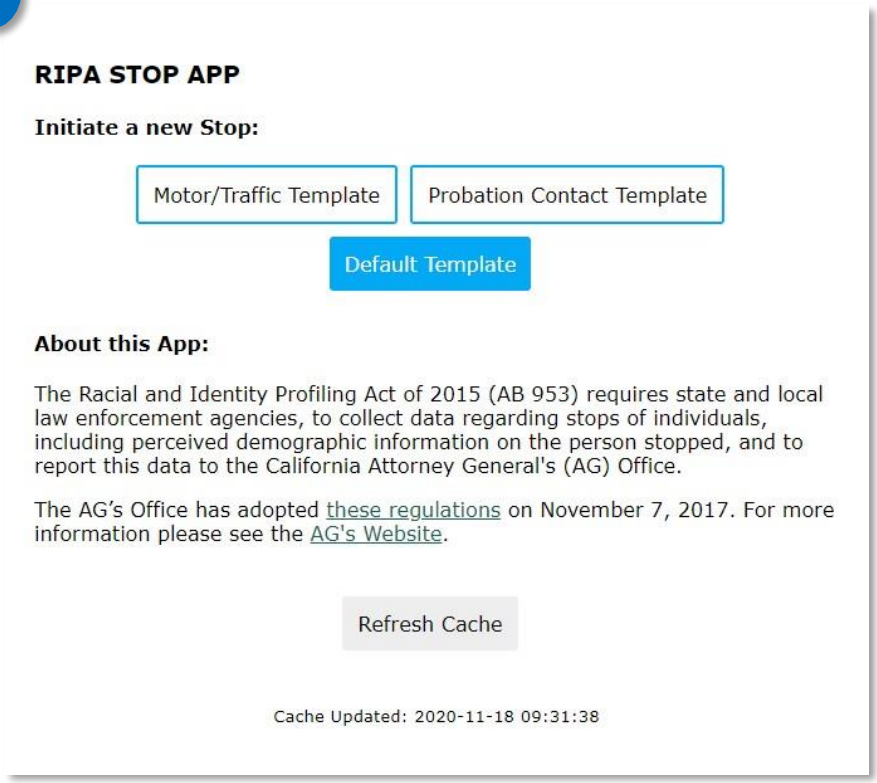
CLICK THE ICON TO LAUNCH THE REPORTING TOOL.

2



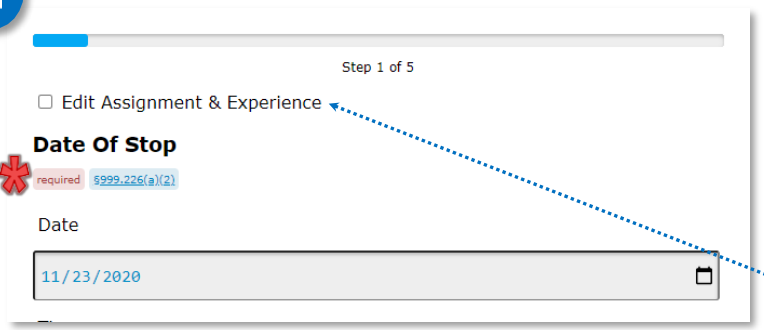
If this pop-up appears, enter the first part (before the @ symbol) of your email as the username, and your computer password to access the program.

3



Select your template to continue.

4



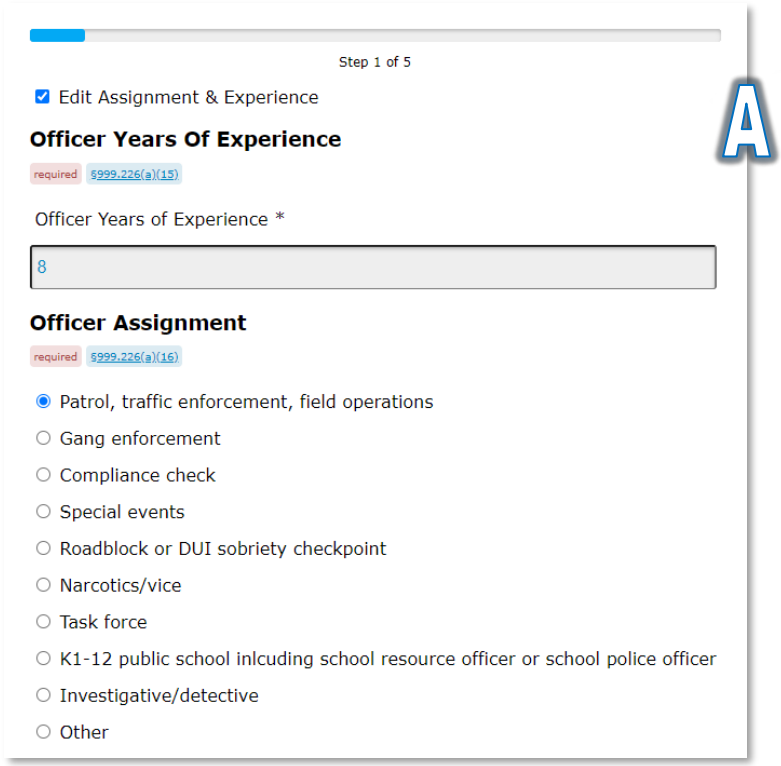
required

ALL REQUIRED FIELDS MUST BE COMPLETED

Oops, you may have missed something! Please review your selections above.

This message will appear if you try to proceed but have missed any required info.

CHECK THIS BOX FIRST



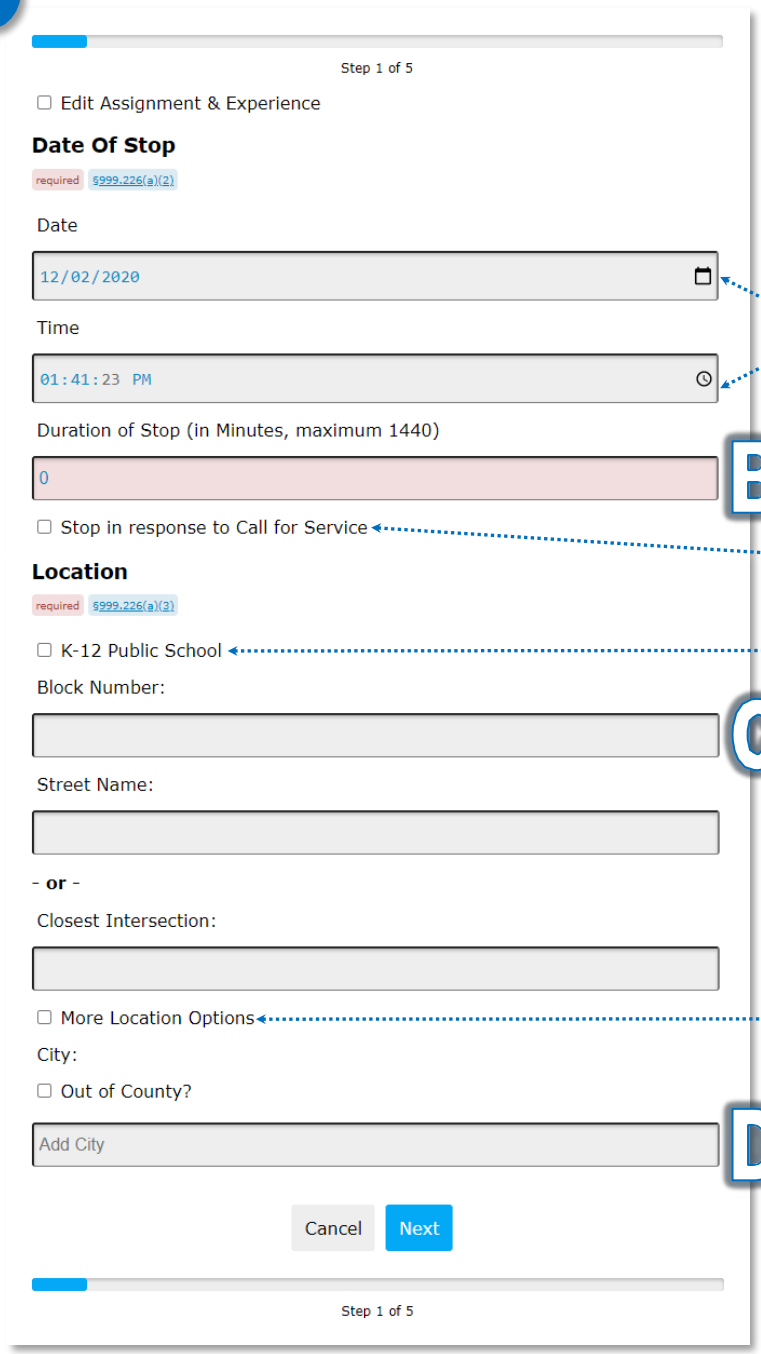
A

- **For area A, the Officer Years of Experience and Officer Assignment fields *MUST* be completed. Enter your years of experience in full years only, and select the appropriate assignment from the list.**

  The report will remember your information, so it only has to be entered once. If your years of experience or assignment change, you must update it by clicking the Edit button.

5

ALL REQUIRED FIELDS MUST BE COMPLETED



Date and time entered automatically, but both can be edited.

Check if in response to a call for service.

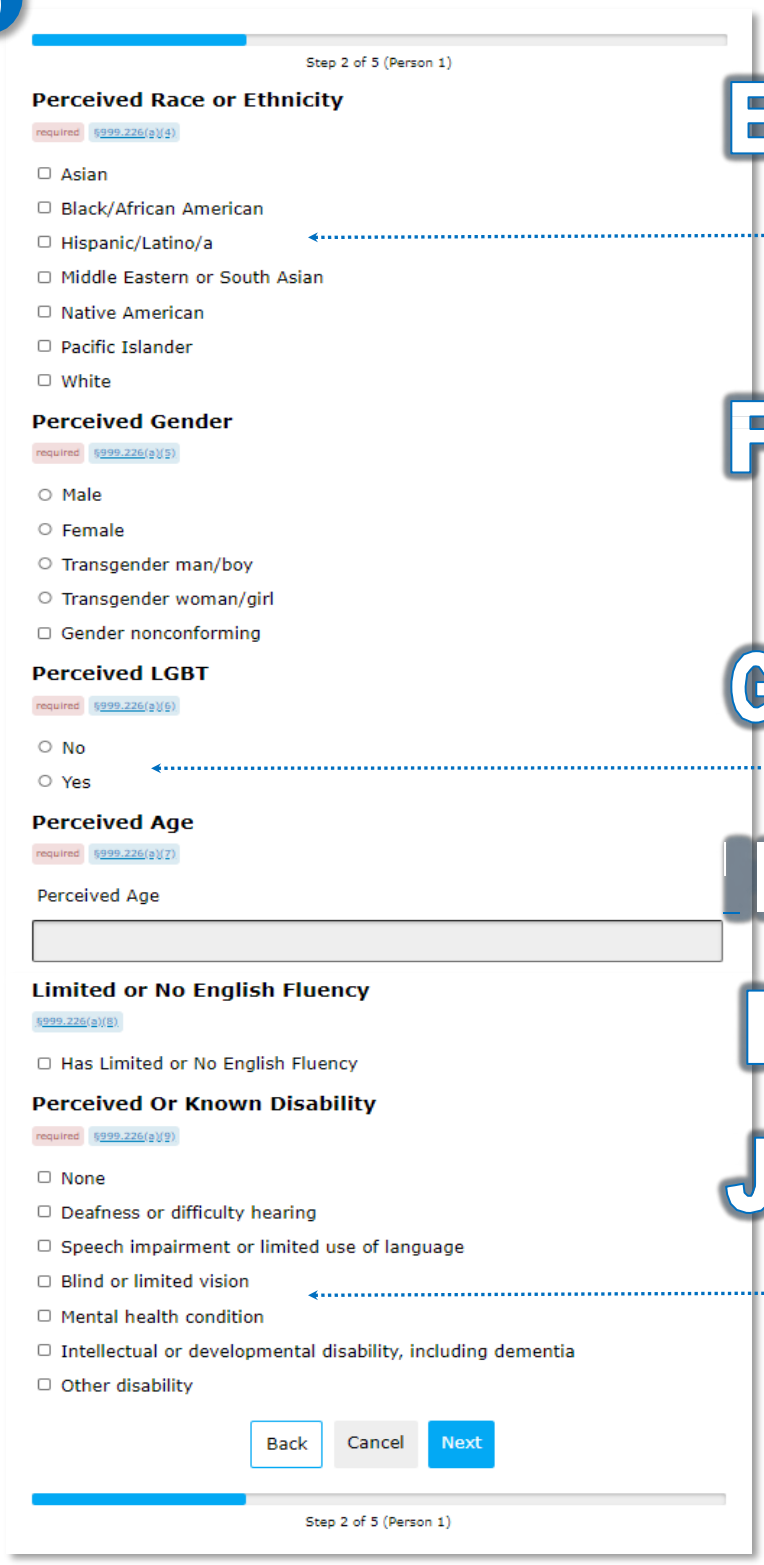
Check if location is a K-12 public school.

Check for highway and landmark fields.

- For area B, enter the duration of the stop in minutes.
- For area C, enter a the block number and street, or the closest intersection, or the highway and closest exit, or road marker, landmark or other. Location of stop must contain minimum of 5 characters.
- For area D, enter a city (box has predictive text). If out of the county, check the box above the city field.
- CLICK NEXT TO PROCEED

6

ALL REQUIRED FIELDS MUST BE COMPLETED



More than one box can be checked for Perceived Race or Ethnicity.

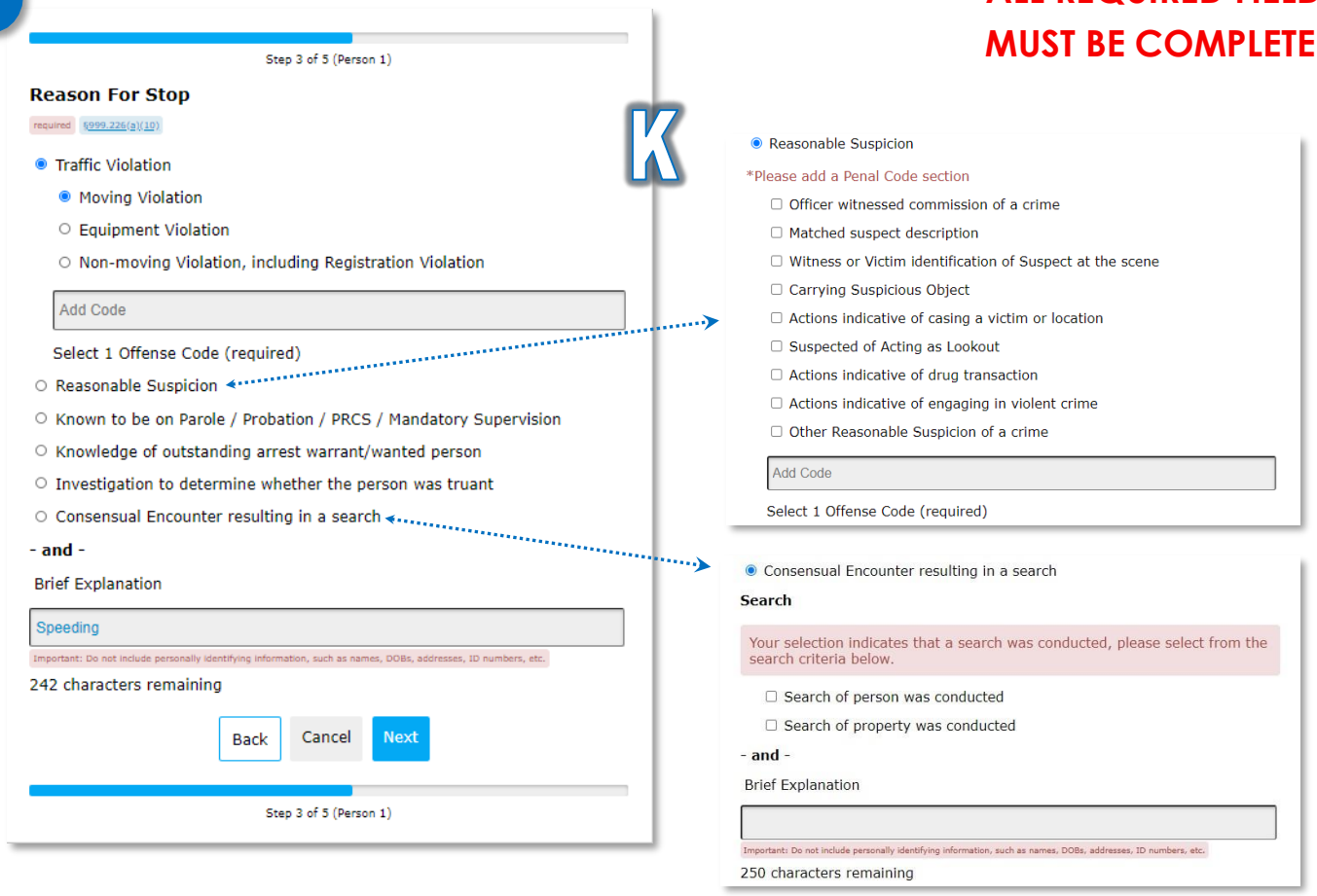
If Transgender Man/Boy or Transgender Woman/Girl is selected above, Yes is automatically selected.

More than one box can be checked for Perceived or Known Disability.

- For areas E, F, G, I, and J, check the appropriate box.
- For area H, enter a numerical value (years only).
- CLICK NEXT TO PROCEED

7

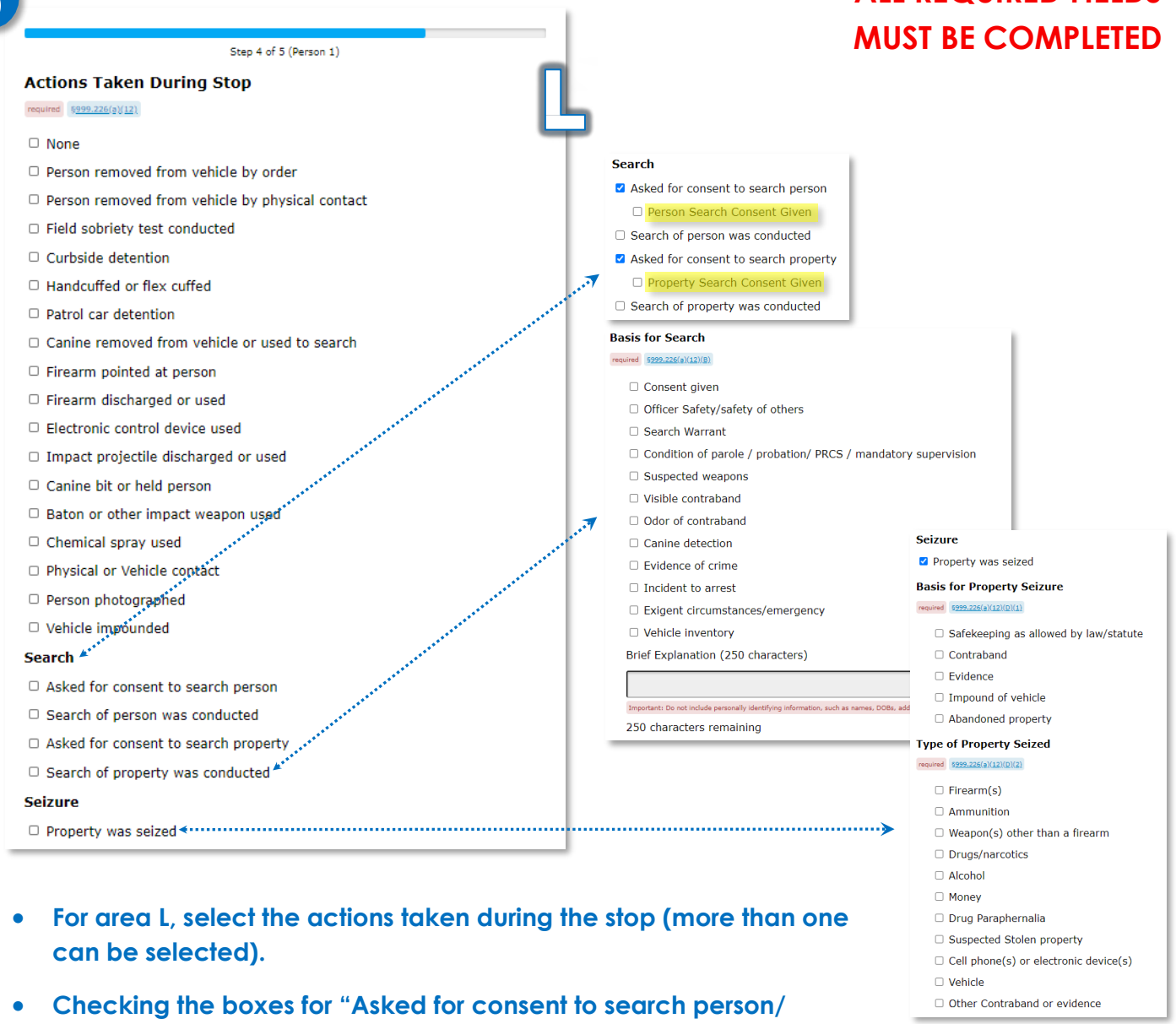
ALL REQUIRED FIELDS MUST BE COMPLETED



- For area K, select the reason for the stop.
- If stop was for a Traffic Violation, select the appropriate sub-category.
- If Reasonable Suspicion is selected, check the appropriate sub-category from the drop down menu (more than one can be selected) ***and*** add a brief explanation.
- If Consensual Search is selected, check the appropriate sub-category from the drop down menu (both boxes can be selected) ***and*** add a brief explanation.
- THE PENAL CODE MUST BE ENTERED (box has predictive text).
- CLICK NEXT TO PROCEED

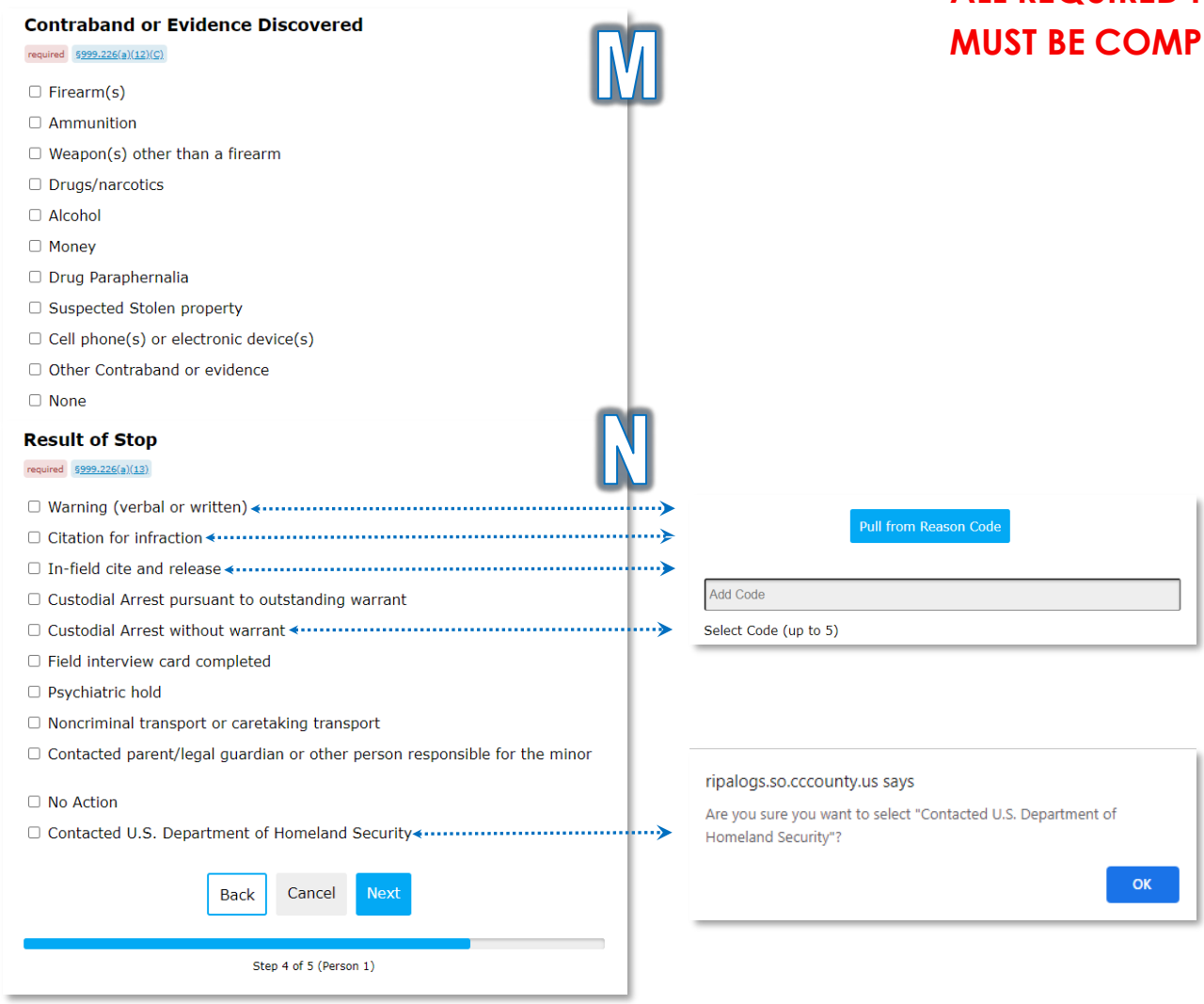
8

ALL REQUIRED FIELDS MUST BE COMPLETED



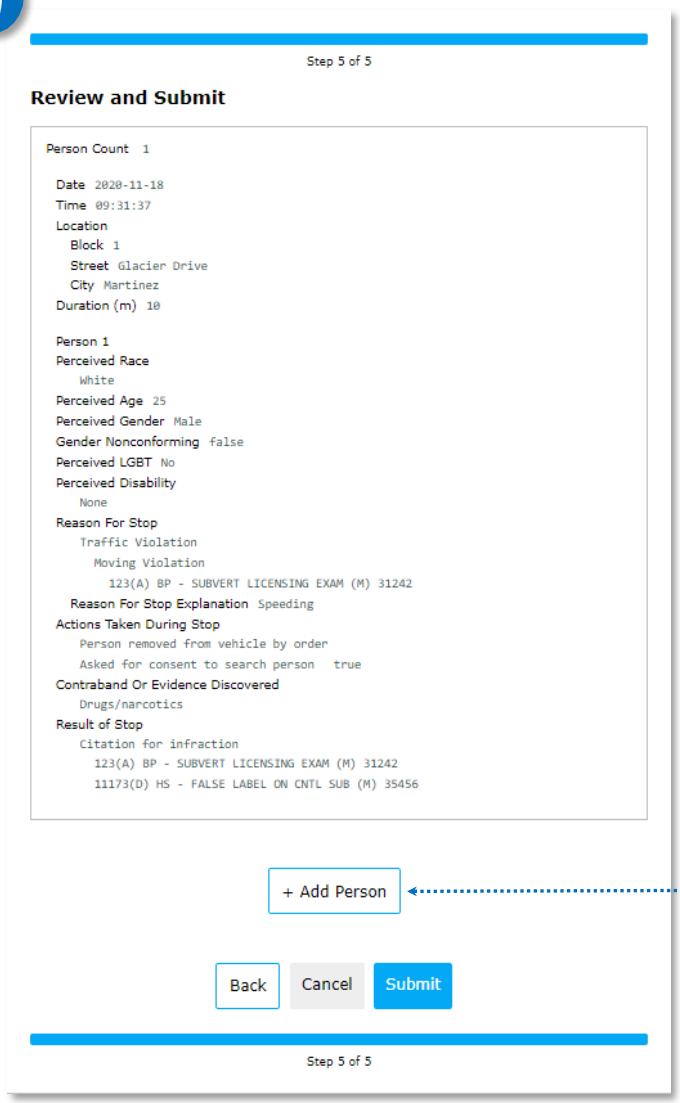
- For area L, select the actions taken during the stop (more than one can be selected).
- Checking the boxes for "Asked for consent to search person/ property reveals additional options. Check if consent to search person/property was given (leave unchecked if not)
- Checking the box for "Search of property was conducted" reveals additional options. Check the appropriate boxes (more than one box can be selected).
- Checking the box for "Property was seized" reveals additional options. Check the appropriate boxes (more than one box can be selected).

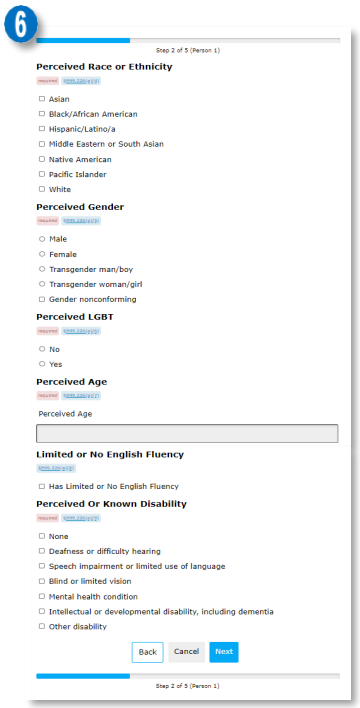
ALL REQUIRED FIELDS MUST BE COMPLETED



- **For area M, select the contraband or evidence discovered (more than one may be selected).**
- **For area N, select the result of the stop (more than one may be selected). For selections that ask for a Penal Code, you can select "Pull from Reason Code" to auto-populate with code entered in "Reason for Stop" from section J. Up to five codes may be entered.**
- **If "Contacted U.S. Department of Homeland Security" is selected, you must confirm your selection in the pop-up box.**
- **CLICK NEXT TO PROCEED**

ALL REQUIRED FIELDS MUST BE COMPLETED





- **Review the information to make sure it is accurate.**
- **To add an additional person, click the "+ Add Person" and repeat 6 through 8.**
- **If all of the information is correct, click the "Submit" button to submit the report.**

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.33
	RELATED ORDERS: PC 147, 289.6, 673, 2601 et. seq., 4001 et. seq., 4570 et. seq.; Board of Corrections Minimum Jail Standards, Title 15, Sections 1034, 1062, 1063, 1066, 1080, 1084.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 9-29-2006	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Treatment of Offenders and Non-Fraternization**	

I. POLICY.

A. During all Office of the Sheriff law enforcement operations, offenders shall be treated fairly, with impartiality and respect due a member of the public. It shall be prohibited for any member of the Office of the Sheriff to knowingly fraternize with persons under criminal investigation, charged with a crime, in custody, on probation or parole, or recently released from custody.

II. DEFINITIONS.

A. ARRESTEE. A person in custody by authority of law.

B. FRATERNIZATION. Association on intimate terms with persons or a group of persons. To become involved in a friendly sympathetic relationship.

C. IN CUSTODY. Persons being legally housed in any penal facility, legally under arrest or sentence for any crime.

D. INMATE. A person in custody.

E. OFFENDER. A person detained or imprisoned for any law violation. The term is inclusive of arrestee and inmate.

F. SEXUAL RELATIONSHIP. This term encompasses all behavior and activity defined as “sexual activity” in California Penal Code Section 289.6(d).

III. GENERAL.

A. TREATMENT OF OFFENDERS.

1. Professional. Employees shall treat all offenders professionally. Employees shall be fair, impartial and consistent and comply with Office of the Sheriff Policies and Procedures when dealing with offenders and enforcing the law.

2. Medical. Individuals who are under arrest by the Office of the Sheriff who are suspected of ingesting a harmful substance or of being under the influence of a controlled substance and displaying gross, outward symptoms will be taken to the nearest hospital for medical treatment. Any individual identified as having a medical problem, including

ingestion of a harmful substance, who is presented for booking by any agency will be evaluated by the Detention Division medical staff prior to the booking process.

3. Safeguarding Offender/Property. Any employee who has any person(s) in custody, under arrest or detention shall be responsible for the proper safeguarding of that person(s) and any personal property that is in their possession at the time of taking custody.

B. PROHIBITED CONTACTS AND INTERACTION WITH PERSONS IN CUSTODY.

1. Persons in custody may be highly manipulative and constantly looking for ways to compromise the integrity of any person who has access to them from the outside. They may attempt to gain information from staff that could threaten the safety and/or security of all. Consequently, interaction with persons in custody is subject to various restrictions.

2. No employee of the Office of the Sheriff, except with the written approval of the Custody Services Assistant Sheriff, unless acting within the scope of his or her official duties, shall become involved in a business transaction, partnership, romantic, or sexual relationship with any inmate in the custody of the Office of the Sheriff.

3. Employees will not hold unnecessary conversations with any inmate. In answering questions, the employees will be brief, courteous and to the point. All employees shall refrain from discussing an inmate's case with an inmate except to direct the inmate to appropriate assistance when requested. Under no circumstances is an employee to offer legal advice or assistance in completing legal paperwork. This includes inmate workers.

4. Employees will not discuss with inmates, nor within the presence of inmates, the actions of any peace officer or law enforcement agency unless required as part of a duty requirement and never in a derogatory manner.

5. No employee shall be permitted to have any personal financial dealings with any inmate. There shall not be buying, selling or exchanging of any article of value between them, nor shall any employee be permitted to collect a fee, commission, or gratuity for disposing of any inmate's property or for any other reason.

6. No employee shall bring into or carry out of any Detention Facility letters, notes, books, packages, notions, cosmetics, tobacco, or any other thing for prisoners confined in the Facility.

C. PROHIBITED FRATERNIZATION.

1. Employees shall not knowingly maintain a personal association with any person(s) who:

a. Is under criminal investigation, charge, or indictment;

b. Has an open and notorious reputation in the community for criminal activity;

c. Is on probation or parole, or;

d. Has recently been released from the custody of any law enforcement facility or other custodial program where such association would bring discredit upon the employee and/or the Office.

D. EXCEPTIONS. Immediate family or relationship by marriage to an employee of the Office of the Sheriff can be considered exceptions to this Policy with respect to fraternization. An employee shall notify his or her Division Commander if the employee is assigned to a custody facility and a relative is an inmate of the facility.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.05.34**
	RELATED ORDERS: California Government Code Sections 11135-11139.5, California Labor Code Sections 432.7, 1197.5, 1735, 1777.6 Civil Rights Act of 1964; County Administrative Bulletin No. 429.3; Board of Supervisors Resolution No. 85/57 CCC Non-Discrimination and Anti-Harassment Policy, 6-1-2000; Americans with Disabilities Act; Age Discrimination in Employment Act; CCCSO 5-5.8, 5-5.10.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Harassment and Discrimination in Employment**	

I. POLICY.

A. Employees are entitled to, and will be provided with, a workplace environment that is free from harassment and discrimination. To promote a positive work atmosphere, harassment and/or discrimination against an applicant or employee by any employee will not be tolerated.

II. DEFINITIONS.

A. HARASSMENT. Includes, but is not limited to the following examples:

1. Verbal Harassment: Epithets, derogatory comments or slurs on the basis of race, religion, gender, gender identity, gender expression, national origin, ancestry, disability, medical condition, marital status, sexual orientation, sex or age.

2. Physical Harassment: Assault, impeding or blocking movement, or any physical interference with normal work or movement when directed at an employee on the basis of race, religion, gender, gender identity, gender expression, national origin, ancestry, disability, medical condition, marital status, sexual orientation, sex or age.

3. Visual Forms of Harassment: Derogatory posters, notices, bulletins, cartoons, or drawings on the basis of race, religion, gender, gender identity, gender expression, national origin, ancestry, disability, medical conditions, marital status, sexual orientation, sex or age.

4. Sexual Harassment: Any deliberate, repeated or unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature will constitute unlawful sexual harassment when:

   a. Submission to such conduct is made either implicitly or explicitly a term or condition of employment;

b. Submission to or rejection of such conduct by an individual is the basis for an employment decision affecting such individual; or

c. Such conduct has the purpose or effect of substantially interfering with an employee's work performance or creating an intimidating, hostile or offensive working environment.

III. GENERAL.

A. HARASSMENT AND DISCRIMINATION PROHIBITED.

1. The Office of the Sheriff strongly disapproves of any form of harassment and/or discrimination at the workplace. This includes harassment of employees by members of the public or employees from other agencies. Supervisors and Managers will take immediate and appropriate steps to eliminate any harassment coming to their attention and to prevent future harassment from occurring.

2. Employees should be aware that many recent court decisions have awarded personal punitive damages for substantiated cases of harassment and discrimination. Additionally, some courts have concluded that harassment need not be intentional nor directed at the offended person to uphold a complainant's case. Therefore, any employee's conduct that creates an intimidating, hostile or offensive working environment, or has the effect of unreasonably interfering with another employee's work performance is prohibited.

B. DEALING WITH HARASSMENT AND DISCRIMINATION.

1. In the interest of preventing harassment and discrimination and developing a positive, productive work environment, employees are encouraged to keep their workplace and their conduct at work on a professional level. All employees shall respect the rights of their fellow employees and shall discontinue actions or comments at work that are pointed out as offensive to someone else.

2. All employees are encouraged to handle situations involving harassment and/or discrimination at the lowest possible level. Employees may often put a minor offensive situation to rest by making their feelings known to those involved.

3. It is suggested, in any offensive situation, that the employee keep a diary of the occurrences. Likewise, an employee accused of harassment and discrimination should keep notes that reflect their version of the incident.

4. Employees should report any harassing and discriminating incident to their Supervisor, Division Commander, Assistant Sheriff, Undersheriff, Sheriff or to the Sheriff's Office Personnel Officer. Supervisory and Management personnel who personally observe incidents of harassment and discrimination will investigate and take immediate and appropriate action.

C. SUPERVISORS AND MANAGERS RESPONSIBILITIES.

1. Supervisors and Managers need to be alert to employee harassment and/or discrimination. Prompt, appropriate action shall be taken

whenever a Supervisor or Manager learns of a situation involving harassment and/or discrimination. Employees making a report will be taken seriously, informed of their rights and of the availability of outside assistance, such as the State Office of Equal Employment Opportunity should it be required.

2. Supervisors and Managers shall keep complete notes on incidents they investigate and will encourage others to keep notes. They shall also keep all involved persons and the Division Commander informed of the action being taken.

3. Supervisors and Managers should be sensitive to harassment and discrimination and affirmatively raise the issue to employees by:

   a. Expressing strong disapproval;

   b. Informing employees of their right to raise the issue;

   c. Following the administrative disciplinary procedures; and

   d. Reporting incidents of a criminal nature to their chain of command.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITIES.

1. Any employee who is the subject of harassment or any employee who knows of the harassment of other employees which is creating an offensive work environment, should report the harassment to their Supervisor, Division Commander, Assistant Sheriff, Undersheriff, Sheriff or the Sheriff's Office Personnel Officer.

   a. If the harassment originated from the employee's Supervisor, the employee may contact the Supervisor's Manager regarding the harassment.

   b. Notification may be verbal or written. If verbal notification is used, the employee may be requested to write a memo at a later time should the Supervisor determine the necessity for such documentation.

V. PROCEDURE 2.

A. SUPERVISOR/MANAGEMENT EMPLOYEE RESPONSIBILITIES.

1. A Supervisor or Manager who personally observes, or is notified of harassment and/or discrimination taking place, will conduct a thorough investigation.

2. Substantiated instances of harassment will be handled within the Corrective Counseling System or the Personnel Management Regulations and immediately reported to the Division Commander.

3. Unsubstantiated incidents that claim a loss of an employee benefit and incidents where the responsible is not identified will be reported to the Sheriff/Undersheriff via the chain of command by inter-office memo

with a copy to the Assistant Sheriff of Administrative Services. The memo shall include:

a. A description of the reported harassment;

b. A complete description of the incident investigation; and

c. A disposition of the investigation.

4. Misunderstandings and minor employee conflicts that are determined not to be harassment and/or discrimination shall be handled appropriately by the Supervisor or Manager.

5. If the employee is not satisfied with the Supervisor's or Manager's disposition of the incident, the employee shall request it be reported to the Sheriff/Undersheriff via the chain of command.

6. The report will be on an inter-office memo and include the same information as required in #3 above. A copy of the report shall be sent to the Assistant Sheriff of Administrative Services.

7. An employee may circumvent the chain of command in reporting incidents of harassment and discrimination by reporting their concern to successively higher levels until the matter has been addressed to the employee's satisfaction or has been notified in writing of an administrative resolution of the matter.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.39
	RELATED ORDERS: Contra Costa County Administrative Bulletin 439, Contra Costa County Administrative Bulletin 541, CCCSO 1.05.42, 1.07.11, 1.07.21, and 1.07.53.	
ISSUE DATE: 5-12-2022 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Remote Work**	

I. POLICY.

A. In recognizing the benefits of remote work, the Office of the Sheriff's Remote Work Policy is established to provide direction for personnel to work from a location other than their primary work location.

II. DEFINITIONS.

A. REMOTE WORK: An employee working from a remote site other than their primary work location, such as a designated satellite workstation or at home on a temporary or regular ongoing basis.

III. GENERAL.

A. The following criteria will be considered by the Division Commander when determining which positions are eligible for remote work and considering whether or not to approve individual remote work agreements:

1. Remote work arrangements will maintain or improve service delivery and productivity for the employee and the Department.
2. Proposed remote work would enable the continued performance of all current duties.
3. The employee can meet all eligibility and standard requirements referenced in the CCCSO Remote Work Guidelines included in Appendix 15.
4. The individual's Remote Work Request and Decision Form adequately documents the employee's capacity to meet these requirements.

B. Remote working is a voluntary arrangement between the employee and the Office of the Sheriff. Employees who wish to work remotely must complete and submit a Remote Work Request and Decision Form. If approved, the Sheriff's Office reserves the right to modify or revoke remote working at any time.

C. Any remote work schedules of more than 20 hours per week (regular, flexible, or alternate work schedules) or more than fifty percent (50%) of the employee's work schedule (4/10 or 9/80 work schedules) must be approved in writing by the County Administrator.

D. To protect local County jobs, new remote work arrangements shall not be granted to any employee who resides more than 200 miles from the County Administration Building.

IV. PROCEDURE.

A. Prior to working from a remote work location, an employee will read and complete all necessary steps included in the Contra Costa County Office of the Sheriff's Remote Work Guidelines included in this policy as Appendix 15.

B. Office of the Sheriff employees working from home will follow the policy outlined in Contra Costa County Administrative Bulletin 439, included in Appendix 15.

C. The employee will complete the Contra Costa County Remote Work Request and Decision Form, submit it to their manager, and only begin working from a remote work location after the request has been approved and signed by the Division Commander. The Contra Costa County Remote Work Request and Decision Form is included in Appendix 15 and can be located in SPARKS.

D. The employee will also complete the CCC Office Ergonomics Awareness Training on Target Solutions, comply with the County Ergonomic Program Employee Responsibilities and maintain an ergonomic working environment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.40
	RELATED ORDERS: None.	
ISSUE DATE: 7-2-2012 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employee Relations	SUBJECT: Fraud	

I. POLICY.

A. Contra Costa County Office of the Sheriff is committed to preventing fraud. All Sheriff's Office employees must share in this commitment. All Sheriff's Office employees must be aware of the circumstances, or "red flags", which lead to fraud.

II. GENERAL.

A. PURPOSE. This policy defines what constitutes fraud, and outlines rules and procedures all employees must follow when fraud is suspected.

III. EXAMPLES.

A. Examples of fraud, which are neither exclusive nor exhaustive, include the following:

1. Theft. This may include the removal or misuse of funds, assets or cash.
2. False accounting. Dishonestly destroying, defacing, concealing or falsifying any account, record or document required for any accounting purpose, with a view to personal gain or gain for another, or with the intent to cause loss to the County or furnishing information which is or may be misleading, false or deceptive.
3. Abuse of position. Abusing authorities and misusing County resources or information for personal gain or causing loss to the County.
4. Any dishonest or fraudulent act.
5. Misappropriation of funds, securities, supplies or other assets.
6. Impropriety in the handling of money or financial transactions.
7. Profiteering as a result of insider knowledge of your organization's activities.
8. Disclosing confidential or proprietary information to outside parties.
9. Accepting or soliciting anything of material value from contractors, vendors, or persons providing services to the company.
10. Destruction, removal, or inappropriate use of business assets.

IV. RESPONSIBILITIES.

A. Any employee who has knowledge of an occurrence of fraud, or has reason to suspect that a fraud has occurred, shall immediately notify his/her supervisor.

B. Every employee shall cooperate with administrative investigations pursuant to this policy. The employee shall not discuss the matter with any one other than his/her supervisor and chain of command, the Internal Affairs Unit, the County Auditor and the District Attorney. Failure to report suspected fraud could result in disciplinary action or possibly termination.

C. Personnel Actions. If a suspicion of fraud is substantiated by the audit investigation, disciplinary action shall be taken in conformance with the County's Personnel Policies and Procedures. A false and vindictive allegation of fraud is a violation of this policy. All violations of this policy, including violations of the confidentiality provisions, shall result in disciplinary actions up to and including termination.

D. Retaliation. It is a violation of this policy for any individual to be discriminated against for reporting fraud or for cooperating, giving testimony, or participating in an audit investigation, proceeding, or hearing. Such individual falls under the protection of the Whistle Blower Act.

E. After an initial review and a determination that the suspected fraud warrants additional investigation, the Undersheriff shall direct further handling and/or investigation pursuant to the Citizens' Complaints/Internal Investigations Policy, Policy 1.06.80, and/or the Personnel Management Regulations Policy, Policy 1.05.70, as appropriate. Any matters to be investigated at the criminal level shall be referred to the Sheriff's Investigation Division or the applicable jurisdiction.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.41
	RELATED ORDERS: CCCSO 1.04.21, 1.05.56; Bamonte v. City of Mesa (2010).	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 1-10-2012	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **On Duty Time**	

I. POLICY.

A. The Office of the Sheriff has an obligation to provide efficient, productive and professional service to the public. How employees conduct business and utilize their on duty time is a major factor in meeting this obligation. Therefore, guidelines are established regarding on duty time and conduct.

II. GENERAL.

A. REPORTING FOR DUTY.

1. Employees shall be properly attired pursuant to policy and have any required equipment available when reporting for duty.

2. Employees shall be punctual in reporting for duty at the time and place designated by their Supervisor(s).

B. HOURS OF DUTY.

1. Employees of the Office of the Sheriff shall have regular hours assigned to them for active duty. When not assigned or ordered to duty, employees are considered off-duty.

2. Deputies shall be familiar with Office of the Sheriff Policy Section 1.05.56, Off-Duty Arrest/Enforcement.

3. On duty time, for purposes of Worker's Compensation, is discussed in Office of the Sheriff Policy Section 1.05.74, Notification and Reporting On Duty Injuries, Accidents or Death; Workers' Compensation.

C. ABSENCE WITHOUT PROPER LEAVE.

1. Employees are expected to be on duty as assigned. Employees shall not:

   a. Be absent from duty without proper leave;

   b. Leave duty without proper relief; and/or

2. Employees unable to report for duty at the prescribed time because of sickness or injury to themselves or their immediate family shall notify the Office of the Sheriff as soon as practical, consistent with the Office of the Sheriff sick leave policy.

D. LOITERING.

1. On duty and in-service employees shall not linger in restaurants, cafes, bars, or other public places.

2. Unless specifically assigned, uniformed employees shall not linger in Office of the Sheriff facilities or other buildings.

E. SLEEPING ON DUTY.

1. An employee shall not sleep while on duty.

2. Employees working a 24-hour shift shall follow the guidelines established for their assignment.

F. PROHIBITED ACTIVITY DURING PUBLIC/BUSINESS CONTACTS.

1. An employee shall refrain from certain conduct while transacting business with the public, or in a business meeting, including:

   a. Chewing gum;

   b. Chewing or dipping snuff or tobacco;

   c. Eating (unless food is served with the meeting); and

   d. Smoking.

2. Any conduct that is offensive or brings disrepute or otherwise reflects negatively upon the employee of the Office of the Sheriff.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.42
	RELATED ORDERS: CCCSO 1.07.21, 1.07.22.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 8-3-2021**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Personal Appearance**	

I. POLICY.

A. Appropriate business attire and good personal appearance serve three basic functions: First, rapport with the public is enhanced when served by well-groomed, well-dressed employees. This demonstrates to the public that the Office of the Sheriff and its employees are professional and serious about its functions. Secondly, the well-groomed and well-dressed employee will generally be treated with more respect by the public and fellow employees. This improves the work environment and builds employee morale. Third, some jewelry is restricted to promote the safety of the employee while in the office or around inmates. For these reasons, the Office of the Sheriff has established standards of personal appearance for employees.

II. GENERAL.

A. DEPUTIES.

1. When reporting for duty, Deputies shall be clean and neat in their personal appearance.
2. Clothing will be appropriate for duty assignment, per the standards described in Office of the Sheriff Policy Section 1.07.21, Dress Code/Uniforms. The Division Commanders may authorize exceptions to these standards to meet temporary special assignments. Permanent assignments that require a different mode of dress must be approved by the appropriate Bureau Assistant Sheriff.
3. All Deputies must come to work smelling clean and must avoid the excessive use of perfume or cologne.
4. Hair shall be kept clean, trimmed and present a well-groomed appearance.

a. For male and female Deputies in uniform:

- Hair shall not be worn in an exaggerated style nor extend more than one inch below the top of the shirt collar.

- Hair may cover the ears. However, it shall not extend below the bottom of the ears nor more than two inches in front of the ears. This includes sideburns.
- Hair extending over the forehead shall not be worn below the highest point of the eyebrows.
- Hair styles that prevent the uniform hat's sweat band from resting on the forehead while being worn are not permitted.
- No decoration(s) shall be worn in the hair except hair clips or pins that match the hair color.
- Moustaches, if worn, will be neatly trimmed and extend neither below, nor more than one-half inch beyond the corners of the mouth. Handlebar moustaches are not allowed.
- Beards are not allowed. Exception: Medical necessity. Deputies with appropriate medical verification may obtain written authorization from the Office of the Sheriff to wear beards. Deputies will submit medical verification of the continuing need for a beard in January and July of each year for as long as the beard is worn for medical reasons. Assistant Sheriffs shall forward all involved documents to the Director of Support Services, Personnel Unit, who shall review the documents for completeness and then forward to the Chief of Management Services for approval. The Director of Support Services, Personnel Unit, shall also make all necessary notifications as required by this policy and maintain a current listing and status of those employees authorized to wear beards. This information will also be forwarded to the Sheriff's Safety Manager for purposes of oversight of the Respiratory Protection Equipment Program as described in Office of the Sheriff Policy 1.07.25.
- Beards and other facial hair shall be well groomed, neat in appearance and shall not be in an exaggerated style. Beards shall be trimmed as short as possible and in no event exceed ¼ inch in length.

5. Jewelry restrictions are established to promote the safety of the Deputy and to maintain an appearance consistent with the professional appearance expected of Deputies.

   a. Deputies may wear the following items of jewelry. All other items of jewelry are not allowed unless specifically authorized by the Deputy's Division Commander on a temporary basis only or by the appropriate Bureau Assistant Sheriff, if a long term need exists.

      - Medical or identification bracelets.

- Finger rings without large protruding settings or ornate design.
- Thumb rings shall not be worn.
- Females with pierced ears may wear a single post, no wider than one-quarter of an inch, in each ear when on duty. Females wearing business attire may wear earrings which are not exaggerated in style.
- Employees may not wear any item of jewelry that requires the piercing of facial skin other than the lower ear lobe. Such items would be nose-rings, pins or posts or lip-rings, tongue studs; etc.
- Males shall not wear earrings.
- Conservative necklaces may be worn by Deputies who are not in uniform or wearing a dress shirt and tie. If Deputies in uniform or wearing a dress shirt and tie choose to wear a necklace, it must not be visible.
- Conservative tie tacks/bars and cufflinks.

b. Authorized pins and insignia are listed in Sheriff's Office Policy Section 1.07.22, Rank and Service Insignia.

6. Cosmetics.

a. Cosmetics worn by uniformed personnel shall be subdued and blended to coordinate with the natural skin color of the individual.

b. False eyelashes of the exaggerated type are prohibited.

7. Fingernails.

a. Fingernails shall be clean and trimmed. Nails shall not extend beyond the tips of the fingers. Female Deputies working non-uniform positions may have fingernails that extend not more than one-half inch from the fingertip.

b. If worn, fingernail polish should be of muted shades and in good taste.

8. Visible Tattoos and Brandings.

a. On-Duty Uniformed Deputies – Deputies, while on duty in uniform, shall not display any visible tattoos or brandings. Sworn uniformed employees shall cover any visible tattoos and/or brandings by wearing an approved uniform or by wearing a skin patch or fabric sleeve that covers the tattoos and/or brandings.

- A skin patch is any patch or bandage that is of a neutral tone.
- A fabric sleeve may be of a neutral tone or black.

b. On-Duty Non-Uniformed Deputies – Deputies, while on duty but not in uniform, shall cover any visible tattoos or brandings by

wearing business attire as approved by the Office of the Sheriff Policy Section 1.07.21, Dress Code and Uniforms.

- Sworn Officers working in an undercover assignment are exempt from this policy while working in that capacity.

B. NON-UNIFORMED GENERAL EMPLOYEES.

1. When reporting for duty employees shall be clean and neat in their personal appearance.

2. Clothing will be appropriate for the duty assignment per Sheriff's Policy Section 1.07.21, Dress Code and Uniforms, and whenever possible conform to the following standards.

3. Female employees shall wear:

   a. A dress, dress suit or pantsuit.

   b. A blouse and/or a sweater and skirt or slacks.

4. Females shall not wear:

   a. Tank tops, T-Shirts, midriff or ultra sheer blouses, dresses or blouses that have plunging necklines, cutoffs, shorts, hot pants, and jean-type pants, except that jean-type pants may be worn in assignments requiring significant physical activity, such as maintenance of evidence in the Property Room.

5. Male employees shall wear:

   a. A dress shirt with tie and slacks.

   b. Sports jackets are optional.

6. Males shall not wear:

   a. Shorts, T-shirts, cutoffs, and jean-type pants, except that jean-type pants may be worn in assignments requiring significant physical activity, such as maintenance of evidence in the Property Room.

7. Exceptions to these standards may be made by the Division Commander to accommodate temporary special assignments. Permanent assignments requiring work clothing other than the dress codes described above must be approved by the Undersheriff.

8. Hair shall be kept clean and well groomed.

   a. Females shall not wear exaggerated hair styles. Those wearing long hair should keep in mind the hazard it presents while working around office equipment such as paper shredders, printers, etc.

   b. Male hair styles shall present a well groomed appearance and shall neither reach the shoulders nor be worn in a ponytail. Beards and other facial hair shall be well groomed, neat and shall neither be in exaggerated style nor be longer than two inches.

9. Jewelry restrictions are established to promote the safety of the employee and to maintain a business-like appearance. Some items of

jewelry are restricted because of their potential hazard while working around office equipment, machinery and/or inmates. Other items are restricted because they are outside the norms of acceptable business attire and detract from the Office of the Sheriff professional and public service decorum. The following jewelry items are restricted for the reasons noted for each. Division Commanders may authorize temporary exceptions depending on the specific duty assignments of the employees.

a. Items creating a potential hazard around office equipment and machinery are:

- Excessive long fingernails that hamper the employee's ability to use office equipment;
- Dangling earrings more than three inches long;
- Long necklaces that hang below the breast line; and
- Large ornate rings

b. Items of potential hazard around inmates are:

- Dangling earrings;
- Heavy necklaces;
- Large ornate rings; and
- Dangling bracelets.

10. All employees must come to work smelling clean and must avoid the excessive use of perfume or cologne.

11. Visible Tattoos and Brandings: Non-uniformed employees shall cover any visible tattoos or brandings by wearing business attire as approved by the Office of the Sheriff Policy Section 1.07.21, Dress Code and Uniforms.

C. DISPATCHERS, AIDES, RANGERS AND SPECIALISTS.

1. When reporting for duty, employees shall be clean and neat in their personal appearance.

2. Clothing will be appropriate for duty assignment, per Office of the Sheriff Policy Section 1.07.21, Dress Code/Uniforms and Section 1.07.22, Rank and Service Insignia. Dispatchers, Aides, Rangers and Specialists, when on duty but not in uniform, are subject to the requirements of Section B of this policy, Non- Uniformed General Employees.

3. All employees must come to work smelling clean and must avoid the excessive use of perfume or cologne.

4. Hair shall be kept clean, trimmed and present a well-groomed appearance.

a. Hair shall not be worn in exaggerated styles or colors.

b. Dispatchers, Aides, Rangers and Specialists in uniform:

- Hair will not be worn below the high point of the eyebrows.
- Hair will not be worn in such a length as to interfere with regular duties.
- Moustaches, if worn, will be neatly trimmed.
- Beards, if worn, will be neatly trimmed and must meet with the Division Commander's approval. Any disputes will be decided by the Division Commander.

5. Jewelry restrictions are established to promote the safety of the employee and to maintain an appearance consistent with the professional appearance expected of Office of the Sheriff employees.

   a. The following jewelry items are restricted to prevent a potential hazard around equipment:

      - Dangling earrings and bracelets shall not be excessive, overstated or such that it presents a safety hazard.
      - Thumb rings shall not be worn.
      - Large ornate rings shall not be worn.
      - Any item of jewelry that requires the piercing of facial skin, other than the lower ear lobe. Such items would be nose-rings, pins or posts or lip-rings, tongue studs; etc.
      - Males shall not wear earrings.

   b. Items that are outside the norm of acceptable business attire.

   c. The Division Commander may authorize exceptions depending on specific duty assignments.

6. Cosmetics.

   a. Cosmetics worn by employees shall be subdued and blended to coordinate with the natural skin.

   b. False eyelashes of the exaggerated type are prohibited.

7. Fingernails.

   a. Fingernails shall be clean and trimmed. Long nails make it difficult to use the keyboard; therefore, no one shall have nails so long as to interfere with their work.

   b. If worn, fingernail polish shall be of muted shades and in good taste.

8. Visible Tattoos and Brandings:

   a. On-Duty Uniformed Dispatchers, Aides, Rangers and Specialists – shall not display any visible tattoos or brandings. Uniformed employees shall cover any visible tattoos and/or brandings by

wearing an approved uniform or by wearing a skin patch or fabric sleeve that covers the tattoos and/or brandings.

- A skin patch is any patch or bandage that is of a neutral tone.
- A fabric sleeve may be of a neutral tone or black.

b. On-Duty Non-Uniformed Dispatchers, Aides, Rangers and Specialists – Non-uniformed employees shall cover any visible tattoos or brandings by wearing business attire as approved by the Office of the Sheriff Policy Section 1.07.21, Dress Code and Uniforms.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.43
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-18-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Office of the Sheriff Propriety and Decorum**	

I. POLICY.

A. Social mores and current business customs direct the acceptable conduct of employees in connection with their work. The Office of the Sheriff, as a public service agency, subscribes to this practice and has established guidelines of acceptable conduct for employees.

II. GENERAL.

A. ADDRESSING SHERIFF'S OFFICE EMPLOYEES. When in the presence of persons from outside the Office of the Sheriff employees shall address fellow employees by their rank or the title of Mr., Mrs., or Ms. as the circumstances warrant.

B. HARMONY AND COOPERATION. Employees shall conduct themselves in a manner that will foster the greatest harmony and cooperation between one another and other Units of the Office of the Sheriff.

C. TRUTHFULNESS. Employees shall be truthful with fellow employees and in all their work related activities.

D. CRITICISM OF OFFICIAL ACTS.

1. Employees shall not publicly criticize any official act of an employee of this County nor an employee of any city, county, state or federal government wherein they are identified as an employee of this Office of the Sheriff, unless authorized by the Sheriff.

2. An employee shall not speak critically or derogatorily to other employees or to any other person in a manner which could reasonably be expected to bring discredit to the Office of the Sheriff regarding the orders, instructions or policy of any Supervisor or Manager of the Office of the Sheriff. In any case, where there is sound reason to believe that an order, instruction or policy is inconsistent or unjust, the involved employee(s) has the right to respectfully call it to the attention of their Division Commander through proper channels.

E. STATEMENTS CONCERNING THE SHERIFF'S OFFICE.

1. Employees shall not address any public gathering, join any organization, appear on radio or television programs, or write articles or manuscripts for publication wherein they are identified as a representative of the Office of the Sheriff, unless authorized by the appropriate Bureau Assistant Sheriff.

    a. Employees seeking authorization shall submit an inter-office memo to the Bureau Assistant Sheriff via the chain of command.

    b. Nothing in this section is meant to restrict an employee from joining an employee union or association.

F. LANGUAGE. An employee shall not use threatening, intimidating or insulting language or behave in an insolent or insubordinate manner toward any other employee of the Office of the Sheriff.

G. LOITERING. Off-duty employees shall not loiter in any public place, nor engage in any shopping or leisure activity while in uniform.

H. OFF-DUTY DEMEANOR. Off-duty employees, in or out of uniform, shall not act in public in any manner that brings disrepute or otherwise reflects negatively upon them or on the Office of the Sheriff.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.44
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Courtesy and Bearing**	

I. POLICY.

A. Courtesy encourages cooperation and builds respect for those who use it. Employees shall practice commonly accepted courtesies and maintain a professional bearing while on duty or representing the Office of the Sheriff.

II. DEFINITIONS.

A. BEARING. The comprehension of one's position and the manner in which one carries oneself in relation to that position.

III. GENERAL.

A. PUBLIC CONTACT.

1. The proper attitude of each employee shall be one of service and courtesy, but not servility or softness. In non-restrictive situations, the employee should be pleasant and personable. On occasions calling for regulation and control, the attitude shall be firm and impersonal, but shall avoid an appearance of rudeness.

2. When a Deputy's badge number is requested, the Deputy should politely:

   a. Explain that the Office of the Sheriff does not issue badge numbers;

   b. Give the person the Deputy's full name and offer to write it down. If available, a business card may be given to the person; and

   c. If the person insists there must be a number, provide the person their employee number and offer to write it down.

3. This example is presented as a guideline of an appropriate response to a stressful situation. All employees shall adopt a like attitude when handling similar situations.

B. FELLOW EMPLOYEE CONTACT. The attitude of each employee contributes to the work atmosphere. All employees shall be courteous and cooperative with their fellow employees.

1. All employees will refrain from creating a hostile work environment. A hostile work environment does not reach the court standard of harassment in employment.

    a. Conduct that would be construed by a reasonable person to be mean, inflammatory or rude could constitute a hostile work environment.

C. BEARING. Personnel shall maintain a professional bearing when on duty or representing the Office of the Sheriff.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.45
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Patriotic Courtesy**	

I. POLICY.

A. As peace officers sworn to enforce the laws of the State of California and the United States of America, Deputies shall display proper respect for the symbols of this nation.

II. GENERAL.

A. PATRIOTIC COURTESY.

1. To the Flag.

   a. On approach of the flag, a Deputy in uniform will face the flag and render a military salute and remain in the saluting position until the flag passes.

   b. On duty Deputies in civilian dress shall stand while the flag passes and the National Anthem is being played. Headgear shall be removed.

2. To the National Anthem.

   a. When the National Anthem is played, Deputies in uniform shall stand at attention and render a military salute for the duration of the anthem.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.46
	RELATED ORDERS: PC 7, 67, 68.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employment Relations	SUBJECT: Gratuities/Rewards/Bribes	

I. POLICY.

A. Office of the Sheriff employees must maintain a neutral position free of gratuities, rewards and bribes to ensure fair, impartial law enforcement.

II. GENERAL.

A. ACCEPTANCE OF BRIBES. No employee shall accept a bribe, nor engage in any act of extortion, nor engage in any other unlawful means of obtaining money or property through their position with the Office of the Sheriff.

B. SOLICITING REWARDS.

1. Employees shall not solicit any reward for performance of their duties nor seek or ask for a gratuity of any kind.

2. Employees shall not solicit free admission into theaters or other places of amusement for themselves or others, except in the line of duty.

3. Employees shall not solicit nor accept free rides from transit systems, except in the line of duty.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.47
	RELATED ORDERS: County Administrative Bulletin 311.5; County Ordinance 36-6.604; Employee County MOU County Personnel Management Regulations; CCCSO 1.04.21, 1.05.25, 1.05.27.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 3-7-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Excessive Absenteeism**	

I. POLICY.

A. The Office of the Sheriff requires and expects all employees to regularly attend work. The efficient operation of the Office of the Sheriff requires employee absences be held to a minimum. The Office of the Sheriff will identify those employees whose absenteeism is excessive and attempt to modify their behavior.

II. DEFINITIONS.

A. EXCESSIVE ABSENTEEISM. Frequent or habitual absence from work.

III. GENERAL.

A. MONITORING ATTENDANCE.

1. Managers and Supervisors should always be alert to absenteeism problems. Any action taken should comply with the requirements of this Policy.
2. An employee's excessive absenteeism, is reason for review. The Sheriff will make every effort to identify and correct those employees having attendance problems.
3. Absenteeism for an employee will be recorded by Division payroll staff.
4. Review of absenteeism will be conducted at the Division level.
5. Division Commanders will review the records of all employees so identified. Contributing factors and extenuating circumstances will be considered in each case before any action is taken.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.48
	RELATED ORDERS: Administrative Bulletin 314.1; County Ordinance 34-18.002, 34-18.004.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Attendance at Meetings on County Time**	

I. POLICY.

A. Procedures are established to allow employees to attend meetings held by County agencies during regular working hours on County time.

II. GENERAL.

A. CIRCUMSTANCES DICTATING ATTENDANCE OF AN EMPLOYEE.

1. Employees may be allowed to attend meetings held by County agencies during regular working hours on County time in the following situations:

   a. The County agency calling the meeting is responsible for determining if attendance is required.

   b. If attendance is sought by the Hearing Officer for testimony or other information.

   c. If attendance is required to settle a grievance filed pursuant to the County grievance policy.

   d. If attendance is required as an employee representative to settle a grievance filed pursuant to the County grievance policy.

   e. If attendance is required as a spokesperson or representative of a recognized organization for meetings or hearings regarding wages, salaries and working conditions.

   f. If attendance is required as an official representative of a recognized employee organization, meeting and conferring in good faith or consulting with management representative(s) on matters within the scope of representation. The number of such representatives shall not exceed two without prior approval of the management representative(s).

   g. As a general rule, Supervisors should not schedule relatively short meetings that require the attendance of off-duty personnel, it being understood that, in all cases, operational necessity shall prevail.

2. Except situations where attendance is legally required (subpoena, jury duty), attendance shall be contingent upon advance arrangements having been made via the chain of command for time away from a work assignment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.49
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 4-3-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Obedience**	

I. POLICY.

A. Employees shall strictly obey and properly execute any lawful order emanating from any Supervisor or Manager to ensure safe and efficient Office of the Sheriff operations.

II. DEFINITIONS.

A. LAWFUL ORDER. A lawful order is construed as an order in keeping with the performance of any duty prescribed by law, Office of the Sheriff policy or procedure or for the preservation of order, efficiency and proper discipline.

III. GENERAL.

A. Obedience to and proper execution of lawful orders requires a clear understanding of the orders. Therefore, if time permits, employees should:

1. Ask for clarification of orders they don't fully understand;
2. Bring conflicting orders to the attention of the Supervisor issuing the conflicting orders. If the Supervisor does not change the order, it shall be obeyed. The employee will not be held responsible for disobedience of any order or violation of procedure when obeying the last lawful order issued by a superior; and
3. The employee and the Supervisor shall report an incident related to conflicting orders to their Manager without unnecessary delay.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.50
	RELATED ORDERS: Contra Costa County Resolution No. 77-680; County Employee MOU.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Employee Job Action**	

I. POLICY.

A. In the event of a job action/work stoppage, the Office of the Sheriff will take reasonable steps to provide an adequate level of service to the community. At the same time, positive attempts will be made to assist in resolving issues in dispute.

II. DEFINITIONS.

A. JOB ACTION. A deliberate and concerted action by employees to remain away from the workplace, or reduce work production to bring pressure upon the employer.

III. GENERAL.

A. FUNDAMENTAL OBLIGATION.

1. The fundamental obligation of the Office of the Sheriff to the public is to provide police protection and Office of the Sheriff services. The Sheriff cannot condone or permit employee actions that interfere with this obligation.

2. Deputy Sheriffs have an obligation to serve the public as defined in the Law Enforcement Code of Ethics. A job action is in direct violation of this code.

3. In order to facilitate communications between labor and management, the Sheriff is committed to developing an on-going dialogue with County officials, community leaders and Office of the Sheriff employees. The Sheriff is committed to resolving all disputes, in a reasonable manner, between Office of the Sheriff employees and management.

IV. PROCEDURE 1.

A. SHERIFF'S PHILOSOPHY.

1. The Sheriff has adopted the philosophy that negotiations are a year-round process.

2. The Office of the Sheriff will provide training to all supervisory and management employees on Memoranda of Understanding content, intent and meaning, as well as basic employee/employer relation practices, i.e.,

grievances, etc. Training will be conducted, as needed, by the Chief of Management Services or his/her designee.

3. The Sheriff will attempt to resolve issues of dispute as they arise, to the mutual satisfaction of the Office of the Sheriff and the employee(s).

4. The Sheriff will meet periodically, or as necessary, with employees and the leadership of employee organizations in order to identify areas of concern.

5. Association and union leadership will not be made to feel intimidated at any level of the organization.

6. The Sheriff encourages open and free-flowing communications between all persons inside and outside of the Office of the Sheriff.

V. PROCEDURE 2.

A. CONTINGENCY PLAN.

1. The Office of the Sheriff will have a contingency plan available to ensure continuation of services to the community in the event of a job action.

2. All employees involved in, or affected by, a job action/work stoppage will be advised of the consequences of their actions and that job actions/work stoppages cannot be condoned.

3. Depending on the nature and extent of the job action, the Sheriff may implement any or all of the following:

   a. All vacations are subject to cancellation, and requests for time off shall normally be denied;

   b. All management and non-striking employees shall be assigned to work locations deemed necessary to maintain services;

   c. Schedules for all management and non-striking employees will be modified only to the extent necessary to ensure vital services;

   d. Use of Reserve Deputies will be minimal and only as necessary to ensure vital or emergency/life-saving services;

   e. Requests for outside assistance from neighboring agencies will only be to the extent necessary to provide vital or emergency/life-saving services and as provided for by their own policies;

   f. The Sheriff will request the Board of Supervisors to invoke County Resolution No. 77-680, General Policies in the Event of a Strike Emergency;

   g. In order to provide current and factual information to the media, public and Office of the Sheriff employees during the job action, a Public Information Officer (P.I.O.) will be assigned; and

   h. At least one employee will be designated as a Management Liaison Officer (M.L.O.) in order to keep in constant communications with the employee group.

4. The Sheriff will maintain constant contact with the Board of Supervisors and will attempt to assist in any way possible to bring the dispute to a speedy and positive resolution.

5. Acts of a criminal nature will not be tolerated.

6. The Sheriff will review the Return-to-Work Agreement and will make decisions based on the factors included therein regarding:

    a. Discipline and/or termination of striking employees;

    b. Amnesty;

    c. Return-to-work scheduling; and

    d. Any new rules or regulations promulgated or in need of promulgation.

7. To ease transition back to work and to facilitate implementation of any new Memorandum of Understanding, meetings will be held between key management personnel, union or association representatives, and employees to review the spirit, meaning, and intent of new Memoranda of Understanding provisions.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.51
	RELATED ORDERS: Administrative Bulletin 23.4; County Ordinance 91-44; CCCSO 1.05.41.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Smoking**	

I. POLICY.

A. The Office of the Sheriff recognizes the irritation and threat to employee health caused by smoking. To minimize these factors, while not unreasonably restricting the right of employees to smoke, the Office of the Sheriff has established guidelines.

II. DEFINITIONS.

A. SMOKING. Possessing a lit pipe, cigar or cigarette of any kind, or any other ignited smoking devices, or the lighting, or emitting or exhaling the smoke of a pipe, cigar or cigarette of any kind.

III. GENERAL.

A. RESTRICTIONS.

1. Smoking is prohibited in all buildings, vehicles and other enclosed areas occupied by County employees, owned or leased by the County or otherwise operated by the County.

2. Specific Divisions may establish smoking areas outside the confines of County buildings, vehicles or enclosed areas. These designated smoking areas must comply with County Administration Bulletin 23.4 and have the appropriate "Smoking" signs conspicuously posted.

IV. PROCEDURE 1.

A. DIVISION COMMANDERS RESPONSIBILITIES.

1. Division Commanders will ensure that employees adhere to the contents of this Policy.

2. Division Commanders will ensure that "No Smoking" signs are posted in compliance with County Administrative Bulletin 23.4.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.05.52**
	RELATED ORDERS: County Personnel Management Regulations; Federal Drug Free Workplace Act of 1988; California Drug Free Workplace Act of 1990; CCC Board of Supervisors Resolution Number 92/52.; H&S Code § 11364.45(f)	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 01-05-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Drugs and Alcohol**	

I. POLICY.

A. Employees are expected to be fit for duty during work hours and shall not be under the influence of alcohol, marijuana, nor of any illegal or prescription drug while on duty.

II. DEFINITIONS.

A. DRUG. The term drug includes:

1. All illegal drugs, hallucinogenic and narcotic substances.
2. Unless and until federal law changes, marijuana is a Schedule l drug under federal law (Controlled Substances Act (Title 21 U.S.C. § 811). Therefore, it is unlawful to use, possess, transport, cultivate, etc.
3. Drugs that are legal to possess with a physician's prescription.

B. ALCOHOL. The term alcohol includes:

1. All alcoholic beverages.

C. UNDER THE INFLUENCE. For use in this section the term "Under the Influence" means the use of any substance which impairs or alters the mental or physical ability of the employee to perform assigned duties.

III. GENERAL.

A. ALL EMPLOYEES.

1. The following rules apply to all employees:

a. No employee will use marijuana or any illegal drug, hallucinogenic or narcotic, ON or OFF DUTY.

- Employees are reminded the possession, use, purchase, transport, sale and cultivation of marijuana is unlawful under federal law.

b. Employees shall not be at work under the influence of alcohol, marijuana, and/or any illegal or prescription drugs.

- An employee under the influence of alcohol, marijuana or any illegal or prescription drug will be relieved from duty.
- Special consumer behavior training or equipment tests conducted by the Sheriff's Office are exempt from this rule.

c. Employees shall not manufacture, distribute, dispense, possess or use alcohol, marijuana, or illegal drugs on County premises, unless used for an authorized police purpose or confiscated as evidence during the course and scope of employment.

- Drugs prescribed by a physician for illness or injury and non-prescription drugs are exempt from this rule (except medicinal marijuana).
- Special consumer behavior training or equipment tests conducted by the Office of the Sheriff are exempt from this rule.
- Any violation of the above may result in requiring the employee to participate satisfactorily in drug abuse assistance or rehabilitation program, or result in disciplinary action up to and including termination.
- Employees must notify the Sheriff via the chain of command of any criminal drug statute conviction for a violation occurring in the workplace within five days after such conviction (Federal Drug Free Workplace Act of 1988).
- Employees will not be disciplined because they request assistance for an alcohol or other drug problem. However, seeking assistance or raising any claim related to substance abuse does not relieve an employee of the responsibility to adhere to this Policy, and does not insulate the employee from discipline for reasons other than seeking assistance for an alcohol or other drug problem.

B. DEPUTIES/UNIFORMED PERSONNEL.

1. Employees in uniform shall not drink any alcoholic beverage.
2. Deputies in plain clothes shall not drink any alcoholic beverage while on duty, except when necessary in the performance of their duty.

C. PREVENTION AND EDUCATION.

1. The Office of the Sheriff is committed to the protection, health, well-being and safety of employees and the public from hazards relating to alcohol and other drug abuse by employees by:

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.53
	RELATED ORDERS: County Employee MOU.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 3-7-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Meal Periods**	

I. POLICY.

A. Employees should receive their meal period(s) without hampering the Office of the Sheriff function or services. Therefore, employee meal periods will be coordinated to accomplish this goal.

II. GENERAL.

A. MEAL PERIOD DURATION.

1. The length of the meal period will be either half an hour or one hour. The meal period must be taken within the first 5 hours of the shift. Employees assigned to uniformed shift work will normally take a half hour meal period while on duty. Most other employees will normally take a half hour or one hour meal period on their own time. The meal period cannot be taken at the end of the shift in order to go home early.

2. Employees assigned to uniformed shift work may suspend their duties for a meal period to be taken within their assigned area, subject to instructions from their Supervisor and the following guidelines:

   a. These employees are required to be available to immediately return to duty should the need arise.

   b. Meals shall be eaten with reasonable dispatch.

   c. Uniformed employees eating in a restaurant with both eating and bar facilities will have their meal at a table in the restaurant portion of the premises.

3. Most employees in non-uniform positions will take their meal period on their own time. The length of the meal period will be either half an hour or one hour depending on their employee Memorandum of Understanding and hours of assignment. Many employees have the option to select the length of their meal period. This will be coordinated with their Supervisors.

B. CONTINUITY OF SERVICES.

1. Employees shall coordinate their meal periods to ensure that the Office of the Sheriff function and required services are continued through their meal period.

2. Supervisors shall ensure that employees receive their meal periods and that the Office of the Sheriff functions and required services are uninterrupted.

3. Meal periods will be scheduled in compliance with state regulations, barring exigent circumstances.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.54
	RELATED ORDERS: Contra Costa County Interoffice Telephone Directory.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Telephone Etiquette**	

I. POLICY.

A. Telephone calls will be handled in a professional manner to ensure the caller receives timely efficient service.

II. GENERAL.

A. ANSWERING SHERIFF'S OFFICE TELEPHONE. Employees shall answer the telephone with:

1. Proper greeting (hello, good morning, afternoon, etc.).
2. The name of their Division or Unit.
3. Their name.

B. HOLD PROCEDURE. Employees will place someone on hold only after they have answered the phone as stated in the above paragraph. Unless they wish to hold longer, a caller should not be left on hold for more than one minute. If the employee can not assist the caller within that time frame, the employee will ask the caller if the employee may return the call, take a message or transfer the call.

C. TELEPHONE MESSAGES. When an employee takes a telephone message, the employee shall ensure that the following information is included on the message sheet:

1. Date and time of the message;
2. Name of the caller;
3. A return telephone number of the caller and the best time to return the call;
4. Any message left by the caller or the nature of the call; and
5. The name or initials of the employee taking the message.

D. TRANSFERRING TELEPHONE CALLS. Absent unusual circumstances, a caller should be transferred no more than one time. If the employee receiving the transferred call cannot provide assistance, that employee should arrange to get back to the caller. The caller should be advised of the public number and Division or Unit to which the caller is being transferred.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.55
	RELATED ORDERS: California Government Code.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Political Activities**	

I. POLICY.

A. Political activities shall not be allowed to interfere with Office of the Sheriff operations nor reflect on the Office of the Sheriff professional image.

II. GENERAL.

A. POLITICAL ACTIVITY RESTRICTIONS. Political activity is restricted only as provided by statute or for conduct that may reflect on the Office of the Sheriff. The following restrictions apply to all employees:

1. Employees shall not directly or indirectly engage in the solicitation of political contributions from fellow employees while on duty or on County property
2. Employees shall not use their official influence to compel political action or non-action
3. Employees shall not engage in the pursuit of political purposes during those hours the employees should be discharging their official duties
4. Employees shall not engage in political activities while wearing the uniform of the Office of the Sheriff.
5. Contact with Board of Supervisors. Employees who are not representatives of recognized employee relations groups shall not approach the Board of Supervisors or its employees concerning legislative, policy or operational matters pertaining to the Office of the Sheriff without the permission of the Sheriff. Nothing in this Policy shall be construed to deny the right of access to any County board or commission by representatives of recognized employee organizations.
6. Contact with the County Administrators Office. Employees are prohibited against contact with the County Administrators Office or its employees in matters pertaining to the Office of the Sheriff without the permission of the Sheriff.
7. Signing Petitions. Employees of the Office of the Sheriff shall not sign any petition, as an employee of the Office of the Sheriff, except by authority of the Sheriff.

8. Political Views. Employees of the Office of the Sheriff shall not engage in political discussion to the detriment of Office of the Sheriff operations.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.56
	RELATED ORDERS: PC 836.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Off-Duty Arrest/Enforcement**	

I. POLICY.

A. Deputies shall not become physically involved in off-duty arrests, traffic enforcement or other incidents unless an immediate threat of loss of life, gross bodily injury or major loss of property exists and other options are unavailable.

II. GENERAL.

A. CRIMES IN PROGRESS WHILE OFF DUTY. The seriousness of the crime will influence the Deputy's course of action. The appropriateness of the off-duty Deputy's action will be judged by the facts known to the Deputy at the time of the incident. Deputies must recognize the potential for escalation of violence or presence of accomplices, and that the Deputy is acting without immediate assistance. In deciding whether off-duty enforcement action will be taken, the following rules shall be followed:

1. Where there is no urgent or immediate need for law enforcement action, the Deputy shall contact the responsible law enforcement agency, observe the incident and await the responding unit's arrival to give a witness statement and/or suspect identification.
2. Traffic. Off-duty Deputies shall not make misdemeanor traffic arrests or become involved in the enforcement of traffic infractions. Also, pursuit of another vehicle by an off-duty Deputy in a private vehicle is prohibited.
3. Fights. Attempts to intercede or make arrests in misdemeanor fights or assemblies shall not be undertaken by off-duty Deputies, except when there is an immediate threat of loss of life, gross bodily injury or major loss of property, and other options are unavailable.
4. Neighborhood Disturbances. Due to the delicate nature of neighborhood disturbances, off-duty Deputies shall refrain from making misdemeanor arrests or otherwise attempting to settle such actions. Complaints should be referred to the responsible law enforcement agency.

B. ARRESTS.

1. An off-duty Deputy who makes an arrest or who participates in any arrest shall immediately report the details of the arrest to the Watch Commander and/or the Patrol Division Captain. Deputies are also required to notify their Division Commander not later than the following work day.

2. When an off-duty arrest occurs in another jurisdiction, the Deputy shall immediately notify the law enforcement agency with jurisdiction.

CCCSO Yellow Stripe Policy

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.05.57**
	RELATED ORDERS: CCCSO 1.05.33, 1.05.58, 1.05.28, P.C. 13670.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 1-6-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Unbecoming Conduct**	

I. POLICY.

A. The public has placed its trust in the Office of the Sheriff to administer an honest effective law enforcement agency. The Office of the Sheriff embraces the public trust and recognizes that effective law enforcement would be severely hampered if such trust were lost. The Office of the Sheriff also recognizes that this public trust can only be retained through the efforts of all employees. Therefore, employees shall conduct themselves in a manner both on duty and off duty that will not discredit or reflect poorly on the Office of the Sheriff.

II. GENERAL.

A. UNACCEPTABLE CONDUCT.

1. By accepting employment with the Office of the Sheriff, safety and general employees alike are accepting a higher standard of conduct than is found in other government service. We must be aware that our actions on and off duty are subject to scrutiny and reflect on the entire Office of the Sheriff. An employee's behavior may be considered unbecoming conduct if it would normally be viewed with disfavor by the community we serve.

2. The following is a list of unacceptable conduct. Each item may be sufficient grounds for utilization of the Corrective Counseling System or the Personnel Management Regulations. The list is not all inclusive and other unspecified conduct may also result in action by the Office of the Sheriff:

   a. Unlawful Conduct: Employees will strictly observe all provisions of the law in both their public and private affairs and will at all times conduct themselves in accordance with all legal mandates.

   b. Abuse of Authority: Employees will not abuse the authority granted them by virtue of their employment, nor take improper actions through "color of authority."

c. Rule Violations: Employees will not violate any County or Office of the Sheriff policies, procedures, orders, directives or regulations.

d. Treatment of Public: Employees will treat all members of the public with respect and courtesy and will refrain from abusive and derogatory conduct and/or profane or inflammatory language.

e. Insubordination: Failure or deliberate refusal of an employee to obey a lawful order given by a Supervisor or Manager shall be insubordination. Ridiculing a Supervisor or Manager or his/her orders, whether in or out of their presence, is also insubordination.

f. Disruption of Operations: Acts or omissions contrary to good order.

g. Misuse of Equipment: Negligent or willful damage to public property or waste of public supplies or equipment.

h. Incompetence or Inefficiency: Failure or inability to adequately complete properly assigned tasks or failure to undertake required obligations.

i. Cowardice: Deputies of the Office of the Sheriff shall not display cowardice or fail to support other peace officers in the performance of duty.

j. Misuse of Sick Leave: Abuse or excessive use of sick leave.

k. Subversive Organizations: No employee shall knowingly become a member of or become connected with any subversive organization. The Sheriff may authorize exceptions, when necessary, for a law enforcement function.

l. Law Enforcement Gang: No employee shall be a member of a group of peace officers within a law enforcement agency who engage in a pattern of on-duty behavior that intentionally violates the law or fundamental principles of professional policing, as defined by P.C. 13670.

m. Outside Associations: No employee shall knowingly maintain outside associations that jeopardize the security or integrity of the Office of the Sheriff or bring discredit to the law enforcement profession.

n. Personal Relationships: Employees will not allow their personal relationships to interfere with Office of the Sheriff business or the performance of their assigned duties. Additionally, fraternization with persons in custody, arrestees, detainees, criminal defendants or other persons the employee has had an enforcement contact with, is prohibited.

o. Indebtedness: Employees shall manage their debts in a manner that will not reflect poorly on their position with the Office of the

Sheriff. They shall avoid situations where creditors are seeking legal judgments or garnishment of their salaries.

p. Other: Any conduct which tends to bring the County or the Office of the Sheriff into disrepute.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.58
	RELATED ORDERS: California Government Code Sections 3300 et. seq., 3305, 3306; PC 832.5; County Employee MOU CCCSO 1.05.27.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 7-16-2015	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Corrective Counseling System**	

I. POLICY.

A. The effective and efficient operation of the Sheriff's Office requires employees to conform to Office of the Sheriff standards. The Sheriff believes that positive correction is often more effective than punishment. Therefore, a system of corrective counseling will be used to assist employees in modifying unacceptable behavior to comply with Office of the Sheriff standards.

II. DEFINITIONS.

A. BUSINESS DAY. Monday through Friday, excluding holidays.

B. HEARING OFFICER. In cases involving an appeal, the Hearing Officer will be the Undersheriff or Bureau Assistant Sheriff not in the employee's direct chain of command.

III. GENERAL.

A. ADMINISTRATION OF CORRECTIVE COUNSELING PHILOSOPHY. The Office of the Sheriff has adopted the philosophy that improvements in employee behavior occur only when:

1. The problem area is clearly identified; and
2. The employee chooses to work with the Sheriff's Office to correct the problem.

B. CORRECTIVE COUNSELING.

1. The Corrective Counseling System consists of three phases which are designed to give the employee an opportunity to correct behavior problems. The Office of the Sheriff will assist an employee in improving behavior through corrective action that is appropriate to the circumstance. The phases and their duration are:

   a. Phase I – Three months

   b. Phase II – Four months

   c. Phase III – Six months

2. Supervisor's notes reflecting an employee's work habits and/or behavior during an evaluation period may be maintained without entering the employee into the system.

C. SUPERVISORS' AUTHORITY.

1. Each Supervisor, Middle Manager, Captain, Assistant Sheriff or above has the authority to place an employee in the Corrective Counseling System. The authority limits are:

a. Phase I - Supervisor

b. Phase I & II - Middle Manager

c. Phase I, II, & III - Captain, Chief, Assistant Sheriff, Undersheriff, Sheriff.

D. INTERVIEW AND ENROLLMENT. Each step of the system is initiated with a meeting between the employee and his or her Supervisor or Manager. The meeting is a very important element in the system because it allows the employee an opportunity to present an explanation of the incident or behavior. It also provides the Supervisor or Manager an opportunity to remind the employee of any rules, policies or procedures that are appropriate or required.

1. The Supervisor or Manager should review available information and conduct any necessary investigation prior to the meeting.

2. When a meeting is scheduled, the Supervisor or Manager shall inform the employee that corrective counseling may result, to give the employee an opportunity to obtain representation.

3. At the conclusion of the interview, the Supervisor or Manager may indicate the need for corrective action, training or increased supervision, or the Supervisor or Manager may require further investigation into the behavior. This investigation may be performed within the Division or, at the request of an Assistant Sheriff via the Undersheriff, by Internal Affairs.

4. If the Supervisor or Manager recommends placement into a phase level beyond the Supervisor's authority, another meeting will be required by the appropriate level of supervision. The originating Supervisor or Manager may attend the additional meetings.

E. CORRECTIVE ACTION. Each incident requires timely corrective action which directly addresses the employee's behavior problem. Appropriate corrective action can be as simple as the counseling which is provided during the meeting with an employee. Other circumstances may require more stringent monitoring of employee behavior, a more structured work environment, increased supervision, specific training, counseling programs, and medical or psychological evaluation and intervention. Resources may include but are not limited to the Sheriff's Office Chief of Management Services and Occupational Health Services, as well as other County Departments and services.

F. EXEMPT EMPLOYEES. The following employees are exempt from this system:

1. Members of the United Clerical, Technical and Specialized Employees, Local 2700; and

2. Members of the Professional and Technical Employees, Local 512; and

3. Members of the Professional and Technical Engineers IFPTE, Local 21; and

4. Members of the Public Employees' Union, Local One.

G. PHASE PLACEMENT CRITERIA.

1. An employee may be placed in the system when behavior is unacceptable. The employee need not be placed in Phase I to begin the Corrective Counseling System. Phase II or Phase III may be used should any or all of the following factors justify placement at a higher phase:

   a. The nature of the behavior;

   b. The seriousness of the behavior;

   c. Repetitive behavior; and

   d. Previous behavior including information in the Office of the Sheriff Corrective Counseling file.

2. Once an employee is placed in a phase, each higher level of authority will review the appropriateness of the placement or recommendation. Each can modify the phase level consistent with their authority or recommend alternate actions. Assistant Sheriffs and above may reject a phase placement and direct the issue to be handled as outlined in the Personnel Management Regulations.

3. Related Incidents. Progression from one phase to another may result from a repetition of the original problem or may result from different but related behavior. Progression need not be sequential. An employee may, for example, be in Phase I and due to the seriousness or complexity of the subsequent behavior be placed in Phase III. A summary of the related Phase will be discussed during the interview and included in the Corrective Counseling document.

4. Unrelated Incidents. An employee may be placed in more than one phase over a specific time frame for different, unrelated incidents. Should this occur, the duration of the first phase is not affected by the subsequent phase placements.

H. COMPLETION OF A PHASE. A phase is completed when the employee's behavior has been corrected during the time requirement of the phase.

1. Any phase that has been replaced due to the employee progressing to another phase for related behavior is not considered a successful completion of that phase.

2. An employee entered into more than one phase at the same time for unrelated behavior may complete one phase while remaining in the Corrective Counseling System for the duration of the other phases.

I. SYSTEM RECORDS. The following files will be maintained within the Sheriff's Office: one copy will be filed with Internal Affairs. All Corrective Counseling documents that relate to an employee will be purged from these files upon successful completion of the phase – 1 year.

1. Internal Affairs records and criminal records will be maintained as required by law.

J. DOCUMENTATION.

1. Once the appropriate Supervisor has talked to the employee and determined a course of action, the Supervisor will document the meeting in a memo. The memo will place the employee in a phase, subject to review. The memo addressed to the employee will reiterate the content of the phase meeting and state the action to be taken in the phase memo format which is set forth in "Procedure 5" of this Policy.

2. The employee will have the opportunity to read and sign the phase memo prior to its placement in the personnel file. The signing of the document by the employee is not an admission of culpability. If the employee refuses to sign the memo, the Supervisor will note the refusal on the memo. The employee will not be ordered to sign the memo.

3. The phase period begins at the time of the meeting with the Manager and/or Supervisor placing the employee into the Corrective Counseling System.

4. If the phase is modified at a higher level, that phase period begins at the time of the meeting with the Manager or Supervisor placing the employee into the increased or decreased phase.

5. The original phase memo shall be given to the employee. One copy shall be forwarded to Internal Affairs through Blue Team via the chain of command. One hard copy will be filed in Internal Affairs.

6. An employee placed in any phase of the system has the right to prepare a memo setting forth the employee's position on the situation. This written memo shall be submitted no later than 30 business days after the interview and forwarded through the same chain of command as the phase documents. It shall remain with the phase documents in the employee's personnel file.

K. TIME LIMIT.

1. Time limits for specific actions within the system are established to ensure the employee of a timely resolution. The time limits are maximums. Generally, implementation of the system should begin as soon as a thorough investigation can be completed. The investigation time starts when the employee's Supervisor, Middle Manager, Captain, Commander or the Internal Affairs Detail becomes aware of the incident or alleged infraction.

2. Time Limits – Investigation Conducted by Division, not as part of an official IA investigation.

a. Phase III – Within 15 business days. An employee may not be placed in Phase III if the investigation exceeds 15 business days.

b. Phase II – Within 25 business days. An employee may not be placed in Phase II if the investigation exceeds 25 business days.

c. Phase I – 26 or more business days. An employee may be placed in Phase I if the investigation exceeds 25 business days.

3. Time Limits – Investigation Conducted by Internal Affairs, or as a result of a completed IA investigation done at Division level.

a. Phase III – No Time Limit

b. Phase II – No Time Limit

c. Phase I – No Time Limit

4. Extension of Time Limits. The established time limits may be extended by mutual agreement between the employee and the Office of the Sheriff or if the employee is unavailable for an interview. There also may be instances when an employee is recommended for the Personnel Management System (County Disciplinary System), and the Sheriff, upon review of the recommendation, chooses instead to place the employee into the Corrective Counseling System. In such cases, the above time limits may be extended.

L. APPEALS PROCESS.

1. An employee placed into a phase may appeal the placement through a formal hearing process. An appeal hearing of Phase I and II placements is discretionary on the part of the Hearing Officer. Phase III placement appeals require a hearing. The phase placement appeal will be heard by a Bureau Assistant Sheriff, selected by the Undersheriff, who is not in the employee's direct chain of command, hereafter referred to as the Hearing Officer. The Hearing Officer has the authority to uphold the phase placement, set aside the phase placement completely, or decrease the phase to any lower level. The Hearing Officer shall review Phase I and II appeals to determine if there is a basis for granting a formal hearing, and within five business days, notify the employee and the Undersheriff of the decision. The hearing will be scheduled in accordance with the time table listed herein.

2. The Hearing Officer will determine the parties to be present at the hearing. The employee and a maximum of two representatives of the employee's choice may also be present.

3. In general, witnesses will not be called nor allowed at the appeals hearing. The employee may however submit written statements no later than the scheduled starting time of the hearing.

4. The entire appeal hearing will be recorded. The recording will be kept and available in Internal Affairs and will be deleted when the phase period is no longer in effect. Upon the employee's request and at the employee’s expense, the employee may obtain a copy of the recording.

5. The following time table has been established for the appeal process:

a. Appeal Notification - 5 Business Days. Upon receipt of the phase memo, the employee has five business days to deliver written documentation to appeal the phase placement. The appeal memo is to be addressed to the Undersheriff with a copy to the employee's Bureau Assistant Sheriff. The appeal process defers the starting date of the phase period. When submitting an appeal memo the employee should include in the memo all facts supporting the need for granting the appeal hearing.

b. Hearing Date - 15 Business Days. Upon granting a formal hearing, the Hearing Officer has 15 business days within which to schedule the hearing. The employee must be notified of the hearing date at least five business days before the hearing. If one of the parties in the appeal has an extended absence, the hearing will be scheduled as soon as practical upon the return to work of the parties.

c. Hearing Results - 5 Business Days. The Hearing Officer will report the final decision in a brief memo to the employee within five business days of completion of the hearing.

6. The Hearing Officer will weigh all testimony and attempt to determine facts surrounding the phase placement.

a. If the decision upholds the original phase level or decreases it, the phase period begins on the date of the Hearing Officer's decision.

b. If the Hearing Officer does not uphold the original phase, all reference to the phase incident and hearing will be immediately purged from the personnel file. Existing Internal Affairs investigation records will be updated and maintained as required by law.

7. The Hearing Officer will report the hearing decision in a brief memo to the employee within five business days of the hearing with a copy to the Chief of Management Services, the Bureau Assistant Sheriff and the Undersheriff.

IV. PROCEDURE 1.

A. SUPERVISORS AND MIDDLE MANAGEMENT RESPONSIBILITIES.

1. The Supervisor should review available information and conduct any necessary investigation prior to the meeting. When a meeting is scheduled, the Supervisor shall inform the employee that Corrective Counseling may result. At the conclusion of the meeting, the Supervisor may indicate the need for corrective action, training, or increased supervision. The Supervisor's options are:

a. Resolve the issue based on information gained during the interview

b. Conduct further investigation;

c. Request investigation by Internal Affairs. Such requests must be made by the Bureau Assistant Sheriff via the Undersheriff; or

d. Place the employee in a phase. The Supervisor will do the following:

e. Provide the employee the opportunity to read and sign the phase memo. If the employee refuses to sign the memo, the Supervisor will note the refusal on the memo. The Supervisor will not order the employee to sign the memo;

f. Give the employee the original phase memo; and

g. Forward a copy of the memo endorsed and dated at each Supervisory level, via the chain of command, for review.

V. PROCEDURE 2.

A. BUREAU ASSISTANT SHERIFF/CAPTAIN RESPONSIBILITIES.

1. System Monitoring. The Bureau Assistant Sheriff/Captain shall ensure that actions taken under this system are adequately monitored. Immediate Supervisor and Managers must be informed of the status of the employees they supervise, the corrective action that is being taken, and the need for evaluating the effectiveness of this action. Such monitoring will assure that an employee will successfully modify behavior within the phase period or will suggest the possibility that additional corrective action is necessary.

2. Special Circumstances. When an employee is the subject of an Internal Affairs investigation and is transferred to another Division, the Bureau Assistant Sheriff/Captain for whom the employee worked when the incident occurred will place the employee in the phase and inform the Bureau Assistant Sheriff/Captain of the Bureau or Division to which the employee is being transferred of this action. The Bureau Assistant Sheriff/Captain of the Bureau or Division to which the employee has been transferred will act as an observer and be responsible for monitoring the training of the employee.

VI. PROCEDURE 3.

A. UNDERSHERIFF RESPONSIBILITIES. The Undersheriff will review the phase documents and:

1. Approve the action as is and direct the phase documents to be placed in the appropriate file.

2. Modify the action to either a higher or lower phase, or reject the action as unsubstantiated; and

   a. Return the Phase documents to the Bureau Assistant Sheriff/Captain for modification and notification to the employee; or

   b. Return the issue to the Bureau Assistant Sheriff/Captain to be handled under the guidelines of the Personnel Management Regulations.

3. Direct additional investigation or request additional information from Internal Affairs or the employee's Division prior to making a decision.

VII. PROCEDURE 4.

A. PURGING.

1. Internal Affairs will purge all phase documents 1 year after the successful completion of the phase.

VIII. PROCEDURE 5.

A. PHASE MEMO FORMAT. (See chart next page.)

OFFICE OF THE SHERIFF
Contra Costa County

Field Operations Bureau
1980 Muir Road
Martinez, CA 94553
(925) 313-2500

DAVID O. LIVINGSTON
Sheriff

MICHAEL V. CASTEN
Undersheriff

DATE: (today's date)

TO: (employee's name)

FROM: (Supervisor/Manager)

SUBJECT: Corrective Counseling -- Phase 1, 2 or 3

GENERAL INFORMATION

Meeting Date and Time:
Meeting Location:
Persons Present:
Description of Issue:

DECISION

Phase Level:
Effective Date:
Purge Date:

EXISTING RELATED PHASE

Phase Level:
Effective Date:
Purge Date:
Description of the issue:

CORRECTIVE ACTION

(Describe Corrective Action)

SYNOPSIS OF INTERVIEW

(Narrative Description of the Interview)

EMPLOYEE RIGHTS

Your appeal and response rights appear in the Corrective Counseling System Policy under Response Rights and Criteria for appeals.

SIGNATURE OF PHASE MEMO

I am aware this memo will be placed in my personnel file. I further understand that signing this document is not an admission of guilt.

_____ _____

(Date) (Employee's Signature)

cc: Undersheriff via Chain of Command

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.59
	RELATED ORDERS: County Administrative Bulletin 303.2; County Employee MOU; County Personnel Management Regulations; County Merit System Ordinance CCCSO 1.05.70.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 5-19-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Grievance Procedure**	

I. POLICY.

A. The grievance process is provided as a system of employee recourse should a dispute arise over the employee's rights in the workplace.

II. DEFINITIONS.

A. BUSINESS DAY. Monday through Friday, excluding holidays.

B. GRIEVANCE. Any dispute which involves the interpretation or application of any provision of the employee's Memorandum of Understanding.

III. GENERAL.

A. The goal of the Sheriff is to resolve all potential grievances at the lowest possible level. All Management and Supervisory employees should work toward this goal by becoming familiar with this Policy.

1. Points to Note.

a. An employee cannot grieve a decision by any County Official if the Memorandum of Understanding says the official's decision is final.

b. A grievance must be filed within 30 calendar days of occurrence of incident.

c. A union or association may represent the employee at any stage of the process.

d. The grievance procedure is similar for all unions/associations.

e. The "clock" runs on all steps of the process. If the County fails to meet time frames, the grievance automatically moves up to the next step. If the employee fails to meet time frames, the grievance is deemed to be withdrawn.

f. Time limits may be waived by mutual consent.

g. Corrective Counseling is not grievable.

h. An association or union cannot file a grievance without listing the employee(s) for whom the grievance is filed.

2. Past Practice. Past practice may be grounds for a grievance (through June 1985). The association/union must demonstrate that such past practice exists and has been acknowledged and agreed to by Management and representatives of the union/association. Only those past practices agreed to by Management and approved by the Sheriff (prior to February 17, 1985 for DSA, January 23, 1985 for Local 1, and February 14, 1985 for Clerical) may be considered a past practice.

3. Informal Grievance.

   a. A grievance begins when an employee objects to the application or interpretation of the Memorandum of Understanding and makes an official complaint to his/her immediate Supervisor. The employee will do either of the following:

      - Meet informally with the immediate Supervisor in an attempt to resolve the issue; or
      - Request, in writing to the Supervisor, a formal meeting with the Supervisor. Within five business days of receipt of the written request, the Supervisor must meet with the employee in a real attempt at resolution. If the Supervisor is represented by the same union/association, the Supervisor must provide a copy of the written request to the union/association. A copy will also be given to the Division Commander at this time.

   b. The goal of the Office of the Sheriff is to resolve all grievances at the informal level by encouraging communication and open dialogue between Supervisor and employee.

   c. If resolution occurs, no formal paperwork is required; the grievance is automatically terminated by the resolution at this informal level. The Supervisor will notify the Division Commander of the resolution.

4. Formal Grievance.

   a. If no resolution occurs after the meeting with the immediate Supervisor, employee may submit the formal grievance in writing, within ten work days of the informal meeting, to his/her Division Commander.

   b. A formal written grievance to the Division Commander must state the following:

      - Which provision of the Memorandum of Understanding has been misinterpreted or misapplied;
      - How the misinterpretation has affected the employee; and
      - The redress being sought.

   c. The Office of the Sheriff has ten business days to resolve or respond to the grievance. Note that this time frame does not allow for grievances to "work their way up" the chain of

command. The Division Commander is the focal point of the Office of the Sheriff response. He/she receives the formal grievance and either resolves the issue or forwards the unresolved grievance to the Sheriff/Undersheriff via the Chief of Management Services. The Sheriff or his designee then has the Office of the Sheriff formal response prepared.

d. If the grievance is unresolved at the Office of the Sheriff level, the employee may appeal in writing to the County Human Resources Director within ten business days (seven business days for DSA) of the denial by the Sheriff/Undersheriff. The County Personnel Director then has 20 business days to investigate and respond to the grievance.

- Grievances of disciplinary actions as defined in Sheriff's Office Policy Section 1.05.70, Personnel Management Regulations begin at this level.

e. If the grievance is unresolved by the County Human Resources Director, the employee may, within seven days of the Director's response, file a request to the County Human Resources Director for an Adjustment Board to review the issue. The Adjustment Board will be composed of three union/association representatives and three County (Management) representatives. The Board must meet within 20 business days of the request. If a majority of the Board agrees, the decision of the Board is binding.

f. If the grievance is unresolved by the Adjustment Board, the employee may request formal arbitration within 20 business days of the Board decision. The arbitrator is selected through mutual agreement between the County Human Resources Director and the employee. Fees and expenses are split evenly between the County and the employee.

5. Management Grievances. Non-represented Managers have a grievance procedure. It is essentially similar to the above procedure without formal arbitration. At the initial step, an Adjustment Board of Management employee hears evidence and makes a recommendation to the Sheriff/Undersheriff regarding the complaint. The Sheriff/Undersheriff makes the final decision.

IV. PROCEDURE 1.

A. SUPERVISOR. The immediate Supervisor will receive all informal grievances and work toward a resolution at that level.

1. If a verbal grievance is resolved no formal documentation is needed.

2. When a Supervisor receives a written request for a formal grievance meeting he/she will:

a. Forward a copy to the Division Commander and if the Supervisor belongs to the same union/association as the employee, forward a copy to the union/association; and

b. Notify the Division Commander of the results of efforts to resolve the grievance.

V. PROCEDURE 2.

A. DIVISION COMMANDER.

1. Upon receipt of a grievance, the Division Commander will:

   a. Ensure that the grievance:

      - Addresses a section of the Memorandum of Understanding;
      - States how the misinterpretation affects the employee;
      - States the redress being sought;
      - Has been presented to the immediate Supervisor; and
      - If the grievance fails to address these issues, the grievance will be returned to the employee with a brief explanation of its deficiency and not the subject of the grievance. No action will be taken until the proper form and content is received.

   b. Record the date the grievance is received on the top of the memo. Immediately send a copy to the Chief of Management Services, and to the affected Bureau's Assistant Sheriff as information only.

   c. Evaluate the possibility of a resolution by the Division Commander. Division Commanders should not reach an agreement which would affect other Divisions without input from them.

2. If there is a possibility of resolution at the Division level, the Division Commander will:

   a. Immediately work towards that resolution.

   b. If successful, summarize the resolution in a memo to the employee with a copy to the Personnel Officer and appropriate Command levels for information.

   c. If unsuccessful, notify the Bureau Assistant Sheriff and forward the grievance to Administrative Services, attention Chief of Management Services, with a brief summary of the attempted resolution allowing sufficient time for the Sheriff to provide the formal response.

3. If the issue is clearly not resolvable at the Division level, the Division Commander will note the fact across the top of the grievance and send it and a brief summary of the Division's position to Administrative Services, attention Chief of Management Services, with a copy to the affected Bureau's Assistant Sheriff, (as information only).

VI. PROCEDURE 3.

A. SHERIFF'S OFFICE PERSONNEL OFFICER. Upon receiving an unresolved formal grievance from a Division Commander, the Chief of Management Services will:

1. Notify the Sheriff/Undersheriff;
2. Prepare the Office of the Sheriff response in a timely manner. Send a copy to the Division Commander, Bureau Assistant Sheriff, and Undersheriff;
3. Provide proper notification to the County Employee Relations Officer;
4. Immediately notify the Bureau Assistant Sheriff of the eventual resolution of the grievance; and
5. Notify all Management personnel of grievance resolutions which result in an interpretation of a Memorandum of Understanding. This will allow such an interpretation to be uniformly applied.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.60
	RELATED ORDERS: CCCSO 1.05.56. Labor Code 432.7	
ISSUE DATE: 2-1-2006 REVISION DATE: 10-11-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employee Relations	SUBJECT: Employee Personal Restraining Order/Temporary Restraining Order or Involvement in an Arrest or Criminal Investigation	

I. POLICY.

A. Sworn employees who have a personal involvement in an on-duty or off-duty arrest or criminal investigation shall immediately advise their Division Commander and discontinue any official role in the investigation or arrest; except in exigent circumstances.

B. General (non-sworn) employees who have a personal involvement in an on-duty or off-duty arrest shall immediately notify their Division Commander if such an arrest results in charges being filed against them, and/or a conviction.

C. All employees have a duty to ascertain and report to their Division Commander when and if charges have been filed, and when and if such charges result in a conviction.

II. GENERAL.

A. CRIMINAL INVESTIGATIONS/PERSONAL INVOLVEMENT. A Deputy has personal involvement in a criminal investigation if the Deputy, a relative or friend, is the victim or suspect of the criminal activity being investigated.

1. A Deputy having such personal involvement shall not become involved in a criminal investigation that does not arise out of the Deputy's normal duty assignment unless directed or authorized to do so by the Deputy's Supervisor upon full disclosure of the Deputy's personal involvement.

2. Nothing in this Policy is intended to prevent any Deputy from investigating a crime in which the Deputy is personally involved, on duty or off duty, when exigent circumstances threaten the loss of evidence, the loss of witnesses, or the escape of the suspect, or when there is a possibility of serious injury to the Deputy or others. When such exigent circumstances cease, so shall the Deputy's efforts to further investigate the crime.

3. Any employee observing suspected criminal conduct by another

employee of the Office of the Sheriff, whether it occurs on duty or off duty, shall immediately report the incident to his or her immediate supervisor.

4. Any employee receiving or developing information that any employee of the Office of the Sheriff is a suspect in any criminal activity shall immediately notify his or her immediate supervisor.

5. Any sworn employee who is arrested for any offense, on duty or off duty, other than a traffic infraction, or who becomes aware that he or she is the focus of a criminal investigation, other than as a victim or witness, shall immediately notify his or her Division Commander. Sworn employees shall also notify their respective Division Commander when they become aware of charges being filed against them or when such an arrest results in a conviction.

6. Any general employee who is arrested for any offense, on duty or off duty, other than a traffic infraction, *and* where charges have been filed, shall notify his or her Division Commander. General employees shall also notify their respective Division Commander when they become aware of such charges resulting in a conviction.

7. Any communication with outside agencies relating to an employee of the Office of the Sheriff, who is the subject of that agency's investigation, shall be conducted at the Lieutenant level or above.

8. If an Office of the Sheriff employee who is traveling on official business is the subject of a criminal investigation or is seriously injured or incapacitated, the supervising Lieutenant shall discontinue the employee's involvement in the training or meeting, and arrange for the employee to return as soon as practical, giving consideration to the needs of the investigating agency and the health status of the employee.

B. EMPLOYEE PERSONAL RESTRAINING ORDER OR OTHER LEGAL IMPEDIMENT.

1. Any sworn employee who is served with a restraining order that restricts him or her from possessing a firearm, or who is the subject of any other restriction that would impede his or her ability to function as an armed peace officer shall immediately notify his or her Division Commander.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.61
	RELATED ORDERS: Administrative Bulletin 302; Contra Costa County Superior Court Local Rules of Court; Number 23 Section F, Labor Code Section 230, (58 Cal. Jur. 3d "Statutes" Section 123, pgs. 515-516).	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 4-3-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Jury Duty**	

I. POLICY.

A. The County has established procedures to ensure employees are properly compensated for jury duty.

II. GENERAL.

A. If called for jury duty in a Superior, or Federal Court, or for a Coroner's Jury, Office of the Sheriff employees will observe the following guidelines:

1. Employees may remain in their regular pay status, or they may take vacation leave or leave without pay and retain all fees and expenses paid to them.

2. If an employee is summoned for jury duty and elects to remain in regular pay status and waive all fees (except mileage allowances), the employee shall obtain from the Clerk or Jury Commissioner a certificate indicating dates attended and the waiver of fees. The employee shall furnish the certificate to his/her Supervisor as a Sheriff's Office record. No Absence Report Form or Overtime Card is required.

3. If an employee elects to retain all fees, they must take vacation leave or leave without pay. No court certificate is required. An Absence Report Form (AF-23) must be completed.

B. In accordance with legal mandates, any employee serving on a jury will not be permitted to work before or after daily jury service. This does not apply to those employees who are on jury duty and have not yet been chosen to serve on a jury.

C. Employees shall advise their Supervisors of scheduled jury duty immediately after being informed of their jury assignment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.62
	RELATED ORDERS: Administrative Bulletin 306.1; Government Code 68097 et. seq.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Witness Duty**	

I. POLICY.

A. The County has established procedures to ensure employees are properly compensated for witness duty arising from their employment.

II. GENERAL.

A. Employees called upon to act as a court witness in a case arising in the course of their work or the work of another County Department may remain in their regular County pay status.

1. Employees may take vacation leave or leave without pay and retain all witness fees paid them. Employees are not allowed to take vacation and collect expert witness fees for work done while on duty.

B. An Absence Report Form (AF-23) must be submitted by employees taking vacation leave or leave without pay.

C. Employees electing to retain their regular pay status shall forfeit all fees and expenses to the Office of the Sheriff.

1. Witness fees for peace officers are collected by the court and paid directly to the County.

2. Employees called to serve as witnesses in private cases or personal matters (e.g., accident suits and family relations) shall take vacation leave or leave without pay and may retain all witness fees paid to them.

D. Employees shall advise their Supervisor in advance of scheduled court appearances for witness duty.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.63
	RELATED ORDERS: California Civil Code Section 1978; California Government Code Sections 68097 et. seq.; PC 1328 County Administrative Bulletin 18.1; CCCSO 1.04.11, 1.05.64, 1.05.68, 1.05.72.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 5-6-2015	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Civil Subpoenas for Office of the Sheriff Employees**	

I. POLICY.

A. Specific guidelines are established to ensure the Office of the Sheriff is compensated for employees testifying in civil matters arising from on-duty related incidents or investigations.

II. DEFINITIONS.

A. CIVIL MATTER. Any non-criminal hearing, including arbitration hearings, before any court or tribunal to include D.M.V. hearings regarding Driver's License status.

B. INFORMATION/DISPOSITION FORM. Refers to Office of the Sheriff form made on an inter-office memo, sample attached, no form number.

III. GENERAL.

A. The information in this Policy only applies to those cases in which an employee is subpoenaed to appear and testify and in which the Office of the Sheriff is not a defendant or plaintiff in the action. For information concerning those cases, see Sheriff's Office Policy Section 1.05.64, "Lawsuits Against the Office of the Sheriff and/or Employee." For information concerning Subpoenas Duces Tecum (SDTs), see Sheriff's Office Policy 1.05.68, "Subpoena Duces Tecum."

B. Employees shall take vacation time to testify in civil matters that arise from personal, non-duty related incidents.

IV. PROCEDURE 1.

A. SUBPOENA ACCEPTANCE.

1. A civil subpoena will be received ONLY IF IT IS STAMPED OR ENDORSED BY THE CIVIL UNIT INDICATING THAT THE APPROPRIATE FEE HAS BEEN DEPOSITED for each day attendance is required. If service is attempted without endorsement, the server will be directed to the Civil Unit, except:

   a. When the subpoena is a Federal subpoena; or

   b. When the subpoena is issued by a county public agency concerning a work-related situation or if the County is the plaintiff or defendant.

2. Subpoena fees for specified county employees require a $275 deposit. The party at whose request the subpoena is issued shall reimburse the public entity for the full cost to the public entity incurred in paying the specified county employee his or her salary or other compensation and traveling expenses as provided for in the California Government Code, for each day that the specified county employee is required to remain in attendance pursuant to the subpoena. The amount of two hundred seventy-five dollars ($275), together with the subpoena, shall be tendered to the Civil Unit for each day the specified county employee is required to remain in attendance pursuant to the subpoena. (CGC 68097.2(b))
3. If the actual expenses should later prove to be less than the amount tendered, the excess amount shall be refunded to the depositor. (CGC 68097.2(c))
4. If the actual expenses should later prove to be more than the amount deposited, the difference shall be paid to the public entity by the party at whose request the subpoena is issued. (CGC 68097.2(d))
5. Once the subpoena has been endorsed by the Civil Unit, the server will deliver the endorsed copy to the Field Operations Bureau located at 1980 Muir Rd., Martinez, CA 94553 for service. The designated employee or Supervisor will deliver a copy of the subpoena to the employee, as soon as possible, ensuring compliance with the subpoena.
6. Employees will accept all stamped or endorsed subpoenas when legally served on them personally or served on the immediate Supervisor when the employee is absent.
7. An immediate Supervisor may accept service for an employee under the following conditions:
    a. There is enough time for the Supervisor to serve the employee, and there is enough time for the employee to comply with the subpoena.
    b. If the Supervisor knows that he/she will be unable to deliver the subpoena, or less than five (5) days remain before the appearance, refusal to accept service is permitted. If the subpoena is accepted and the Supervisor later learns that delivery is impossible, notification will be given to the process server or his/her office, not less than 48 hours prior to the appearance date and time. The Supervisor is then excused from any duty or liability.
8. When an employee is served a civil subpoena, he/she will immediately notify his/her Supervisor so proper scheduling can be done.
9. An employee shall not volunteer to testify and shall not testify unless legally subpoenaed in civil actions arising out of Office of the Sheriff employment.

V. PROCEDURE 2.

A. RECORDATION/BILLING.

1. To ensure proper billing, the subpoenaed employee will keep a record of:

a. Date of court appearance;

b. Travel time to court;

c. Time spent in court;

d. Means of travel;

e. Any overtime involved;

f. Round trip mileage; and

g. Any other expenses.

2. This information will be provided to the Civil Unit on an INFORMATION/DISPOSITION SHEET.

   a. If this Form is not attached to the subpoena, request a copy from the Division's Administration or the Civil Unit.

   b. More than one appearance on the same case can be listed on the same form.

3. Forward the completed Information/Disposition Form with the civil subpoena attached to the Civil Unit.

4. If appearance was canceled, return Form to Civil Unit indicating subpoena was canceled.

5. Employees shall not accept any fees or expenses from the litigants. All recovered fees will be revenue of the Office of the Sheriff to reimburse for salary and expenses incurred by the Office of the Sheriff. It is a misdemeanor to take any personal type of consideration or ask for or receive any payments.

6. Employees will also file any appropriate overtime card and/or Travel Demand Form (for personal mileage) required by Office of the Sheriff Policy Section 1.04.52, Overtime- Pay and Regulations or Office of the Sheriff Policy Section 1.05.72, Reimbursement Demands. Overtime cards will not be approved in civil matters unless the Information/Disposition Form is attached for proper routing.

B. CIVIL UNIT. The Civil Unit will ensure proper billing for reimbursement to the Office of the Sheriff. Any questions regarding civil subpoenas should be referred to the Civil Unit for clarification.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.64
	RELATED ORDERS: California Civil Code of Procedure Sections 415.10, 415.20(a), 415.30; California Government Code Sections 825, 960.2, 995, 53051; County Administrative Bulletin 118.2; CCCSO 1.05.63.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 7-16-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Lawsuits Against the Office of the Sheriff and/or Employee**	

I. POLICY.

A. Legal papers served on an employee concerning lawsuits arising from their employment must be properly handled to ensure the County and the employee receive adequate representation. Employees are cautioned not to advise process servers that they "accept service"; rather employees only receive documents. Whether such receipt constitutes good service is a determination for County Counsel.

II. DEFINITIONS.

A. LEGAL PAPERS. Used in this section to describe all claims, small claims actions, summonses, complaints, writs and other court orders served on employees that relate to claims of any type against the Office of the Sheriff and/or the employee. The term does not apply to subpoenas, discovery request, etc., unless they are related to an action against the Sheriff's Office and/or employee arising out of employment with the Office of the Sheriff.

III. GENERAL.

A. HANDLING LEGAL PAPERS.

1. The following guidelines apply when legal papers are served on an employee. With regard to the service of a civil case subpoena on an employee, see Sheriff's Office Policy Section 1.05.63, Civil Subpoena for Sheriff's Office Employees.

   a. Upon receipt of any legal papers, either by personal service or by a Supervisor, the individual accepting service will record the date, time, manner (i.e., by mail, by hand, etc.), and place of service and legibly sign their name on the first page. The Supervisor shall deliver a copy to the employee by handing it to the employee.

      - The employee or Supervisor shall make their own copy of the legal papers and deliver the original legal papers immediately to the affected Assistant Sheriff for immediate transmittal to the Sheriff / Undersheriff.

- If available, the envelope in which the legal papers were received shall be forwarded with the legal papers.

b. The Sheriff or Undersheriff may choose to direct the Planning and Research Unit to process these papers.

2. In small claims actions, generally, Risk Management appears at Small Claims Court along with a designated Sheriff's employee.

   a. Any small claims judgment against the Sheriff's Office will be forwarded to the Planning and Research Unit, who will make the necessary arrangements for payment if deemed appropriate by Risk Management.

3. To facilitate the service of process and to reduce inconvenience to employees, an Office of the Sheriff employee who has been named in a lawsuit in connection with his or her official duties, may authorize in writing the Planning and Research Unit, the Undersheriff, and/or County Counsel to accept service of civil process on his or her behalf in either Federal or State legal actions arising from their employment with the Office of the Sheriff of Contra Costa County.

   a. This specific authorization to accept service of civil process shall extend only to legal actions arising from their employment. The individual authorized to accept service does not have authority to accept service of process in any legal action which does not arise from the authorizing employee's employment with Contra Costa County.

   b. Such authorizations must be made in writing on the Authorization to Accept Service of Process Form (a form which is generally prepared by County Counsel) and is effective when the subject employee signs and delivers the form until it is revoked in writing. The completed form will be delivered to the Planning and Research Unit, who will forward it to County Counsel.

4. If an employee is personally served by mail or by a process server, and he or she request County representation, a written request shall be submitted by the employee to the Planning and Research Unit via the chain of command for appointment of counsel. The employee's request will be reviewed by County Counsel, and a formal request will be completed by County Counsel and forwarded to the employee for signature.

   a. The employee is not required to surrender individual defense to the County. However, if an employee elects to retain separate counsel, the County is not required to pay for the defense of the action or to pay any judgment rendered in the case.

5. The Planning and Research Unit will ensure that records and documentation for claims against the Office of the Sheriff or its employees are maintained for as long as the respective cases are active or subject to appeal. Case files may be retained indefinitely if they are of archival nature.

6. The County provides insurance coverage for employees against public liability which may arise from their County employment. Employees are cautioned they may be held individually liable for punitive and exemplary damages assessed against them for willful, wanton and malicious acts. No insurance can be obtained to provide coverage for such damages.

7. In cases where an employee receives a summons and complaint by mail, the employee shall not sign nor return the Acknowledgment of Service or the Waiver of Service by mail. It is County policy not to return the Notice of Acknowledgment. The employee is to forward the legal papers to the Planning & Research Unit who will forward it to County Counsel. A copy will remain in the Professional Standards Division.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.65
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 12-18-2013**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Requesting Legal Opinions or Interdepartmental Inquiries**	

I. POLICY.

A. To moderate requests for formal written legal opinions made to the District Attorney's Office, Office of County Counsel, Attorney General's Office, or inquiries to the Human Resources Department or County Administrator's Office, such requests shall be made through the chain of command to the Sheriff or Undersheriff. All such requests shall be signed by the Sheriff or the Undersheriff or their designee, or by the Administrative Lieutenant. The Civil Unit is an exception and may communicate directly with the Office of County Counsel in discussing legal issues pertaining to civil process.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.66
	RELATED ORDERS: PC 171b; Perimeter Screening Policy - Superior Court, Contra Costa County, 7/99; Amended Access Policy - Superior Court, Contra Costa County, 9/5/2000.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 1-17-2012	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Criminal Subpoenas and Court Procedures**	

I. POLICY.

A. Criminal subpoenas shall be processed and served on Office of the Sheriff employees in an expeditious manner. Office of the Sheriff employees shall regard themselves as officers of the court when called to testify, and will treat the court and court officers with respect.

II. GENERAL.

A. Criminal Subpoenas. Criminal subpoenas for employees are generally received from the County District Attorney's Office, however some courts provide computer printout subpoenas

B. Courthouse Access. The Contra Costa County Superior Court has adopted a policy regarding courthouse access by sworn peace officers. All employess of the Office of the Sheriff will comply with that Superior Court policy.

C. COURT ATTENDANCE.

1. All employees subpoenaed in cases before the court shall be punctual in attendance.

2. Court attire is specified in Policy 1.07.21 (Dress Code/Uniform) at procedure 5.

3. When giving testimony, employees will speak calmly and explicitly in a clear, distinct and audible tone, so as to be easily heard by the court and jury. The employees shall testify accurately and will neither suppress nor overstate circumstances with the objective of favoring or discrediting anyone.

D. REFUSAL TO TESTIFY.

1. Any employee appearing before any of the below listed bodies who invokes his/her constitutional privilege and refuses to testify or provide requested information may be subject to the Corrective Counseling System or Personnel Management Regulations.

a. Any competent investigative body.

b. A judicial tribunal.

c. A hearing board.

d. A person authorized to take testimony.

III. PROCEDURE 1.

A. CRIMINAL SUBPOENA PROCESS – RECEIVING SUBPOENAS.

1. All criminal subpoenas for employees are received by the Division Subpoena Clerk.

2. Division Subpoena Clerks log these subpoenas and distribute them for service.

B. CRIMINAL SUBPOENAS PROCESS – SERVING SUBPOENAS.

1. The service of a subpoena to an employee shall normally be done by the employee's immediate Supervisor. However, the Division Commander may designate additional employees to serve subpoenas.

2. At time of service, a copy of the subpoena, or a notice of subpoena, will be given to the employee named on the subpoena. The person serving will sign and date the proof of service on the original.

3. Signed original subpoenas are logged by Division Subpoena Clerks and returned to the originating District Attorney's Office. An exception to this procedure is the computer printout subpoena issued by some courts. These are logged and discarded.

4. In the event of changes or cancellations, the Division Subpoena Clerk shall ensure that the subpoenaed employee is notified, either by written notice or by telephone.

IV. PROCEDURE 2.

A. COURT ATTENDANCE PROBLEMS.

1. It shall be the responsibility of each employee to notify the District Attorney’s Office or appropriate court if the employee is unable to make a scheduled court appearance.

2. If an employee receives a subpoena for a court appearance date which conflicts with his/her scheduled vacation, scheduled training out of county, or military or emergency personal leave, the employee must notify the District Attorney's Office directly or notify his/her Divisional Subpoena Clerk, who will make the notification.

3. The employee shall ensure that alternative arrangements (i.e., continuance or cancellation) have been made prior to missing a court date for the above reasons.

4. In the event the case has started, the employee must call the court directly to report his/her absence.

5. In the event the court or District Attorney does not rescind the subpoena, the employee must attend court.

6. In the event of conflicting court dates, when an employee receives two or more subpoenas requiring a court appearance on the same day and time, the employee shall be responsible for notifying the District Attorney's Office of the conflict.

V. PROCEDURE 3.

A. GENERAL ACCESS – PERIMETER SCREENING OF PEACE OFFICERS AND GENERAL EMPLOYEES.

1. Deputies in complete uniform are authorized to carry their sidearm in Contra Costa courthouses. Such uniformed Deputies will be allowed through any entrance or screening without any requirement of producing their ID card or explaining their business.

2. Plain clothes Deputies who are armed and produce their ID card, and state their business shall be allowed through any entrance or screening.

3. All Office of the Sheriff General employees not assigned to Court Services shall use public access doors to enter Contra Costa courthouses.

4. No employee, including Deputies, appearing on a personal matter, such as his/her own family law case, shall be permitted to carry a weapon into a courthouse. Employees are not authorized to appear on personal matters while in uniform.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.67
	RELATED ORDERS: County Risk Management Unit Claim Procedures, June 2002; CCCSO 1.05.64; Nelson v. the Supreme Court (2001) 89 Cal. App. 4th 565; Government Code, Section 26202.6.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-18-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Claims and Lawsuits-Administrative Inquiry**	

I. POLICY.

A. When allegations of misconduct surface through claims or lawsuits filed against the County, they must be thoroughly reviewed. The Professional Standards Unit shall forward copies of such documents to the affected Bureau Assistant Sheriff for review and action if warranted.

II. DEFINITIONS.

A. CLAIM. A third party demand against the County for money or property perceived by the claimant as his/her rightful due to recover damages for an accident or injury.

B. LAWSUIT. A case brought before a court by which an individual pursues a remedy that the law affords.

III. GENERAL.

A. TYPES OF CLAIMS.

1. Auto Liability. Auto accidents which involve County employees driving County vehicles.
2. Property Claims. Claims for destroyed, damaged, or lost property above $200.
3. General Liability. Claims arising out of any act of the County or a County employee that constitutes unreasonable conduct.
4. Civil Rights. Violations of public rights which fall outside the California Tort Claims Act of 1963 which provides substantive liabilities and immunities for public entities and their employees.
5. Medical. Allegations that the County failed to provide adequate medical care while that person was in any type of County facility.

B. NOTIFICATION OF CLAIMS AND LAWSUITS.

1. County Counsel and/or Risk Management provides notification to the Office of the Sheriff Professional Standards Unit of all claims/lawsuits involving the Office of the Sheriff.

2. The Professional Standards Unit will notify and/or forward copies of claim/lawsuit documents to the appropriate Bureau Assistant Sheriff when:

   a. The amount of the claim/lawsuit is for $5,000.00 or more;

   b. When a pattern of employee conduct or specific activity causes multiple claims/lawsuits;

   c. When an individual has a history of contrived claims/lawsuits;

   d. When a change in policy or procedure may eliminate or reduce future claims;

   e. When the Professional Standards Unit Commander believes the claim/lawsuit should be reviewed by the Bureau Assistant Sheriff/Division Command staff.

IV. PROCEDURE 1.

A. CLAIM REQUIRING ADMINISTRATIVE INQUIRY REVIEW.

1. After review by the Bureau Assistant Sheriff of a claim/lawsuit and with the Undersheriff's approval, an administrative review may be turned over to the Internal Affairs Detail for investigation.

2. Administrative reviews shall be conducted in all cases of alleged:

   a. Force

   b. Sexual harassment; or

   c. Criminal/unlawful conduct.

3. Administrative Inquiries will cover previously undiscovered violations of Office of the Sheriff Policies and Procedures that have taken place within six months of the date of occurrence. The Professional Standards Unit will forward copies of investigative reports to the affected Bureau Assistant Sheriff.

4. Any allegations of criminal/unlawful conduct will be investigated within the normal Statute of limitations for the crimes(s) involved.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.68
	RELATED ORDERS: Evidence Code Sections 1040-1045, 1070, 1270, 1530, 1531, 1560-1565; Code of Civil Procedure Sections 1985-1987, 2020, 2034;Government Code Sections 6250–6270, 68096, 68097.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Subpoena Duces Tecum**	

I. POLICY.

A. The Office of the Sheriff has established guidelines for the acceptance of Subpoenas Duces Tecum to ensure complete compliance in providing the documents and court appearances they require.

II. DEFINITIONS.

A. SUBPOENA DUCES TECUM. A legal process requiring the production of designated books, tapes, documents or other evidence.

B. SUBPOENA DUCES TECUM RE: DEPOSITION. A legal process requiring the attendance of a witness out of court to give evidence before a judge, commissioner, notary public, or other authorized officer of the court or to produce certain evidentiary records for deposition and requiring the witness to be prepared to authenticate the documents.

C. TNG ORDER. The legal requirement that a juvenile court judge must review juvenile records to determine what information, if any, may be released to a requesting party .

III. GENERAL.

A. This Policy addresses subpoenas requiring testimony, the production of documents, or the attendance of the Custodian of Records or other qualified witnesses to deliver records or documents to the clerk of the court, a deposition officer, or to appear before a judge, deposition officer, or other authorized officer of the court to give testimony.

IV. PROCEDURE 1.

A. SUBPOENA ACCEPTANCE.

1. The Technical Services Division, Records Unit Manager is the designated person to accept, review, track and disseminate to the appropriate division or unit subpoenas for Office of the Sheriff business records.

2. Any Office of the Sheriff employee may accept Subpoenas Duces Tecum or Subpoenas Duces Tecum re: Depositions. Employees shall notify the server that the Technical Services Records Unit is the main repository

and designated as the appropriate service location and provide location and business hours for service.

3. Subpoenas are date sensitive requiring timely production of documents and notifications for appearances. The date and time received and by whom shall be written in the upper right hand corner of the subpoena.

4. Office of the Sheriff employees shall first telephone the Technical Services Records Unit and advise them of Subpoenas Duces Tecum upon receipt, after completing step 3 (above), forward them by fax to the Technical Services Division, Records Unit Manager for review, tracking, and dissemination.

B. TECHNICAL SERVICES RECORDS UNIT RESPONSIBILITIES.

1. The Records Unit Manager or designee shall review each Subpoena Duces Tecum for the following:

   a. Is it addressed to the proper Custodian of Record?

   b. Is the affidavit/declaration attached?

   c. Is the name of the law firm, attorney's name and telephone number affixed?

   d. Are the compliance date and court date appropriate for appearance (5 days appearance or 15 days production of documents)?

   e. Confirm that the original Subpoena Duces Tecum was shown at time of service and that a copy of both the Subpoena and affidavit/declaration were provided.

   f. If documents requested regard a subject not directly represented by the serving attorney confirm that the required "Notice to Consumer" has been received.

2. The Records Unit Manager shall maintain an audit/tracking log of all Subpoenas Duces Tecum received. Affix a Notification and Compliance Form and disseminate the Subpoena Duces Tecum to the appropriate division or unit for action.

C. COMPLIANCE.

1. After review of the Subpoena Duces Tecum, should questions arise regarding its validity, forward it by fax to County Counsel for consultation and response for any of the following reasons:

   a. Improperly drawn, served or lacks date of production;

   b. Information is available through the discovery process;

   c. Lacks affidavit or declaration;

   d. Lacks sufficient specificity, overbroad in scope or excessively burdensome;

   e. No case number indicated;

   f. Witness fees not paid;

g. Disclosure would interfere with a pending or related investigation or is not in the best interest of the agency;

h. Conflicts with TNG order; and/or

i. The request is for documents in a legal proceeding in which the Office of the Sheriff is already a participant.

2. Certified copies are acceptable and have the same evidentiary value as originals. Do not provide originals. Certified copies require a stamp in red ink indicating they are a true copy of the original records.

3. Do not allow a copy service to handle the originals or personally make copies with Office of the Sheriff equipment. (Note: The Civil Code of Procedure authorizes this practice only when the attorney and the court are from another county.)

4. Response times depend on the type of subpoena. Criminal subpoenas require five (5) days for agency personnel and fifteen days for business records or the time agreed upon between the Custodian of Record and the party who served the subpoena. If an agreement of a different time is made, follow-up the agreement with a letter indicating the agreed time on Office of the Sheriff letterhead and signed by the Custodian of Records.

5. Provide a copy of the records and the completed affidavit or declaration as follows:

a. Place the records, affidavit/declaration in a sealed, separately enclosed inner envelope, and write the time, number of the action, name of witnesses, and date of the subpoena, or affix a copy of the subpoena face page to it.

b. Enclose it in an envelope, seal it and address it as follows:

- If directs attendance/documents in court, address it to the clerk of the court.
- If directs attendance/documents at a deposition, address it to the deposition officer taking the deposition and the place of the deposition or the deposition officer's place of business.
- For mutually agreed upon location or other circumstances, follow Evidence Code Section 1560(c)(3) and (d) for direction.

D. SUBPOENA FEES.

1. Reasonable costs associated with locating, copying, reviewing, etc. shall be at the maximum rate of $24.00 per hour per person, computed at $6.00 per quarter hour or fraction thereof, actual postage charges, and the actual cost, if any, charged to the witness by a third party for the retrieval and return of records held by that third party .Ten cents ($0.10) per page for standard documents 8 ½ x 14 inches or less; twenty cents ($0.20) per page for copying from microfilm and actual costs for reproduction of oversize documents or documents requiring special processing.

2. Fees for records delivered to the attorney, the attorney's representative, or the deposition office for inspection or photocopying at the witness' place of business shall not exceed $15.00. Apply appropriate costs should the records need to be retrieved from microfilm. (See number 1.)

3. When a personal appearance of the Custodian of Records is required pursuant to Evidence Code Section 1564, the witness is entitled to the same witness fees and mileage permitted in a case requiring testimony in court and any additional costs provided by Evidence Code Section 1563(b).

4. No documents shall be delivered without receipt of fees for such services.

5. Complete the Notification and Compliance Form and return to the Technical Services Records Unit Manager for recordation and audit/tracking.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.05.70**
	RELATED ORDERS: County Employee MOU California Civil Code 1094.6; County Employee Retirement Law of 1937; County Personnel Management Regulations; County Merit System Ordinance; CCCSO 1.04.64.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 4-5-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Personnel Management Regulations**	

I. POLICY.

A. The effective and efficient operation of the Office of the Sheriff requires that employee behavior conform to Office of the Sheriff standards. Occasionally, positive actions to correct unacceptable behavior fail or the unacceptable behavior is such that use of the Corrective Counseling System is inappropriate. The Office of the Sheriff uses the County Personnel Management Regulations in these cases to modify unacceptable behavior.

II. DEFINITIONS.

A. ADMINISTRATIVE APPEAL. An administrative appeal allows the employee to meet with the Sheriff for the purpose of discussing an administrative decision affecting the employee.

B. CAUSE OF ACTION REPORT. A report from supervisory personnel that identifies specific causes for disciplinary action against an employee.

C. COUNTY. The County of Contra Costa.

D. DEMOTION. The reclassification of an employee to another position in a class having a lower salary allocation at the top step than the class previously occupied by the employee.

E. DIRECTOR OF PERSONNEL. The person designated by the County Administrator to serve as the Assistant County Administrator-Director of Personnel.

F. EMERGENCY PERSONNEL ACTION. An emergency personnel action is warranted when the Sheriff or designee has reliable information regarding an employee's recent or potential behavior which would cause that Manager to have a reasonable concern for the welfare or safety of the public, the employee, or other employees. An emergency personnel action may involve assignment to a Temporary Modified Duty, Leave of Absence with Pay, or assignment to a specific work station.

G. MERIT BOARD. The Merit Board of Contra Costa County.

H. PERMANENT STATUS. Appointment to a position which must be confirmed by successful completion of the probationary period specified for the class.

I. REDUCTION. The lowering of an employee's compensation level within their current salary range.

J. REPRIMAND. A formal written notice to the employee informing him/her that his/her performance and/or behavior must improve.

1. Used when counseling or other non-disciplinary methods have not worked.

a. Tells the employee what future disciplinary action will occur if there is no improvement.

b. Defines the area where improvement is needed.

c. Is placed in the employee's personnel file.

2. Letters of Reprimand are subject to the Grievance Procedure as outlined in the Memoranda of Understanding.

K. REVOCATION OF POLICE POWERS. It may be necessary for the Sheriff or designee to temporarily suspend the police powers of a sworn employee. The employee is served with a document indicating that the officer's police powers (per Section 830 P.C., et. seq.) have been suspended, and revoking authorization for Office of the Sheriff issued weapons, ID card and badge.

III. GENERAL.

A. PERSONNEL MANAGEMENT. The County Merit System Ordinance and Personnel Management Regulations provide that tenure of employees shall be awarded for good behavior and the rendering of efficient service. The regulations also provide that the Sheriff may dismiss, suspend, demote or reduce in compensation any employee for cause. When the use of the Corrective Counseling System is inappropriate, or the employee has failed to correct unacceptable behavior while in the system, the Personnel Management Regulations will be utilized.

1. Cause. The following list of causes are sufficient for the utilization of the Personnel Management Regulations. The list is indicative of causes that may result in dismissal, suspension, demotion or reduction in compensation. However, it is not all inclusive and other unspecified causes may result in such action.

a. Absence without leave.

b. Excessive or unexcused absenteeism and/or tardiness.

c. Neglect of duty.

d. Incompetence or inefficiency.

e. Disorderly or immoral conduct.

f. Being at work under the influence of liquor or drugs, carrying liquor or drugs during work hours and/or on County premises.

g. Conduct tending to bring the Merit System into disrepute.

h. Conviction of any criminal act involving moral turpitude.

i. Negligent or willful damage to public property or waste of public supplies or equipment.

j. Misappropriation of County funds or property.

k. Dishonesty or theft.

l. Violation of any reasonable policy or procedure or lawful order given by a Supervisor.

m. Insubordination.

n. Unreasonable failure or refusal to undergo any physical, medical and/or psychiatric examination and/or treatment authorized by County regulations.

o. Material and intentional misrepresentation or concealment of any fact in connection with obtaining employment.

p. Willful violation of any of the provisions of the Merit System Ordinance or Personnel Management Regulations.

q. Sexual Harassment.

2. Skelly Requirements.

a. Before taking action to dismiss, demote, reduce compensation, or suspend an employee for more than 40 work hours (48 hours for 24 hour shift employees), the Sheriff shall direct the service of a Notice of Proposed Action, either personally or by certified mail with a return receipt requested. The notice shall contain the following:

- A statement of the action proposed to be taken;
- A copy of the charges including the acts or omissions and grounds upon which the action is based;
- If it is claimed that the employee has violated a rule or regulation of the County, Office of the Sheriff or district, a copy of said rule shall be included with the notice;
- A statement that the employee may review and request copies of materials upon which the proposed action is based; and
- A statement that the employee has seven (7) calendar days to respond to the Sheriff, either orally or in writing.

b. The employee who has been served with a Notice of Proposed Action has seven (7) calendar days to respond to the Sheriff, either orally or in writing, before the proposed disciplinary action may be taken. Upon application and for good cause, the Sheriff may extend in writing the period to respond. If the employee's response is not filed within seven (7) days or any extension granted, the right to respond is lost. Pending employee response to a Notice of Proposed Action, the Sheriff may place the employee on temporary leave of absence with pay, for cause specified in writing.

3. Dismissal, Suspension, Demotion or Reduction in Compensation. After complying with applicable Skelly requirements, the Sheriff shall issue an order in writing stating specifically the causes for the action.

   a. The order shall be filed with the County Human Resources Director after service on the employee. The filed order shall list the date served, by whom served, and whether it was served personally or by the U.S. Postal Service via certified mail with a return receipt requested.

   b. The employee may, within ten (10) calendar days after personal service or receipt of the order, appeal in writing through the County Director of Human Resources to the Merit Board, or the employee may waive in writing to the County Director of Human Resources his/her right of appeal to the Merit Board in favor of appeal rights under a specific grievance procedure.

4. Suspension Without Pay Due to Pending Criminal Charges.

   a. The Sheriff, upon giving notice as provided in 3a. above, may immediately suspend an employee against whom there is a pending criminal charge which adversely affects the County service or conflicts with continued employment. Such suspension lasts until the Sheriff has knowledge of a disposition on the charges. Pending criminal charges exist when an employee has been arrested or has been named a defendant in a criminal complaint or indictment filed in any court.

   b. To suspend an employee due to pending criminal charges, the Sheriff shall serve on the employee, either personally or by certified mail with a return receipt requested, a Notice of Suspension Due to Pending Criminal Charges. The notice shall contain:

      - A statement that the employee is suspended due to pending criminal charges;
      - A statement of the charges upon which the suspension is based and of the facts by which such charges adversely affect the county service or conflict with continued employment;
      - A statement that the employee may respond to the Sheriff either orally or in writing within seven (7) calendar days; and
      - A statement that disciplinary action may be taken after disposition of the charges.

   c. The Notice of Suspension Due to Pending Criminal Charges may include a Notice of Proposed Action (Skelly Notice).

   d. The Merit Board may order lost pay restored for good cause, subject to the employee's duty to demonstrate damages, but not if the employee:

- Is given a Notice of Proposed Action (Skelly Notice); and
- Is dismissed or otherwise disciplined for cause directly related to the charges within 14 calendar days after the Sheriff has knowledge of a disposition of the criminal charges.
- A criminal conviction expunged by the court under Penal Code Section 1203.4 may be used during an administrative hearing (Adams v. County of Sacramento).

e. A criminal conviction based upon a plea of 'nolo contendere' (no contest) may not be used during an administrative hearing (County of Los Angeles v. Civil Service Commission [Craig Calzada], 39 Cal.App.4th, 256).

5. County Merit Board Hearing/Rehearing. The following is a brief summary of some of the provisions in the County Personnel Management Regulations for an employee appeal of a dismissal, suspension, demotion or pay reduction.

a. The Merit Board shall, within 20 days from the filing of an appeal, determine whether to take jurisdiction of the matter for a hearing. If a hearing is granted, the appellant is entitled to appear personally, produce evidence and to have counsel and a public hearing.

b. Within 30 calendar days after the Merit Board certifies its decision to the Sheriff and at the request of a party or on its own motion, the Merit Board may order a rehearing to:

- Hear new evidence not known or available with reasonable diligence at the time of the hearing; and
- Rectify any obvious mistake of law or obvious injustice not known at the time of the hearing.

6. Separation of Probationary Employee. A probationary employee may be rejected from the service at any time during the probation period without regard to the Skelly provision of these rules. The following administrative guidelines apply to the rejection of probationary employees.

a. Written notice of rejection must be given not later than the last day of the probationary period. The notice must be served on or before its effective date, otherwise the employee is entitled to the same due process afforded a permanent employee.

b. Probationary employees are entitled to an administrative appeal to the Undersheriff.

B. EMERGENCY PERSONNEL ACTIONS. On occasion, unusual or inappropriate behavior on the part of Office of the Sheriff employees may require Office of the Sheriff Managers to take immediate personnel action to provide for the safety of individuals or security of Office of the Sheriff facilities. The guiding principle of

this section is to provide employees with a safe, secure working environment and to minimize disruption of service to the public.

1. Recognizing the Need for Action.

   a. Emergency action under this section is warranted under the following general circumstances.

      - An overt act by an employee which may be illegal or may represent such a serious breach of Office of the Sheriff Policy that the Sheriff or his designee has a reasonable concern for the safety of individuals or security of Office of the Sheriff facilities.

      - Unusual behavior or statements attributed to the employee which tend to indicate instability, or present a potential danger to the safety of self or others. This may include threatening statements attributed to the employee, or statements indicating severe depression or illogical thought processes. This unusual behavior may or may not require taking the employee into protective custody under Welfare & Institutions Code Section 5150. In either case, it is imperative that a supervisor or fellow employee remain with the agitated employee until he/she receives medical attention at a designated facility, or until the arrival of someone else in the employee's trust to care for him/her (i.e. family member, friend, clergy, etc.).

   b. The emergency action should be taken by the highest available command level Manager depending on the time of occurrence. Ideally the employee's Bureau Assistant Sheriff should be involved; if unavailable, the Station, Facility, or Division Commander shall be contacted.

IV. PROCEDURE 1.

A. INSTITUTING THE PERSONNEL MANAGEMENT REGULATIONS. When a Supervisory, Command, or Management person believes cause exists to institute the use of the Personnel Management Regulations above a Letter of Reprimand, a Cause of Action Report shall be prepared. Letters of Reprimand only require a Cause of Action Report if there is no investigative report such as an I.A. report prepared to support the Letter of Reprimand.

1. Cause of Action Report.

   a. The Cause of Action Report will be prepared on official memo stationery by the Supervisory, Command or Management personnel concerned. The report will be directed to the Sheriff via the Undersheriff.

   b. The subject line of the memo shall include the following:

      - Cause of Action Report;

      - Specific causes of action; i.e., violation of rules, failure to modify unacceptable behavior, etc.; and

- Identity and position/title of the employee involved.

c. The body of the report shall include an objective, thorough description of specific details of violations alleged and/or of failure to modify unacceptable behavior. The report must be complete, concise and sufficiently in depth to establish a Cause of Action. It should include personal observations but not judgments, witness statements and interviews with the person(s) who is the subject of the report. Other additional statements from individuals having knowledge of incidents or events contributing to the Cause of Action should also be included.

d. Documentary information supporting the Cause of Action shall be attached and become part of the Cause of Action Report

e. Following the body of the report the following acknowledgment is to be inserted. "I acknowledge I have read, or have been given the opportunity to read, the contents of this report."

_____ _____

Signature Date

f. Employees subject to action shall be given a copy of the Cause of Action Report and the opportunity to respond in writing within five working days if such response is not already included in the report. Within this time period the employee may also request to meet with the Division Commander in person to review the facts of the Cause of Action Report.

g. Upon completion of the report and attachments, employees subject to the action shall be requested to read the report and sign the acknowledgment.

h. If the employee refuses to sign the acknowledgment and/or refuses an opportunity to read the report, the Supervisory, Command or Management person instituting the action will note the refusal immediately below the acknowledgment.

2. Processing Cause of Action Report.

a. The completed Cause of Action Report shall be forwarded immediately to the supervisor of the Supervisory, Command, or Management person instituting the action.

b. The immediate Supervisor shall, upon receipt of the report:

- Review the Cause of Action Report and may:
- Direct any necessary additional investigation at his/her command/management level.
- Recommend the Internal Affairs Detail conduct an investigation. The Sheriff or the Undersheriff may direct an Internal Affairs Detail investigation.
- Report immediately below those previously submitted.

- Forward the Cause of Action Report to the next immediate Supervisor in the chain of command.
- Step (b) above shall be repeated as necessary to ensure the Cause of Action Report is received by the Sheriff within five (5) business days of initiation.
- For proposed action above a Letter of Reprimand, the Bureau Assistant Sheriff shall schedule a Cause of Action conference (Round Table) after consulting with the Undersheriff.

V. PROCEDURE 2.

A. EMERGENCY PERSONNEL ACTION. When during times other than regular business hours, (weekdays, Monday - Friday, 8am - 5pm) it becomes apparent that emergency personnel action may be necessary, the Bureau Assistant Sheriff or designee shall ensure the steps below are followed. During regular business hours, except for good cause, the Undersheriff will be fully briefed before taking actions set forth in "ACTION", Sections 2, 3, or 4 below.

B. VERIFICATION.

1. Prior to taking action, the Bureau Assistant Sheriff should take immediate steps to verify that emergency action is warranted.
2. In certain instances, a verbal or written report by a medical or psychological consultant will be sufficient cause for emergency action. In other cases, the Bureau Assistant Sheriff or designee should interview the employee to be impacted by the emergency action.
3. In no event should an unconfirmed rumor or hearsay be the sole cause for an emergency personnel action.

C. ACTION. Depending on the information available and the seriousness of the employee's actions or behavior, the following actions should be taken by the Division Commander or designee:

1. Immediately ordering the employee to be seen by an on-call therapist from the Department's Employee Assistance Program provider, and having the employee observed or monitored until he/she can be seen by the psychologist.
2. Placing the employee on "Temporary Leave of Absence with Pay" by completing an AK 183 and having the employee sign the document; or
3. Having the employee report to a work location where supervision can be provided. This could involve an emergency change in shift schedule of the employee.
4. Revoking the police powers of the employee and collecting duty weapon, other safety equipment, badge and I.D. The Division Commander shall maintain temporary possession of the equipment. The Division Commander will return the equipment to the Training Unit in the event the employee is terminated.
    a. The seriousness of placing an employee on Leave of Absence, revoking police power and/or taking the employee's weapon

should not be underestimated. Good judgment and timely consultation with Command Staff is imperative.

D. DOCUMENTATION AND FOLLOW-UP. The procedures described in this Policy are for a short term, immediate response to an emergency personnel issue. The Bureau Assistant Sheriff will be responsible for follow-up, notification and documentation.

1. The Bureau Assistant Sheriff will report the emergency action taken to the Undersheriff as soon as practical, including all documentation and copies shall be sent to the Chief of Management Services.

2. The Division Commander will continue to monitor the employee's status on a day-to-day basis until a decision is made regarding any permanent action or return to duty.

VI. PROCEDURE 3.

A. DISABILITY DUE TO PSYCHOLOGICAL FACTORS.

1. Upon submission of medical verification indicating that the employee is unable to perform the job due to psychological factors and must take leave from work, the employee's peace officer powers will be revoked and his/her duty weapon, other safety equipment, badge and ID card, will be collected and held by his/her Division Commander until the employee is cleared to return to full duty.

2. The Division Commander will return the equipment to the Training Unit in the event the employee resigns, retires or is terminated.

VII. PROCEDURE 4.

A. CAUSE OF ACTION CONFERENCE (ROUND TABLE). All Cause of Action memo's will be reviewed by the Undersheriff, who will determine on a case-by case basis if a Cause of Action conference is necessary. The Cause of Action conference will be comprised of the Sheriff, Undersheriff, appropriate Bureau Assistant Sheriff, appropriate Division Commander, Internal Affairs representatives, and such other persons as the Sheriff shall determine on a case-by-case basis. This Cause of Action conference will review the Cause of Action Report and any other supporting documents such as I.A. Investigative reports to ensure the discipline is timely, proper and fair. This Cause of Action conference will be held prior to a final recommendation or endorsement by the Undersheriff to the Sheriff, except letters of reprimand, which are the responsibility of the Undersheriff to review.

VIII. PROCEDURE 5.

A. SHERIFF. The Sheriff upon receipt of a Cause of Action Report for merit system placement above a Letter of Reprimand will:

1. Review the Cause of Action Report;

2. Fully discuss the matter with the appropriate Bureau Assistant Sheriff and the Undersheriff; and

a. Based on the recommendations, during the Cause of Action conference determine the proper course of action which could include:

- Closing the issue based on available information;
- Return the matter to the Bureau Assistant Sheriff via the Undersheriff to be handled in the Corrective Counseling System;
- Return the matter to the Bureau Assistant Sheriff via the Undersheriff to issue a Letter of Reprimand to the employee and place it in the employee's file; or
- Dismiss, suspend, demote or reduce compensation to the employee.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.71
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Petty Cash Funds**	

I. POLICY.

A. Divisions may maintain a Petty Cash Fund for minor operating expenses. The need as well as the amount of a Division's Petty Cash Fund will be determined by the Division Commander and the Chief of Management Services. The Petty Cash Fund will be established to provide monies for daily nominal expenses required to maintain efficient Division operations.

II. GENERAL.

A. DIVISIONAL PETTY CASH FUND.

1. Individual purchases will be $25.00 or less.
2. The Petty Cash Fund is not to be used in advance of purchase. Purchases will be reimbursed after a receipt is presented.

B. PETTY CASH CUSTODIAN. The Division Commander will appoint a Division Petty Cash Custodian and an Alternate Custodian. The Petty Cash Custodian will be solely responsible for the maintenance of the Division's Petty Cash Fund. The Alternate Custodian will maintain the Petty Cash Fund in the absence of the Petty Cash Custodian and for not less than two (2) consecutive weeks each year.

III. PROCEDURE 1.

A. PETTY CASH CUSTODIAN RESPONSIBILITIES. The Petty Cash Custodian will:

1. Have on hand cash and/or receipts totaling the amount of the fund at all times.
2. Routinely submit demands for reimbursement. Demands should be submitted monthly unless activity of the fund requires more submissions to maintain a substantial amount of cash.
3. Promptly cash reimbursement checks.
4. Obtain an employee's signature on the reimbursement demand when a receipt is presented.
5. Reconcile the Petty Cash Fund at least monthly to ensure accuracy, or when transferring the fund to and from the Alternate Custodian.

6. Promptly report any fund discrepancies to both the Division Commander and the Departmental Fiscal Officer.

IV. PROCEDURE 2.

A. DIVISION COMMANDER RESPONSIBILITIES. The Division Commander will perform periodic audits of the Petty Cash Fund.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.72
	RELATED ORDERS: Administrative Bulletin 9.8, 11.4, 313.1; County Ordinance 36-8.18, 36-8.1604; County Employee Memoranda of Understanding; CCCSO 1.07.14, 1.07.23, 1.05.73.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 9-18-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Reimbursement Demands**	

I. POLICY.

A. Employees may be reimbursed for actual, reasonable and necessary expenses arising from the discharge of their official duties in accordance with this policy and within the policy limitations.

II. DEFINITIONS.

A. Employee Travel Demand. Refers to County Form No. M8154, Revised 9/82.

B. D-15 Demand Form. Refers to County Form No. D-15, Revised 10/77.

III. GENERAL.

A. EMPLOYEE TRAVEL DEMAND. Demands are primarily used to reimburse employees for overtime/out-of-county meals and all authorized travel expenses. Demands are not intended to substitute for the normal requisition system, nor for the ordinary purchase of equipment. Only actual expenses up to certain amounts are reimbursable. The Employee Travel Demand Form is used:

1. To reimburse employees for money spent in performance of their duties;
2. To reimburse employees for education and training that has been previously approved for reimbursement.

B. REIMBURSEMENT GUIDELINES.

1. Ineligible Expenses:

a. Alcoholic beverages, except when purchased for a police duty or experiment authorized by a Division Commander.

b. Liability coverage for automobile rentals, as coverage is already provided by the County while the rental car is used for business.

c. Otherwise eligible expenses that were not incurred. For example, if two people travel together in one car, only one would be eligible for mileage reimbursement.

d. Unapproved expenses, i.e., expenses incurred by the traveler in anticipation of approval of a Travel Request that subsequently was not approved.

2. When attending an approved seminar or class and the fee for the lunch is included in the seminar price, (i.e., seminar and lunch - $20), the employee will be reimbursed the full amount if the seminar or class fees were not prepaid by the Office of the Sheriff.

3. All lodging, meals, mileage, bridge fares and parking associated with authorized travel are reimbursable. Receipts must be attached for all expenses. Meal receipts for overtime meals or out-of-county meals must identify the restaurant, the date and the amount of the bill, including tax and gratuity. Mileage is reimbursed for use of personal cars at the rate specified by the IRS.

4. Reimbursement for education and training is subject to prior approval by the employee's Bureau Assistant Sheriff.

5. Purchases made on behalf of the Office of the Sheriff shall be claimed on a D-15 Demand Form, not on an Employee Travel Demand.

6. The Sheriff and management employees specified in the County Resolution for Compensation of County Officers and Management may be reimbursed professional development. Professional development includes membership in professional organizations, subscriptions to professional publications and attendance fees at job-related professional development activities. Specific reimbursement limits are established by the current County resolution or MOU.

7. Expenses incurred in connection with travel subject to pre-approval on a Travel Request Form will not be reimbursed in the absence of an approved Travel Request Form. Prior to incurring any travel-related expenses for which reimbursement will be sought, employees are encouraged to review Policies and Procedures 1.05.73, Travel Requests.

8. Costs of required training additional to registration fees, such as mileage and meals, may be allowed if such costs would not otherwise have been incurred. Reimbursement is limited to employees who travel for training to a location other than their assigned work location. Reimbursement is not available to staff for in-County mileage and meals if their work location is County-wide.

    a. Mileage is only reimbursed when it exceeds the employee's normal daily mileage. Example: The employee lives in Davis and attends a class in Sacramento. There is no reimbursement in this example as the employee's normal commute is greater than the commute to class.

9. Hosting official guests of the County, such as members of examining boards, official visitors, public speakers or honored guests, at banquets or other official functions, may be reimbursed if approved by the Division Commander.

10. The purchase of meals may be authorized when the employee(s) is required to conduct business with County officials or employees and it is inappropriate or impractical to conduct such business at the work place or during work hours.

C. OVERTIME/OUT-OF-COUNTY MEALS.

1. Reimbursement for meals: Actual expenses, including tax and gratuity, for individual meals, and snacks, will be reimbursed up to $65.00 per day, if the individual is eligible for three meals on that day. If eligible for two or fewer meals, the following individual maximums shall apply:

   a. Breakfast $10.00

   b. Lunch $20.00

   c. Dinner $35.00

   - Receipts of actual expenses required.

2. The following circumstances entitle an employee to reimbursement for actual meal expenditures, up to the maximum allowed:

   a. When working three or more unscheduled hours in addition to the regular work shift, or three or more unscheduled hours on a regularly scheduled day off. Overtime hours that are scheduled in advance do not qualify for meal reimbursement.

   b. When out-of-County because of a particular work assignment.

D. REIMBURSEMENTS WITH APPROVED TRAVEL REQUEST.

1. For authorized overnight or air travel, an approved Travel Request Form must accompany the Employee Travel Demand Form signed by the appropriate Bureau Assistant Sheriff. Actual expenditures for each meal must be listed on the demand form including the tax and gratuity and reimbursement will not exceed current maximum amounts.

2. Bridge tolls, parking, checking fees, telephone and FAX charges (relative to County business), BART or bus fares, along with tips and porterage (baggage handling) in accordance with local custom, may be submitted for reimbursement.

3. For portions of an authorized travel day, the amount reimbursed will be in accordance with the departure and return times (example: a person leaving on authorized travel at 11:00 a.m. Monday and returning at 3:00 p.m. Tuesday will not be reimbursed for breakfast Monday or dinner Tuesday.)

4. When traveling on grant funds, the repayment rate will be governed by the grant requirement.

E. REPLACING SAFETY EQUIPMENT. Deputies who are required to purchase specified safety equipment will be reimbursed for the purchase price or authorized percentage of the purchase price described in Policy Section 1.07.23, Personal Protection Equipment. Replacement safety equipment may be available from the Training Unit. Contact the Training Unit prior to purchasing safety equipment. Receipts for the equipment must be attached to the demand form.

F. CAREER DEVELOPMENT TRAINING/EDUCATION. Reimbursement for education and training is subject to Office of the Sheriff approval to a maximum of $650 per fiscal year.

1. Employees desiring reimbursement for training or education courses must submit a memo through the chain of command, prior to commencing the course of instruction to the Undersheriff to obtain approval. All members throughout the chain of command will indicate on the memo their approval or disapproval in order to ensure the class does not conflict with the employee's work schedule.

2. The Undersheriff will return the memo to the employee back down the chain of command indicating approval or disapproval. If approved, the employee shall prepare a TR1 and submit the TR1 to the Undersheriff via the chain of command.

3. Once the Undersheriff has signed and approved the TR1, all documents will be forwarded to the Fiscal Services Unit.

4. Upon completion of the course, the employee shall submit the following to the Fiscal Services Unit:

    a. Employee Travel Demand (M8154)

    b. Receipts for classes and books; and

    c. Grade report or transcript.

G. LOST OR DAMAGED PERSONAL PROPERTY. Refer to Policy 1.07.14, Personal Property, Lost or Damaged.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITY.

1. Combine all overtime/out-of-county meal and travel demands into one monthly demand. List individual instances on the demand. Do not combine multiple months into one demand.

2. Attach a note explaining any demands which may be difficult for auditing staff to evaluate.

3. All dates, case numbers including overtime investigations, and amounts must clearly be shown for each instance.

4. Attach receipts for all expenses, including meals. Meal receipt must indicate the date, the name or restaurant and the amount.

5. Sign demand and include employee number; and submit to Division Commander via chain of command.

6. Demands are to be submitted in a timely manner, generally within 30 days of completion of travel. Any demand submitted outside that time frame must include a memo from the employee to the Division Commander with an explanation of the late submittal. The County has no obligation to pay travel expense reimbursement requests submitted more than one year following completion of travel.

V. PROCEDURE 2.

A. DIVISION COMMANDER RESPONSIBILITY.

1. Ensure that the demand is complete as to name, address, signature, employee number and dates.

2. Review actual claim against Division records as to travel, overtime worked, date, and review amounts in conformity with County and Office of the Sheriff policy.

3. Confirm that all receipts are attached and submit, via the Division Commander to the Fiscal Services Unit.

VI. PROCEDURE 3.

A. FISCAL SERVICES UNIT RESPONSIBILITY.

1. For all demands (except lost or damaged property: see Policy 1.07.14), the Fiscal Services Unit will:

   a. Enter the correct reimbursement costs and check the form for compliance and accuracy;

   b. Attach authorized travel form or Training Reimbursement Form to the Demand Form; and

   c. Ensure timely submission to the Auditor's office. Normally, all Demand Forms received in the Fiscal Services Unit will be processed semi-monthly.

2. Demands requiring further explanation will be returned to the Division Commander via the chain of command.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.73
	RELATED ORDERS: Administrative Bulletin 9.8, 11.4, 12.7, 313.2; County Ordinance 36-8.18, 36-8.1604, 1108-2.222; County and Employee MOU.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employee Relations**	**SUBJECT:** **Travel Requests**	

I. POLICY.

A. Training and Travel Requests shall be properly processed to ensure the employee is authorized to travel and is properly reimbursed pursuant to Office of the Sheriff and County policy. All travel requests involving the Office of the Sheriff shall follow these guidelines.

II. DEFINITIONS.

A. TRAVEL REQUESTS. Refers to County Travel Request form effective 7/07.

B. REIMBURSEMENT. Refers to County form M-8154 Employee Travel Demand, D-15 Non-Employee Demand.

C. WARRANT REQUESTS. Contra Costa County Form No. M-383.

III. GENERAL.

A. TRAVEL AUTHORIZATION.

1. All overnight trips, regardless of cost, and all day-trips costing more than $100 per trip, are authorized only when prior approval has been granted pursuant to this Policy. No travel reimbursement will be paid without prior approval for the travel expense.

   a. All travel subject to this Policy shall be requested on a Travel Request form, which shall be completed by Division Purchasing Clerks upon request by Division Commanders.

   b. Travel costing less than $1,000, and involving fewer than five travelers on the same trip, and with the travel destination within the continental United States, requires the approval of the traveler's Bureau Assistant Sheriff.

   c. Travel costing $1,000 or more per person, or involving five travelers or more on the same trip, or with a travel destination outside of the continental United States, requires the approval of the traveler's Bureau Assistant Sheriff and the County Administrator's Office.

d. All Travel Requests should be fully approved at least two weeks prior to the commencement of travel. If the travel requires approval by the County Administrator's Office, allow an additional week for processing.

e. Travel Requests submitted late will not be granted except in unusual, urgent, or exigent circumstances. Travel undertaken in the absence of an approved Travel Request will not be reimbursed.

f. Exceptions to this Policy may apply for certain "operational" travel such as the transport of prisoners. The County Administrator's Office may approve exceptions upon the request of the Sheriff.

2. Authorization for travel may be granted subject to the following criteria:

a. Priority of request in relation to available funds and other travel requirements.

b. Overnight travel authorization should be limited to the period of the approved meeting plus reasonable travel time to and from the meeting.

c. The "Travel Justification" section of the Travel Request must explain why the travel is necessary and beneficial to the County. The explanation must include the importance of the trip to the employee's responsibilities. A copy of the conference schedule and/or itinerary should also be attached.

d. Mandated training requirements are given priority.

e. All overnight trips involving persons who are not employees of the Office of the Sheriff, including co-educational field trips and trips involving minors, shall require the prior approval of the Sheriff's Executive Team.

3. Travel Requests are not required for:

a. Out-of-County meals when there is no overnight travel.

b. Training reimbursement for career development courses taken on the employee's own time; and

c. Travel and/or meals incurred by Transportation staff while transporting inmates.

d. Extradition travel by the Civil Unit.

B. TRAVEL REQUESTS FOR TRAINING.

1. Travel Requests relative to state mandated programs (P.O.S.T. and S.T.C.) will be prepared by the Training Unit.

2. Non-mandated training Travel Requests that involve employees from more than one Division may be prepared by the Training Unit.

3. All other non-mandated training Travel Requests shall be originated within the employee's Division.

4. Travel Arrangements:

   a. Once a course, seminar, or meeting has been reviewed and is either mandated or approved on a Travel Request, reservations must be made.

      - If the institution offers lodging and meals, use them; or
      - If the host institution does not offer lodging but has lodging recommendations, follow the recommendations if the price is reasonable. If the institution does not make the room reservation, it should be made immediately. Rates must include tax on the Travel Request.

   b. The options for transportation are:

      - County vehicle - if the Division has sufficient vehicles to allow use by an employee attending school.
      - Personal vehicle – the employee collects mileage reimbursement at current rate. The reimbursement rate for mileage is changed periodically to conform with IRS- approved rates. County policy permits an employee to drive a personal vehicle rather than travel by airplane, as long as mileage cost is not more than the airfare.
      - Airline – reservations may be made at the time the Travel Request is completed. Tickets will be purchased by a Purchasing Clerk (see Procedure 4).
      - Rental Car - If a rental car is needed, it should be noted on the Travel Request. (Vouchers are provided by the General Services Department's Purchasing Division.)

   c. Travel Request Form must be completed and signed by the employee's Bureau Commander. (See instructions in Appendix 3).

   d. Warrant Request form (M-383) must be completed and attached to the Travel Request or attach a copy of the Travel Request to Procurement Card log.

      - A separate Warrant Request or Procurement Card transaction is required for each expense that will not be claimed on an Employee Travel Demand (meals and mileage).

Procurement Card	**Warrant Requests**
Air Travel	Registration Fees
Registration Fees	Association Fees
Lodging	Lodging
	Membership Dues
	Association Dues

- The disposition of the check should be noted on each Warrant Request; i.e., “hand carried” or “mailed”.
- Warrant Requests must contain complete information about the travel and to whom the payment is to be made.
- Travel Requests require at least three weeks for processing.

IV. PROCEDURE 1.

A. DIVISION RESPONSIBILITY FOR NON-MANDATED TRAINING TRAVEL AND ALL OTHER TRAVEL.

1. Division Commanders shall establish Divisional procedures for the completion of travel arrangements, Travel Requests, Warrant Requests and procurement card transactions for all non-mandated training travel.
2. The Division Commander receiving a completed Travel Request may:
   a. Approve the request based on the required criteria noted in the General Information portion of this policy.
   b. Require additional information from the originator of the request; or
   c. Disapprove the request and return it to the originator.
3. Travel Requests that are approved and initialed by the Division Commander will be forwarded to the Bureau Assistant Sheriff for approval and signature.
4. Upon receipt of a completed Travel Request, the Bureau Assistant Sheriff will have copies forwarded as follows:
   a. A copy of the Travel Request shall be routed to the Training Unit. Any available class description should also be forwarded.
   b. A copy of the Travel Request shall be maintained in the Division.
   c. The Fiscal Unit must be notified of any changes.

V. PROCEDURE 2.

A. TRAINING UNIT.

1. The Training Unit’s Clerical Detail shall complete the travel arrangements, Travel Requests, Requisitions and Warrant Requests or Procurement Card transactions for all mandated training travel initiated by the Unit.
2. Travel Requests received by the Unit, including those that originate in the Unit, shall be:
   a. Checked for accuracy and completeness.
   b. Checked to ensure that any applicable source of reimbursable training funds are noted on the form.
   c. Initialed by the employee making the review.

3. Reviewed Travel Requests requiring approval by the County Administrator (See General 1 (c) above)(original and one copy) shall be routed to the Chief of Management Services.

4. A copy of each Travel Request shall be kept by the Unit. An additional copy shall be forwarded to the Fiscal Unit.

VI. PROCEDURE 3.

A. CHIEF OF MANAGEMENT SERVICES RESPONSIBILITIES.

1. Upon receipt from the Bureau of completed Travel Requests requiring approval by the County Administrator's Office (see General 1 (c) above), the Chief of Management Services may:

   a. Forward the request, based on the required criteria noted in the "General Section" portion of this Policy, to the County Administrator's Office; or

   b. Require additional information from the originating Division.

2. The Chief of Management Services will forward a copy of the approved Travel Request to both the originating Bureau and the Fiscal Unit.

VII. PROCEDURE 4.

A. PURCHASING CLERK RESPONSIBILITIES. The Purchasing Clerk shall:

1. Review all travel request information for completeness and for compliance with submission deadlines.

   a. Any late-submitted travel requests will not be processed in the absence of a signature from the applicable Bureau Assistant Sheriff.

2. Prepare all proper travel requests on a Travel Request form in a timely manner in order to allow sufficient time for approvals.

3. Submit completed Travel Requests to the appropriate Bureau Assistant Sheriff for approval, noting thereon those Travel Requests which additionally require approval of the County Administrator.

4. Forward those Travel Requests requiring the approval of the County Administrator's Office to the Chief of Management Services.

5. Notify the originating Division when the Travel Request has been fully approved.

6. Arrange and provide payment for all approved travel using a procurement card.

7. Forward a copy of the approved Travel Request to the Fiscal Unit.

8. Records of all processed Travel Requests shall be maintained by the Administrative Services Purchasing Clerk.

9. After completion of travel, all employee Travel Demands shall be processed by the Administrative Services Purchasing Clerk.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.74
	RELATED ORDERS: County Ordinance 36-8.1402; Administrative Bulletin 205.3; California Labor Code Sections 3212, 3213 and 4850; California Code of Regulations Title 8 Section 342 (8 CCR 342); Injury and Illness Prevention Program Manual; CCCSO 1.04.64, 1.04.67, 1.06.62.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-10-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Notification and Reporting On-Duty Injuries, Accidents or Death; Workers' Compensation**	

I. POLICY.

A. In the event of an on-duty injury or death, notification of the employee's selected representative shall be made in a timely manner. To facilitate notification, the Office of the Sheriff will maintain a current file of Personnel Emergency Notification Forms for all employees. To ensure employees receive workers' compensation benefits, and that the Office of the Sheriff meets mandated reporting requirements, all on-duty injuries or illnesses must be properly and immediately reported.

II. DEFINITIONS.

A. EMPLOYEE REPRESENTATIVE. Those persons who an employee wants notified first in case of his/her injury or death of the employee. The representative may be a relative, friend or fellow employee.

B. INJURY AND ILLNESS PREVENTION PROGRAM MANUAL. Identification, reporting, and remediation of workplace hazards.

C. INJURY REPORT FORM. County Form AK30.

D. LAW ENFORCEMENT OFFICER KILLED OR ASSAULTED FORM. Office of the Sheriff Form SD1.

E. PERSONNEL EMERGENCY NOTIFICATION FORM. Designates employee's selected representative.

F. WORKERS' COMPENSATION FORM. Employees Claim for Workers' Compensation Benefits Form DWC1).

G. ON DUTY. Working hours when an employee is performing assigned tasks. In cases of approved training or meetings, whether within the Office of the Sheriff or elsewhere, this refers only to the duration of the actual training classes or meetings and not after-hours activities unrelated to the training or meeting. For purposes of Workers Compensation, traveling to and from the location of the training or meeting may, under certain circumstances, be considered on duty as shall be predetermined on a case-by-case basis.

III. GENERAL.

A. NOTIFICATION FILE.

1. A file of employees' representatives will be maintained in order to ensure prompt notification in the event of the death or injury of the employee. The file will contain the following information:

   a. Employee's name.

   b. Representative's name, relationship, home address, home phone number and cell phone number, business address and business phone number with a maximum of two representatives per employee.

2. The file will be maintained by the Personnel Unit and will be used only in the event of an emergency. The information shall be considered confidential and will be used only when authorized by a Sergeant or above. The Communications Center will have twenty-four hour computer access to the file.

B. FACTS ABOUT WORKERS' COMPENSATION.

1. Workers' Compensation. Workers' Compensation is a no-fault insurance plan, paid for by the County and supervised by the State. Fault need not be present to recover specified medical expenses and lost wages. The only requirement is that the illness or injury be job incurred. In cases of injuries incurred while traveling or away on official business, the employee must be on duty for Workers' Compensation to apply. California Workers' Compensation Law, and the applicable MOU shall be the overriding authority in determining the County's obligations.

   a. All County employees are covered by workers' compensation.

   b. Any injury or illness is covered if it is incurred in connection with the employee's job while on duty. For example, common colds and flu are not covered, but exposure to tuberculosis on the job is covered.

2. Benefits. Workers' compensation provides two kinds of benefits:

   a. Medical care to cure or relieve the injury.

   b. Compensation for lost wages. These payments are tax-free. The amount and duration of compensation will depend upon the Labor Code, medical verification, and the applicable MOU.

      - Safety personnel generally receive this benefit for any work time loss of greater than eight hours.

      - General employees start receiving compensation payments when the injury or illness results in over three calendar days of work loss.

3. Special Benefits - Safety Personnel. Special benefits, by statute or administrative law, have been established for safety personnel.

a. Under California Labor Code 4850, sick leave and vacation credits continue to accrue during the period that full salary is being received.

b. If an injured safety employee remains eligible for workers' compensation temporary disability benefits beyond one year, full salary will continue by integrating sick leave and/or vacation accruals with workers' compensation benefits (use of vacation accruals must be approved by the Office of the Sheriff and the employee). If salary integration is no longer available because accruals are exhausted, workers' compensation benefits will be paid directly to the safety employee as required by workers' compensation laws

c. Hernia, heart trouble, pneumonia, cancer, meningitis, hepatitis, lower back injury, and tuberculosis may be compensable for any safety employee if an industrial cause is established. However, active or safety personnel with five years or more service have a disputable presumption that such injuries developing during their employment arose out of and in the course of that employment. Some of these presumptions are in effect following termination of employment for a period of three calendar months for each full year of service not to exceed 60 months.

4. Statute of Limitations. Timely reporting of a job-related illness or injury is important. Failure to report an illness or injury within a year may bar the employee from workers' compensation benefits.

5. Organization Numbers. The AK30 Form, block “6a” requires an organization number which allows capture of necessary information by Risk Management. The organization numbers which an employee is assigned for payroll purposes shall be indicated on the AK30.

6. Outside Employment. California Workers' Compensation Appeals Board has upheld the legality of employers crediting Labor Code Section 4850 benefits of public safety workers (safety employees) with earnings received from a secondary source (i.e., outside job, self employment, etc.). Concurrent (outside) employment earnings from general employees also offset workers' compensation disability benefits although its application is more complex. Accordingly, all employees, while receiving workers' compensation disability payments for an on-the-job-injury, are responsible for advising the Administration Division via their Division Commanders when they are receiving any simultaneous secondary earnings. This notification must be in writing and include the duration and amount of outside earnings. Outside employment is covered by Office of the Sheriff Policy 1.04.67 Outside Employment and requires prior Office of the Sheriff approval.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITIES.

1. Employees may provide the Office of the Sheriff with the names of up to two representatives that will be maintained in order to ensure prompt

notification in the event of the death or injury of the employee. The file will contain the following information:

a. Employee's name.

b. Representative's name, relationship, home address, home phone number and cell phone number, business address and business phone number with a maximum of two representatives per employee. Employees are responsible for notifying the Office of the Sheriff when their representatives' status changes, or for changes in telephone numbers or addresses of representatives. Changes will be submitted by completing a new Personnel Emergency Notification Form and forwarding it to the Sheriff's Communications Center.

2. Employees shall immediately notify their Supervisor of the injury or illness. If an employee is unable to make the notification, the first fellow employee or family member aware of the problem must make the notification. Necessary first aid or medical treatment for the injured or ill employee is always the first priority.

3. Employees shall keep their Division Commanders informed of their medical status and estimated date of return to work.

4. Employees with medical documentation placing physical limitations on their ability to perform tasks shall abide by those limitations both on and off duty.

5. Employees shall submit medical verification for all lost time resulting from a work-related injury or illness. Employees returning to work after an absence resulting from an on-the-job injury must bring a doctor's clearance. The clearance will be submitted to the Division Commander.

a. Temporary Modified Duty: A doctor's clearance for temporary modified duty will be handled as outlined in the Office of the Sheriff Policy Section 1.04.22, Temporary Modified Duty Assignments.

V. PROCEDURE 2.

A. SUPERVISOR'S RESPONSIBILITIES.

1. Initial Reporting. After the Supervisor has ensured that necessary first aid or medical treatment has been given, the following steps will be taken:

a. Immediately notify their immediate Supervisor of any illness or injury resulting in the employee leaving work.

b. Complete the first page of the AK30 Form Section titled, Supervisor's Occupational Injury or Illness Report. Fax a copy to the Administration Division immediately. Complete the second page of the AK30 Form. Forward AK30 Form to the Personnel Services Unit, Administrative Services Bureau via the chain of command as soon as possible.

c. Provide the employee with an Employee's Claim for Workers' Compensation Benefits Form (DWC1). After receiving the completed form from the employee, the employer's portion

should be completed and forwarded to the Personnel Services Unit, Administrative Services Bureau via the chain of command. If the employee declines to return the DWC-1 Form, note such action on the AK-30 Form under section 19 b.

2. Additional Reporting for Serious Injury/Illness or Death.

   a. The Supervisor will ensure a notification is made to Office of the County Administrator, Risk Management Division, Assistant Risk Manager, [redacted], or by sending copies of all relevant reports by mail or transmittal to: 2530 Arnold Dr., Suite 140, Martinez, CA 94533 as soon as possible during normal business hours for any of the following circumstances.

      - Death of an employee.
      - Injury requiring in-patient hospitalization of more than 24 hours for other than medical observation.
      - Dismemberment.
      - Injury producing any serious degree of permanent disfigurement.

   b. The Sheriff's Communication Center will confer with the on-scene Sheriff's Manager, or in the absence of the Manager, the Watch Commander, regarding the circumstances surrounding the death or injury of the employee. The Center will then, at the direction of the Manager or Watch Commander, within 8 hours of the incident, notify the Sheriff's Safety Manager and CAL-OSHA/Occupational Safety & Health for any of the above circumstances, unless the incident is an auto accident without any mechanical malfunctions, the result of a criminal act (i.e., police shooting or an injury directly caused by a police function), or a heart attack.

      - Local Cal-OSHA Offices:
        - Concord
          1465 Enea Circle, Bldg E, Suite 900
          Concord, CA 94520
          (Ph) 925-602-2665
          (Fax) 925-602-2668
        - Oakland
          1515 Clay Street, Suite 1303
          Oakland, CA 94612
          (Ph) 510-622-2916
          (Fax) 510-622-2908
        - San Francisco
          455 Golden Gate Avenue, Suite 1524
          San Francisco, CA 94102
          (Ph) 415-703-5210 / 415-557-0100
          (Fax) 415-703-5231 / 415-557-0123

INFORMATION required to report includes:

- Time and date of accident
- Employer's name, address, and phone number
- Name and job title, or badge number of person reporting the accident
- Address of site of accident or event
- Name of person to contact at site of accident
- Name and address of injured employee(s)
- Nature of injury
- Location where injured employee(s) was (were) moved to
- List and identity of other law enforcement agencies present at the site of accident.
- Description of accident and whether the accident scene or instrumentality has been altered.

c. The Supervisor will also immediately notify the Division Commander, via the chain of command, of any serious on-duty injury, illness or death of an employee and generate an Unusual Incident Report Form.

3. Supervisors of Safety Personnel. All deaths of, or assaults on, Sheriff's safety personnel in the line of duty shall be reported to Technical Services Division on the Sheriff's Office Law Enforcement Officer Killed or Assaulted Form. The use of this form is fully covered in the Office of the Sheriff Policy 1.06.62 Police Involved Fatal or Serious Injury Incidents Policy

4. Off-Duty Injury, Serious Illness or Death. Any Supervisor learning of an employee having a serious injury, illness or death while on or off duty shall immediately complete and forward an Unusual Incident Report Form to the Sheriff via the chain of command.

VI. PROCEDURE 3.

A. MANAGERS RESPONSIBILITIES. The employee's Manager shall ensure that all the required reports and notifications are made. In the absence of a Manager, the Division Commander shall assume those responsibilities.

VII. PROCEDURE 4.

A. DIVISION COMMANDER RESPONSIBILITIES.

1. The employee's Division Commander shall ensure all provisions of this section are completed. In cases of serious injuries, illness or death of an employee while on duty, the Division Commander shall initiate the following:

a. Dispatch a unit to the employee's residence to provide notification, assistance and transportation. If possible, the person dispatched should be an acquaintance of the family;

b. If time is of the essence and the family resides at a distant location, a phone call to the family or local law enforcement agency may suffice;

c. Notify the Bureau Assistant Sheriff and Undersheriff; and

d. Notify the current President of the Deputy Sheriffs' Association and the Contra Costa County Peace Officers Alliance.

2. The Division Commander shall direct the Division Payroll Clerk to properly record any employee absence due to an employee on-duty injury or illness.

3. All completed forms and documentation will be routed to the Personnel Services Unit, Administrative Services Bureau.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.75
	RELATED ORDERS: CCCSO 1.06.2; California Peace Officers' Association Manual, Death of A Law Enforcement Officer.	
ISSUE DATE: 2-1-2006 REVISION DATE: 6-21-2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employment Relations	SUBJECT: Death of an Office of the Sheriff Employee or Volunteer; Funeral Coordinator; Mourning Ribbons	

I. POLICY.

A. The Sheriff is concerned and will be actively involved in communicating with the family when an employee or volunteer dies, whether on or off duty. In such an event, prompt notification will be made and a Sheriff's representative will be assigned to assist the decedent's family, as appropriate considering the circumstances.

II. GENERAL.

A. NOTIFICATION OF SHERIFF.

1. When the death of an employee or volunteer occurs, the Sheriff shall be notified through the chain of command provided in Office of the Sheriff Policy Section 1.06.21, Unusual Incident Notification Procedure.

   a. The name of the deceased should not be used when transmitting by radio.

B. NOTIFICATION OF NEXT OF KIN WHEN DEATH OCCURS ON DUTY.

1. Next of kin notification is the responsibility of the Bureau Assistant Sheriff.

   a. The Division Commander may designate others to make the notification.

2. Next of kin notification shall be made in person.

   a. When impractical due to distance or time delays, the Division Commander may request another police department to make immediate notification.

3. In all cases, the person making notification must be provided with adequate information about how the death occurred.

4. Notification must be expedited to ensure that information is not revealed prematurely through media releases or other sources.

5. Once notification has been made, and while still with the family member, the person(s) who made notification may find it necessary or appropriate to:

   a. Contact other family members, as requested by first member notified.

   b. Assist in getting children in the home help, care and, if necessary, alternate lodging.

   c. Arrange for someone to stay with notified family member after the notification person leaves.

   d. Inform family members of employee to contact if any needs or question develop.

   e. The decedent's Division Commander will select a representative to assist the decedent's family.

6. The selection will be based on the desires and assessments of the following individuals:

   a. Members of the deceased's family;

   b. Co-workers; and

   c. Immediate Supervisor.

III. PROCEDURE 1.

A. DUTIES OF THE SHERIFF'S REPRESENTATIVE'S RESPONSIBILITIES.

1. The representative appointed in B (6) shall attempt to provide the deceased employee's family with assistance in any problems or concerns that may arise.

2. The following are areas which may be addressed by the Sheriff's representative in assisting the deceased employee's family.

   a. Assist in selecting pallbearers.

   b. Assist in selecting honor guard, if requested.

   c. Have the Office of the Sheriff Funeral Coordinator arrange for the participation of the Color Guard and the Sheriff's Pipes and Drums in accordance with the wishes of the family of the decedent.

   d. Assist in completing or obtaining any documents/instruments necessary to the decedent's family, such as:

      County personnel documents;

      County Insurance policies; and

      County retirement/benefits papers.

3. The representative will remain in regular contact with their Division and will provide appropriate funeral arrangement information to the Office of the Sheriff.

B. SHERIFF'S RETIRED SAFETY OR RESERVE MEMBER FUNERAL. This Section "B" relates only to the funeral or memorial services for retired safety employees and retired Reserve Deputies. The tribute accorded upon the death of an active safety employee or an active Reserve Deputy, whether on or off duty, shall be determined on an individual basis by the Sheriff. (A Reserve Deputy Sheriff is considered retired when he or she leaves the Office of the Sheriff after 20 years of honorable service if under the age of 50, or five years if the Reserve is 50 or older.)

1. The Division Commander or designee of the decedent's last assignment will be the Office of the Sheriff contact person and act as a representative for the family.
2. The representative will notify the Sheriff's Office's Funeral Coordinator and advise the family of the memorial services procedure.
3. The memorial tribute includes:
    a. Color Guard. Present colors.
    b. The Sheriff may authorize further participants for the tribute at discretion.
4. The Funeral Coordinator will make arrangements for the Color Guard.
5. Honor Guard selection will be made by Bureau Assistant Sheriffs on a rotational basis.
6. Pipes and Drum member selection will be made by the Bureau Assistant Sheriffs assisted by the band leader.
7. Bureau Assistant Sheriffs will make the final decision regarding funeral or memorial service attendance of on-duty personnel and the temporary reassignment of personnel to maintain appropriate staffing levels.
8. Generally, memorial tributes, when authorized by the Sheriff, will be limited geographically to Contra Costa County and adjoining Counties.
9. The decision to provide the memorial entitlement plan shall be at the sole discretion of the Sheriff.

C. OFFICE OF THE SHERIFF FUNERAL COORDINATOR.

1. The Patrol Division, Muir Station Commander shall be the Funeral Coordinator.
2. The Funeral Coordinator will coordinate Office of the Sheriff funerals and official responses to other agency funerals.
3. The Funeral Coordinator will work closely with the Sheriffs representative in such areas as establishing funeral assembly points, providing escorts, arranging an Honor Guard, a Color Guard and Pipes and Drums participation.
4. The Funeral Coordinator will ensure that a CHP 162A (Peace Officer Funeral Worksheet) form is completed and sent to the California Highway Patrol. This form can be accessed on the Sheriff's Office G: Drive, and will be part of the Muir Station Commander's desk manual.

D. BADGE MOURNING RIBBON.

1. This policy will also allow for the public to identify the reason why the mourning ribbon is worn.

2. Black mourning ribbons worn "in memoriam" of the death of an active duty Office of the Sheriff sworn employee, Reserve Deputy or fellow peace officer shall be worn on the badge as follows (see graphic below):

   a. Ribbons shall go from the top right (1:30) to lower left (8:00) on the badge (viewed from the front), as if an extension of the right hand placed over the heart.

   b. Ribbons shall be worn through the day of the funeral.

   c. Ribbons should be 1/ 4" wide.

   d. Ribbons shall only be worn if authorized in writing by the Funeral Coordinator, Undersheriff or Sheriff. If authorized, all staff wearing metal badges shall affix the mourning ribbon for the authorized period.

   e. The Funeral Coordinator's authority under "d," above, is limited to authorizing the ribbon for a death of a fellow peace officer in the nine Bay Area counties, which comprise Contra Costa, Alameda, Sonoma, Napa, Marin, Solano, San Francisco, San Mateo and Santa Clara.



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.76
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 9-5-2019	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employment Relations	SUBJECT: Resignation, Termination or Extended Leave-Internal Notification	

I. POLICY.

A. In the event of the resignation, termination or extended leave of an employee, the appropriate Divisions shall be notified. Prompt communications are necessary to ensure the return of equipment, facilitate scheduling and verify the completion of all necessary paperwork.

II. DEFINITIONS.

A. EXTENDED LEAVES. For purposes of this section, leaves of over one month are considered extended leaves.

B. NOTICE OF SEPARATION. County Form AK16.

C. NOTICE OF VOLUNTARY TERMINATION OF EMPLOYMENT. County Form AK219.

III. PROCEDURE 1.

A. RESPONSIBILITIES FOR INFORMATION FLOW. Upon receiving notification regarding the resignation, termination or extended leave of an employee, the following will occur:

1. Each employee is encouraged to submit a memo to his/her Division Commander not less than 30 days prior to resignation advising of the employee's intention to resign.

2. It shall then be contingent upon the Division Commander to ensure that the Undersheriff, the Administrative Services Bureau Assistant Sheriff, the affected Bureau Assistant Sheriff, the Training Division Commander, the Professional Standards Division Commander, and the Chief of Management Services receive a copy of the memo immediately.

3. In the absence of the Bureau Assistant Sheriff, the next in command shall assume the notification responsibilities.

4. The memorandum shall contain the employee's name, employee number, Division and effective date of the transaction. An extended leave memorandum should contain estimated return dates, if possible.

5. Prior to termination date, the resigning employee and Sheriff's Office employee conducting the exit interview will complete the Notice of Voluntary Termination of Employment Form. The completed form will be submitted to Administrative Services. Administrative Services will complete the Notice of Separation Form. Both completed forms will be forwarded to Human Resources.

6. In the event of voluntary resignation, the affected personnel shall return:

   a. To Training:

      - Handgun
      - Three Magazines
      - Trigger Lock
      - Gun Case
      - Flashlight/Battery/Chargers
      - Two Sets of Handcuffs
      - O.C. (Pepper) Spray
      - Leather Duty Belt
      - Holster
      - Magazine Pouch
      - Two Handcuff Cases or One Double Handcuff Case
      - OC Pouch
      - Key Holder
      - Radio Holder
      - Four Keepers
      - Baton/ASP
      - Baton Holder (brass or plastic)/ASP Holder
      - Respirator Mask
      - Ballistic Vest
      - Locked Container (Hornady Lockbox)
      - Rain Gear
      - Taser/Cartridge/Battery/Taser Holster
      - Gas Mask/Filters/Holder

b. To FOB:

- FOB Card
- Report Writing Manual

c. To Your Duty Station:

- Department Keys
- Patrol Rifle/Magazine Holder/Three 30 Round Magazines (Patrol Division)
- Active Shooter Kit (Patrol Division)
- Any Additional Duty Station Equipment Assigned

7. In the event of termination, the aforementioned items shall be taken by the employee's Division Commander or Bureau Assistant Sheriff or designee and later returned to Administrative Services and the other above designated locations.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.77
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 4-11-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Employment of Relatives**	

I. POLICY.

A. The Office of the Sheriff maintains a policy of equity and fairness in its hiring, operational and promotional practices. No employee shall use personal power, influence or their personal relationships to aid or hinder other employees.

II. DEFINITIONS.

A. NEPOTISM. Favoritism displayed to a relative or acquaintance on the basis of an inter-personal relationship.

B. RELATIVE. Persons related by blood, marriage, adoption, or cohabitation. For example: husband, wife, significant other, father, mother, son, daughter, brother, sister, half-brother, half-sister, grandparent, grandchild, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother- in-law, sister-in-law, uncle, aunt, nephew, niece and cousin.

III. GENERAL.

A. HIRING RELATIVES.

1. If a relative of an Office of the Sheriff employee is certified for a permanent position, the Office of the Sheriff Manager responsible for conducting the hiring interview will be responsible for ensuring that nepotism is not a factor. In all respects, the candidate will be treated and evaluated in an equal manner with other candidates certified from the list. Under no circumstances will a Manager conduct the hiring interview if doing so would create a conflict. This would preclude a Manager from interviewing or influencing the interview of a close friend or relative.

2. The Office of the Sheriff employee whose relative has been certified as a potential employee will make no efforts to influence the selection.

3. If no eligible list exists for temporary appointments, the Director of Employment Services will develop a pool of candidates through general recruitment and refer available candidates to the Division Commander for temporary appointment.

B. NOTIFICATION.

1. In the event the relative of an employee is successful, following a competitive recruitment and examination, the Sheriff will be informed of the familial relationship by the Office of the Sheriff Manager responsible for conducting the hiring interview prior to the offering of any job to that relative.

2. Questions regarding the implementation of this Policy shall be addressed to the Assistant Sheriff of the Administrative Services Bureau.

C. COMMANDS. The Office of the Sheriff seeks to avoid situations where a supervisory or command relationship exists between relatives assigned to the same command. Relatives will not be assigned to the same command when either is the Supervisor or Commander.

1. Employees who become relatives after assignment to the same command shall notify by memorandum the Undersheriff via the chain of command. Approval of the Undersheriff is required for continuance of the assignment.

IV. PROCEDURE 1.

A. Employees offered promotional opportunities or employees requesting transfers or reinstatement shall be required to indicate by memorandum via the chain of command to the Undersheriff any relative within the command in which a position is being sought.

B. The Commander of the Division in which the position is being sought shall determine the following:

1. If the relative is a Supervisor or Manager, or

2. If the applicant will supervise or manage a relative assigned to the same command.

C. The Undersheriff will consider the reporting relationship and the possible effects of the assignment prior to approval or disapproval of the assignment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.78
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employment Relations	SUBJECT: Pipes and Drums	

I. POLICY.

A. The Sheriff recognizes the importance of establishing and supporting an active pipe and drum corps to perform at official ceremonies and other designated events in an honored law enforcement tradition.

II. GENERAL

A. The Office of the Sheriff Pipe and Drum Corps is a volunteer organization primarily staffed by current, retired, reserve, or auxiliary law enforcement personnel. It exists under the auspices of the Contra Costa Deputy Sheriff's Association.

1. Funding for Pipes and Drums is derived from private fundraising activities, charitable donations and performance donations.

2. Members shall conform to the uniform policies adopted by the Office of the Sheriff.

B. Pipes and Drums shall endeavor to provide an authentic traditional law enforcement musical background to police funerals, memorial ceremonies, inspections, parades and other law enforcement related events.

1. When Pipes and Drums has been asked to activate for an event, the Sheriff's Funeral Coordinator will act as director. (See CCCSO Policy 1.05.75 Death of an Office of the Sheriff Employee.)

2. When an event takes place, efforts shall be made to release Pipes and Drums members from their normal assignments to participate. Schedule adjustments may be employed as appropriate.

3. Wearing of the Office of the Sheriff uniform for each event shall be at the discretion of the Sheriff or his designee.

4. When wearing the uniform or any garment bearing a graphic image indicating the Office of the Sheriff, Pipes and Drums members shall abide by all Office of the Sheriff Polices and Procedures regarding conduct.

C. PARTICIPATION IN NON OFFICE OF THE SHERIFF EVENTS

1. Pipes and Drums members may participate in events during off-duty hours. All participating members shall be informed if the event is considered off-duty and is therefore not subject to FSLA or Workers Compensation. No member shall be required to attend an event that is considered off-duty and participation will be completely voluntary.

2. Office of the Sheriff uniforms, side arms, and garments bearing any graphic images indicating the Office of the Sheriff shall not be worn during non Office of the Sheriff events.

3. Non Office of the Sheriff events shall be coordinated outside official channels and such business will be conducted off duty.

4. As long as the above requirements are met, no official approval will be required prior to participation in non Office of the Sheriff events.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.81
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 11-18-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Personnel Management and Employment Relations	SUBJECT: Employee's Personal Information	

I. POLICY.

A. The Office of the Sheriff requires certain specific personal information from employees for administrative needs. Such employee information is confidential and shall be handled accordingly.

II. DEFINITIONS.

A. SPARKS. Refers to Sheriff's Personnel Administrative Record Keeping System.

III. GENERAL.

A. PERSONAL CONTACT INFORMATION.

1. Office of the Sheriff employees shall report any changes in names, addresses, telephone numbers and whom to inform in case of emergency. The actual residence address is required. A post office box is not acceptable.
2. All changes will be reported to the employee's Division and Administrative Services within 48 hours of the change.
3. Changes will be reported in the Personnel database (SPARKS).

B. RELEASE OF PERSONAL CONTACT INFORMATION.

1. The home address and phone number of any employee of the Office of the Sheriff or any other law enforcement agency shall not be released to the public.
2. If the home address or phone number of an employee of the Office of the Sheriff or any other law enforcement agency is included in a crime report, the Records & ID Unit shall delete the information prior to releasing the crime report to the public.
3. If a request is received for an employee's home address and phone numbers, the requestor will be invited to leave a message which will be sent to the employee. If the requestor claims the matter is an emergency, assistance in contacting the employee may be provided. If the situation involves Office of the Sheriff business and immediate contact is

necessary, assistance will be provided. However, if the caller is recognized as any of the following, information may be released.

a. An Office of the Sheriff employee through their employee number.

b. A recognized employee of a law enforcement agency.

c. A recognized employee of the District Attorney's Office.

d. A known official with valid reason for wishing to contact the employee.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.82
	RELATED ORDERS: PC 832.5, 832.7, 832.8; Gov. Code Section 3306.5 County Employee MOUs; Policy & Procedure Appendix 8, Personnel Files; Bradshaw v. City of Los Angeles, SB 1421 amending PC §832.7, Government Code 26202.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 2-17-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Personnel Files**	

I. POLICY.

A. The Office of the Sheriff is committed to the protection of employee personnel files and their retention as provided by law. The Sheriff will maintain personnel files for all employees. The contents of these files are confidential and are accessible only as specified in this Policy.

II. DEFINITIONS.

A. PERSONNEL FILE. A personnel file is any file maintained under an employee's name by the employer that contains records relating to personal data, medical history, evaluations, promotions, discipline, complaints, internal investigations relating to the employee's conduct, general employment information about assignments, transfers, or other personnel actions, and any other information the disclosure of which would constitute an unwarranted invasion of personal privacy, unless disclosure is specifically required by law in specified circumstances.

B. SUPERVISOR'S NOTES. Supervisor's notes, kept informally and not indexed or filed by employee name, do not constitute a personnel file. The purpose of such notes would be to assist the Supervisor in the performance evaluation process, or provide the Supervisor with personal recollection regarding a meeting or encounter.

III. GENERAL.

A. AUTHORIZED PERSONNEL FILE.

1. Employee personnel files are considered confidential, and the right to access is strictly limited to Supervisors and/or Managers who have a legitimate need to review the file. Pre-employment background files have even more severe restrictions, being accessible only by the Sheriff, Undersheriff, and immediate administrative staff.

2. The legal justification for protecting peace officer personnel files is contained in both the Penal Code and the Peace Officer Bill of Rights. Regardless of legal mandates, the Sheriff maintains that all personnel files shall be treated in a confidential manner and shall only be released at the direction of County Counsel or as required by law.

3. Office of the Sheriff Policy and Procedures Manual Appendix 8 contains a list of all authorized and recognized personnel files, as well as their location and the persons authorized to access the files.

B. EMPLOYEE NOTICE.

1. The goal of documenting job performance and behavior is to improve employee performance. Good management practice requires that the employee be made aware of any job related work discrepancies, as well as any documented reports of superior or positive performance.

2. No memoranda, reports or any written material which contain negative or derogatory information about an employee shall be placed in the employee's personnel file unless the employee has been provided with a copy of the material.

3. The employee shall have 30 days from the date of receipt of the negative written information to deliver a written response. The employee's written response will be attached to the material in the personnel file.

C. EMPLOYEE ACCESS TO PERSONNEL FILE.

1. An employee shall have the right to inspect and review his/her personnel file at reasonable intervals during the regular business hours of the County.

2. If a Deputy Sheriff believes that any items in his/her personnel file is mistakenly or unlawfully in the file, the Deputy may request in writing to their Division Commander that such items be corrected or deleted. The written request must describe the corrections or deletions requested and state the reason for the request. The written request will be retained in the personnel file for the same duration of time as the questioned items.

D. OUTSIDE ENTITIES' ACCESS TO PERSONNEL FILE.

1. When cities and other legal entities contract for police services with the Office of the Sheriff, a special relationship exists which allows for the review of certain limited items in the personnel files of officers assigned, or proposed to be assigned, to that entity. This limited access is based upon the city or entity having a responsibility and right to review the activities and work product of its contracted (and proposed) officers.

2. Agents of cities/entities which contract with the Office of the Sheriff may review the following information in the employee's personnel file:

    a) Information regarding attendance, absences, sick leave usage records, and records of tardiness;

    b) Information regarding regular quarterly/annual performance evaluations; and

    c) Information regarding disciplinary actions or corrective counseling which is based on acts or omissions alleged to have occurred within the boundaries of the jurisdiction or while on duty within the jurisdiction.

3. Information related to the above items will be conveyed only by an authorized Office of the Sheriff representative and only to those persons who constitute the governing body of the contracting entity. For contract cities, this will include the City Manager. In “P” Districts, this will be

limited to the Board of Directors. The information will be presented in a briefing format.

4. Written documentation will not be placed in any file maintained by the District or entity. Any information shared with the governing body will be held in strictest confidence.

E. PERSONNEL RECORD PURGING.

1. Records contained in personnel files of employees are subject to the following retention schedule and will be purged after the below listed term.

2. As items are purged, they will be forwarded to the employee from whose file the items have been purged.

PURGE LIST
(Items marked as "Do Not Purge" shall be retained in the subject Personnel File in perpetuity.)

ITEM	**PURGE AFTER**
1. Personnel History Form	Do Not Purge
2. Background Information	Do Not Purge
3. Injury Reports & Related Documents	Do Not Purge
4. Equipment Issuance Form	Do Not Purge
5. Certificates, Educational & Training Documents (In Training File Only)	Upon Term
6. Transfer and Promotional Documents	Do Not Purge
7. Complaints against Peace Officers made by Members of the Public and any Internal Investigative Reports or Findings relating to such Complaints (Pen. Code 832.5)	5 Years
8. Administrative Inquiries not as a result of a citizen complaint and any Internal Affairs Investigative Reports, Findings, and other investigative materials related to such Inquiries (Gov. Code § 26202)	2 Years
9. Resolutions, Memoranda, Certificates of Appreciation, etc.	5 Years
10. Corrective Counseling Documents	1 Year
11. Vehicle Accident Reports	2 Years
12. Skelly Notices, Skelly Orders, and Letter of Reprimand*	5 Years
13. Performance Evaluations	Do Not Purge

(*) Letters of Reprimand generated by an arbitrator for Rank & File DSA Members may be purged at the discretion of the Sheriff pursuant to DSA MOU (Rank & File) section 24-8.

F. RELEASE OF PERSONNEL INFORMATION FOR SAFETY PERSONNEL. Except as provided in "G" below, peace officer personnel files are confidential and information within shall only be released in accordance with the California Penal Code and the Peace Officers' Bill of Rights.

1. Outside agency request for personnel file review:

a. Requires a signed waiver of authorization by the employee; and

b. Specific documents must be addressed in the waiver.

G. PUBLIC RECORDS ACT REQUESTS. Personnel Files are generally exempt from release under the Public Records Act (Gov. Code § 6254(c)).

1. As stated in Appendix 8 "Personnel Files" at I.A., Internal Affairs files, generally records of internal and administrative investigations pertaining to the conduct of one or several employees, are a part of the subject employee's Personnel File. These IA files are exempt from release under the Public Records Act (Gov. Code § 6254(f)), except for

    a. Records of officer-involved shootings;

    b. Records of officer uses-of-force that result in death or great bodily injury;

    c. Records of sustained incidents of unreasonable or excessive force;

    d. Records of sustained incidents of an officer failing to intervene against another officer using force that is clearly unreasonable or excessive;

    e. Records of sustained incidents involving sexual assault against a member of the public;

    f. Records of sustained incidents of dishonesty;

    g. Records of sustained incidents of prejudice or discrimination;

    h. Records of sustained incidents of unlawful arrests or unlawful searches;

    i. All video or audio recordings involving "critical incidents," as defined that are contained within an employee's personnel file (including his or her IA file) shall be released pursuant to a Public Records Act request in compliance with the provisions in Policy 1.06.77 "Release of Information (Public Records Act)" Procedure 10.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.83
	RELATED ORDERS: Administrative Bulletin 405.4; County Interoffice Telephone Directory; AFSCME Memorandum of Understanding, 4/14/1992, Exhibit 1.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 11-12-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Personal Use of Sheriff's Office Address/Telephones**	

I. POLICY.

A. Personal use of the Office of the Sheriff address and telephone decreases operational efficiency and adds unnecessary cost to the Office of the Sheriff. Therefore, guidelines are established to control such use.

II. GENERAL.

A. OFFICE OF THE SHERIFF ADDRESS. Employees shall not use the Sheriff's Office address for personal business.

B. OFFICE OF THE SHERIFF TELEPHONES.

1. Office of the Sheriff telephones are provided for Office of the Sheriff business. Employees shall follow these guidelines when using Sheriff's Office telephones.

   a. Personal multi-message unit or long distance calls will not be made from Office of the Sheriff telephones unless the call is placed collect or billed to the caller's home telephone or personal credit card.

   b. Employees are to minimize the use of the telephones for personal business to reduce lost employee productivity time and unavailability of the telephone line while the call is being made.

2. Employees should be aware that they are obligated to repay the County for charges incurred for personal telephone calls made on a Sheriff's Office telephone. Additionally, employees are obligated to make up lost work time.

3. Facsimile (FAX) machines will only be utilized for County business. Use for personal or union business is not permitted.

4. Facsimile (FAX) machines may be used to receive documents from or transmit documents to the local union office when necessary, as long as it does not disrupt Office of the Sheriff operations.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.91
	RELATED ORDERS: County Ordinance 34-20.008, 34-20.010.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Posted Notices**	

I. POLICY.

A. Employee organizations have access to bulletin boards to display employee representation information.

II. GENERAL.

A. Employees shall not mark, alter, deface or remove posted notices of the Office of the Sheriff, nor shall they post notices or announcements on bulletin boards without permission of the Supervisor having control of the area where the bulletin board is located.

B. Recognized employee organizations shall have access to:

1. Designated portions of bulletin boards or display areas in public portions of County buildings; and

2. Public portions of offices in which the employee organization has employees, provided the information posted is within the scope of representation and that the employee organization appropriately posts and removes the information.

C. The Sheriff reserves the right to remove objectionable material. The employee organization which posted the material will be notified of any such removal.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.05.92
	RELATED ORDERS: None.	
ISSUE DATE: 2-18-2005 **REVISION DATE: 6-21-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Official Correspondence/Communications**	

I. POLICY.

A. Official correspondence and/or communications by the Sheriff's Office shall conform to established business protocol.

II. GENERAL.

A. OFFICIAL LETTERS.

1. Official letters shall be written on the standard Sheriff's Office letterhead and all such letters, except those signed by the Sheriff personally, shall be signed as follows:

   Sincerely,

   (Two single spaces)

   David O. Livingston, Sheriff

   (Four single spaces for signature)

   First and Last Name, Rank
   Title (example; Assistant Sheriff, Division/Bureau)

2. The use of official letterhead shall be restricted to official business and a copy of all official letters will be filed in the office of origin. All official letters shall be retained as required for business needs, or as required by law. However, all official letters will be kept at least one full year.

3. All letterheads will include "David O. Livingston, Sheriff, Contra Costa County".

B. OFFICIAL MEMOS.

1. Official memos shall be written on the standard Sheriff's Office memo template located on the Office of the Sheriff Intranet under the "Forms" tab.

2. The memo shall be generally only in black type. Red may be used to designate changed or suggested language or for urgent emphasis. It will

contain margins no greater or less than 1” left / right, and .5” top / bottom. The approved memo font is Arial 12 point.

C. TELETYPES.

1. Telegrams, radiograms and teletypes shall be signed "David O. Livingston, Sheriff" - name, title and Division of origin.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.05.95**
	RELATED ORDERS: California Government Code 25355; CCCSO Policy sections 1.05.55, 1.05.46, Appendix 1; CC County Administrative Bulletin 117.7	
ISSUE DATE: 2-1-2006 **REVISION DATE: 01-05-2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Personnel Management and Employment Relations**	**SUBJECT:** **Fund-Raising Activities**	

I. POLICY.

A. Fund-raising activities shall not interfere with Office of the Sheriff operations nor reflect negatively on the public image of the Sheriff or members of his Office. Soliciting or accepting gifts or donations may, in some cases, project an appearance of impropriety on the part of this Office or its employees. By conscientiously avoiding any impression of favoritism, this office will be avoiding any resentment that might result from law enforcement situations involving contributors. It is also the intent of this policy to caution employees of this Office against overburdening benevolent contributors with excessive requests for donations.

II. GENERAL.

A. Any conduct that is undignified or may otherwise reflect negatively on the Office of the Sheriff or its employees shall not be authorized.

B. Employees shall not use their official influence to solicit contributors, nor shall they imply in any way that a contribution may be rewarded, since expectations of favoritism may lead to resentment if a Deputy is required to arrest, cite, ticket or otherwise enforce the law in a situation involving a contributor.

C. Employees shall not engage in political fund-raising in uniform or in any other way that clearly defines them as employees of the Office of the Sheriff as set forth in Office of the Sheriff policy section 1.05.55.

D. Nothing in this policy is intended to prohibit any employee's personal charitable donations or efforts where no Office of the Sheriff endorsement or involvement could reasonably be inferred.

E. Office of the Sheriff employees shall exercise caution that magnanimous contributors are not excessively burdened with requests for contributions.

III. PROCEDURE.

A. Any fund-raising activity by an employee of the Office of the Sheriff that may reasonably be thought by the public to be endorsed by this Office or any of its contract units, whether in uniform or otherwise, requires advance approval by the Sheriff or his designee.

B. Any gifts to the Office of the Sheriff of $ 10,000 or more in value must be approved by the County Board of Supervisors. Such gifts will not be approved if they are prejudicial, discriminatory, burdensome or illegal.

C. Any gifts to the Office of the Sheriff that are between $1000 to $10,000 in value may be accepted by the Sheriff or his designee upon notification to and review of the County Administrator.

D. Gifts of less than $ 1,000 may be accepted by the Sheriff or his designee without approval of the County Administrator.

E. Noteworthy gifts, regardless of value, shall be called to the attention of the County Administrator and of any consequential conditions or stipulations regarding the gift or donation. A donor may designate the purpose of the gift, but the purpose must relate to, and the gift must be used for, official County business, or a public purpose of the County. A donor may not designate an employee who may use the gift.

F. No gift or contribution shall be solicited or accepted from firms or individuals which are intended, or could be reasonably construed as tending to influence business or applications pending before the Board of Supervisors.

G. All gifts will be documented in a memorandum forwarded through the chain of command to the Personnel and Finance Division ("Fiscal").

1) Fiscal will prepare orders for the Board of Supervisors' consideration and approval as required.

2) Fiscal will track all donations for notification and review by the County Administrator.

Contra Costa County

OFFICE OF THE SHERIFF

Policies and Procedures Manual

SECTION 3



Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter Six:

Office of the Sheriff Operations

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.01
	RELATED ORDERS: CCCSO 1.06.21, 1.06.31, 1.06.71, 1.06.73, 1.06.78. Board of Supervisors Order, November 19, 1996.	
ISSUE DATE: 2-1-2006 REVISION DATE: 3-7-2014	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Watch Commander	

I. POLICY.

A. To ensure unity of command, the Office of the Sheriff strives to maintain management oversight 24 hours a day. Watch Commanders respond to critical incidents, major crimes or other significant events and provide direction at the command level as needed. On those occasions when a Watch Commander is not on duty or on call, an appropriate Manager of the affected Division will be notified.

II. DEFINITIONS.

A. WATCH COMMANDER. A safety employee at the rank of Lieutenant or higher. The Watch Commander is the in-field, law enforcement liaison to the County's Emergency Operations Center (EOC).

III. GENERAL.

A. For purposes of this Policy, the Watch Commander and the Facility or Station House Commanders have the same authority in the event of a call out. The Watch Commander will work a modified schedule so as to be available during off-business hours, weekends and holidays. In the absence of a Facility or Station House Commander or City Police Manager, the Watch Commander will respond to specified incidents and handle calls as required by policy. Depending on the incident, the Watch Commander may be relieved of responsibility once the Facility/Station House Commander arrives on the scene.

B. RESPONSIBILITIES OF THE WATCH COMMANDER.

1. The Watch Commander will ensure all Office of the Sheriff rules, regulations, policies and procedures are followed. The Watch Commander will authorize and direct investigations of all procedural violations on his/her watch, and make corrective or disciplinary recommendations when appropriate. All violations coming to the attention of the Watch Commander will be reported to the involved employee's chain of command by the end of the watch. Violations of a serious or criminal nature will be immediately communicated to the appropriate command staff.

2. The Watch Commander will respond to any significant hazardous materials incident, disaster or other significant event within our jurisdiction, which may require the activation of the Emergency Operations Center or notification of the Office of Emergency Services Alert Duty Officer. The Watch Commander will act as the on-scene Incident Commander, coordinating efforts and resources through the Office of the Sheriff Command Post and the Office of the Sheriff Operations Center, until relieved by the appropriate Facility/Station Commander.

3. The Watch Commander is responsible for ensuring that all requests for information from the public and news media are handled in a timely and appropriate manner. See "Procedure 2." News Media Liaison.

4. The Watch Commander will visit all 24-hour facility work sites as the schedule allows.

5. The Watch Commander has the discretion and authorization to invoke the Officer-Involved Protocol as necessary.

6. A Watch Commander schedule will be maintained. The schedule will be distributed to the Communications Unit, Patrol Division Administration, Emergency Services Division, Station Houses, Investigation Division, Contract Cities and Detention Facilities.

C. NOTIFICATIONS.

1. When notified of a major crime or critical incident, the Watch Commander will ensure that call-out procedures are initiated in accordance with existing notification policies. The Watch Commander will also ensure that proper notification is made up the chain of command as necessary. Office of the Sheriff Policy Sections 1.06.21, Unusual Incident Notification Procedure and 1.06.62, Police-Involved Fatal or Serious Injury Incidents Policy specifies notification procedures.

2. Notification to the on-duty Watch Commander, Facility/Station House Commanders or appropriate Manager will normally be made by the on-duty Sergeant or the Communications Center.

3. In the event of specified incidents or major crimes and citizens complaints where a Manager has been requested, first notification during normal business hours will be made to the affected Facility/Station House Commander. During the Facility/Station House Commander's off hours, first notification will be made to the Watch Commander. If, during these hours, the on-duty or on-call Watch Commander is not available, then the appropriate Facility/Station Commander or an appropriate Manager in the affected Division will be notified.

4. In addition to the procedures outlined in Section A, the Watch Commander must notify the Office of Emergency Services Alert Duty Officer of high-profile events that meet the below listed criteria. This provides an emergency method of informing the relevant persons of serious incidents which should be brought to the attention of the County Administrator or designee:

a. Threats to citizens' health or safety such as refinery or other industrial explosions, fire or chemical release.

b. Community disasters such as an airplane crash, bus or train wreck in which lives are threatened or lost, or earthquake or other natural disasters resulting in emergency response and evacuations.

IV. PROCEDURE 1.

A. RESPONDING TO CALLS.

1. The Watch Commander shall respond to the following incidents:

a. Officer-involved fatal incidents, including off-duty fatal incidents;

b. Officer-involved shooting, other than accidental discharge with no injury, or the shooting of an animal;

c. Any riot or major disturbance in a Office of the Sheriff Detention Facility;

d. Deaths of persons while in police custody or under police control, excluding deaths which occur while an inmate is under a doctor's care for a disease, or other natural condition which is the cause of death;

e. Child abduction by stranger;

f. Incidents involving a hostage situation;

g. Significant hazardous material releases or spills within the County; and

h. Any incident as directed by higher authority.

2. The Watch Commander shall be notified and, at their discretion, respond to the following incidents:

a. Escapes from the MDF or the WCDF where security has been breached;

b. Mutual aid requests through the Sheriff's Office Mutual Aid Coordinator;

c. Non-fatal injury to a Deputy;

d. Multi-agency request for assistance made by the Office of the Sheriff;

e. High-profile incidents of a serious nature;

f. Incidents that may involve activation of the County Emergency Operations Center;

g. Child stealing cases; and

h. All cases where a command level officer's presence is appropriate.

3. In addition to the above incidents, the Watch Commander will be available for telephone consultations with Facility Station House Sergeants.

V. PROCEDURE 2.

A. NEWS MEDIA LIAISON.

1. The Watch Commander shall act directly as a news liaison, when possible. If circumstances prevent this, the Watch Commander will assign an appropriate designee to this task.

2. The Watch Commander shall be responsible for assuring that all press and public information is obtained at the scene. If there is a media liaison officer going off duty, the Watch Commander will ensure continuity as to what has been, can be and will be released.

3. The initial release shall be designated “First Release”. The information for this release shall be accumulated and disseminated in a timely manner, in keeping with existing News Media Relations Policy.

   a. All subsequent releases will be handled by the affected Division or the Division responsible for the ongoing investigation.

4. First Releases and Unusual Incident Reports are not identical. Unusual Incident Reports are for internal use and may contain some sensitive information and are not to be released to the press or public.

5. The Watch Commander or designee will ensure that the First Release is sent to the Sheriff, Undersheriff, appropriate Bureau Assistant Sheriff and Division Commander, Technical Services Division, and the Office of the Sheriff Public Information Officer.

6. Information authorized for release is delineated in Sheriff’s Office Policy Sections 1.06.39, Dissemination of Law Enforcement Information and 1.06.36, Police Involved Fatal or Serious Injury Incidents Policy.

7. Release of information.

   a. The Watch Commander, when possible, will personally handle all media inquiries while on scene.

   b. The Watch Commander will consult with the on-scene investigator to determine the appropriateness of information released.

   c. Release of information regarding internal investigations of alleged misconduct by members of the Office of the Sheriff or disciplinary action taken as a result of any such investigation shall be made only by the Sheriff, Undersheriff or their designee.

   d. First Release information will be general in nature to avoid compromising the investigation. Any updates to the First Release, during the tour of duty, will be approved by the Watch Commander.

   e. When it is determined that an incident and its results were caused by actions of another agency, the media will be referred to the appropriate agency.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.02
	RELATED ORDERS: PC 830.6, 832.6(a); CCCSO 1.07.21 Dress Code	
ISSUE DATE: 3-10-2010 REVISION DATE: 12-22-2014	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Sheriff's Reserve and Volunteer Units	

I. POLICY.

A. The Office of the Sheriff is augmented by a Sheriff's Reserve Unit in addition to a variety of specialized volunteer units.

B. Members of these units donate their time to aid and assist the Office of the Sheriff in achieving and accomplishing its mission. In order to utilize these resources, the following guidelines and procedures have been established.

II. POLICY

A. RESERVE LEVELS AND AUTHORITY.

1. Reserve Deputy Sheriffs: Reserve Deputy Sheriffs shall have the powers of a peace officer, as provided below, when on duty:

a. Level I Reserve Officers are defined in Penal Code Section 832.6(a)(1) which states in part that a Level I Reserve Officer may be "assigned to the prevention and detection of crime and the general enforcement of the laws of this state whether or not working alone."

Level I Reserves are not authorized to have citizen ride-a-longs.

b. Level II Reserve Officers are defined in Penal Code Section 832.6(a)(2) which states in part that a Level II Reserve Officer "may be assigned to the prevention and detection of crime and the general enforcement of the laws of this state while under the immediate supervision of a peace officer who has completed the basic training course for deputy sheriff's and police officers prescribed by the Commission on Peace Officer Standards and Training."

The Basic Training Bureau of POST further defines the Reserve Level II position as a "second officer/deputy in a patrol car/vessel" with an officer/deputy who has attended a basic academy. POST states a Level II Reserve was not meant to be deployed alone in a car to act as a cover officer in a patrol environment.

A Reserve may be deployed alone as long as he or she is assigned duties within his or her Reserve Level.

Level II Reserves may be assigned without immediate supervision if they are working those limited duties that are authorized for Level III Reserves (listed in c. below).

Level II Reserves can not have ride-a-longs.

c. Level III Reserve Officers are defined in Penal Code Section 832.6(a)(3) which states in part that a Level III Reserve Officer "may be deployed and are only authorized to carry out limited support duties not requiring general law enforcement powers in their routine performance. Those limited duties shall include traffic control, security at parades and sporting events, report taking, evidence transportation, parking enforcement, and other duties that are not likely to result in physical arrests. Level III Reserve Officers, while assigned those limited duties, shall be supervised in the accessible vicinity by a Level I Reserve Officer or a full-time officer.

Level III Reserves are not authorized to have citizen ride-a-longs, but they may be paired with other Level III Reserves working Level III assignments.

Level III Reserves are not authorized to ride along in a patrol environment (including Marine Patrol) based on the fact that Level III Reserves are not to be assigned duties likely to result in physical arrests.

2. Reserve Rank: The Reserve Unit uses the Office of the Sheriff ranking model to organize and identify roles/positions. Reserve Deputies shall not wear or display insignia designating such appointed rank.

B. VOLUNTEER UNITS.

1. Volunteers are assigned to the following areas based on their interest and specialized skills:

a. Search and Rescue

Members are dedicated volunteers who can be summoned to assist the Sheriff's Office during the following events:

- Missing persons
- Despondent subjects (case by case basis with approval from Volunteer Services Manager, Watch Commander, or Division Captain).
- Area searches for evidence
- Public relations events
- Disaster response

b. Air Squadron

Pilots and observers provide air operations support to the Office of the Sheriff. The unit participates in the following events:

- Personnel transportation
- Aerial surveillance/cataloging of critical infrastructure
- Logistical support
- Public relations events
- Disaster response

c. Dive Team

Members are accomplished and certified divers available to assist the Office of the Sheriff with events that necessitate the need to dive into bodies of water. The following are examples of typical events that divers are called to:

- Drowning victim recoveries
- Evidence collection/property recovery
- Location/removal of hazardous objects (hindering boat traffic)
- Inspection of equipment/structures (county waterway infrastructure)
- Public relations events
- Disaster response

d. Communications Unit

Licensed Ham Radio operators provide alternate communications to the operational area in the event of an emergency or major disaster.

The Communications Unit regularly trains by handling communications during volunteer events such as:

- ESSU missions/training
- Communications support
- Public relations events
- Operational Area communication exercises
- Disaster response

e. Chaplains

The Chaplaincy program provides support and comfort to the Law Enforcement community and the public. Chaplains are available to provide guidance and

counseling in times of crisis. The Chaplains assist the Office of the Sheriff in events such as:

- Death notifications
- Line-of-Duty Deaths
- Public relations events
- Educational programs
- Disaster response

f. Cadets

The program offers our youth and young adults experience and training regarding law enforcement. Some common events our Cadets participate in:

- Parades and Fairs
- Search and Rescue missions/training
- Tactical Competitions
- Traffic enforcement
- Public relations events

g. Food Service Unit

The unit provides food service to support field operations to the Office of the Sheriff during training or emergency events. Some examples of deployment are:

- EOC activations
- Search and Rescue missions/training
- MAMFF missions/trainings
- SWAT missions/trainings
- Volunteer recognition events
- Public relations events
- Disaster response

h. Sheriff's All Volunteer Extended Services (SAVES)

This is a very diverse unit comprised of community members with different skill sets who assist our Office with delivery of logistical and clerical support. These members are assigned to nearly every area of the Office of the Sheriff.

i. Mutual Aid Mobile Support Team (MAMST)

This unit provides support in the form of deployment and equipment supply and maintenance for the Mobile Field Force, Search and Rescue, and the Special Weapons and Tactics Team. The unit also provides medical support in high-risk cases where it would be

beneficial to have immediate medical care with the deployment team.

III. PROCEDURE.

A. ASSIGNMENT OF RESERVES/VOLUNTEERS.

1. Reserves/Volunteers will be assigned by the Volunteer Services Coordinator and report directly to a station house commander, facility commander, contract city chief, or other authority/assignment.

   a. The Station Commander or Patrol Sergeant may assign Reserves or Volunteers as needed within the parameters of this policy. Final approval rests with the Emergency Services Division Commander.

2. Reserves shall be assigned to duties consistent with their Reserve Level dictated by the Penal Code, but may augment Patrol as needed.

   a. Level III Reserves may not be the second deputy or conduct uniformed ride-a-longs in Patrol as that duty is likely to result in physical arrest. Level III Reserves may be paired up during a Level III detail/assignment.

B. PATROL DEPUTY RESPONSIBILITIES TO THE RESERVE PROGRAM.

1. The following guidelines are to be adhered to by Patrol members who may have Reserve personnel assigned to them:

   a. Training the Reserve in Patrol functions and duties.

   b. Evaluation of a Reserve's performance, in writing using the Reserve evaluation form provided by Volunteer Services.

   c. Reporting incidents of misconduct of Reserve personnel, via memorandum, to the Volunteer Services Sergeant and the shift supervisor.

   d. When working as a second deputy in a patrol environment, Level II Reserves may only operate the Patrol Vehicle if they have completed the 24-hour Emergency Vehicle Operations Learning Domain consistent with PC 13519.8 (High-speed vehicle pursuit training guidelines) and CVC 17004.7 (immunity qualifications).

   e. Reserves may be assigned details that generally require no follow-up investigation and there is no suspect information such as parking citations, alarms, petty thefts, found property reports, etc.

   f. The Patrol Area Supervisor shall make every attempt to minimize inconvenience to the volunteer's schedule prior to considering any extended tour of duty.

C. PATROL DEPUTY RESPONSIBILITIES TO THE CADET PROGRAM

1. Patrol members who may have Cadets assigned to them shall train them in non-dangerous Patrol functions and duties. Cadets may be assigned to assist in details such as the County Fair, parades, or other community events. Cadets may not assist in arrests or other dangerous incidents.

e. Reserves may be assigned details that generally require no follow-up investigation and there is no suspect information such as parking citations, alarms, petty thefts, found property reports, etc.

f. The Patrol Area Supervisor shall make every attempt to minimize inconvenience to the volunteer's schedule prior to considering any extended tour of duty.

C. PATROL DEPUTY RESPONSIBILITIES TO THE EXPLORER PROGRAM

1. Patrol members who may have Explorers assigned to them shall train the Explorer in non-dangerous Patrol functions and duties. Explorers may be assigned to assist in details such as the County Fair, parades, or other community events. Explorers may not assist in arrests or other dangerous incidents.

CCCSO Yellow Stripe Policy

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.03**
	RELATED ORDERS: Law Enforcement Involved Fatal Incidents, Contra Costa County; Police Chief's Association, (March 2008); CCCSO Appendix 2; PC 11108.9, PC 11474, PC 11479.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 8-3-2021**	**CLEARANCE:** Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	**SUBJECT:** Physical Evidence	

I. POLICY.

A. This policy describes proper evidence collection, packaging, and submission information, as well as providing guidelines for a major incident scene pending the arrival of Forensic Services Division staff. The approprate handling of evidence to ensure its preservation and control is a critical law enforcement fuction.

B. This policy contains **Addendum A - Guidance Document for Evidence Packaging.** The goal of this guidance document is to provide awareness of the standard packaging options that are available for use, along with their purpose, to ensure the best decision is made for the collection, documentation and preservation of evidence and items for safekeeping.

C. Due to the potential for serious injury or death, safety must be of paramount concern for all personnel handling and packaging firearms. Safeguards including use of green "UNLOADED" labels, standardized documentation, and packaging must be followed. Compliance will ensure the safety of all personnel handing and transporting firearms.

II. DEFINITIONS.

A. ASPERGILLUS. A mold that grows on marijuana plants.

B. BLOOD WITHDRAWAL. Medically approved method utilizing trained medical staff for the drawing of a blood sample.

C. CONTROLLED SUBSTANCE. Drugs and certain other chemicals that come under the jurisdiction of federal and state laws regulating their manufacture, sale, distribution, use and disposal.

D. CONTROLLED SUBSTANCES ENVELOPE (CSE). Evidence envelope for drugs and narcotics evidence.

E. CRIME SCENE. Location where criminal activity has occurred or where evidence related to criminal activity may be present.

F. FCN NUMBER. DOJ File Control Number.

G. GSR. Gunshot Residue consists of both burnt and unburnt primer and powder components, as well as components from the bullet, cartridge case and lubricants used on the firearm.

H. IBIS/NIBIN. Integrated Ballistics Identification System/National Intergrated Ballistic Information Network. A system that digitizes the unique marks firearms leave on cartridge cases and bullets and searches a database to connect firearms-related crimes

I. IMPLIED CONSENT FORM DS 360. DMV Administrative Per Se Order of Suspension/Revocation Temporary License Endorsement.

J. IMPLIED CONSENT FORM DS 367. DMV Officer's Statement Form.

K. ITEM. An object that has been assigned a unique item number. Several objects that have been collected from the same location, grouped together, and assigned a unique item number.

L. LEVEL A PPE. The highest level of personal protective equipment that includes the use of a SCBA and a fully enclosed chemical-protective suit.

M. LEVEL B PPE. The second highest level of personal protective equipment requiring the use of a SCBA and chemical-resistant clothing.

N. LEVEL C PPE. The third highest level of personal protective equipment requiring the use of an air-purifying respirator and chemical resistant clothing.

O. MDF. Martinez Detention Facility

P. MGO. Marijuana Grow Operations.

Q. N95 Mask. High efficiency particulate mask that filters out at least 95% of 0.3 micron particles.

R. NIBIN ENVELOPE. Dedicated evidence envelope for fired cartrigde cases.

S. OZONE. A colorless gas that is a form of oxygen.

T. SEXUAL ASSAULT EVIDENCE KIT (SAEK). A kit containing specialized components for the collection of sexual assault evidence.

U. SCBA. Self Contained Breathing Apparatus.

V. TRACE EVIDENCE. Minute quantities of material, such as hair, fiber, glass or soil that may be transferred between people, objects, or the environment during a crime.

W. UNLOADED FIREARM LABEL. Refers to a green adhesive label placed on a gun box with initals and date of the individual verifying the firearm therein is unloaded.

X. VSU. Violence Suppression Unit

Y. VOID SAMPLE. Urine specimen collected when the subject first voids bladder.

Z. VOLATILE SUBSTANCE. A liquid or substance that quickly changes into a gas.

III. COLLECTION-GENERAL

A. The employee collecting evidence should keep in mind that the court will require the identification of each piece of evidence. The identification of evidence includes the case number, date collected, description of evidence, where found, from whom, time collected, and an accurate chain of custody.

B. Officers receiving or seizing any property that contains a serial number shall complete a CLETS query on those items.

1. The crime report in which the property was seized shall indicate if the property was clear or stolen.

    a. If the property is stolen, a crime report shall be written and the agency of jurisdiction, per CLETS, shall be notified.

2. The model/serial number and description along with the FCN number shall be recorded in the crime report. The FCN printout shall be attached, if available.

3. All firearms with obliterated serial numbers shall be submitted to the Crime Lab for Serial Number Restoration.

IV. MAJOR SCENE GUIDELINES

A. Patrol deputies must take the following steps to secure the integrity and evidence at major crime scenes:

1. <u>Secure the scene</u>

    a. Once the scene is rendered safe, it shall be immediately secured. Access should be limited to only those officials who must enter.

    b. Entry by fire, ambulance, or any other personnel should also be limited to those who are needed inside the scene.

2. <u>Set a perimeter</u>

    a. A perimeter using crime scene tape shall be established for each scene.

    b. The perimeter must be large enough to safeguard any evidence.

3. <u>Begin a log</u>

    a. A log should be started as soon as possible and record all persons entering the scene, the time of entry and exit, and the reason for their entry.

    b. Removal of any item from a scene must be witnessed and logged, unless it was collected by the assigned Deputy or Forensic Services Division personnel.

    c. The log shall state the person removing the object, the witness, time of removal, and the reason for removal.

4. <u>Secure/collect any weapons</u>

    a. The Deputy in charge at the scene will promptly see to the security and collection of any weapons.

b. If the area is secure, loose weapons or instruments should be left in place and undisturbed. If the area is not secure, the Deputy in charge at the scene shall promptly collect and safeguard such items.

c. Any Deputy collecting a firearm shall note its serial number (if any) and maintain the chain of custody.

d. Loose weapons or instruments should be photographed in place prior to collection, unless security considerations prevent this.

5. Collect physical evidence in danger of being contaminated

a. Physical evidence at the scene which is in danger of being contaminated, destroyed, or removed must be promptly and effectively observed, recorded, and collected.

b. Examples: evidence adhering to live participants (such as blood stains), footprints and fingerprints in adverse weather, volatile substances, various types of trace evidence, and gunshot residue (GSR) evidence.

B. Forensic Services Division (FSD) personnel will assume responsibility for evidence work upon their arrival.

1. The responsible Division will be requested to provide support for FSD by furnishing Deputies for scene security, crowd control, traffic direction, etc.

2. Assistance with evidence collection and preservation may be requested. Deputies involved with evidence collection and preservation shall work under the Laboratory's direction.

C. In shooting cases involving Sheriff's Office employees, the Deputy in charge will check the firearms of all employees who were present at the time of the incident to ensure all discharged firearms are identified and collected.

1. In most cases, the firearm should be left in its original condition and given to FSD personnel as is upon their arrival.

2. The Deputy must minimize any manipulation of the firearm that could cause a change to its original condition otherwise loss of evidence or inadvertent changes could occur. Document the following conditions with photographs and notes:

a. Appearance and location of any adhering trace evidence.

b. If the firearm is cocked. The safety may be put on by the receiving Deputy, who must make note of that fact.

c. Safety on or off.

d. Hammer back. The hammer may be lowered, but a note must be made of that fact.

e. Any apparent jamming of either fired or unfired ammunition. No attempt shall be made to unload the weapon or clear the jam.

f. Location and position of the weapon's magazine (e.g., fully or partially inserted, completely separate from the firearm, missing, etc.)

3. Collected firearms shall be given to FSD staff upon their arrival.

4. If the Deputy in charge at the scene was involved in the incident, the responsibility for security and collection of weapons and instruments shall rest with a non-involved Supervisor or the next-in-line non-involved Deputy at the scene.

5. If a handgun is collected from an on-duty Deputy, reasonable attempts will be made to immediately provide that Deputy with a substitute weapon, unless circumstances dictate otherwise.

6. All rounds of the same type of ammunition fired will be collected from each shooting Deputy.

7. Firearms that are not retained in evidence, as determined by the incident investigators, will be returned promptly by FSD staff after being inspected and tested.

V. EVIDENCE COLLECTION GUIDELINES

A. Deputies may be responsible for evidence collection and documentation at crime scenes.

B. The evidence and property collected by Deputies will be submitted to the Forensic Services Division.

C. Always wear Personal Protective Equipment (PPE) when collecting evidence.

D. Evidence must be properly documented, collected, packaged, stored and transferred. Packages containing evidence must be appropriately labeled and contain a chain of custody. See **Addendum A - Guidance Document for Evidence Packaging**.

1. Take photographs prior to moving the evidence. Take as many photographs as needed to accurately portray the location of the item for court. Evidence photographs generally described below:

a. Overall – photographs that show a large area of the scene and area where the evidence is located. Examples: Intersections, street signs, a street with houses, the entire living room in a house. Small evidence and cones may not be visible.

b. Medium – photographs that show where evidence is located relative to other objects in the scene. Examples: evidence cones next to a car, the area in front of a bedroom door, the back seat of a car. Medium photographs may not show evidence in detail, or the location of the photograph in relation to the entire crime scene.

c. Close-up – photographs that show detail of an item. Examples: close-up of a firearm showing a cocked hammer, fired cartridge cases next to an evidence cone, pry marks on a window. Close-up photos may not show the location of an item in a crime scene.

2. Identify the items through sketching and taking notes regarding their appearance and location.

3. Your report must accurately describe the evidence and evidence collection procedures. This includes a description, the location it was found or collected from, the date collected, packaging used, and where the evidence was dropped off.

VI. COLLECTION OF BLOOD AND URINE SAMPLES FOR ALCOHOL AND/OR DRUG ANALYSIS

A. Kits for the collection of blood and urine samples for alcohol and drug analysis are provided by the Forensic Services Division and must be used to ensure proper preservation of the samples. Two types of kits are provided by the Forensic Services Division for the submission of blood and urine samples for alcohol and/or drug testing:

1. Blood Sample for Alcohol/Drug Analysis.

2. Urine Sample for Alcohol/Drug Analysis.

B. Delaying the sample collection may result in a negative chemical test due to the drug getting metabolized in the body, especially drugs like Cocaine and THC. When a specific substance is suspected, the appropriate specimen will be obtained as close as possible to the time of incident.

1. Driving Under the Influence of Alcohol ONLY: Blood or Breath

   a. Urine should be collected only if the individual has a medical condition that prevents blood sample collection.

2. Driving Under the Influence of Alcohol and/or Drugs: Blood

   a. Urine should be collected only if the individual has a medical condition that prevents blood sample collection.

3. Drug Facilitated Sexual Assault: BOTH Blood and Urine

4. Under the Influence of Drugs (i.e. 11550): Blood or Urine

C. Urine kits are available [redacted] and the blood kits are carried by the Blood Withdrawal Technicians.

D. All kits are sealed when distributed to ensure that the contents are intact. Any kit not sealed should be returned to the Forensic Services Division.

E. Instructions for the use of the kits can be found on the back of each envelope. The instructions are self-explanatory and should be carefully followed to ensure proper collection of the sample and proper handling of the paperwork.

F. Blood and Urine Kits will be placed in the refrigerator marked blood and urine for alcohol and toxicology testing [redacted] Do not place the evidence for the lab in the refrigerator marked for bloodborne pathogens.

G. Additional information on packaging and delivery of blood and urine kits can be found in **Addendum A - Guidance Document for Evidence Packaging**.

VII. BLOOD WITHDRAWAL

A. An on-call Blood Withdrawal Technician (phlebotomist) will be used to draw blood in all cases.

1. Contracted blood withdrawal services are requested via Dispatch.

2. For cases involving possible communicable disease exposure, refer to Office of the Sheriff Policy Section 1.06.19, Communicable Disease - Prevention and Control.

B. Prior to subjecting a suspect or arrestee to a blood withdrawal, Deputies will:

1. Make a reasonable effort to determine if the suspect is a hemophiliac or using anticoagulants under the direction of a physician.

a. If it is determined that a suspect is a hemophiliac or using anticoagulants, Deputies shall not conduct a blood draw per CVC 23157.

b. A statement by the arrestee that he/she is subject to one of these medical conditions is sufficient for the Deputy to assume that the subject qualifies for the exemption.

c. It is recommended that the Deputy make this determination early in the investigative procedure (i.e., preliminary questions).

C. When a blood draw can not be conducted, Deputies should document in their report the reason along with the name of the suspect's physician and the date of his or her last visit to the physician, as stated by the suspect.

1. In cases involving drunk drivers or boat operators who are exempt from a blood draw, the suspect must complete either the breath or urine test.

2. Get approval from the Deputy’s supervisor prior to calling for the Blood Withdrawal Technician.

3. Witness the blood withdrawal.

a. The Deputy must watch the withdrawal process carefully to be able to testify in court regarding the procedures used.

b. The Blood Withdrawal Technician may refuse to perform the withdrawal if it is not witnessed by the Deputy.

D. A blood draw may be administered when the person is unconscious if a court order is obtained.

E. The Blood Withdrawal Technician will:.

1. Complete the information required on the labels for the vials. The Blood Withdrawal Technician attaches the labels to the vial and gives the vials to the Deputy.

2. Complete the declaration. The Blood Withdrawal Technician retains his/her copy of the Declaration and gives the other copies to the requesting Deputy

F. The Deputy must:

1. Complete the information on the front of the kit envelope completely and legibly.

2. Place the seals over the tops of the vials and initial the vial labels.

3. Place the tape seal over the entire length of the envelope flap and initial.

VIII. NON-CONSENSUAL BLOOD WITHDRAWAL - MISDEMEANOR CASES

A. Blood samples shall not be forcibly taken from an uncooperative suspect, unless a court order is obtained or the suspect was arrested/detained for CVC 23152 or H&N 655 (Boating Under the Influence).

B. Non-consensual testing of a person arrested or detained for CVC 23152 or H&N 655 is allowed only with the supervisor's permission and within the following guidelines for Deputies:

1. Any suspect arrested/detained for CVC 23152 or H&N 655, including juveniles, shall be given the opportunity to provide a chemical test of his/her choice as directed by law.

2. A non-consensual blood draw will be obtained if the Deputy has sufficient probable cause to believe the subject was driving a vehicle or operating a boat under the influence and can articulate those circumstances in the police report.

3. The detained person refuses to cooperate during field observations/field sobriety tests or refuses to provide a chemical test at the testing site.

C. Before administering a non-consensual draw, the Deputy will try to obtain consent for the blood sample before implementing this policy. The Deputy will advise the suspect of the following:

1. A blood sample shall be taken without consent and over his/her objection.

2. A non-consensual blood draw is a refusal and all applicable administrative sanctions will be taken against his/her driving privilege by DMV.

3. The refusal admonition shall be read verbatim from the backside of DMV form 367 (Officer Statement).

4. The suspect's answers will be recorded on the DMV 367 form and in the body of the report.

D. Supervisory approval shall be obtained.

E. The blood draw shall be performed at a contract city police station or Sheriff’s substation. It shall not be done at MDF or Juvenile Hall.

F. Should a non-consensual blood draw be necessary from a hospitalized suspect, concurrence shall be obtained from the medical staff to allow the procedure.

G. The Blood Withdrawal Technicians shall be notified at the time of their callout that the blood draw is non-consensual.

H. The Blood Withdrawal Technicians will complete the withdrawal of the sample.

I. The amount of force used, if any, to overcome resistance shall be limited to that force which is necessary to collect the blood sample. Care should be taken to guard against injuries to the suspect or the Deputies involved.

J. Office of the Sheriff policy prohibits the following in order to obtain a blood sample:

1. Excessive bending, twisting and hyper-extension of arms
2. Use of any weapon
3. Striking blows
4. Neck restraint, i.e. carotid

K. The non-consensual removal of the blood sample will be documented in the arrest report. Documentation should include:

1. The amount and type of resistance, if any.
2. The method used to secure the suspect.
3. The names of the persons who witnessed the blood draw.
4. The location of the blood draw.
5. Any other pertinent information.

L. The Implied Consent forms (DS 360 and DS 367) shall be completed. A non-consensual blood draw is a refusal and all license suspension procedures will apply.

M. The Non-Consensual Chemical Testing Checklist will be initialed, signed and dated. The checklist will be included in the arrest report.

N. The withdrawal of the sample shall be videotaped whenever possible. The tape will be placed into evidence.

O. Supervisor Responsibilities:

1. The supervisor shall respond to the test location and monitor the blood draw.
2. The supervisor shall ensure that the following conditions have been met:
    a. The driver has been lawfully arrested/detained for CVC 23152 or H&N 655.
    b. The Deputy has read verbatim the formal admonishment from the DS 367 form and the driver has refused all available tests.
    c. The detained/arrested person has been advised that a refusal to voluntarily submit to or complete a test of his/her choice will result in the administering of a non-consensual blood draw and that all provisions of CVC 13353 will be invoked.
    d. That the suspect refuses to provide a chemical test.
    e. The suspect is not a hemophiliac, does not have a heart condition and is not using prescribed anticoagulants.
    f. The medical technician consents to participate in a non-consensual draw.

g. Sufficient assistance is available to safely obtain a blood sample.

h. The NON-CONSENSUAL CHEMICAL TESTING CHECKLIST has been initialed, signed and dated by the arresting Deputy. The supervisor will also sign the checklist.

i. The supervisor will monitor the blood draw and continually assess if the danger of injury to the suspect outweighs the need to collect the blood sample.

IX. URINE COLLECTION

A. The Deputy will take the following actions when collecting a urine sample:

1. Use an alcohol/drug urine testing kit.

2. Ensure a Deputy of the same sex as the suspect witnesses the giving of a urine sample. The collection should be witnessed to ensure that tap or toilet water is not substituted for the sample.

3. Provide reasonable privacy to respect the dignity of the suspect without jeopardizing officer safety or test accuracy.

4. Follow the procedures on the kits and will properly document the chain of custody.

B. For alcohol analysis, the subject must empty (void) his/her bladder prior to taking a urine sample.

1. The sample shall be taken twenty (20) to thirty (30) minutes later, or as soon thereafter as a sample may be obtained.

2. The Deputy will note the time of voiding and the time the sample was taken in his/her report and on the specimen container.

C. For drug analysis, preliminary voiding is not necessary.

D. If it is necessary to obtain a urine sample at a location that does not have urine kits, the kits can be obtained at MDF or at police departments.

E. The Urine Kit should be tape sealed and the officer sealing the kit should place his or her initials on the seal.

F. Additional information on packaging and delivery of urine kits can be found in **Addendum A - Guidance Document for Evidence Packaging**.

X. BREATH SAMPLE COLLECTION

A. Only Deputies that have been certified as Operators by the Contra Costa County Crime Lab should use the breath instrument to conduct breath tests. Certification can be achieved by taking the Operator Course offered by FSD.

B. When instrument malfunctions occur, the instrument will be taken out of service. The Operator experiencing the problem should contact the FSD, Drug, Alcohol and Toxicology Section by calling [redacted] between 8:00 am and 5:00 pm. After hours support for instrument malfunctions is not available. A message needs to be left on the voice mail at the phone number above. FSD staff will respond on the next working day.

XI. DRUG EVIDENCE COLLECTION

A. The Drug, Alcohol, and Toxicology Section provides Controlled Substances Envelopes (CSE) for the submission of drug evidence for examination.

B. Deputies will adhere to the following guidelines related to the packaging of drug evidence in the CSE:

1. Dissimilar items or items from different sources must be given unique item numbers.

2. Numerous similar units (e.g., multiple bindles, tablets or balloons) from a single source should be packaged together and submitted as a single item.

3. The assigned item numbers must be the same on the evidence, in the police report, and on the CSE.

4. The source or location of each item must be included on the CSE.

5. Do not place items such as rocks, powder, or plant material loose inside the CSE. Each item should be placed inside a container, such as a plastic bag, and marked with the item number then placed inside the CSE.

6. Items such as money, roach clips, coin purses, coke spoons, cigarette packages, empty packaging materials, etc., must be packaged separately from the drug items to be analyzed and sent to Property Services.

7. The laboratory will not accept syringes with needles. For drug analysis, the contents of syringes must be transferred to glass vials prior to submission. For latent print or DNA analysis, the syringe needle must be removed prior to submitting the tube.

8. Items too large for the CSE should be placed in larger containers, such as a paper bag. Attach the CSE to the outer container.

9. Package any evidence for fingerprint analysis appropriately (any excessive rubbing can negatively affect the recovery of prints).

    a. Do not write on the evidence packaging where latent print processing is needed – the writing will obliterate any latent prints present.

10. All the information on the CSE envelope should be filled out completely.

11. The chain of custody on the front of the CSE must be completed starting with the individual who placed the items into the envelope.

12. The CSE must be tape sealed and initialed with the tape running across the length of the opening.

13. All drug evidence must be taken to Property Intake.

14. Additional information on packaging and delivery of a CSE can be found in **Addendum A - Guidance Document for Evidence Packaging**.

C. Requests for drug analysis on drug-related offenses will come from the Investigation Division.

1. For drug evidence requiring analysis, as determined by the VSU Supervisor, the Investigation Division will send a list of the cases and

corresponding items needed for lab analysis to Property Services for retrieval and transport to the Alcohol, Drug, and Toxicology Section by FSD staff

D. Drug evidence from other felony cases such as robberies, assaults and homicides, can be analyzed when requested by the Detective handling the case.

E. Drug evidence not analyzed will be stored at Property Services for three years before destruction.

1. The VSU Supervisor can make a request for analysis at any point prior to destruction.

XII. ILLICIT MARIJUANA GROW OPERATIONS

A. Processing Plants and Equipment

1. Medical Marijuana Grow Operations are covered under CCCSO Policy 1.06.50.

2. Once secure, photographs must be taken to document the illicit grow operation as found.

3. The number of plants (mature and immature) should be determined.

4. If an indoor operation, the number of plants found in each room should be determined.

5. [redacted]

6. Photographs documenting the locations of those plants chosen to account for the ten-pound sample should be taken.

7. [redacted]

8. [redacted]

   a. A small cutting of several leaves and/or bud material is sufficient as a sample.

9. Each sample is to be packaged in a paper envelope or small paper bag and labeled (i.e. “Sample of plant A from suspect’s bedroom.”).

10. Photographs documenting each sampled plant (in its original location) with the labeled sample should be taken.

11. Technique:

   a. Randomly place [redacted] plants throughout the operation.

   b. Take the cutting, package it, and label it as “Sample from Plant A at Number Stand A.”

   c. Place the sample next to the plant.

d. Take an overall photograph of Plant A indicating its location in the operation, then do a medium range photograph showing the plant, the sample, and the labeled stand as one image.

e. Repeat [redacted]

f. The five individually packaged and labeled random plant samples are placed into a Controlled Substance Envelope for submission to the Drug, Alcohol, and Toxicology Section for examination.

12. The gross weight of the plant material must be determined. The gross weight can be determined several ways:

    a. Weighing the plant material present.

    b. Estimating the gross weight based on a dimensional measurement of the total amount of plant material present.

    c. Determining an average weight for a plant present within the grow operation and multiplying that average by the number of plants present.

13. The remaining bulk plant material can be destroyed per 11479 H&S.

14. Juvenile bulk plant material (vegetative or pre-flowering state) may be destroyed on site and left.

15. Plants should be uprooted with the roots cut or the central stalk snapped to prevent replanting.

16. If the location is an easily accessed public area or there is a potential that the offenders could come back shortly after law enforcement has left the scene, consideration should be given to bring the juvenile plants back to Property Services for destruction.

17. Flowering plants or plants with buds need to be transported to Property Services for destruction.

18. The number of lights, ballasts, and other grow related equipment should be determined.

19. If an indoor operation, the number of each type of grow equipment found in each room should be determined.

20. Serial numbers for equipment such as lights and ballasts should be recorded. This can be done either with notes or by taking photographs of the serial numbers.

21. One light and one ballast is collected as evidence from the grow operation. The remaining bulk lights and ballasts can be transported to Property for destruction.

22. Very large equipment may be taken to Property Services for proper disposition but will not be stored as evidence.

23. A Court Order pursuant to 11474 H&S will be obtained within 60 days to destroy the bulk equipment. Obtaining the court order for destruction is the responsibility of the Violence Suppression Unit (VSU) Sergeant.

24. Samples of foodstuff derived from marijuana are to be taken with the remaining bulk material transported to Property for destruction.

B. Other Considerations

1. Structural modification may have been done for indoor MGOs.

   a. Alterations may have occurred to maximize the growing environment or to disguise the growing location.

   b. Document the modifications with photographs when possible.

   c. Call the local building inspection entity to evaluate structural safety and potential code violations prior to release of the home or other type of building to the owner.

2. Electrical modifications may have been done to bypass the normal distribution of power to the structure.

   a. Document any electrical modifications with photographs.

   b. Photograph the power meter prior to turning power off or unplugging any equipment.

   c. Call the local building inspection entity and PG&E to evaluate electrical safety and potential code violations prior to release of the home or other type of building to the owner.

C. Federal Cases

1. Some cases may be investigated in cooperation with a Federal agency and prosecuted at the Federal level. The same plant and grow equipment sampling and destruction policies listed above will apply.

2. If the Federal agent requests to have more plants or grow equipment collected than required by this policy, the Federal agency will be responsible for the storage of these additional items.

D. Safety

1. The CCCSO Injury and Illness Prevention Program (IIPP) dictates safe work practices to address the various safety hazards present at an MGO.

2. During the processing of an MGO, the local fire department should be on scene to identify potential fire hazards, since hazardous situations may exist.

E. Fire

1. Fire hazards from electrical modification may be present on site from uncovered breaker boxes, exposed live wires, excessive wiring, wire bundles, and wires exposed to water.

2. Numerous high intensity light bulbs are often used indoors which are extremely hot.

3. Many operations will use flammable and volatile solvents such as acetones, camp fuel, and isopropyl alcohol. These can ignite when exposed to a flame, electrical arc, or other heat source such as the lights.

4. Solvents can also produce explosions when the right fuel/air mixture is reached.

F. Electrical

1. The electrical modifications at grow operations are generally not done by competent or licensed electricians and are very hazardous.
2. Exposed live wires, improper grounding, inadequate circuits and moist environments all pose electrocution hazards.
3. Light ballasts can hold their electrical charge for up to 15 minutes after being unplugged and pose an electrocution risk.
4. Processing should cease in the area of the grow operation effected by a potential electrical hazard.
5. A licensed electrician or a representative from PG&E should be requested to render any electrical hazards safe prior to commencing processing.

G. Atmospheric

1. [redacted]
2. [redacted]
3. Volatile liquids such as solvents can create an unsafe atmospheric condition.
4. The Hazardous Materials Specialists should be requested to evaluate and monitor the atmosphere during the course of the grow operation processing when poor ventilation exists and an atmospheric hazard might be present.
5. Sheriff's employees shall not enter an enclosed space with a potential atmospheric hazard before the atmosphere has been properly evaluated and any hazards mitigated.

H. Mold

1. Molds are a standard byproduct growing in the same area as the plants.
2. Without respiratory protection, mold may produce allergic reactions, sinus and respiratory distress, and even death in extreme cases.
3. Aspergillus is a group of pathogenic molds that grow on decaying marijuana that can lead to acute infections, chronic diseases, and even death in some individuals.

4. Proper respiratory protection and other protective barriers should be employed when handling marijuana.

5. A properly fitted N95 mask will prevent exposure to aspergillus and other molds.

6. Long sleeves, gloves, protective suit and eye goggles are also effective at limiting exposure to the mold spores.

I. Hazardous Materials

1. Large volumes of hazardous materials are often present at MGOs.

2. Large volumes of fungicides, pesticides, acids, and bases are used and are generally stored improperly, including being poured down drains and sewers.

3. Flammable organic solvents may be present for hash oil extractions.

4. Large quantities of fertilizer are also present.

5. Hazardous Materials Specialists may need to respond to the scene to dispose of these materials to ensure Sheriff's Office employees and the public are properly protected from these hazards.

J. Confined Spaces

1. Some grow operations may be in underground rooms or tunnels. These locations are considered confined spaces and OSHA guidelines must be followed.

2. Only those trained as an entrant, attendant, or confined space supervisor can make entry into this type of environment.

3. Untrained Sheriff's Office employees shall not enter confined spaces; these grow operations must be processed by those trained for confined spaces and trained with Level B or Level A protective equipment with SCBA.

XIII. EVIDENCE PACKAGING GUIDELINES

1. Evidence must be packaged to preserve the integrity of the evidence for laboratory analysis and court presentation.

2. Generally, items should be placed in separate packages.

3. Seal and initial the container with evidence tape or clear box tape.

   a. Cardboard boxes must have the bottom, top, and sides taped sealed and initialed.

   b. Do not use Scotch tape, masking tape, or duct tape.

4. Evidence Barcode Labels must be generated for all evidence.

   a. Envelopes with a preprinted Chain of Custody

      1. Enter case and evidence information into EvidenceOnQ

      2. Print an Evidence Barcode Label without a Chain of Custody and affix to the back of each evidence envelope

3. Fill out first line of the preprinted Chain of Custody (From, To, and Date)

b. Packages with no preprinted Chain of Custody

1. Enter case and evidence information into EvidenceOnQ

2. Print an Evidence Barcode Label with a Chain of Custody and affix to front of each package

3. Fill out first line of the Chain of Custody (From, To, and Date) on the label.

5. Use appropriate packaging, **see Addendum A - Guidance Document for Evidence Packaging** for packaging guidelines.

6. When handling evidence containing possible latent fingerprints, use care not to destroy the prints or contaminate the item with your own fingerprints or DNA. Handle the item with gloves, minimize your contact, and avoid smooth surfaces and regions likely to have prints.

7. When handling evidence pertaining to fraudulent documents, i.e. checks, counterfeit bills, etc., the item should be handled by its edges or areas not likely to have prints. To avoid transferring writing indentions onto the evidence, the package must be written on prior to placing evidence inside.

8. Large items such as doors or car fenders may not be able to be packaged.

a. Suspected bullet holes, tool marks, blood spatters or other areas of interest should be covered using a suitable packaging material and secured with tape, whenever possible.

B. Firearms will be rendered safe to ensure employee safety while preserving potential evidence.

1. The general steps used to render a firearm safe are to point the gun in a safe direction, remove the ammunition source (magazine), and then carefully manipulate the firearm to clear the chamber.

2. When handing revolvers, mark the cylinder under the hammer using a felt tip pen. Remove cartridges from the cylinder and note the chamber position.

3. If a loaded firearm cannot be rendered safe, [redacted] A staff member will assist you to render the weapon safe. If after business hours, contact Sheriff's Dispatch.

C. Firearms will be packaged in a manner to preseve potential evidence.

1. Package each firearm in a separate cardboard gun box.

2. Ammunition and magazines found with a firearm shall be separately packaged and placed within the same cardboard gun box with the firearm.

3. A green "UNLOADED" label must be affixed to packaging. The initials of the individual rendering the gun safe along with the date this action was performed must be reflected on the label.

4. If no firearm is submitted, place ammunition and magazine in an envelope.

5. Additional information on firearm evidence packaging can be found in **Addendum A - Guidance Document for Evidence Packaging**.

XIV. TEMPORARY STORAGE AT STATION HOUSES

A. The Patrol Division maintains temporary evidence lockers at [redacted] Such temporary evidence lockers will be used only for the temporary storage of evidence and property.

1. The following items will not be stored at Station Houses:

a. Items too large to be secured in lockers at the station house but can be transported in a patrol unit (bicycles excepted).

b. All controlled substances evidence.

i. [redacted]

c. [redacted]

B. The Patrol Division Commander shall maintain procedures to ensure property from Station Houses and Contract City Police Departments is transported to Property and Evidence Services in a timely manner.

XV. SUBMISSION TO PROPERTY AND EVIDENCE SERVICES

A. [redacted]

B. [redacted]

1. Staff are available after hours via Sheriff's Dispatch for emergency evidence needs for the following purposes:

a. Very large items that cannot be temporarily stored anywhere else.

b. Large quantities of controlled substances.

c. Large sums of money or items of unusually high value.

2. The request for after-hours Property staff callback must come from the Watch Commander.

C. [redacted]

1. [redacted]

2. Packaging supplies and drying cabinets are available.

3. Evidence and Property must be packaged and sealed per guidelines and placed in an evidence locker at Intake.

4. Bloody clothing is to be hung in the drying cabinets for Property staff to package once dry.

5. The Evidence Log must be filled out completely.

6. Deputies must clean up after themselves prior to leaving the intake area.

D. Muir Station utilizes Property Intake as its primary evidence locker.

1. Deputies from other station houses may bring items to Property Intake.

E. [redacted]

F. Property will not accept the following items:

1. Body parts or bones:

a. Contact the Coroner's Office for further instructions. DO NOT deliver to Property Service or Crime Lab

2. Explosives

3. Foods (perishable)

a. Take photographs for the case report.

XVI. EVIDENCE SUBMISSION TO FORENSIC SERVICES DIVISION FOR ANALYSIS

A. The Forensic Services Division Crime Lab operates across two facilities.

1. Criminalistics Section (Summit Crime Lab)
(Crime Scenes, Biology/DNA, Digital Evidence, Firearms, Latent Prints)
2530 Arnold Drive, Suite 200, Martinez

2. Drug, Alcohol, and Toxicology Section (Muir Crime Lab)
1960 Muir Road, Suite 201, Martinez

B. The Forensic Service Division receives requests for service using the following:

1. A **Criminalistics Request Form**. Fill out the form with all applicable information. The request form is designed to ensure that crime laboratory staff have the information necessary to accept the request and conduct the appropriate examinations. The Criminalistics Request Form may be found on ARIES.

2. Specialized evidence envelopes DO NOT require a Criminalistics Request Form. Fill out all applicable information on the front of the preprinted envelope instead of a request form.

a. Fired Cartridge Cases for NIBIN Entry Only Envelope

b. Fingerprint Evidence Envelope

c. Suspected Control Substance Envelope (CSE)

d. Blood Sample for Alcohol/Drug Analysis Envelope

e. Urine Sample for Alcohol/Drug Analysis Envelope

C. Evidence shall be packaged according to section XIII Evidence Packaging Guidelines.

1. Additional information on evidence packaging and delivery can be found in **Addendum A - Guidance Document for Evidence Packaging.**

2. Large items such as doors or car fenders may not be able to be packaged.

    a. Suspected bullet holes, tool marks, blood spatters or other areas of interest should be covered using a suitable packaging material and secured with tape, whenever possible.

    b. Contact the lab prior to any large item submission.

3. If direct evidence submissions do not meet the laboratory's requirements, FSD staff will ask the submitter to:

    a. Correct the problem with materials supplied by the laboratory, or

    b. Resubmit once the evidence is properly packaged, sealed and/or documented.

XVII. OBTAINING EVIDENCE FOR COURT

A. Evidence may be obtained from the Property Services staff between 8:30 am and 4:30 pm, Monday through Friday. The Deputy should call in advance to ensure the evidence is ready for pickup.

B. It is the responsibility of the Deputy obtaining such evidence to properly document the chain of custody, ensure the security of the evidence while in their custody, and ensure its return to the original container after it is used in court.

ADDENDUM A

GUIDANCE DOCUMENT FOR EVIDENCE PACKAGING

This Guidance Document is intended to supplement Physical Evidence Policy 1.06.03.

The goal of this guidance document is to provide awareness of the standard packaging options and their purpose, and to ensure the best decision is made for the collection, documentation, and preservation of evidence.

Evidence Barcode Labels must be generated for all evidence.

Envelopes with a preprinted Chain of Custody

- Enter case and evidence information into [redacted]
- Print an Evidence Barcode Label without a Chain of Custody and affix to the back of each evidence envelope
- Fill out first line of the preprinted Chain of Custody (From, To, and Date)

Packages with no preprinted Chain of Custody

- Enter case and evidence information into [redacted]
- Print an Evidence Barcode Label with a Chain of Custody and affix to front of each package
- Fill out first line of the Chain of Custody (From, To, and Date) on the label



Contra Costa County **Office of the Sheriff** General Policy and Procedure	CCCSO	NUMBER: 1.06.04
	RELATED ORDERS:	
ISSUE DATE: 4-3-2015 REVISION DATE: 9-12-2016	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Sergeant Development / Mentoring Philosophy	

I. POLICY.

A. Sergeant development and mentoring will be accomplished within a framework of a standardized assignment process that insures organizational efficiency with a basic level of predictability. It is in the best interest of the Sergeants, the Office of the Sheriff and the community to have well-trained Sergeants with a broad base of experience. Sergeants are encouraged to seek personal and professional improvement through education and a variety of assignments.

II. GENERAL.

A. All Sergeants will have an initial-assignment either to Patrol or Detention for a period of 1-2 years. The Sheriff or his designee may determine an alternate assignment is in the best interests of operational efficiency. After the alternate assignment is complete, the Sergeant will be required to complete his or her initial-assignment in Patrol or Detention.

B. After approximately 1-2 years of initial-assignment, Sergeants will be re-assigned to either Patrol or Detention depending on their initial-assignment.

C. Sergeants are eligible to apply for special assignments at any time. Special Assignments will normally be for a maximum of 3 to 4 years.

D. Sergeants may request a different assignment at any time. Requested moves between Custody, Patrol and Special Assignments prior to completion of a minimum of one year in Patrol and one year in Detention are disfavored, but will be evaluated case by case for approval. Such early movements do not relieve the Sergeant from the responsibility to complete a minimum of one year in Patrol and one year in Detention.

E. Sergeants who have completed initial assignments to Patrol and Detention will be rotated based on time assigned to Patrol, and Detention. This method will be used for routine balancing of staff, when no other criteria exist.

F. All Sergeants will be trained via the Sergeant Training Matrix.

G. Sergeants can be reassigned at any time due to inadequate performance.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER:** 1.06.16
	RELATED ORDERS: Homeland Security Presidential Directive #5 (National Incident Management System (NIMS) California Government Code, Title 19, Division 2, Chapter 1 (SEMS) California Government Code, Title 2, Division 1, Chapter 7 California Law Enforcement Guide for Emergency Operations; State OES California Law Enforcement Mutual Aid Plan Contra Costa County Emergency Operations Plan	
ISSUE DATE: 12-15-2016 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Emergency Management- Department Operations Center (DOC)**	

I. POLICY.

A. The Department Operations Center (DOC) will serve to manage and coordinate law enforcement resources within the Office of the Sheriff jurisdiction and the operational area during major incidents and/or emergencies.

1. Tactical control remains the responsibility of the Field Incident Commander (IC) at all times.

B. All incidents requiring the activation of the DOC will be managed in accordance with the National Incident Management System (NIMS) and the California Standardized Emergency Management System (SEMS).

II. DEFINITIONS.

A. Activation: At a minimum, a designated official of the Office of the Sheriff implementing SEMS as appropriate to the scope of the emergency and the agency's role in the response.

B. Emergency: A condition of disaster or of extreme peril to the safety of persons and property from natural or human causes.

C. Incident: An occurrence or event, either human caused or by natural phenomena, that requires action by emergency personnel to prevent or minimize loss of life or damage to property.

III. GENERAL.

A. PURPOSE: The purpose of the Department Operations Center (DOC) is to support field level Incident Commanders within the Office of the Sheriff jurisdiction and throughout the Operational Area by:

1. Coordinating the flow of information, resources, and priorities within the law enforcement function, amongst the local governments within the Operational area and the Emergency Operations Center (EOC).

2. Coordinating the flow of information between the Incident Command Post (s) and the Emergency Operations Center (EOC).

3. Establishing Office of the Sheriff Incident Action Plan priorities for each operational period.

4. Arranging for and allocating resources from field level requests.

5. Developing, maintaining, and documenting response efforts and situational reports.

6. Coordinating the Mutual Aid function.

7. Coordinating the recall of Office of the Sheriff personnel.

B. LOCATION: The Department Operations Center (DOC) is located on the lower floor of the Field Operations Building, 1980 Muir Road, Martinez, in room number 104, commonly referred to as the Training Room.

1. If needed, the selection of an alternate DOC location will be made in conjunction with the staging/deployment of the Mobile Command Vehicle.

IV. PROCEDURE 1.

A. ACTIVATION: The DOC should be activated at any time a single incident or multiple concurrent incidents, require the coordination of personnel and equipment beyond the capacity of the Incident Command Post to manage.

1. The decision to activate the DOC will rest with the Division Commander of the affected division (or his/her designee). If multiple divisions or jurisdictions are affected, the Patrol Division Commander (or his/her designee) will initiate the activation and assume the role of DOC Director.

2. In the absence of the Division Commander, the next highest ranking manager or Watch Commander may activate the DOC.

   a. The manager activating the DOC should immediately notify their chain of command.

3. Unless otherwise directed by the Sheriff or Undersheriff, the DOC shall be activated for the coordination of Operational Area law enforcement resources any time the County EOC is activated.

4. When activated, Operational Area Mutual Aid shall be coordinated from the DOC under the direction of the DOC Director.

5. The DOC Director will assign staff to organize the DOC in accordance with the DOC startup checklist located in the Field Operations Guide.

   a. A copy of this checklist is located on the inside of the Video Room door (room 105) within the DOC.

6. During normal business hours, activation shall be initiated by contacting the Field Operations Bureau Assistant Sheriff or his/her designee.

7. During non-business hours and holidays, requests for activation should be made to the on-duty Watch Commander or to the on-call Watch Commander or affected Lieutenant (e.g., Station House Commander, Custody Facility Lieutenant, etc.) via dispatch.

   a. The person making the request shall minimally advise the following:

      - Affected area (station house, custody facility, etc.)
      - Synopsis of the incident including extent of casualties and ongoing hazards
      - Resources being requested.

V. PROCEDURE 2.

A. NOTIFICATIONS: Upon receiving a request to activate the DOC, the communications supervisor will ensure the following notifications are made:

1. The Division Commander for the affected division
2. The Assistant Sheriff for the affected bureau
3. The Division Commander for the Office of Emergency Services (OES)
4. The OES on call Duty Officer
5. The Law Enforcement Mutual Aid Coordinator.

VI. PROCEDURE 3.

A. STAFFING AND ORGANIZATION: The Incident Command System is designed to be a flexible framework for managing incidents of various sizes and complexities. Therefore, specific staffing of the DOC is dependent upon the size and complexity of the incident at hand.

1. The responsibilities of any position that remain unstaffed rest with the next higher level of the organization to carry out or assign.
2. A sample DOC organization chart is available for reference in the Field Operations Guide.
3. The primary sections and functions the DOC Director must consider regarding staffing include bur are not limited to:

   a. Public Information Officer (PIO) (Command): Responsible for coordinating the formulation and release of information to the media and may work with other PIOs in a Joint Information Center for interagency coordination during more complex events.

   b. Safety Officer (Command): Legally required for HAZMAT incidents, the Safety Officer is responsible for ensuring personnel safety and well-being, including the coordination of Critical Incident Stress Management.

   c. Scribe (Command, if Planning is not staffed): Responsible for the detailed documentation of the response effort and all incident

message forms with reference to time, message, and actions taken.

d. Liaison Officer (Command): Responsible for coordinating the flow of information between command staff and points of contact and representatives of an assisting agency.

e. Operations Chief: A member of the General Staff responsible for coordinating support of field level operations directly applicable to the primary mission.

f. Planning and Intelligence Chief: A member of the General Staff responsible for the collection, evaluation, dissemination and use of information about the development of the incident and the status of resources.

g. Logistics Chief: A member of the General Staff responsible for providing facilities, services, and material in support of the incident.

h. Finance Chief: A member of the General Staff responsible for all financial, administrative, and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.

VII. PROCEDURE 4.

A. INCIDENT MANAGEMENT GUIDELINES: Operational Area Emergency Operations Center **not** activated:

1. The DOC staff, at the direction of the DOC Director, is responsible for coordinating the resources, strategies, and policy for any event in the Office of the Sheriff jurisdiction that exceeds the capabilities of the field level resources to manage.

2. The DOC is responsible for developing and maintaining the Incident Action Plan. When establishing priorities for the response to an incident(s), the DOC Director will prioritize goals based on the following criteria:

   a. Saving lives

   b. Protecting property

   c. Preserving the environment

   d. Restoring interrupted essential services.

3. The DOC will coordinate resource requests from field Incident Command Posts to ensure appropriate assets are acquired, tracked, assigned, and funded.

4. In the event of a personnel recall, the DOC is responsible for the coordination of the recall of personnel in accordance with CCCSO Policy 1.06.22, Emergency Activation of Personnel.

5. The DOC Director will ensure the information collected, decisions made, and actions taken within the DOC are thoroughly documented as a chronological log.

a. Event log keeping and resource tracking should be accomplished using the Web EOC program.

B. Operational Area Emergency Operations Center **is** activated:

1. In addition to managing events and law enforcement resources within the jurisdiction, the DOC is responsible for coordinating Law Enforcement Branch information from local jurisdictions and communicating that information to the Law Branch Director of the Operations Section with the Emergency Operations Center.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.18
	RELATED ORDERS: Administrative Bulletin 15.6; Office of Emergency Services Manual; Field Operations Guide (F.O.G.) CCCSO Injury and Illness Prevention Program; Government Code Sections 8558(a), 8625, 8630; County Ordinance Code Chapter 42-2; CCCSO 1.06.21, 1.06.211.	
ISSUE DATE: 12-21-2015 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Bomb Threats or Bombings at Office of the Sheriff Facilities**	

I. POLICY.

A. This policy provides guidance for addressing bomb related incidents at Sheriff's Office facilities. For incidents involving properties not owned or operated by the Office of the Sheriff, refer to Patrol Division Policy 3.01.33 Bombings, Bomb Threats, Explosives, and Explosive Devices.

II. GENERAL.

A. The safety of Office of the Sheriff employees, as well as the general public, is the primary concern in addressing potential bombs or bomb threats [redacted]

III. PROCEDURE 1.

A. BOMB THREAT: Employees receiving a bomb threat should do the following:

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.19
	RELATED ORDERS:	
ISSUE DATE: 5-6-2015 REVISION DATE: 3-22-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Homeland Security Incidents	

I. POLICY

A. The Office of the Sheriff recognizes that violent extremism and terrorism represent an ongoing threat to public safety. Deputies will ensure that all information and any incidents potentially pertaining to violent extremism or terrorism are thoroughly documented and forwarded to the Homeland Security Unit in a timely manner.

B. Deputies will respond to and document suspicious activity that represent a potential terrorist threat or may involve any Critical Infrastructure or Key Resources within the County.

II. DEFINITIONS

A. Critical Infrastructure: Assets, systems, and networks, whether physical or virtual, so vital to the United States that the incapacity or destruction of such assets, systems, or networks would have a debilitating impact on security, national economic security, public health or safety, or any combination of those matters.

B. Key Resources: Publicly or privately controlled resources essential to the minimal operations of the economy and government.

C. Homeland Security Unit (HSU): Serves as the Information Sharing Center between Contra Costa County Office of the Sheriff and local, regional, state, federal and private partners relating directly to infrastructure and potential terrorist activity. HSU collects and disseminates information to identify trends in order to deter threats, mitigate vulnerabilities and minimize consequences for any man made intentional acts.

D. Terrorism: A violent act, in violation of state or federal laws, targeting a non-combatant population, critical infrastructure, or key resources, which is intended to coerce or intimidate a population or its government regarding a political or social objective.

III. GENERAL INFORMATION

A. In order to facilitate information sharing between the local, regional, state, and federal levels, it is imperative that all members of the Office of the Sheriff report information that may help identify individuals and/or groups that may be involved in potential terrorist activity.

B. When dealing with incidents involving potential extremists, deputies will remain mindful of the difference between those persons who are potentially planning some violent action and those who are exercising their constitutionally protected rights.

IV. PROCEDURE

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.20
	RELATED ORDERS: Goodall v. Brite, (1936) 11 Cal. App. 2d 540; California Government Code Section 8655; U.S. Code Title 42, sections 5123 and 11003; California Public Utilities Code section 2872(e) and 2891.1(f)(2).	
ISSUE DATE: 4-1-2010 **REVISION DATE: 3-7-2014**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Community Warning System**	

I. POLICY.

A. The Office of the Sheriff shall deploy the Community Warning System (CWS) for delivering timely alerts and warnings about imminent hazards to human life or health in Contra Costa County.

II. DEFINITIONS.

A. COMMUNITY WARNING SYSTEM (CWS). An integrated, multi-mode, all-hazard public warning system constructed to alert the public in the event of a chemical accident or other public safety incident.

B. EMERGENCY ALERT SYSTEM (EAS). A federal system for overriding broadcast radio and television, as well as cable and satellite services. The primary purpose of EAS is to enable the President of the United States to communicate with the nation in times of crisis. EAS may also be used for local alerting; however, participation in local alerts is voluntary on the part of the individual broadcasters.

C. EMERGENCY DIGITAL INFORMATION SYSTEM (EDIS). A statewide emergency public information service operated by the Governor's Office of Emergency Services.

D. STAFF AUTOMATED NOTIFICATION DEVICE (SAND). A computerized telephone calling system using pre-defined phone lists to make notifications to public safety and health personnel.

E. TELEPHONE EMERGENCY NOTIFICATION SYSTEM (TENS). A computerized telephone calling system that allows geographic mapping of the area to be notified.

F. WIRELESS EMERGENCY ALERTS (WEA). A federal system that provides an interface to participating cellular mobile service providers for delivery of critical alert information to cellular phones in a danger zone. The primary purpose of WEA is to enable the President of the United States to communicate with the nation in times of crisis. Not all cell phone carriers participate in this program and not all cell phones are WEA compatible. Individuals may opt out of local alerts on their cellular device, but may not opt out of presidential alerts.

III. GENERAL INFORMATION.

A. FUNCTION.

1. The Community Warning System automatically coordinates the transmission of alerts and warnings over a variety of delivery systems, including:

   a. Sirens in the vicinity of major industrial facilities;

   b. Telephone notification (TENS) to residential telephones in the 9-1-1 database;

   c. Cell phone calls, text messages and email messages in the voluntary registration database;

   d. Alerting NOAA weather radios;

   e. The Emergency Alert System (EAS) over broadcast radio, television and cable;

   f. Wireless Emergency Alerts (WEA) to mobile phones over mobile telephone broadcast towers;

   g. The State of California's "Emergency Digital Information Service" (EDIS);

   h. Pagers, emails and Internet notifications;

   i. The County's cable television channel; and,

   j. Low-power AM Travelers Information Radio broadcasts.

B. APPROPRIATE USE

1. The Community Warning System (CWS) may be used to provide time-sensitive alerts and warnings to affected members of the public about imminent hazards to human life or health for which specific protective action is recommended.

2. The CWS may also be used to advise affected members of the public when follow-on action is required; e.g., a message advising the public to air out their houses following a hazardous materials incident.

3. The CWS will NOT be used for public communications that:

   a. Are commercial or political in nature;

   b. Are not authorized by a responsible public safety official;

   c. Do not request specific and immediate protective action by the public; or,

   d. Could be effectively delivered by other means.

C. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.21
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 2-4-2019	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Unusual Incident Notification Procedure	

I. POLICY.

A. In specified events falling within the parameters of the Unusual Incident Report, special care shall be taken to ensure notification of the Sheriff is made in a timely manner.

II. DEFINITIONS.

A. Unusual Incident Report. An Office of the Sheriff form titled, Unusual Incident Report. It is routed via email to the UIR receiver list which is comprised of: Administration (Sheriff/Undersheriff), Bureau Assistant Sheriffs, Captains, Lieutenants, Sergeants, Professional Managers, and Professional Supervisors.

III. GENERAL.

A. INCIDENTS REQUIRING NOTIFICATION.

1. All incidents meeting any of the following criteria will require a UIR to be generated:

   a. Office of the Sheriff involvement in any incident that has attracted or has the potential to attract extensive media or public attention;

   b. Any incident that has adversely affected, or has the potential to adversely affect, Office of the Sheriff operations; and

   c. Any incident that is unusual in nature, wherein the Sheriff/Undersheriff would need the information to properly respond to questions from the media, the public or other interested parties.

2. In addition to the required written notification noted above, the following specific incidents require that verbal notification be made to the Sheriff/Undersheriff and affected Bureau Assistant Sheriff:

   a. Any serious injury or death of an employee;

   b. Any homicide wherein an employee's action or inaction caused the death;

c. The death of an inmate or arrestee in the custody of the Office of the Sheriff;

d. Any incident involving an employee as a hostage or as a hostage taker;

e. Any incident involving major damage to a Office of the Sheriff Facility or equipment;

f. Any major riot/disturbance in any Office of the Sheriff Detention Facility;

g. Any disaster requiring involvement of Office of the Sheriff resources that is of major media or public interest;

h. Any request for Mutual Aid; and

i. Any incident wherein an employee is exposed to a life-threatening situation and/or suffers severe physical or emotional trauma, and a Supervisor at the scene determines that immediate support from the Administration level would be of help to the employee.

3. Other incidents may occur which do not fit any of the above criteria and the on-scene Supervisor may feel the notification steps should be taken.

a. The Supervisor shall verbally notify his or her Manager and complete an Unusual Incident Report; and

b. The Manager receiving the verbal notification will decide whether or not to continue the verbal notification to the next level of command. The Unusual Incident Report will be forwarded in all cases.

IV. PROCEDURE 1.

A. UNUSUAL INCIDENT REPORT.

1. The Unusual Incident Report shall be completed and routed in a timely manner by supervisory/management personnel. The employee responsible for the report shall not go off duty prior to its completion.

2. Unusual Incident Reports shall be immediately disseminated via email to the UIR receiver list.

V. PROCEDURE 2.

A. VERBAL REPORT OF UNUSUAL INCIDENTS.

1. Verbal reporting will be accomplished via the chain of command. The Supervisor receiving the verbal report will either:

a. Personally relay the report to their Supervisor; or

b. Direct the employee making the notification to report to the next higher ranking Supervisor in the chain of command.

2. If a Supervisor in the chain of command is not available, the notification process will bypass that position.

3. When verbal reporting is initiated for any incident not specifically described in this Policy, each Supervisor receiving the report will decide whether or not to continue the verbal reporting process.

4. The Undersheriff may decide to stop or delay verbal notification to the Sheriff for any incident including those specifically listed in this Policy.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.22
	RELATED ORDERS: Contra Costa County Emergency Operations Plan (Oct 15, 96); Government Code Section 3100; Law Enforcement Guide for Emergency Operations by California; State O.E.S. (1998); Standardized Emergency Management System (SEMS) CCCSO 1.06.07.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 10-29-2015	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Emergency Activation of Personnel**	

I. POLICY.

A. To establish mobilization procedures for the Office of the Sheriff's resources during a National emergency, major disaster or unusual occurrence, all members of this agency, sworn, non-sworn and volunteer, shall serve as disaster service workers subject to the assignment of disaster response activities by their superior or by law.

II. GENERAL.

A. During periods of major disaster, the Office of the Sheriff may take on additional responsibilities as the lead agency for emergency management in the Operational Area. These responsibilities may place a greater burden on the department than can be managed with existing on-duty personnel.

B. In the event of a major disaster or unusual occurrence requiring a full commitment of the agency's resources and personnel, all sworn and non-sworn members of the Office of the Sheriff and all emergency services volunteers shall immediately make themselves available for mobilization to help carry out this agency's responsibilities. The mobilization plan for the Office of the Sheriff is described on the following pages.

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.23
	RELATED ORDERS: Administrative Bulletin 15.6; Office of Emergency Services Manual; Field Operations Guide (F.O.G.) CCCSO Injury and Illness Prevention Program; Government Code Sections 8558(a), 8625, 8630; County Ordinance Code Chapter 42-2; CCCSO 1.06.21, 1.06.211.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 3-7-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Major Disaster Response**	

I. POLICY.

A. The County Emergency Operations Center (E.O.C.) shall notify the Sheriff and provide disaster support, and resource coordination. In response to a major disaster, the Office of the Sheriff shall focus its personnel, resources and energy on mitigating the effects of the disaster. The goal of the Office of the Sheriff is to safeguard lives and property, while minimizing the impact of the disaster and restoring order to the community. Every effort will be made to resume normal service and effectively handle the public needs.

II. DEFINITIONS.

A. BUILDING WARDEN. A designated County employee responsible for the exigency plan for a building.

B. EXIGENCY. A situation requiring immediate aid or action.

C. FLOOR WARDEN. A designated County employee responsible for the exigency plan for a floor, and who works closely with the Building Warden.

D. MAJOR DISASTER. Fire, earthquake, explosion, national emergency, riot or other potentially life-threatening situations requiring the mobilization of the Sheriff's Office.

E. WATCH COMMANDER. The Watch Commander is responsible for necessary decision making during non-business hours.

F. Primary Work Location. Work site or location to which an employee is assigned.

III. GENERAL.

A. ADMINISTRATIVE SERVICES.

1. The Sheriff is the Administrator of Emergency Services, and in such capacity, has certain powers and duties when an emergency exists under Government Code Section 8558(a) or pursuant to County Ordinance Code Chapter 42-2 or Government Section 8558, 8625, or 8630.

2. In the Sheriff's absence, the Undersheriff, Support Services Bureau Assistant Sheriff or senior Manager will direct and coordinate the efforts of the County's emergency operations in the event of a major emergency which threatens the safety of persons and property and which may require the assistance of other political subdivisions.

3. The following persons are available resources and are qualified to assume the powers and duties of the Administrator of Emergency Services when the Sheriff or designee is unavailable to serve in such capacity:

   a. County Administrator;

   b. Chief Assistant County Administrator;

   c. Assistant County Administrator

   d. Deputy County Administrator

   e. Chief, Contra Costa County Fire Protection District;

   f. County Director of Health Services;

   g. County Public Works Director; and

   h. County Welfare Director.

B. In the event of a major disaster, Office of the Sheriff resources will be focused on the medical needs, security and safety of the community, staff and inmates. Office of the Sheriff employees are expected to make reasonable efforts to contact their primary work locations as soon as possible to ascertain the status of the disaster and the need for them to report to work either on an emergency basis or as part of their normal work cycles.

C. In accordance with Federal and State laws and this Policy, those Divisions involved in coordinating responses to major disasters shall establish necessary procedures to ensure that the intent of this Policy is carried out. Specifically, the O.E.S. Division Commander shall develop and maintain procedures and coordinate the operations of other Divisions to ensure that the intent of this Policy is enforced.

IV. PROCEDURE 1.

A. EARTHQUAKE EXIGENCY PLANS. In the event of a life-threatening earthquake, Office of the Sheriff resources will be focused on medical needs, safety of employees and public, and security of inmates.

1. Safety Rules.

   a. Stay where you are.

      - If inside a building, take cover under tables, desks or doorways; duck and cover; crouch on knees with face down and cover back of neck; and avoid glass windows, tall cabinets, falling plaster.

      - If outside, avoid buildings, trees, walls and power lines.

b. Do not use matches or open flame.

c. Expect power outages, activation of alarms and sprinklers, and stoppage of elevators.

d. Expect aftershocks that may cause as much or more damage than has already taken place due to the weakening of structure.

B. AFTER AN EARTHQUAKE.

1. After a life-threatening earthquake, all employees will:

a. Administer first aid and request medical aid if needed; and

b. Determine damage to facilities.

2. Should an evacuation be necessary, the below evacuation guidelines will apply.

3. Every effort will be made to resume normal service and effectively handle the needs of the public.

V. PROCEDURE 2.

A. FIRE EXIGENCY PLANS. In order to minimize the dangers to employees and the public, all employees will know, understand and follow the fire exigency plans of their workplace.

1. The specific plan of action addressed in this section is for the County Administration Building located at 651 Pine Street, Martinez Exigency plans for all other Office of the Sheriff facilities are the responsibility of the Bureau Assistant Sheriff in charge of those facilities. Such exigency plans will be included in the Division Manuals.

B. AUTHORITY AND RESPONSIBILITY DURING A FIRE.

1. Building Warden. The Building Warden, during an exigent situation, will have authority for decisions affecting the County Administration Building, the emergency and security of the premises. Upon notification of a fire alarm in the County Administration Building, the Building Warden will:

a. Proceed to the location and ensure the Fire Department is on the scene.

b. Determine if it is necessary to evacuate all or part of the building. The Building Warden will post a County employee at each entrance of the building to ensure that no unauthorized persons are allowed to enter the building.

c. The Building Warden will complete the evacuation. Any missing persons will be immediately reported to the Fire Officer In Charge.

2. Floor Wardens. Floor Wardens for each floor of the County Administration Building are designated by the County Department in control of that floor(s). Refer to County Administrative Bulletin 15.6. Floor Wardens must ensure that the employees who report to them understand procedures to be followed in case of an exigent situation.

This includes being familiar with the alarm systems, evacuation routes, location of fire exits and use of fire extinguishers. In addition, all Floor Wardens are directly responsible for the protection of their employees, County assets and continuity of operations within their area. In case of an exigency situation, the Floor Wardens or their designated alternates must:

a. Ensure that all employees are properly notified of the exigent situation;

b. Initiate action for first aid, rescue, fire or damage control activities, shutdown equipment as required, and protect classified materials and other assets;

c. Evacuate their portion of the building when instructed to do so by the Building Warden, a fire officer at the scene or a voice announcement on the building speaker system;

d. Account for all employees and visitors after evacuation and report this to the Building Warden; and

e. Ensure that essential functions and operations are continued when possible.

3. Upon arrival of the Consolidated Fire Department, the Fire Officer In Charge will direct the control and extinguishing of the fire.

C. BASIC GUIDELINES FOR PERSONNEL.

1. Reporting a Fire:

a. Locate and activate a fire alarm.

b. Telephone 9-1-1 and give the building location or room number. From inside County buildings dial 9-9-1-1.

- Describe the type and size of the fire.
- Advise if there are any injured people.
- Give your name and phone number.

2. Evacuation. Evacuate all people from the area of the fire and close off the fire area. Fire extinguishers may be used, but if the smoke or heat presents a danger to your safety, evacuate the area and let emergency personnel handle the situation.

a. If possible, have someone stand by at the nearest entrance to direct emergency personnel to the affected area.

b. Elevators shall not be used for evacuation. The elevators automatically return to the first floor and lock open when a fire alarm is activated.

c. Emergency evacuation routes are posted on each floor of the building to facilitate evacuation of employees of the Sheriff's Office, other County employees and the public. The evacuation routes and exits from the building are as follows:

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.24**
	RELATED ORDERS: CCCSO 1.02.01, 1.02.27, 1.06.02.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 01-27-2021**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **SWAT Team**	

I. POLICY.

A. A Special Weapons and Tactics (SWAT) team will be utilized in critical situations to minimize dangers to the public, employees, and suspects.

II. DEFINITIONS.

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.25
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Telecommunications Emergency Command**	

I. POLICY.

A. [redacted]

II. GENERAL.

A. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.26
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 5-4-2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Mobile Command Vehicle (MCV)	

I. POLICY.

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.27**
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 5-3-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Major Incident Debrief**	

I. POLICY.

A. A formal debriefing and critique of every major incident will occur within thirty calendar days of a major incident, unless an exception is authorized at the Office of the Sheriff Executive Level.

II. DEFINITIONS.

MAJOR INCIDENT. Major Incidents include, but are not limited to, SWAT Team utilization, serious hazardous material spills, significant mutual aid responses, demonstrations requiring special preparation or staffing, riots, hostage situations, prisoner escapes, in-custody deaths, officer involved shootings, and fatal or life-threatening accidents or similar incidents involving Office of the Sheriff personnel. Command Staff and Division Commanders may determine incidents other than those enumerated, to be Major Incidents based on an overall judgment as to the significance of the incident such as the level and quality of response by Office of the Sheriff personnel, public interest in the incident and any other pertinent factors.

DEBRIEF. A debriefing shall be conducted of the Major Incident. Department Managers, Supervisors, and personnel directly involved in the Major Incident shall attend. At the conclusion of the debriefing, an evaluation and analysis of the role, function, and performance of the Office of the Sheriff personnel in connection with the Major Incident will be conducted, to include the applicability of previous training, planning, tactics, execution, and overall handling of the detail.

III. PROCEDURE 1.

A. The debrief may include physical assets such as audio recordings, video recordings and police reports. The debrief should not include in-progress or investigative reports or recorded statements of involved personnel generated as a result of the protocol investigation.

B. The Incident Commander will chair the debriefing and make all arrangements, including the determination of appropriate personnel who should attend. The debrief will include an evaluation of the Office of the Sheriff response, scene management and tactics. The Bureau Assistant Sheriff will attend the debriefing.

C. At the time the debrief meeting is scheduled, the Bureau Assistant Sheriff will consult with County Counsel or a private attorney and determine if they should attend the debrief meeting.

D. Attendees at the debrief should generally be limited to the Bureau/Division field personnel who were involved in the incident and their direct chain of command. The Division Commander shall have final authorization on who will be in attendance.

IV. PROCEDURE 2.

A. DEBRIEF DOCUMENT. At the conclusion of the debriefing a written summary will be prepared by the Incident Commander. The summary should include the following sections, when applicable, and any detail as will be useful for future response to similar Major Incidents:

1. Major incident;
2. Date/time of incident;
3. Date/time of debrief;
4. Participating personnel;
5. Sequential outline of incident;
6. Involved persons, divisions, agencies;
7. Procedures that worked well;
8. Procedures that did not work well;
9. Recommended procedural and/or training solutions;
10. Person Assigned to Correct;
11. Time Frame to Correct;
12. Report Correction to Whom; and
13. Recommendations.

B. MEMO DRAFT. A cover memo shall be generated and addressed to County Counsel, via the Bureau Assistant Sheriff, notifying them the Incident Debrief has been conducted and that a Debrief Document has been prepared. The memorandum and all relevant documentation related to the debrief will be marked “Confidential: Attorney / Client Privilege.”

1. The complete packet shall be forwarded through the affected bureau chain of command including the Sheriff and the Undersheriff.

C. RELEASE OF DOCUMENTS/INFORMATION. All personnel involved in a Major Incident, as well as those involved in the debriefing of the Major Incident, are reminded to comply with Sheriff’s Office Policies 1.06.71 Dissemination of Law Enforcement Information, 1.06.74 Control of Sheriff’s Office Information, 1.06.78 News Media Relations, and other policies applicable to the Major Incident. In no case shall any debrief documents be released except upon appropriate legal process.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.28**
	RELATED ORDERS: Appendix 2.3 County Intersection Observation Plan - Code 666 and Be On The Lookout (BOLO) Broadcast.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 11-18-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **County Intersection Observation Plan (Code 666)**	

I. POLICY.

A. In order to provide a coordinated effort in the County area toward the apprehension of suspects fleeing by vehicle from major crimes, the Sheriff has adopted an intersection observation plan with other law enforcement agencies.

II. DEFINITIONS.

A. CLERS Radio. The California Law Enforcement Radio System, which is a statewide station-to-station radio communication system.

B. BOLO. Acronym used for "be on the lookout for".

C. CLETS Message or APB Mask. Used to process All Points Bulletin information in the Communication Center.

III. GENERAL.

[redacted]

[redacted]

[redacted]

[redacted]

f. Those units not specifically assigned to participate in the Code 666 shall remain in the proximity of their assigned beats or areas. They shall be cognizant of the wanted vehicle and watch the major traffic arteries in their beats.

IV. PROCEDURE 1.

A. SHERIFF'S TECHNICAL SERVICES DIVISION RESPONSIBILITIES.

1. Central Communications Center personnel, upon receiving a Code 666 request from a Station House Commander, Police Commander, or Area Supervisor will:

   a. Broadcast the information as soon as possible on CLERS radio;

   b. Broadcast the information as soon as possible to all Sheriff's units and Contract Cities; and

   c. Broadcast any additional information, on both systems, as it is received.

2. Dispatchers will ensure that designated observation points are covered by the assigned Deputies.

V. PROCEDURE 2.

A. PATROL DIVISION RESPONSIBILITIES.

1. When a Code 666 is broadcast, Deputies who have an assigned intersection in their beat will:

   a. Immediately drive to their assigned intersection;

   b. Take a position of observation that will allow them to readily pursue the suspect vehicle if observed; and

   c. Advise Dispatch that they are in position.

2. When a Deputy with an assigned intersection in his/her beat cannot cover that intersection in a reasonable time he/she will:

   a. Have Dispatch check for a closer unit to cover the location; and

   b. Notify their Sergeant of the inability to cover the location.

3. Deputies unable to respond to an assigned intersection may request that Dispatch call CHP for assistance in covering that location.

4. Area Sergeants will verify that assigned Deputies are providing cover for designated observation points.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.29
	RELATED ORDERS: PC 4536; CCCSO 1.06.21.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-20-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	SUBJECT: **Escapes**	

I. POLICY.

A. The Office of the Sheriff shall assume reporting and investigation responsibilities for all escapes by persons for whom the Office of the Sheriff has taken physical custody.

II. GENERAL.

A. REPORTING RESPONSIBILITY.

1. The Deputy from whom the escape occurred is responsible for notifying the appropriate personnel and initiating the original escape report.

2. If the escape occurs from a Reserve or Temporary Deputy, a permanent Division Deputy will be assigned to assist in the preparation of the report.

III. PROCEDURE 1.

A. NOTIFICATION OF ESCAPE.

1. The Deputy from whom the escape occurred is responsible for notifying the following:

   a. Dispatch, supplying all available information regarding the escape and escapee; and

   b. Shift Supervisor.

2. The Shift Supervisor is responsible for notification of the following:

   a. Detention Division - the Facility Commander;

   b. Patrol Division - the Station House Commander responsible for the escapee, or the Watch Commander if after hours; and

   c. Court Security Division - the Court Security Services Lieutenant.

3. The Facility Commander, Court Security Services Lieutenant or Station House Commander will ensure the following are notified via the chain of command:

a. Appropriate Division Commander;

b. Appropriate Bureau Assistant Sheriff;

c. Undersheriff;

d. Sheriff, and

e. Risk Management

- During non-business hours, the above personnel will be notified via the Unusual Incident Report Form. In the case of Risk Management, the Unusual Incident Report shall be [redacted]. A follow-up copy of the report shall be sent by transmittal or mail to: Office of the County Administrator, Risk Management Division, Assistant Risk Manager, 2530 Arnold Dr., Ste. 140, Martinez, CA 94553.

IV. PROCEDURE 2.

A. INVESTIGATION ASSISTANCE FOR ESCAPES INVOLVING VIOLENCE OR VIOLENCE POTENTIAL. The appropriate Facility, Division or Station House Commander will contact the Investigation Division Commander, Assistant Division Commander or on-call Investigator for assistance when:

1. A Deputy is injured during an escape;

2. The escapee has displayed propensities toward committing violent crimes; or

3. There is a need for immediate follow-up investigation.

V. PROCEDURE 3.

A. ESCAPE REVIEW.

1. The concerned Bureau Assistant Sheriff shall initiate an investigation of the escape incident. The occurrence of an escape indicates an area of concern in one or more of the following areas:

   a. Transportation/custodial procedures;

   b. Deputy mental/physical error; and/or

   c. Structural weaknesses/deficiencies.

2. The concerned Bureau Assistant Sheriff shall obtain and review all reports relative to the incident and, if necessary, interview all Deputies and witnesses. Upon completion, the Bureau Assistant Sheriff shall forward the results of the investigation via the chain of command to the Sheriff/Undersheriff with recommended policy, procedural or structural changes, and/or corrective personnel action(s) if necessary.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.30
	RELATED ORDERS: PC 849, 1551, 1551.1, 1551.2, 1551.3, 1552.1 1553.1, 1555.1, 11177.1; US Constitution Art. IV, Section 2, Cl2; Title 18 US Code Section 3182; State Extradition Manual; Michigan v. Doran 438 US 282, 289.	
ISSUE DATE: 2-1-2006 REVISION DATE: 1-8-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Out of State Warrants, Extradition and Rendition	

I. POLICY.

A. All Extradition and Rendition proceedings shall be the responsibility of the arresting agency. The Office of the Sheriff will process all Office of the Sheriff, Contract Cities and CHP arrests, with timely notification of the fugitive's availability to other agencies. Other arresting agencies may contract with the Office of the Sheriff for rendition services.

II. DEFINITIONS.

A. APPLICATION FOR REQUISITION. The formal written request from the Prosecutor for requisition upon the Governor of the asylum state.

B. ASYLUM STATE. The state where the fugitive or defendant has taken refuge or is found.

C. DEMANDING STATE. The state which seeks to extradite the fugitive.

D. EXTRADITABLE OFFENSE. Refers to any criminal offense, felony or misdemeanor, regardless of whether the offense is a crime in the asylum state.

E. EXTRADITION. The surrender, by one nation or state to another, of an individual accused or convicted of an offense outside its own territory and within the territorial jurisdiction of the other, which being competent to try and punish him, demands the surrender.

F. FUGITIVE. One who is accused or convicted of a crime in one state and is later found in another state, regardless of the manner or reason for his/her departure from the first state.

G. FUGITIVE COMPLAINT. The document filed in the asylum state prior to receipt of the Governor's warrant charging the person arrested with being a fugitive from justice.

H. FUGITIVE WARRANT. The arrest warrant issued by the local court prior to receipt of the Governor's warrant authorizing the arrest and detention of the fugitive pending receipt of the Governor's warrant.

I. GOVERNOR OR EXECUTIVE AUTHORITY. Any person performing the functions of Governor under State law.

J. GOVERNOR'S WARRANT. The warrant issued by the Governor of the asylum state commanding that the fugitive be arrested and delivered over to designated agents of the demanding state.

K. MAGISTRATE. Any judge in the State of California (PC 808) or any person certified to be a magistrate under the laws of the demanding state.

L. REQUISITION. Refers to the formal demand made by the Governor of the demanding state upon the Governor of the asylum state and upon which the Governor's warrant is based.

M. WAIVER OF EXTRADITION. Waiver by the fugitive of the issuance and service of a Governor's rendition warrant, and consent to be transported to the demanding state.

III. GENERAL.

A. RENDITION. This Policy deals specifically with the rendition procedures required to surrender a fugitive to another state. This portion of the process requires coordination between Divisions. The extradition of a fugitive from another state is the responsibility of the Investigation Division, Civil Unit.

B. ON VIEW ARREST. A fugitive from another state may be arrested without a California warrant, upon reasonable information that the accused stands convicted or charged in the courts of any other state with a crime punishable by death or imprisonment for a term exceeding one year under Penal Code Section 1551.1. Reasonable information forms the basis for a probable cause arrest and means:

1. In most cases, receipt of a telephone call, teletype or telegram from the demanding agency is sufficient. The information received must verify that the demanding agency has a complaint or indictment stating that the crime is punishable by more than one year or by death.

2. Other acceptable documentation is a certified copy of the complaint, indictment or warrant stating that the crime is punishable by more than one year or by death.

IV. PROCEDURE 1.

A. ARREST PROCEDURES.

1. Based on the above probable cause a fugitive may be arrested under Penal Code Section 1551.1 and may be booked into the County Detention Facility.

2. The arresting Deputy shall make every effort to ensure that the person named in the warrant and the person arrested is one and the same. Identification can be accomplished in a number of ways, such as:

a. Admission by arrestee;

b. Witness Statements;

c. Driver's License;

d. Birth certificate;

e. Social Security card, and/or

f. Bail slips.

3. Verification must be made by telephone or teletype to the responsible agency in the demanding state with a demand that a teletype warrant be forwarded immediately.

a. This verification shall be the responsibility of the arresting Deputy and may be accomplished by the Records Unit or the Communication Center.

V. PROCEDURE 2.

A. INTERROGATION OF SUBJECT. The arresting Deputy should attempt to complete the interrogation of the subject. Further follow-up investigation will be handled by the Civil Unit staff.

1. The interrogation must be preceded by a Miranda warning and waiver of rights.

2. Establishing that the arrestee is the person named on the warrant from the other state is the major necessary element of the rendition/extradition process.

3. The Civil Unit will conduct a follow-up investigation to determine if the subject will sign a Waiver of Extradition Form.

4. In the event that the interrogation cannot be completed by the arresting Deputy, the designated Civil Unit staff will complete this process prior to the arraignment/initial appearance hearing.

VI. PROCEDURE 3.

A. PREPARATION OF ARREST REPORTS.

1. An arrest report must be completed indicating the probable cause leading to the arrest. The report should include:

a. All information pertaining to the arrest, identification and extradition of the fugitive;

b. All information regarding the out-of-state warrant and the term of sentence, indicating a term of more than one year or death; and

c. If the arrestee intends to waive extradition.

2. The report and supporting documents shall be turned in, and approved by, the conclusion of the arresting Deputy's shift.

VII. PROCEDURE 4.

A. BOOKING AND DETENTION.

1. A Penal Code Section 1551.1 arrest on an out-of-state warrant is based on probable cause and is booked as an on-view arrest. The arrest type is an "Out of State Warrant," but it is handled as an "on view." A Booking Authority Form is required. All Penal Code Section 1551.1 arrests are no bail. Disregard any bail listed on the out-of-state warrant. Note: A Magistrate may only set bail prior to the service of a Governor’s Warrant.

2. In order for Fugitive Detail to process fugitive complaints in a timely manner for both the Office of the Sheriff and the County agencies that contract with the Sheriff's Office for these services, Civil Unit staff will monitor the "Civil 1551" report provided by Tech Report Services.

3. All Office of the Sheriff arrests for Penal Code Section 1551.1 will be scheduled for the Mt. Diablo Arraignment Calendar Department. Arrests for Penal Code Section 1551.1 by other agencies will be scheduled for a court in the arresting agency's jurisdiction.

4. The subject must be taken to court for the arraignment/initial appearance within the two court day time constraints of the Penal Code Section 825 time limit. A Probable Cause Declaration Form is necessary for a Penal Code Section 1551.1 arrest.

VIII. PROCEDURE 5.

A. ARRAIGNMENT/INITIAL APPEARANCE HEARING.

1. The Civil Unit staff will seek a fugitive complaint from the District Attorney's Office under Penal Code Section 1551 for Sheriff's Office, Contract Cities and CHP cases only.

   a. Appropriate documentation is required to obtain a complaint. This may be documents, fingerprints and booking photographs. Faxed certified copies of these items are acceptable.

   b. A statement from the demanding state that they intend to extradite is necessary.

2. Once the complaint is issued by the District Attorney's Office, it will be filed along with five copies of the Waiver of Extradition Form in the Mt. Diablo Arraignment Calendar Department.

3. The arrestee must be taken before a Magistrate for the formal admonishment.

   a. If the subject agrees to waive extradition, the waivers shall be signed before the Magistrate. The waiver negates all other formality, including the filing of a complaint. Waivers are prepared by the Civil Unit and distributed to the court, arresting agency, Governor's Office, and Office of the Sheriff for booking file; and two are kept by the court.

   b. If the subject refuses to waive extradition he/she can be ordered held in custody or released on bail pending extradition. The first remand may be for 30 days. A second remand may be issued for 60 days if needed.

      - If the accused denies that he/she is the same person charged with or convicted of a crime in the other state, a hearing is held within 10 days to determine if there is probable cause to believe he/she is the person charged or convicted.

4. The Supervising Clerk or designee at the Sheriff's Detention Facility will notify the Civil Unit of any disposition changes, e.g. bail set, awaiting Identity Hearing, local charges, etc.

B. IDENTITY HEARING.

1. The Civil Unit may request additional documentation to prove the subject's identity. Upon verification of identity, the subject will be remanded to custody or allowed to bail.

2. If the subject is remanded to custody after the Identity Hearing, the first remand is for 30 days. A second remand may be issued for an additional 60 days. This allows 90 days to obtain a Governor's Warrant.

IX. PROCEDURE 6.

A. GOVERNOR'S WARRANT.

1. The Civil Unit staff will request a Governor's Warrant from the demanding state agency. The 90-day time restrictions are stayed pending the resolution of local charges or holds within our State.

   a. If there are no holds outside our County, we will immediately request the Governor's Warrant.

   b. If there are holds for another California agency outside our County, no Governor's Warrant will be requested. All information concerning the out-of-state-warrant will be forwarded with the subject to the agency with the hold.

2. The Supervising Clerk or designee at the Sheriff's Detention Facility will notify the Civil Unit of any change in disposition of the prisoner (i.e., bailed, awaiting issuance of a Governor's Warrant, other local charges, etc.)

3. Once obtained, the Governor's Warrant must be served on the subject.

   a. If the subject is in or out of custody, this service will be completed by the Civil Unit.

   b. If the subject is free on bail, the Civil Unit will arrange for the subject's arrest.

   c. The subject must be arraigned on the Governor's Warrant within two court days. The subject will be given a reasonable time, (10 days) to file a Writ of Habeas Corpus. After the ten days, if a Writ of Habeas Corpus is not filed, the demanding state will be allowed to extradite the fugitive.

   d. Bail or any other conditional release is expressly precluded following service of the Governor's Warrant unless any of the four issues are raised to challenge extradition (Writ of Habeas Corpus). Michigan v. Doran 438 US 282,289.

X. PROCEDURE 7.

A. RELEASE. All Fugitives, regardless of arresting agency, will need approval from the Investigation Division, Civil Unit prior to release.

1. Detention Division staff will notify the Civil Unit of the anticipated release.

2. The Civil Unit will ensure a release is permissible. Once that is determined, the authorization will be in written form (i.e. FAX, teletype or memorandum) to the Detention Division staff.

3. The Civil Unit will make notification to the demanding state when the fugitive is available to be released to their custody. A reasonable time, usually 10 days, is given to the demanding state to make arrangements for the extradition.

XI. PROCEDURE 8.

A. OBTAINING A LOCAL FUGITIVE WARRANT FOR A PERSON WANTED IN ANOTHER STATE WITHOUT PRIOR ARREST.

1. Occasionally there may not be sufficient probable cause to justify an arrest. In these cases, the involved Deputy should choose not to make an on-view probable cause arrest. The information concerning the case should be documented and routed to the Civil Unit. The demanding state will be requested to mail certified copies of the warrant and complaint and necessary identification documents. A local fugitive complaint can then be sought from the District Attorney's Office. The magistrate shall then issue a local fugitive warrant directing the arrest of the subject.

2. A subject arrested on a local fugitive warrant is processed like other local warrant arrests. The subject must be scheduled for court the next court day and will be given the opportunity to sign a waiver of extradition.

3. From this point on, the procedures are the same as those outlined above.

XII. PROCEDURE 9.

A. EXTRADITION. The process of extradition of fugitives from other states is the responsibility of the Investigation Division, Civil Unit.

Contra Costa County **Office of the Sheriff** **General Policy and Procedure**	**CCCSO**	**NUMBER: 1.06.31**
	RELATED ORDERS: P.O.S.T. Hate Crime Policy Training Guidelines Code of Civil Procedures Section 52, Ralph Civil Rights Bill Los Angeles P.D. Special Order No. 38, December 1998 "Preventing Hate Crime", California Atty. General's Office, 2001; DOJ Informational Bulletin 09/30/94 "Hate Crime Reporting", P.C. 422.55, P.C. 422.92, P.C. 13023(a), CCCSO 1.06.20.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 1-6-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Hate-Based Crimes and Bias-Motivated Incidents**	

I. POLICY.

A. The Office of the Sheriff values the diversity of the community it serves.

B. The Office of the Sheriff will investigate all bias-motivated incidents on a priority basis.

C. The Office of the Sheriff will respond and react to all bias-motivated incidents in a supportive, sensitive and empathetic manner to the victims, family and the community that may have witnessed or suffered from such incidents.

II. DEFINITIONS.

A. BIAS. A preconceived negative opinion or attitude toward a group of persons based on their race, religion, national origin, sexual orientation, gender, gender identity, gender expression, or mental or physical disability. For purposes of hate crimes policy, "bias" is interpreted as "hate".

B. BIAS-MOTIVATED INCIDENT. An incident motivated by bias or prejudice may be criminal or non-criminal depending upon circumstances, context, and accompanying acts. Bias-motivated incidents, which are prohibited by law, are known as "Hate Crimes".

C. HATE-BASED CRIMES. Hate-based crimes are not distinct crimes, but are rather traditional offenses motivated by the offender's bias. California Penal Code section 422.55 defines a hate crime as a "criminal act committed, in whole or in part, because of one or more of the following actual or perceived characteristics of the victim: (1) disability, (2) gender, (3) nationality, (4) race or ethnicity, (5) religion, (6) sexual orientation, (7) association with a person or group with one or more of these actual or perceived characteristics.

D. NON-CRIMINAL BIAS. Bias-motivated incidents also include non-criminal conduct that is motivated by prejudice, hatred or bigotry and is directed against any individual or group of people, residence, or house of worship, institution or business expressly because of the victim's (person's or institution's) real or perceived race, nationality, religion, sexual orientation, gender, or mental or physical disability. Non-criminal bias-motivated incidents include, but are not limited to: epithets (verbal name calling), which while offensive, do not

constitute criminal conduct unless accompanied by a verbal threat of violence and the ability to carry out the threat; distribution of bias-motivated material in public places; posting of bias-motivated material that does not result in property damage; and the display of offensive, biased materials on one's own property.

E. CALIFORNIA'S CIVIL RIGHTS LAWS. The State of California has two civil rights statutes protecting individuals against hate crimes. It is against the law in California to threaten or commit acts of violence against persons or their property based on the biases listed above.

1. The Ralph Civil Rights Act. (California Civil Code Section 51.7) This Act assures the right to be free from any violence, or intimidation by threat of violence, committed against persons or property because of (or because of the perception of) their race, color, religion, ancestry, national origin, political affiliation, sex, sexual orientation, age, disability, or position in a labor dispute.

2. The Bane Civil Rights Act. (California Civil Code Section 52.1). This act forbids interference (or attempts to interfere) by threats, intimidation, or coercion with Constitutional rights or Federal or State laws. In the event of such illegal interference, California's Attorney General, or the County's District Attorney, may bring a civil action for an injunction, and may also seek a civil penalty of twenty-five thousand dollars ($25,000).

III. PROCEDURE

A. REPORTING DEPUTY.

1. Deputies will notify their Station House Shift Supervisor when a potentially bias-motivated incident has been identified.

2. Deputies responding to potentially bias-motivated incidents shall take all necessary steps to relieve fears and concerns of the victim(s). Reasonable attempts must be made to:

   a. Approach victims in an empathetic and supportive manner.

   b. Calm and reassure the victim to reduce potential feelings of alienation.

   c. Reassure the victim(s) that the Office of the Sheriff is dedicated to finding and prosecuting any and all persons responsible for hate crimes.

3. Deputies will complete a thorough investigation and report regarding the incident prior to the completion of their assigned shift.

4. Deputies will provide the victim and any interested persons with the department's hate crimes brochure, pursuant to P.C. 422.92.

B. SHIFT SUPERVISOR.

1. When becoming aware of a potentially bias-motivated incident, the Shift Supervisor for the respective Station House will assist the responding officer in determining the nature of the crime and its proper classification.

2. If the incident meets the criteria of a bias-motivated incident, the Shift Supervisor will ensure that the following has occurred:

   a. The appropriate Station House Manger or Watch Commander has been advised.

   b. All evidence has been properly collected.

   c. The report detailing the incident has been completed, reviewed and routed prior to the completion of the Deputy's assigned shift.

   d. An Unusual Incident Report is completed as soon as possible.

C. DAYSHIFT STATION HOUSE SUPERVISOR.

1. Upon being notified that a bias-motivated incident has occurred, the designated Dayshift Station House Supervisor will:

   a. Ensure the Investigations Lieutenant is aware of the incident and has received a copy of the report.

   b. Request the Crime Analysis Unit conduct an analysis of crimes or events within the designated area to determine if similar bias-motivated incidents may have occurred within the past year.

   c. Serve as the Station House Liaison to assure a consistent point of contact between the Office of the Sheriff and the community over the course of the investigation. These duties may include, but are not limited to the following:

      - Conducting neighborhood canvasses to inform the residents of the incident, control rumors and gather appropriate information regarding the general climate of the community.
      - Providing calm and reassurance to the community to prevent further bias-motivated incidents.
      - Enlisting the aid of religious, community, business or educational groups to help reduce the fear in the involved neighborhood and possibly assist in identification of the responsible parties.

   d. Provide lineup briefing information regarding bias-motivated incidents.

2. The Dayshift Station House Supervisor will ensure the Station House Manager is kept apprised of the incident details and developments in a timely manner.

D. INVESTIGATION DIVISION

1. The Investigation Division will conduct a follow-up investigation of felony crimes involving a bias-motivated incident.

2. The appropriate Investigation Team Leader will:

   a. Ensure proper assignment and investigation of all bias-motivated incidents in a timely manner.

b. Act as the liaison with the appropriate Station House Commander.

c. Ensure that the Homeland Security Unit has been advised of any bias-motivated incidents that may require increased situational awareness.

d. In cases involving juveniles, the Investigation Division will ensure that juveniles cited by the Patrol Division, as well as juveniles involved in aggravated cases and cases in which the offense will probably continue, are referred to the Probation Department for the filing of a petition.

e. The Investigation Team Leader will ensure that the Investigation Division Lieutenant is kept apprised of efforts and progress being made related to the investigation, up to and through its completion and final classification.

E. CRIME ANALYSIS UNIT

1. Upon becoming aware of a potentially bias-motivated incident, the Crime Analysis Unit will conduct a thorough analysis of the incident, to include but not limited to the following:

   a. A link analysis or similar charting

   b. Mug shots of responsible(s)

   c. Rap Sheets

   d. Gang/Group involvement

   e. Crime Reports

   f. Pin map of incidents

2. The Crime Analysis Unit will conduct a review of reports and incidents up to one year prior to the reported incident(s) to identify any similar events that may not have been previously classified as a bias-motivated incident, identify other trends, and establish leads to assist in the investigation.

3. The Crime Analysis Unit will provide their report and findings to the Station House Manager, the Investigation Division Lieutenant and their designee(s).

4. The Crime Analysis Unit will ensure that the Records Unit is aware of all incidents that have been closed and identified as bias-motivated incidents. The Records Unit is responsible for reporting the incident to the Department of Justice, pursuant to P.C. 13023(a).

5. The Crime Analysis Unit will provide the FOB Assistant Sheriff, Undersheriff and Sheriff with an annual report of all bias-motivated incidents upon request.

F. CRIME SCENE

1. Any scene involving cross burning or other bias-motivated destruction or defacement of property shall be handled with evidence collection as a priority.

2. The responding Deputy shall ensure that the following steps are taken:
    a. Obtain a sample of the cross, paint, or other material used;
    b. Properly collect and package all evidence;
    c. Photograph and process the scene;
3. Extensive crime scenes should be referred to the Crime Scene Investigators or the Criminalistics Laboratory for processing.

Contra Costa County **Office of the Sheriff** **General Policy and Procedure**	**CCCSO**	**NUMBER: 1.06.32**
	RELATED ORDERS: PC 136.1,166.4, 261, 262, 273.5, 273.6, 278, 278.5, 286, 289, 415, 602.5, 784.5, 836, 849(b), 853.6, 12028.5, 13700, 13701, 13730; Code of Civil Procedure Sections 410-429, 527.6, 1277 Family Code Sections 6241, 6250, 6254, 6271-73, 6380, 6383; Contra Costa County Police Chiefs' Association - Policy Guidelines for Domestic Violence, CCCSO Patrol Division Policy 3.01.28 ("Domestic Violence, Gun Violence, Harassment and Restraining Orders").	
ISSUE DATE: 2-1-2006 **REVISION DATE: 3-22-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Domestic Violence**	

I. POLICY.

A. The official response to incidents of domestic violence shall stress the enforcement of the law to protect the victim and shall communicate the attitude that violent behavior in the home is criminal behavior and will not be tolerated. Arrests of domestic violence offenders are encouraged if there is probable cause that an offense has been committed. Arrests are required, absent exigent circumstances, if there is probable cause that a domestic violence protective order has been violated (Refer to Patrol Policy 3.01.28 ("Domestic Violence, Gun Violence, Harassment and Restraining Orders")). A "request for assistance in a situation involving domestic violence is the same as any other request for assistance where violence has occurred" (PC §13701(a) & (b)).

II. DEFINITIONS.

A. ABUSE. Penal Code Section 13700(a). Intentionally or recklessly causing or attempting to cause bodily injury, or placing another person in reasonable apprehension of imminent serious bodily injury to himself or herself, or another.

B. COHABITANT. Penal Code Section 13700(b). Two unrelated adult persons living together for a substantial period of time, resulting in some permanency of relationship. Factors that may determine whether persons are cohabiting include, but are not limited to:

1. Sexual relations between parties while sharing the same living quarters;
2. Sharing of income or expenses;
3. Joint use of ownership of property;
4. Whether the parties hold themselves out as husband and wife;
5. The continuity of the relationship; and
6. The length of the relationship.

C. DOMESTIC VIOLENCE. Penal Code Section 13700(b). Abuse committed against an adult or a fully emancipated minor who is a spouse, former spouse,

cohabitant, former cohabitant, or person with whom the suspect has had a child or is having or has had a dating or engagement relationship.

D. DOMESTIC VIOLENCE REPORT. Supplemental 13700 P.C. Form. Accompanies the domestic violence police report.

III. GENERAL.

A. Contra Costa County has adopted a "Zero Tolerance Against Domestic Violence" initiative. The Office of the Sheriff supports "Zero Tolerance" through its efforts to reduce repeat offenses and identify aggressors. Penal Code Section 13730(a) states: "All domestic violence-related calls for assistance shall be supported with a written incident report." This Section also mandates specific information to be documented within the report. The specific information required within the report can be addressed by utilizing the Domestic Violence Report - Supplemental Report Form, which categorizes all statistical data necessary pursuant to this Section. With this in mind, the supplemental report form is not intended to replace a well-written narrative of the incident.

1. Monthly, the total number of domestic violence calls received and the numbers of those cases involving weapons or strangulation or suffocation shall be compiled by the Records Unit and submitted to the Attorney General.

B. It is not only the letter of the law but also the spirit of the law that directs Office of the Sheriff responses. Most serious violent incidents of domestic violence are not solitary in nature. These incidents are most often preceded by a series of numerous other less serious non-violence acts that eventually lead up to a violent incident. Diligence and quality work protects the community the Office of the Sheriff serves.

IV. PROCEDURE 1.

A. DIVISION COMMANDER. In accordance with state law and this Policy, those Divisions handling a domestic violence case or portions of a domestic violence case shall establish procedures to ensure that this Policy is carried out. Specifically, the Patrol Division Captain shall maintain procedures that ensure the intent of this Policy is enforced during our initial contact in such cases. Refer to the Office of the Sheriff Patrol Division Manual, Policy 3.01.28 ("Domestic Violence, Gun Violence, Harrassment, and Restraining Orders").

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.33
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Special Investigations**	

I. POLICY.

A. Special Investigations for vice, narcotics and organized crime will be actively conducted to effectively meet the law enforcement objectives of the Office of the Sheriff.

II. GENERAL.

A. SPECIAL UNITS. The Office of the Sheriff maintains and funds specialized enforcement Units for vice and narcotics violations. These Units conduct special investigations and develop cases for arrest and prosecution. The Divisions in which these Units operate shall maintain procedures for their effective and efficient operations.

B. OFFICE OF THE SHERIFF RESPONSE.

1. Deputies shall make arrests in all instances wherein the Deputy has sufficient legal evidence of a violation of any law or ordinance pertaining to vice or narcotics.

2. Deputies having information of vice, narcotics or organized crime activities occurring behind closed doors are generally in no position to secure the type of evidence necessary for a conviction. In such cases, Deputies shall do the following:

   a. Gather as much information and/or evidence as possible without making themselves obvious to the suspects and make a full report to their immediate Supervisor; and

   b. In cases requiring immediate attention, such as when timely information is received from a complainant, witness or informant, the Deputy's Supervisor should be contacted immediately, with a written report to follow. If the Supervisor is unavailable, the Deputy should contact the Watch Commander.

III. PROCEDURE 1.

A. SUPERVISOR/STATION HOUSE COMMANDER/WATCH COMMANDER.

1. The Supervisor/Station House Commander/Watch Commander will take immediate action if the circumstances are such that any time delay would clearly jeopardize a warranted arrest. Otherwise, he/she will notify the Supervisor of the special Unit(s) involved and provide available assistance to that Unit(s).

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.34
	RELATED ORDERS: PC 1524.1, 7500-7540; Health and Safety Code Sections 121050, 121055 and 121060; California Government Code Sections 13960-13973; Center for Disease Control Guidelines; CCCSO Appendix 10; T.B. Exposure Control Plan for the Contra Costa County Detention Facilities, County Risk Management; CCCSO Injury and Illness Prevention Program (I.I.P.P).	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	SUBJECT: **Communicable Disease-Prevention and Control**	

I. POLICY.

A. The Office of the Sheriff bears the responsibility to the public and its employees to increase awareness about risks, methods of transmission, and procedures for handling communicable diseases.

II. DEFINITIONS.

A. A.I.D.S. Acquired Immune Deficiency Syndrome, caused by H.I.V., is a disease that results in the body's inability to fight infections which results in illness and death.

B. A.R.C. A.I.D.S. related complex is a condition caused by the A.I.D.S. virus and has a specific set of symptoms.

C. BODY FLUIDS. Blood, semen, drainage, pus, saliva, sputum, mucus, vomit, urine, feces, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid and amniotic fluid.

D. CHICKEN POX. A highly infectious disease caused by the varicella-zoster virus that spreads from person to person by direct contact or through the air from an infected person’s coughing or sneezing. The disease results in blister-like rash, itching, tiredness and fever.

E. CHIEF MEDICAL OFFICER. As used in this Policy, the County Health Officer via Communicable Disease Control/AIDS program, 597 Center Avenue, Suite 200, Martinez.

F. COMMUNICABLE DISEASE. An infectious disease capable of being passed to another by contact with an infected person or their body fluids.

G. C.P.R. Cardiopulmonary Resuscitation is a life-saving technique whereby the rescuer temporarily maintains the function of an individual's respiratory and circulatory systems.

H. EXCRETA. Waste matter eliminated or separated from an organism.

I. H.B.V. Hepatitis B virus causes an infectious disease of the liver; transmitted by body fluids.

J. H.C.V. Hepatitis C virus causes an infectious disease of the liver; transmitted by body fluids.

K. HERPES. Inflammatory viral diseases of the skin and nerve endings characterized by clusters of blisters; transmitted by direct contact with blisters.

L. H.I.V. Human Immunodeficiency Virus is the virus that causes A.I.D.S..

M. MENINGITIS. A disease in which inflammation of the meninges (membranes that envelope the brain and spinal cord) occurs; caused by several kinds of virus or bacteria and may be transmitted by respiratory contact such as mouth to mouth resuscitation.

N. SYPHILIS. A contagious venereal disease caused by bacteria transmitted by blood or direct contact with open lesions.

O. TUBERCULOSIS. A bacterial disease that can be transmitted through sputum and is spread by inhaling airborne droplets from infected people.

P. WHOOPING COUGH. The Brodetella Pertussis virus resulting in a cough illness lasting at least two weeks with one of the following: paroxysms of coughing, inspiratory “whoop,” or post-tussive vomiting - and without other apparent cause.

III. GENERAL.

A. This Policy applies to the following communicable diseases: A.I.D.S., A.R.C., H.B.V., H.B.C., H.I.V., Herpes, Syphilis, Meningitis, Tuberculosis, and other communicable diseases not listed.

B. The communicable disease policy shall be followed when on-duty employees contact another individual's body fluids or excreta in the following means:

1. Blood, semen, drainage, pus, saliva, sputum, mucus, vomit, feces, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, and/or amniotic fluid in an employee's eyes, mouth, or broken skin;

2. Needle stick from used needle;

3. Unprotected mouth-to-mouth breathing (CPR); or

4. Human bites.

C. TRAINING.

1. Continual essential training on the implementation of this Policy shall be given to all employees.

2. All new employees shall receive training during Division orientation in accordance with the Injury and Illness Prevention Program (I.I.P.P).

3. Divisions will maintain records of employees who have completed communicable disease training in accordance with the I.I.P.P. record keeping standards.

D. TESTING.

1. Legal Authority.

a. Health and Safety Code Sections 121050, 121055 and 121060: Authorize testing if the District Attorney has filed a valid criminal charge against an individual. Deputies and victims of crimes may petition the court to request authorization for testing of an individual who has been accused of specified crimes (including assault on a police officer, resisting or interfering) for the H.I.V. virus and other communicable diseases.

b. Penal Code Sections 7500-7540: Allows and authorizes testing of individuals in certain circumstances, whether or not a criminal charge has been filed. These statutes also allow inmates to request testing of other inmates in certain situations. This legislation also permits revoking the bail, probation or parole of individuals who refuse to comply with ordered testing. Prior to forced testing under these statutes:

- The County Health Officer must make a finding that there is a reasonable belief that a significant risk of exposure occurred. The County Health Officer may interview witnesses and receive testimony from involved parties prior to making a decision; and
- The County Health Officer may require the person requesting the test to undergo a baseline test prior to forced testing.

2. An appeals process, for anyone disagreeing with the findings of the County Health Officer, allows either the petitioning employee, or the subject from whom testing is sought to petition to a Hearing Panel and to Superior Court for an ultimate finding.

3. Test results are forwarded to each requesting victim and the accused.

4. Confidentiality. Physicians are not subject to civil or criminal liability for performing an H.I.V. test, or for disclosing the H.I.V. status of a source patient to a physician certifying the exposure, the exposed individual, or any attending physician of the exposed individual, if the physician acted in good faith in compliance with the law. The exposed individual MUST keep the H.I.V. test results and any H.I.V. related information about the source patient confidential and may not further disclose the information.

IV. PROCEDURE 1.

A. UNIVERSAL PRECAUTIONARY MEASURES. When Office of the Sheriff employees come in contact with or by another individual's body secretions or excreta, preventive measures should be taken to avoid possible disease contamination.

1. Employees should always assume that all body secretions are potentially infectious, regardless of the source.

2. The best practice is to wear disposable gloves and protective eye wear to protect and keep the hands and eyes clean.

   a. Replace gloves that are heavily stained or torn during the course of routine tasks.

   b. Upon task completion wash hands thoroughly with soap and water.

   c. Use a 1:10 solution of chlorine bleach and water or at least 70% alcohol to thoroughly disinfect hands, when available.

3. Keep hands away from the eyes, nose, and mouth.

   a. If eyes, nose, and mouth become contaminated rinse thoroughly with water.

4. Always maintain a clearly marked red bio-hazard plastic bag for no other purpose than to collect contaminated items.

5. Constantly be alert for sharp objects, such as hypodermic needles, knives, razors, nails, etc. Use utmost care to prevent cuts and punctures.

   a. Do not use hands to search areas out of view.

6. All clothing articles contaminated with body fluids should be removed and placed in a marked plastic bag for cleaning.

   a. Refer to Appendix 10, Bloodborne Pathogens Exposure Control Plan for proper uniform cleaning procedures.

7. All contaminated equipment, from automobiles to ink pens, and work surfaces should be disinfected.

V. PROCEDURE 2.

A. EMPLOYEE RESPONSIBILITIES.

1. When an exposure occurs, an employee will immediately notify their immediate Supervisor. The employee will not request voluntary testing from the involved subject, but will ensure that their immediate Supervisor makes this request.

2. If the criteria for voluntary testing is not met, the employee in conjunction with the supervisor will complete:

   a. Notification of Possible Communicable Disease Exposure (Form EMS 6);

   b. Petition for Order to Test Accused's Blood Form to request authorization for testing;

   c. Report of Request and Decisions for HIV Testing (Form DHS 8459); and

   d. Sharps Injury Log, if appropriate.

3. All employees are encouraged to contact the County Health Department or personal physician to be serially tested and receive counseling. Follow-up testing is highly recommended.

VI. PROCEDURE 3.

A. SUPERVISOR'S RESPONSIBILITIES.

1. The Supervisor on duty at the time of the incident will request voluntary testing from an arrestee/inmate via written consent, or obtain samples incident to the arrest, if possible. The Supervisor will not have the involved employee request voluntary testing.

2. The Supervisor will ensure the completion and signing of the following and submit all through the chain of command immediately to the Division Commanders:

   a. Supervisor's Report of Occupational Injury or Illness Form (AK30);

   b. Employees Claim for Workers' Compensation Benefits Form (DWC1);

   c. Notification of Possible Communicable Disease Exposure (to be completed by the employee);

   d. Consent for the HIV Antibody Blood Test, if applicable;

   e. Petition for Order to Test Accused's Blood, if applicable (to be completed by the employee);

   f. Authorization for Disclosure of the Results of Blood Test(s) to Detect the Presence of HIV Antibodies; and

   g. Sharps Injury Log, if appropriate.

3. If blood is drawn voluntarily, or incident to the arrest, the Supervisor will ensure delivery of the two labeled blood samples along with the completed forms below to the Public Health Laboratory (Monday through Friday) for testing as soon as possible. The Public Health Lab is located at 2500 Alhambra Blvd., 2nd Floor, Room #209, in the building adjacent to the emergency room. If the Public Health Lab is closed, samples should be placed in the sally port refrigerator at the Martinez Detention Facility or the Field Operations Bureau evidence refrigerator. The Supervisor must ensure the samples are delivered to the Public Health Lab when opened.

   a. Whole blood samples must be placed in red top vacutainer vials (i.e., clean uncontaminated vials with no preservatives. Blood and urine alcohol vacutainer (gray top) or blood typing vacutainers (purple top) cannot be used for H.I.V. testing.

4. Fax copies of the Forms listed below to the Professional Standards Unit.

   a. Consent for the HIV antibody Blood Test;

   b. Notification of Possible Communicable Disease Exposure;

   c. Authorization for Disclosure of the Results of Blood Test(s) to Detect the Presence of H.I.V. Antibodies; and

   d. Petition for Order to Test Accused's Blood.

5. Original forms are to be forwarded to Administrative Services via the Division Commander.

6. Supervisors should encourage employees to contact the County Health Department or their personal physicians for personal testing and counseling.

VII. PROCEDURE 4.

A. DIVISION COMMANDER'S RESPONSIBILITIES.

1. In all cases where voluntary testing has been refused, the Division Commander will:

   a. Ensure that all documents have been completed for processing the victim's request to the court within twenty-four hours of possible exposure; and

   b. Forward all documents (including support documentation, crime report, etc.) to the Professional Standards Unit within twenty-four hours of the exposure.

2. Assign an employee to sit on an Appeal Board, when requested by the County Health Officer.

3. Ensure that all employees receive Division training on the implementation of this Policy.

VIII. PROCEDURE 5.

A. PROFESSIONAL STANDARDS UNIT'S RESPONSIBILITY.

1. Criminal Actions.

   a. Review all forms received from the concerned Division and ensure the documents listed below are completed.

      - Consent for the H.I.V. antibody Blood Test
      - Notification of Possible Communicable Disease Exposure
      - Authorization for Disclosure of the Results of Blood Test(s) to Detect the Presence of H.I.V. Antibodies
      - Petition for Order to Test Accused's Blood
      - Proposition 96 Order to Test Accused Blood

   b. Take all completed documents to the District Attorney's Office accompanied by the investigator seeking a Criminal Complaint.

      - Once the Criminal Complaint has been issued it shall be hand carried to the appropriate court along with the Petition for Order and Order to Test.
      - When the Complaint is filed with the Clerk of the Court, the Professional Standards Unit will request an In Camera Hearing to review the Petition and grant the Order.

c. Certified copies of the Petition and Order will be sent to:

- The Martinez Detention Facility, "M" Module, if blood is to be drawn;
- The Public Health Laboratory along with blood samples to allow testing (Do not send samples to the Forensic Services Division); and
- The Office of the Sheriff files

d. If there will be a delay in issuing a complaint, the Professional Standards Unit will hand carry the Petition for Order, and Order to Test, along with supporting documents to the appropriate court for review by a judge and request the issuance of the Order.

e. Notify Risk Management via AK30.

f. Notify the County Communicable Disease Control Unit via the Notification of Possible Communicable Disease Exposure Form.

g. Refer victim to the County A.I.D.S. program for pre-test counseling.

2. Non-Criminal Actions.

a. Penal Code Section 7500 et seq., addresses the requirements and procedures for communicable disease testing where no criminal charge has been filed, or is anticipated. This would apply where incidental contact occurs, or as is sometimes the case at Detention Facilities, the incident will be handled through inmate disciplinary procedures.

b. The process under this section requires the completion of the forms indicated under Procedure 3, 2 a - g. The Supervisor must also ensure that the Report of Request and Decision for HIV Testing (Form #DHS8459) is completed and forwarded through the chain of command.

c. Review and ensure all appropriate documents received from the concerned Divisions are completed properly.

d. Notify the County Health Officer via Communicable Disease Control/AIDS Program, 597 Center Ave., Martinez to request a formal decision to have a non-consenting individual serially tested for communicable diseases.

- Deliver appropriate documents to the County Health Officer within forty-eight hours of the exposure.

e. When the County Health Officer issues a decision to order testing (and the appeal process has been completed);

- The Professional Standards Unit will receive the Report of Request and Decision for H.I.V. Testing signed by the County Health Officer.

- The Professional Standards Unit will ensure that blood is drawn and delivered to the Public Health Laboratory.
- Complete steps listed in Procedure 3, 2 a - g.

f. If the County Health Officer issues a decision to deny testing;

- The Professional Standards Unit will ensure that the Deputy is notified and aware of his/her appeal rights.
- If the employee chooses to appeal a negative decision by the County Health Officer, the Professional Standards Unit will ensure the employee completes the Report of Request for Appeal for HIV Testing (Form DHS 8457) within three days.
- The Professional Standards Unit will notify County Health Officer immediately of an appeal, when requested.
- If the Appeal Board also issues a negative finding, the Professional Standards Unit will, at the request of the involved employee, carry the appeal to Superior Court for review by a judge.
- If testing does not occur, complete steps listed in Procedure 3, 2 a-g.
- If at any time during the process listed in this Section, the Office of the Sheriff determines to proceed with a criminal complaint and testing as authorized in Health and Safety Code Sections 121050, 121055 and 121060, the Professional Standards Unit will immediately notify the County Health Officer to suspend his investigation. The Professional Standards Unit will follow the procedures outlined under Procedure 5, Criminal Actions.

IX. PROCEDURE 6.

A. INMATES REQUESTING TESTING.

1. Inmates requesting testing of another inmate should be immediately referred to the medical staff of the Detention Facility.

a. Deputies should not question or comment on the inmate's request.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.35
	RELATED ORDERS:	
ISSUE DATE: 10-11-2018 REVISION DATE: 7-14-2021	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Use of Naloxone for Drug Overdoses	

I. POLICY.

A. Office of the Sheriff Sworn personnel shall be trained to administer Naloxone in accordance with the training guidelines established by Contra Costa County Health Services and State Law. Trained personnel will use Naloxone to prevent opioid-related deaths amongst members of the public and staff members who have been exposed.

B. There is no legal requirement to administer Naloxone.

II. DEFINITIONS

A. **Naloxone** (Narcan): an opioid receptor antagonist and antidote for opioid overdose produced in intramuscular, intranasal and intravenous forms. Narcan is the brand name for Naloxone.

B. **Opiates**: Naturally derived from the poppy plant, such as heroin and opium.

C. **Opioids**: Synthetic opiate drugs such as fentanyl, morphine, buprenorphine, codeine, hydromorphone, hydrocodone, oxymorphone, methadone and oxycodone.

D. **Opioid Overdose**: An acute condition including but not limited to extreme physical illness, decreased level of consciousness, respiratory depression coma, or death resulting from the consumption or use of an opioid, or another substance with which an opioid was combined, or that a layperson would reasonably believe to be an opioid-related drug overdose that requires medical assistance.

E. **Naloxone Quality Improvement Program Usage Report:** Mandatory reporting form which is to be completed by law enforcement personnel who have administered Naloxone to a subject. A data collection protocol established by Contra Costa Health Services used to evaluate the impact of the Naloxone Program.

F. **Universal Precautions:** Universal precautions refers to the practice, in medicine, of assuming that all body secretions are potentially infectious, regardless of the source and avoiding contact with subjects' bodily fluids, by means of the wearing of nonporous articles such as medical gloves, goggles, and face shields.

III. PROCEDURE

A. Program Coordination/Maintenance

1. Training

a. Naloxone training will be coordinated through the Sheriff's Law Enforcement Training Center (LETC) in compliance with state law and following the guidelines of County Health Services.

b. Naloxone training will only be performed by trained/authorized instructors.

c. Training rosters will be completed and maintained for all Naloxone Training Courses. Completed rosters will be forwarded to the LETC for storage.

d. Training will include the assembly of a Nasal Naloxone Device and the simulated delivery of the medication to a patient.

e. All trainees will complete and pass a written test that shows their knowledge of the course materials. Completed tests will be forwarded to the LETC for storage.

f. Initial training will consist of a thirty-minute, instructor-led course. Re-training will be conducted in accordance with standards established by P.O.S.T.

2. Equipment

a. **Field Overdose Kit**. A Field Overdose Kit will consist of a Pelican-style case, two (2ml) doses of Naloxone HCL, two nasal atomizers, one set of protective gloves, one N95 respirator, one CPR face shield, and a County Health Services Naloxone Report Form.

b. **Detention Overdose Kit.** A Detention Overdose Kit will consist of a Pelican-style hard case, two (2ml) doses of Naloxone HCI, two nasal atomizers, one set of protective gloves, and one N95 respirator.

c. **Station Facility Emergency Overdose Kit**. A Facility Overdose Kit will consist of a wall-mounted container, two (2ml) doses of Naloxone HCL, two nasal atomizers, one set of protective gloves, one N95 respirator, one CPR face shield, and a County Health Services Naloxone Report Form.

d. Kits will be marked on their exterior with the expiration date of the Naloxone contained within. Naloxone has a two-year shelf life. Shift supervisors will ensure that all doses are within their effective shelf life.

e. Naloxone is a prescription medication and will be safeguarded from loss or theft. An inspection of the naloxone kit shall be the responsibility of the personnel assigned the equipment and

will be done at each shift. Missing or damaged naloxone kits will be reported to the shift supervisor.

f. Replacement atomizers and other supplies will be coordinated through the FOB Patrol Division/Detention Division Administrative Lieutenant by the shift supervisors.

3. Storage

a. Field Overdose Kits will be deployed with Patrol Division deputies in the beat bags. Sworn personnel should take a Field Overdose Kit when conducting operations outside Sheriff's Office buildings.

b. Detention Overdose Kits will be stored at the Deputy Station on housing modules/buildings at county detention facilities.

c. Field Overdose Kits will be kept out of direct sunlight and away from extreme heat or cold.

B. Deployment

1. Deputies will utilize Universal Precautions whenever providing first aid to a subject.

2. Upon arrival at an emergency situation, deputies will perform an initial assessment of the subject's airway, breathing, and circulation. If necessary, Emergency Medical Services (EMS) should be requested to respond.

3. If the subject is not breathing but has a pulse, the deputy should begin rescue breathing. If the deputy believes the subject is suffering from an opioid-related overdose, the deputy should administer Naloxone after providing several rescue breaths to the subject.

4. After administering Naloxone, the deputy should continue rescue breathing until the subject begins to breathe on their own. If the subject fails to breathe on their own after three minutes, the deputy should consider administering a second dose of Naloxone.

Note: The administration of Naloxone may lead to a violent/combative reaction of the subject. Deputies should be prepared for this to occur. If Naloxone is administered by a deputy, the subject will be assessed by fire, ambulance, and/or medical personnel.

5. Expended Naloxone containers will be disposed of in a sharps box or other hazardous materials container.

6. The Naloxone Kit that was used will be taken out of service until it is re-stocked with necessary supplies.

7. Only Naloxone issued by the Office of the Sheriff or the Contract City of assignment will be administered to subjects.

C. Deputy Reporting

1. When Naloxone has been administered to a subject, the deputy will notify arriving medical personnel. The deputy will identify the number of doses provided and the amount provided as a part of each dose.
2. A medical/hospitalization police report will be prepared on the incident, detailing the actions of the deputy and the subject.
3. The deputy will complete the Naloxone Quality Improvement Program Usage Report and affix a copy of the report to the police report.
4. Detention deputies will provide medical staff all information related to the use of Naloxone to complete the Naloxone Usage Report.

D. Supervisor Duties

1. When Naloxone has been administered, the shift supervisor will transmit the Naloxone Quality Improvement Program Usage Report to County Health Services following the instructions on the report form.
2. A copy of the report will be routed to the FOB Patrol Division Administrative Lieutenant or appropriate detention division Administrative Lieutenant.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.36
	RELATED ORDERS: CCCSO 1.06.20; Evidence Code § 1553.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 4-5-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Digital Photography**	

I. POLICY.

A. The Sheriff has established requirements for the production and submission of digital photographs of crime scenes and traffic accidents that apply to all Divisions except the Forensic Services Division.

II. DEFINITIONS.

A. CD (Compact Disc). A small optical disk on which data such as music, text or graphic images is digitally encoded.

B. ARS. (Automated Report Writing System) Report Writing System.

C. DIMS. DISC IMAGE. A web query data base for the storage of agency crime reports.

D. J-PEG. (Joint Photographic Expert Group) A Common format used mostly for color images. Not recommended for simple graphics, letters or line drawings because of lack of sharpness and clarity.

E. PIXEL. Short for a single point in a graphic image. Pixels are so close together that they appear connected. A computer monitor displays images by dividing the screen into thousands or millions of pixels.

F. TIFF. (Tag Image File Format) A widely used format for storing image data, compatible with a wide range of scanners and image processing applications.

III. GENERAL.

A. DIGITAL EQUIPMENT REQUIREMENTS. A digital camera must have the following elements in order to be authorized for use by Sheriff's Office employees:

1. The camera used must produce images with a resolution of at least 800x600 pixels with color information of at least 15 and no more than 24 megapixels.

2. Cameras must create files in either the J-PEG or TIFF format; and

3. Cameras will not be programmed to record the date or other information in the image. This is to avoid time/day stamp errors.

IV. PROCEDURE 1.

A. EMPLOYEE RESPONSIBILITIES AND SUBMISSION OF PHOTOS.

1. Employees shall refrain from the use of personal cell phones for the purpose of taking digital photographs as evidence, as the phone's contents could be subpoenaed for court purposes even if the photograph has been deleted off of the phone.

    a. Only in cases of extreme exigency should personal cell phones be considered, and it must be thoroughly documented in your report.

2. Digital Images associated with the Sheriff's Office crime reports will be handled in the following manner:

    a. Department issued digital cameras shall be used to take photographs for evidentiary purposes.

    b. The Deputy taking digital photographs will upload photos directly into our report writing system. Users must ensure that they only attach the appropriate photo to the appropriate report in our report writing system.

    c. The Deputy will label all photos attached to their report in our report writing system.

    d. Once the photos have been uploaded from the camera into our report writing system, the user must then delete all photos.

3. No digital photos may be attached to any report unless they have a law enforcement and/or business application.

4. Photos or videos displaying the following are not to be downloaded and attached to the report writing system:

    a. Genitalia of a person (any age)

    b. Female breasts (any age)

    c. Children who are part of child pornography investigations

5. Photos and videos listed in #4 above will be copied onto a CD or digital storage device, placed into evidence, and thoroughly documented in the body of the report.

6. Evidentiary photographs taken during the course of an employee's on duty time are considered property of the Office of the Sheriff, regardless if the photograph was taken with a personal or county device.

7. If an employee is assigned a work smart phone as a requirement of their position, it may be utilized to take evidence photographs.

a. Photos should be downloaded into our report writing system and deleted as soon as practical to do so. This should also be thoroughly documented in their report.

b. Employees should be cautioned that work cell phones are issued for the sole purpose of work related business. The contents of work phones also have the potential to be subpoenaed, even if the photograph has been deleted from the phone.

V. PROCEDURE 2.

A. SUBMISSION OF NON SOLID-STATE MEMORY MEDIA.

1. When necessary, digital images may be submitted on a CD or digital storage device if the Records Unit Manager has ascertained that they can be properly processed. The Records Unit Manager must approve any other electronic media ahead of time.

2. The Digital Photo Submission Envelope must be completely filled out with a CD or digital storage device.

3. The non-solid-state media must be clearly marked with the D.R. number, date, and the submitter's employee number.

4. CDs or digital storage device shall not contain digital images from more than one case.

5. Other electronic media may contain digital images from multiple cases as long as each case has a directory folder with the case D.R. number as the directory name. A separate Declaration Form and supplemental report must be submitted for each case.

6. The records Unit will retain the CDs or digital storage device until the images are imported in the Image Management System. Then the digital storage device or CDs will be destroyed.

VI. PROCEDURE 3.

A. SUPERVISORY RESPONISIBILITES

1. Supervisors should monitor deputies to ensure they are not using their personal cell phones for the purpose of taking digital photographs for evidence.

a. Supervisors should ensure the digital cameras provided to their work locations are in good working order. If a Supervisor locates a camera that is either broken or not working properly, they should issue a memo to their Manager to have the equipment replaced.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.37
	RELATED ORDERS: PC 261, 288, 289, 647.6, 799, 800-803, 1413, 12028, 12028.5, and 12029; Welfare & Institution Code Section 8102; Code of Civil Procedure Section 2080.10; CCCSO 1.06.35, 1.07.13.	
ISSUE DATE: 2-1-2006 REVISION DATE: 12-19-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Property and Evidence Retention, Release and Disposition	

I. POLICY.

A. Property collected, packaged and stored when no longer necessary shall be returned to the rightful owner or appropriately disposed of. It is mandatory that the property be returned, released or disposed of when the legal necessity for its retention no longer exists, the statute of limitation expires, or the property is not necessary for prosecution.

II. DEFINITIONS.

A. CERTIFICATE OF RETENTION. A form requesting firearms transfer from Property Services to the Office of the Sheriff firearms inventory.

B. 8715 DISPOSITION REPORT. Refers to Law Enforcement Prosecution/Court Information Form, JU 8715.

C. PROPERTY ACTION REPORT (RGEX). A computer-generated report that indicates the final disposition of property as entered by the Investigation Division.

D. PROPERTY DISPOSITION REQUEST (P.D.R.). An Office of the Sheriff form that Detectives utilize to notify Property Services of the final disposition of property.

E. RECEIPT FOR THE SAFEKEEPING OF PROPERTY. A three-part form indicating who the owner of the property is.

III. GENERAL.

A. RETENTION AND/OR RELEASE OF PROPERTY/EVIDENCE.

1. Property or evidence held by the Office of the Sheriff will be retained for the period of time required by statute or legal necessity. All property or evidence held in cases that have resulted in claims and/or lawsuits against the Office of the Sheriff, any of its police units, or Contra Costa County must be retained for the duration of the legal action. Property submitted as found property, safekeeping, or for destruction will be retained as required by law and released or disposed of by Property Services staff without additional approvals.

2. The release of evidence requiring approval of the Field Operations Bureau, or a court order are:

   a. Homicide cases;

   b. Sexual Assault cases.

B. RELEASE OF DRUG EVIDENCE FROM PROPERTY.

1. Release of drug evidence for any reason from Property Services to Sheriff or contract city personnel shall require two individuals: the person receiving the drug evidence and a witness.

   a. A call to Property Services must be made to schedule a date/time for the drug evidence pick up.

   b. The primary individual seeking release of the drug evidence must inform his or her supervisor of this upcoming transaction.

   c. The reason for the release of the drug evidence must be provided to Property Services:

      If the release is for court purposes, the subpoena for the individual picking up the drug evidence must be shown to Property Services.

      If the release is for investigative purposes, such as a reverse buy, a memo articulating the need for the drug evidence must be provided to Property Services. The memo must be from a lieutenant or above.

   d. The primary individual picking up the drug evidence will sign the chain of custody on the evidence package and the Property Card.

   e. The witnessing individual will cosign the Property Card.

   f. Property Services will record the following in the property management system and in the comments field on the evidence bar code:

      Who signed for the evidence

      Who witnessed the evidence transaction

      The reason for the evidence release and the documentation shown justifying the evidence release

   g. The deputy picking up the drug evidence will write a report supplement detailing:

      What evidence was picked up

      The date and time the evidence was picked up

      The reason for the evidence release

      Who witnessed the transaction

      To whom and when the deputy released the evidence to, such as the District Attorney's name, court personnel's

name and title, or law enforcement agent's name, agency, and title, or returned to Property.

- If the evidence was released and is not being returned to Property Services, the deputy will call Property Services with that information.

The subpoena or court order shall be scanned and attached to the supplement in the report writing system.

h. The supervisor may verify with the witness that the transaction occurred as written in the primary's report supplement prior to approving the report.

2. Release of drug evidence for any reason from Property Services to an external agency will also require two individuals from that agency or task force to be present.

a. Only individuals employed by law enforcement (local, state, or federal) or prosecution agencies (District Attorney's Office, Attorney General's Office, Court personnel, etc.) will be permitted to receive drug evidence.

b. Drugs for release to a third party agency must be approved by the original submitting agency.

c. Property Services will photocopy or verify the law enforcement photo ID from each individual and file.

d. Property Services' documentation of the drug evidence release transaction to an external agency will be the same as for release to Sheriff's employees.

C. DISPOSITION OF PROPERTY/EVIDENCE.

1. Homicide and sexual assault cases require an authorization for the disposition of property, the Field Operations Bureau shall authorize such releases when:

a. The case is closed with future prosecution not possible for any reason.

b. An 8715 Disposition Report shows the case has been adjudicated - refer to "D. 8715 DISPOSITION REPORTS" below; or

c. The statute of limitations expires - refer to "F. STATUTE OF LIMITATIONS" below.

2. The Investigation Division has the responsibility of obtaining a Court Order Release pursuant to Penal Code Section 1536 when property being released was seized pursuant to a search warrant.

3. Property Services will ensure, prior to any scheduled destruction of property held as evidence, that no claim or lawsuit against the Office of the Sheriff, any of its police units, or the County has been filed. Such evidence in a claim or lawsuit proceeding will continue to be held until Property Services is informed by the Planning and Research Unit, upon advice from the County Counsel, that the case has been closed.

D. 8715 DISPOSITION REPORTS.

1. All 8715 Disposition Reports shall be received by Property Services. Property Services will determine if property is being held and forward those reports with a P.D.R. to the Field Operations Bureau which must authorize release of the property or evidence unless:

   a. There is an appeal of a guilty conviction;

      Misdemeanor conviction - judgment is final if not appealed within 30 days.

      Felony conviction - judgment is final if not appealed within 60 days.

   b. The case is a homicide conviction resulting in a death or life sentence;

   c. A co-defendant is awaiting trial; or

   d. A Division Commander approves retention due to extraordinary circumstances.

   e. A claim or lawsuit has been filed involving property or evidence from a criminal case.

2. In guilty pleas, evidence may be released or destroyed, as there is no formal appeal period. Prior to destroying evidence, ensure there is no co-defendant awaiting trial requiring use of the same evidence.

E. RMS/CASE MANAGEMENT PROPERTY DISPOSITION SYSTEM.

1. The Field Operations Bureau will adopt policies requiring Detectives and Misdemeanor Complaint Deputies, including those assigned to Contract Cities, to utilize the RMS/Case Management System to release property. The property action field “PROP-ACT” and the “REMARKS” portion of the “DACT” screen shall be used to provide release or destroy instruction to Property Services. Release instructions shall be given when a case is closed with no prosecution or determined the evidence or property is no longer required. Directions must be clear and include the name and addresses of owners, if applicable.

2. Property Services will, on a regular basis, retrieve a Property Action Report (RGEX) and comply with the property disposition instructions. Property Services will notify property owners, by letter, with dates calendared for disposal if the property is unclaimed. The term “release” includes destruction, auction, recycling or conversion to Sheriff’s Office use, as determined by Property Services.

F. STATUTE OF LIMITATIONS.

1. Property will be held no longer than six months after the statute of limitations has expired unless prosecution or legal necessity requires retention. At the expiration of the statute of limitations, when no criminal charges are pending and no claim or lawsuit against the Office of the Sheriff, any of its police units, or Contra Costa County has been filed. In the case of homicides and sexual assaults, a P.D.R. or e-mail will be sent by Property Services to the investigating or assigned officer indicating

the property should be disposed of. A Division Commander may require that the evidence be retained beyond the statute of limitations.

2. Evidence collected in homicide cases will be retained until disposition is directed by the Court or District Attorney's Office. However, if all court actions involving suspects are final and the sentence does not result in a life or death sentence, the property has no evidentiary value, or the District Attorney approves of it, the Division may release the property. Evidence accepted as a Court Exhibit is usually retained by the Courts and thereafter may be destroyed only by Order of the Court, which must accompany the evidence upon return to Property Services.

3. Statutes of limitations for property retention is as follows:

   a. One Year: All misdemeanors, P.C. 802;

   b. Two Years: Violation of P.C. 647.6 committed upon a minor under 14 years of age;

   c. Three Years: All felonies not listed below, P.C. 801;

   d. Four Years: Those crimes listed in P.C. 803;

   e. Ten Years: Those crimes labeled in P.C. 800; and

      Any crime punishable by a prison sentence of 8 years or more

      Forcible rape, P.C. 261

      Child molestation, P.C. 288

      Forcible acts of sexual penetration and all such crimes with a child under 14 years of age, P.C. 289

      Indefinitely: Any offense punishable by death or life imprisonment or the embezzlement of public money, P.C. 799.

G. STOLEN OR EMBEZZLED PROPERTY. Personnel returning stolen or embezzled property to the lawful owner must comply with Penal Code Section 1413.

H. SAFEKEEPING. Property held for safekeeping shall be stored by Property Services. The submitting officer shall indicate "Safekeeping" on the property card and complete a Receipt for Safekeeping of Property and provide a copy to the owner of the property. The property will be stored for 60 days for the owner to claim or make other arrangements. If neither is done, the property shall be disposed of according to Code of Civil Procedure Section 2080.10.

I. FIREARMS. With the exception of firearms submitted for destruction, all firearms to be released require approval of the Director of Property and Evidence. Any firearm that becomes a nuisance as defined by Penal Code Sections 12028 or 12029, or is unclaimed or abandoned, shall be destroyed. If a firearm is converted to official use, a Certificate of Retention shall be obtained and the firearm placed into the Office of the Sheriff firearms inventory.

Contra Costa County Office of the Sheriff **General Policy and Procedure**	**CCCSO**	**NUMBER: 1.06.38**
	RELATED ORDERS: California Agricultural Code Sections 5023, 5761, 5763; PC 148.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Pest Eradication**	

I. POLICY.

A. Employees will cooperate with state and county agricultural agencies to ensure a safe timely eradication of designated pests, while preserving the public peace.

II. GENERAL.

A. STATE AND COUNTY AGRICULTURAL AGENCIES.

1. State and county agricultural agencies are responsible for the eradication of designated pests. After the state and county announces that a pest problem exists, the County Agricultural Commissioner is responsible for educating the public (newspapers, radio, mailers, etc.) of the problem and what procedures are needed.

2. The county's agricultural department personnel will be responsible for the following:

   a. Advise law enforcement agencies when they will be in their jurisdiction. A two day notice is requested;

   b. Eradicate infested areas as fast as possible by obtaining the property owner's permission;

   c. Obtain an inspection warrant prior to any forcible entry when permission to enter is denied by the property owner;

   d. Request animal control officers at scenes where their assistance is needed to restrain animals; and

   e. Call the police as a last resort to keep the peace.

B. OFFICE OF THE SHERIFF GUIDELINES. When notified of a pest problem and the intended action of County Agricultural Department personnel, the Office of the Sheriff will do the following:

1. Inform the beat Deputies of the procedure before the eradication begins.

2. Dispatch Deputies as soon as possible to life-threatening problems.

3. Take no action when there are locked gates, etc., and no peace-keeping measures are needed.

4. A Deputy will forcibly enter private property only under the following circumstances:

    a. Lawful court order; or

    b. Immediate life-threatening circumstances exist.

5. Court orders will be shown to the owner or person in legal control of the property. Refusal by the owner or any other party to abide by the order will result in enforcement of Penal Code section 148 and/or other applicable codes.

6. Deputies will not be involved in pest eradication at roadblocks unless directed by court order.

7. Provide Sheriff's Dispatch with information on pest eradication procedures and existing circumstances, so proper direction may be given to inquiries from the public.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.39
	RELATED ORDERS: Administrative Bulletin 20.0; California Evidence Code Section 1040 et. seq. California Constitution Article I, Section 1; California Government Code Section 6251, et. seq., 13960 (b) California Labor Code Section 432.7.; PC 1301, 11105, et seq.,13960 (b), 11167, 11167.5; CVC 20012, 20001, 23153 W&I 5328, 825 – 828; Contra Costa County Superior Court Policy re: Juvenile Records; Department of Justice Criminal Records Security Act; CCCSO 1.06.75, 1.06.77, Appendix 8.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Criminal Intelligence Files**	

I. POLICY.

A. Criminal Intelligence Files are developed to provide the Office of the Sheriff with a sound database that meets the lawful need of suppressing criminal operations and protecting the public.

II. DEFINITIONS.

A. GANG. A group of criminals often wearing symbolic identifying attire, characterized by violence and illegal activity, who band together for mutual protection, power and unlawful profit.

B. ORGANIZED CRIME. Criminal profiteers who operate in a functional, structured organization that frequently employs violence to obtain its objectives.

C. SCHI. An acronym for Summary Criminal History Information which is the master record of information compiled by a criminal justice agency pertaining to the identification and criminal history of any person, such as a name, date of birth, physical description, date(s) of arrest, arresting agencies and booking numbers, charge(s), dispositions, and similar data about such persons.

D. HOMELAND SECURITY. Any endeavor integral to national security, including the collection and maintenance of criminal information, that is done at the request of the Federal Government's Department of Homeland Security (DHS).

III. GENERAL.

A. CATEGORIES OF STORED INFORMATION.

1. Persons who are currently involved or suspected of being involved in the planning, organizing, financing, or committing of criminal activities; or who are suspected of having threatened, attempted, planned, or performed criminal acts.

2. Persons who have an established association with known or suspected crime figures.

3. Organizations and businesses which are currently involved in or suspected of being involved in the planning, organizing, financing or committing of criminal activities; or which have threatened, attempted, planned or performed criminal acts.

4. Organizations that are operated, controlled, financed, infiltrated or illegally used by crime figures.

5. People or organizations suspected of being a threat to national security. This criminal intelligence will be obtained in response to a request by the Department of Homeland Security.

6. Learning with whom suspects associate will help Deputies locate and keep track of suspects. It is important to note that mere association with a person suspected of criminal activity does not create a criminal link between the parties.

IV. DEVELOPMENT AND MAINTENANCE OF CRIMINAL INTELLIGENCE FILES.

A. The development and maintenance of Criminal Intelligence Files must follow specific guidelines. The development and storage of information linking persons and/or organizations together for the purpose of criminal activity must be carefully controlled and kept secure. Due to the sensitive nature of such data and the potential for violating a person's civil rights should such data become public, the following guidelines will be strictly followed:

1. Deputies will not retain personal criminal intelligence files beyond such time as they have a valid reason related to the Office of the Sheriff.

2. Deputies developing information linking persons and/or organizations together for the purpose of criminal activity will forward such information to the Emergency Services Division, Homeland Security Unit, Crime Analyst. Examples Are:

    - Organized crime;
    - Gangs;
    - Explosives;
    - Automatic weapons;
    - Civil unrest; and
    - Threats to national security.

3. The Emergency Services Division, Homeland Security Unit, will correlate, verify and distribute the information if it is warranted. All such information, distributed by H.S.U. in the form of Criminal Information Bulletins, shall be handled as confidential and will not be disclosed to the news media or the public except through the Investigation Division.

a. The Support Services Bureau will route copies of reports and pass on information to other persons and agencies on a need-to-know basis.

4. Deputies Records – Nothing in this Policy is meant to restrict or discourage Deputies from developing investigative data or field interview information during the routine course of their duties. In fact, it is the collection and routing of such data from Deputies that makes it possible for the Support Services Bureau to develop useful current Criminal Intelligence Files. It is the collection and storage of data from reports and arrests that make up the SCHI. In a broad sense, the records kept by the Deputies in their field duties are the Sheriff's raw data for the development of Criminal Intelligence Files and SCHI.

a. All such data is confidential unless it is specifically listed as "Public information" or "Designated Information for Release to Specified Persons".

b. Once information, which may be withheld, is given to any member of the public, it can no longer be withheld from other members of the public on the basis of confidentiality. Therefore, Deputies will adhere to the following:

- Deputies will safeguard their field information records, i.e. field interviews, suspect photographs, investigative notes, Criminal Information Bulletins, etc., from becoming public.
- Deputies will not keep field information records in their private vehicles, residences or any other place that the records are not secure.

V. PROCEDURE 1.

A. DIVISION COMMANDER RESPONSIBILITIES.

1. Each Division Commander will follow Office of the Sheriff Policies with regard to the control and dissemination of law enforcement information. Additional policies developed by Division Commanders regarding dissemination of law enforcement information shall be in compliance with the Office of the Sheriff Policy Section 1.06.71, Dissemination of Law Enforcement Information.

B. EMPLOYEE RESPONSIBILITIES.

1. All employees shall be aware of the confidential and sensitive nature of the information with which they work. Employees will not disseminate information unless in compliance with Office of the Sheriff Policies and in compliance with current law.

Contra Costa County Office of the Sheriff **General Policy and Procedure**	**CCCSO**	**NUMBER: 1.06.40**
	RELATED ORDERS: Business and Professional Code Section 4140; Health and Safety Code Section 11014.5; Health and Safety Code Section 11364.7(a) and (e) Health and Safety Code Section 11471.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Needle Exchange Program**	

I. POLICY.

A. The Office of the Sheriff, pursuant to the Health and Safety Code, will not arrest any public entity, its agents or employees for criminal prosecution for the distribution of hypodermic needles or syringes during authorized clean needle exchanges. However, officers should use discretion concerning other violations of the law relating to illegal drug use regardless of where the paraphernalia was acquired.

II. DEFINITIONS.

A. DRUG PARAPHERNALIA. Includes, but is not limited to, hypodermic syringes, needles, and any other objects designed for use in the injection of controlled substances into the human body.

B. IMMUNITY. Freedom from arrest as guaranteed by legislation for a public entity and its agents or employees who are in the process of facilitating an officially authorized needle exchange.

C. NEEDLE EXCHANGE. A program initiated and authorized by an officially recognized health or benevolent organization to exchange used or otherwise contaminated syringes or needles for sterile new ones.

III. GENERAL.

A. APPLICATION OF IMMUNITY.

1. Health and Safety Code Section 11364.7(a) guarantees freedom from criminal prosecution for public entities and their agents or employees who distribute needles or syringes during a lawfully authorized clean needle and syringe exchange project.

2. The pre-existing statutory provisions of Business and Professional Code Section 4140 prohibiting unauthorized possession of a hypodermic needle have not been repealed. Any person who has in their possession or under their control a hypodermic needle or syringe or any drug paraphernalia that wasn't prescribed by a physician in accordance with Pharmacy Law is subject to arrest.

a. Incident to such an arrest or warrant search, property may be subject to seizure without process.

b. The fact that the needle or syringe was obtained at a needle exchange provides no immunity from seizure, arrest, or prosecution.

B. DEPUTIES SHOULD NOT FOCUS ON NEEDLE EXCHANGE PROGRAMS.

1. The needle exchange workers should not be arrested in the performance of their duties. Such an arrest would frustrate legislative intent, as they are immune from criminal prosecution.

2. Deputies should not seize hypodermic syringes from the needle exchange workers for the same reason.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.41**
	RELATED ORDERS: CCCSO Detention Division Manual; CCCSO Patrol Division Manual; CCCSO Report Writing Manual.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 9-12-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Report Writing**	

I. POLICY.

A. Crime reports are the primary instruments used for recording and disseminating crime information. Crime reports shall be completed and routed in an expeditious manner to ensure the necessary information is received by the appropriate people.

II. GENERAL.

A. CRIME REPORTS. Crime reports shall be written as set forth in the Report Writing Manual, Patrol Division.

1. The following is a list of circumstances or crimes which require a written crime report:

   a. Felonies;

   b. All vandalism;

   c. All petty thefts;

   d. All misdemeanors where follow-up is required;

   e. All battery reports;

   f. Suspicious circumstances where information may be of value to other Divisions or agencies;

   g. All found or lost property;

   h. Civil matters where property or people change custody while a Deputy is present;

   i. Any crime where a suspect is identified;

   j. Missing persons;

   k. Racial, religious, or ethnic harassment and/or violence;

   l. When directed by a Supervisor;

   m. All deaths to which a Deputy responds or is sent;

   n. All report numbers issued in error shall have a written explanation as to the reason why; and

o. All allegations of child abuse or neglect (founded, unfounded, or unknown).

III. PROCEDURE 1.

A. SUPERVISOR'S RESPONSIBILITY.

1. Report Review. After a crime report is written, it shall be submitted to the reporting Deputy's immediate Supervisor for review.

a. The Supervisor shall review the report for proper content, correct spelling and necessary elements of the crime. If the report is not satisfactory, it will be returned to the reporting Deputy for necessary changes.

b. If the crime report is satisfactory, the Supervisor will sign it and route it to the appropriate locations.

c. Reports written for report numbers drawn in error will be reviewed to determine the reason for the error. Supervisors will ensure that the incident history for the detail is attached to the report.

d. Reports written by Supervisors shall be approved by another Supervisor or Manager.

e. Supervisors will ensure reports documenting allegations of child abuse or neglect include the notification to Child and Family Services (Penal Code 11166(a)) whether founded, unfounded, or unknown. The written notification shall occur within 36 hours. The Suspected Child Abuse Report form is available on ARIES under documents.

2. Report Routing. To ensure a complete investigation and the proper dissemination of information, crime reports must be properly routed by Supervisors.

a. Reports will be routed by writing the number of copies desired in the distribution box at the bottom of Form A. In the case of a supplement report, the routing box at the bottom of Form B, C or D will be used, as applicable.

b. After review and routing is completed, crime reports are delivered to Technical Services Division, Records Unit for distribution to the locations designated in the "Routing Section".

c. Routing Felony Reports:

- In all felony reports requiring follow-up, two copies shall be routed to the Investigation Division, using the appropriate "Investigation" box in the distribution box.
- All felony cases involving narcotics, drugs and/or paraphernalia shall be routed to the Narcotics Detail using the "Narcotics" box (2 copies). The Narcotics Detail also requires two copies of all information reports regarding narcotics.

- All reports involving vice and/or gambling will be routed to the Vice Detail using the "Vice" box.

d. Routing Misdemeanor Reports.

- Patrol Division. Reports shall be routed in accordance with Chapter 1, Section 9, of the Patrol Division Manual.
- Detention Division.
- Detention Division Supervisors will review and sign misdemeanor reports. The signed/approved original crime reports will be forwarded to the Technical Services Division, Records Unit for proper distribution.
- Three (3) copies of the crime report will be routed to the Misdemeanor Complaint Officer for the following:
  - All misdemeanor arrest and citation reports;
  - All misdemeanor reports indicating a complaint will be sought through;
  - All misdemeanor reports which identify a suspect.
- The Misdemeanor Complaint Officer will ensure that copies of the report are delivered to the appropriate District Attorney's Office.

e. All reports written for report numbers drawn in error will be routed to the respective Station House Commander or Police Manager.

f. All reports documenting founded or suspected child abuse or neglect will be forwarded to Child and Family Services under additional routing. Reports documenting unfounded allegations may but are not required to be forwarded to CFS.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.42
	RELATED ORDERS: Volunteer Services Ride-Along Program Rules and Regulations.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 2-17-2008	**CLEARANCE:** Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	**SUBJECT:** Ride-Along Program	

I. POLICY.

A. The Ride-Along Program is intended to be an educational program that affords official visitors, visiting police, other government officials, and the public an opportunity to observe the field activities of the Office of the Sheriff. It also provides a good educational forum for our Explorer/Cadet Program and gives greater understanding of the law enforcement profession to candidates who apply for a position within the Office of the Sheriff.

II. DEFINITIONS.

A. RIDE-ALONG WAIVER. (Form PF-52) - A printed form signed by participants in the Ride- Along Program which releases the Office of the Sheriff from liability for injury to, or death of, the participant while engaged in a ride-along.

III. GENERAL.

A. This Policy governs all ride-alongs in all Divisions, including water craft, aircraft, and any vehicle.

1. PROGRAM PARTICIPATION.

a. All program participation requests are to be processed through the Patrol Division Administration Office. Sheriff's employees are to follow the same guidelines as the public when requesting to participate in the Patrol Ride-Along Program.

b. Requests to participate in the program must be received two weeks in advance of the requested ride-along date.

c. Deputies may participate in the Ride-Along Program ONLY under the following conditions:

- The ride-along is used as a training day; or
- The ride-along is done on paid overtime previously approved by the Deputy's Division Commander. Such approval will only be granted upon the basis of a compelling organizational need; or

- The ride-along is done on “Release Time”, during which the Deputy remains on paid duty, but has been released from his or her usual duties to do the ride-along.
- Deputies riding along pursuant to this section shall be in full uniform with full patrol equipment and vest.

d. Any arrangements for a special ride-along, a ride-along without advance notice or accommodation of official visitors shall be made through the Patrol Division Assistant Sheriff, or by any Bureau Assistant Sheriff.

e. Requests for program participation shall preferably be in letter form and shall contain the full name, address, phone number, date of birth and a short statement as to reason for the request.

f. Written requests shall be addressed as follows:

- Office of the Sheriff
  Attention: Patrol Ride-Along Program
  P. O. Box 391
  Martinez, CA 94553-0039

g. For official participants, new media members, visiting police or other government officials, the Office of the Sheriff member arranging the ride- along will receive participant background information. Participants must provide all the information on the request form, have a background check completed and sign a waiver form.

- Official visitors may have the background check waived upon recommendation of the Patrol Division Commander or any Bureau Assistant Sheriff.

h. Participants (other than Office of the Sheriff Explorers) must be 18 years of age or older to participate in the Program. Recruits and Student Workers are not to ride-along in uniform. Any other exceptions to this Policy must be with the express approval of the Patrol Division Commander or any Bureau Assistant Sheriff.

i. The Patrol Division Commander or designee will designate the Station where the participant will ride. This will be on a rotation system among all Station Houses. Each Station House will be notified weekly of the Program participants and given the cleared ride-along requests with waivers attached. Every effort will be made to accommodate requests to participate in the Program. The importance of this program in the hiring process cannot be overemphasized. Cooperation between Divisions is essential in promoting this valuable program. However, when requests outnumber the positions available, ride-alongs will be scheduled in the following priority:

- Approved participants will be notified of the scheduled date and time to ride, by the Station House Commander or designee.

- The FOB Administrative Senior Clerk shall notify persons in writing who do not qualify to participate in the program.
- Participants will be permitted to ride only one time during any six month period.
- Participants shall not ride with spouses or relatives. Deputies shall excuse themselves from riding with any person with whom they have a personal relationship.

2. PROGRAM RULES.

a. Participants shall be appropriately attired and well groomed when participating in the program. A ride-along participant in an Office of the Sheriff vehicle is viewed by the public as a representative of this Office. Therefore, the participant's attire, appearance, and personal conduct shall reflect the standards of the Office of the Sheriff.

b. Participants will report to the Station House that they are assigned to ride. The participant shall sign the waiver form in the presence of the Deputy. The Deputy shall return the signed waiver to the FOB Administrative Senior Clerk.

c. Participants may ride full shifts on day shift; they may not ride on swing shift past 2200 hours.

d. Participants shall follow all directions given by the Deputy.

- At no time will they interfere with Deputies in the performance of their duties.
- They will remain in the patrol vehicle or other conveyance unless directed otherwise by the Deputy.
- They will not accompany a Deputy into a home or crime scene while the Deputy is conducting official business.

e. Cameras and recording devices are prohibited. Prior arrangements must be made with the Patrol Division Commander if news media members want to record or photograph any activities during a ride-along.

f. The Division Commander/Bureau Assistant Sheriff or his/her representative will select the area and beat where a participant will ride.

3. DEPUTY SHERIFF RESPONSIBILITIES.

a. All non-sworn ride-along participants including Office of the Sheriff general members shall sign a Release and Waiver of Liability Form prior to a ride-along. The time and duration of the ride-along shall be entered on the waiver. The Deputy shall ensure the waiver form is signed in his presence and the completed waiver shall be returned to the FOB Administrative Senior Clerk.

b. The ride-along participant's name should be written in the appropriate box on the shift log prior to leaving the station. The Deputy shall log-on and note in his/her incident history that he/she has a ride-along.

c. The role of the ride-along participant should be that of an observer only. The participant's involvement in any situation shall be at the direction of the Deputy and shall be limited to the actions essential to officer safety. Ride-along participants should be briefed on the routine tasks and duties of a field Deputy.

d. Deputies shall exercise due care when determining the location or position of a ride-along participant during a routine traffic stop or other incident. A Deputy who is assigned a ride-along participant is directed or required to respond to an extremely hazardous situation, he/she shall ensure that the immediate Supervisor is aware that a ride-along participant is present. In extremely hazardous situations, it may be advisable to notify Central Communications that they are leaving the ride-along participant at a safe location and return for the individual after the incident has been concluded. Ride-along participants shall follow the directions of the Deputy at all times.

e. A participant shall be returned immediately to the Station House for any violations of the ride-along policy. The Deputy shall write a memo indicating why the ride-along was discontinued and send it to the Station House with a copy routed to the Patrol Division Commander.

4. EXPLORER/CADET RIDE-ALONG PROGRAM.

a. The Ride-Along Program is designed to provide an Explorer/Cadet with an educational forum concerning the duties and responsibilities of a Patrol Deputy.

b. Explorers/Cadets will request, by Explorer Ride-Along Application Form, a ride-along at the Station House they desire, a minimum of 48 hours prior to the requested ride-along.

c. The Explorer/Cadet must have on file with the Explorer Advisor a Ride- Along Waiver signed by the Parent(s) or legal guardian.

d. Station House Commanders or their designee will assign the Explorer/Cadet to a Deputy for a ride-along if the schedule permits. Every effort will be made to schedule the Explorer with different Deputies for the ride-alongs. A copy of the WIDSI, with the scheduled date, time and name of assigned Deputy will be given to the Explorer/Cadet and the original will be routed to Patrol Administration.

e. Explorers/Cadets may ride a maximum of two times per month.

f. Explorers age 14 to 15 years may ride on day shift only, and in no case later than 1800 hours.

g. Explorers age 16 to 21 years may ride on swing shift, but no later than 2300 hours.

h. Explorers will ride in uniform.

i. An Explorer/Cadet who does not meet the requirements of the program, i.e. grade point average, will not be allowed to participate in the Ride-Along Program.

j. The Deputy assigned an Explorer/Cadet ride-along will provide insight and training in the functions and responsibilities of operating law enforcement conveyances. Patrol Deputies should remember than an Explorer/Cadet's status is similar to that of a citizen ride-along.

- If an Explorer/Cadet is certified in First Level - Less than Full access CLETS, they may operate a MDC.
- If they have received training, they may operate a radio.
- If trained, they may assist in traffic control for special events.
- They may assist the Deputy in completing routine forms that have no evidentiary value.

k. At the completion of their ride-along, the Explorer/Cadet will complete the Ride-Along Detail Form and submit it to their post advisor.

l. Explorers/Cadets will adhere to the Volunteer Services Unit Program and Patrol Division ride-along rules and regulations. Any conduct violations shall be documented and reported to the Volunteer Services Coordinator with a copy routed to the Patrol Division Commander.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.43
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 12-19-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Business Cards	

I. POLICY.

A. Members of the Office of the Sheriff shall use only Office of the Sheriff's approved business cards for official purposes.

II. GENERAL.

A. Bureau Assistant Sheriffs will ensure employees follow the Office's approved format for business cards. Issuing cards that deviate from the format is prohibited.

B. The approved style includes Howard Linen, bright white, cover stock paper, Black ink, type font is Kennedy GD Small Caps.

C. TYPES OF CARDS.

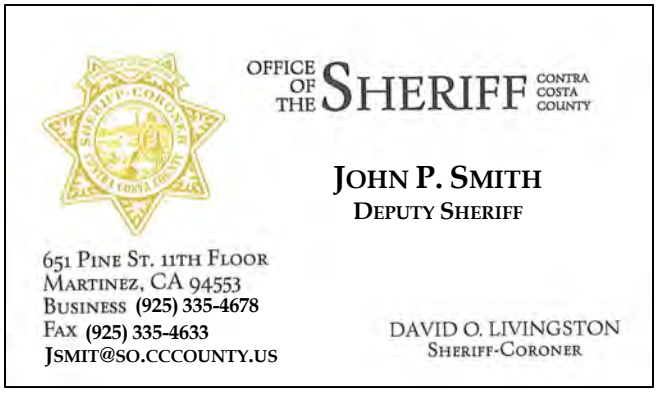
1. Specific Business Cards. Employees may request a business card via the chain of command to the Bureau Assistant Sheriff if it is required for their particular duties.

   a. The card will include the member's rank, name, work location and phone number.

   b. The specific business card for ranks above Captain will have a raised gold Sheriff's star.

   c. Business e-mail address and fax number located with the address section.

   d. An example of the specific business card is as follows:



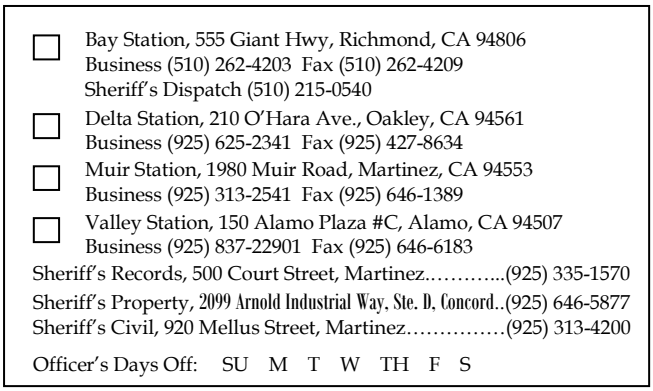
2. Unit Business Cards. For general use by all personnel.

   a. This card can be used by typing, writing or stamping an employee's name in the designated space.

   b. An example of this business card is as follows:



Front



Back

3. Special Use Cards/Recruiting. Designed to meet special needs such as recruiting.

   a. The appropriate Bureau Assistant Sheriff shall approve special use card designs.

   b. Examples of these business cards are as follows:





D. USE OF BUSINESS CARDS.

1. Business cards shall only be distributed when necessary and in the course of official business.

2. Business cards shall not bear notations or endorsements other than those pertaining to official functions of the Office of the Sheriff.

3. Business cards shall not be issued for obtaining any special privilege or benefit or to request that the bearer receive any type of favorable consideration.

E. OFFICIAL MESSAGES. Divisions may have a specific need for information to be included on the back of business cards. Division Commanders shall provide the draft text for the printer.

F. REQUISITION OF BUSINESS CARDS.

1. Requests shall be submitted in memo format via the chain of command to the Bureau Assistant Sheriff.

2. The Bureau Assistant Sheriff will process all requests for business cards in his/her Bureau and forward the request to Sheriff's Fiscal Unit for purchase through an approved vendor.

3. Employees receiving business cards purchased by the Office of the Sheriff may, at their own expense, pay the difference in costs and obtain a specific card or raised gold star version.

4. If an employee wishes to purchase business cards at his/her own expense, it must be from a vendor approved by Sheriff's Fiscal. The employees Bureau Assistant Sheriff will provide the Office of the Sheriff approved specifications.

G. HONORABLY RETIRED PERSONNEL.

1. Captains, Lieutenants, Forensic Managers, and Civilian Chiefs and Directors may be issued business cards identifying them as retired.

   a. Cards ordered prior to the retirees final day of service shall be purchased, one time only, at Office of the Sheriff expense.

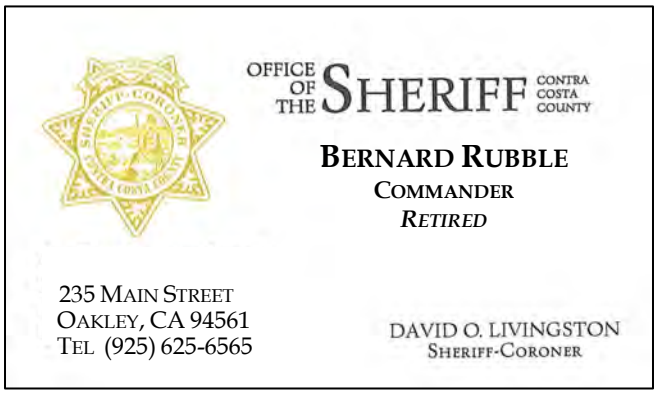
   b. Honorably retired personnel may order cards at their own expense.

   c. The card will list their home address, phone number, and e-mail address in lieu of a business address.

d. Honorably retiring personnel above the rank of Captain may be issued business cards with a raised gold Sheriff's star.

e. Orders will be placed through the employees/retirees Bureau Assistant Sheriff.

2. An example of an "honorably retired" business card is as follows:



Contra Costa County **Office of the Sheriff** **General Policy and Procedure**	**CCCSO**	**NUMBER: 1.06.44**
	RELATED ORDERS: County Employee MOU. CCCSO 1.04.22, 1.04.23, Appendix 10	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-1-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Committees**	

I. POLICY.

A. The Office of the Sheriff will develop and maintain committees that serve the purpose of advising, informing, and facilitating operations.

II. DEFINITIONS.

A. COMMITTEE. A group of Sheriff's employees delegated to consider, investigate, take action on or report about matters affecting the Office of the Sheriff.

B. STANDING COMMITTEE. An ongoing Committee for the purpose of facilitating the Sheriff's business or initiating changes.

C. AD HOC COMMITTEE. A Committee formed for a specific purpose, case, or situation as needed.

III. GENERAL.

A. STANDING COMMITTEES.

1. Awards Committee. The Committee evaluates nominations for Medals of Valor and makes recommendations to the Sheriff. This Committee is described in Office of the Sheriff Policy Section 1.04.22 Office of the Sheriff Medal of Valor Award Program.

   a. The Committee's composition is stated in Policy Section 1.04.22, General, F.

   b. All nominees must be approved by the Sheriff or his designee.

2. Inmate Welfare Fund Committee. The Committee provides independent oversight of the budget for the Inmate Welfare Fund.

   a. The Committee consists of the Custody Services Bureau Assistant Sheriff or his designee and five public at large members appointed by the Sheriff.

3. Employee/Officer of the Year Committee. The Committee evaluates nominations for Employee and Officer of the Year and makes recommendations to the Sheriff. The Committee is described in Office of

the Sheriff Policy Section 1.04.23 Employee of the Year/Officer of the Year.

a. The Committee's composition is stated in Policy Section 1.04.23, General B.

4. Safety Committee. The Committee reviews health and safety related issues and makes recommendations to Executive Management. The committee is described, and its composition is stated, in Office of the Sheriff Policy and Procedure Appendix 10, Bloodborne Pathogens Exposure Control Plan.

a. The Office of the Sheriff Safety Manager chairs the Committee. Each Division selects a representative from each facility. Each employee association also selects a representative to the Committee.

5. Uniform Committee. The Committee reviews requests for modifications to the uniform policy and proposals for specialized uniforms, and makes recommendations to the Sheriff.

a. The Sheriff or his designee appoints members to the Committee. The Committee will be chaired by a Lieutenant and will include Sergeants, Deputies, and non-sworn personnel from all Divisions.

6. Sheriff's Training Advisory Committee (TAC). This committee reviews Office of the Sheriff Training Requirements, current legal mandates and training techniques.

a. This committee's composition is stated in Office of the Sheriff Policy Section 1.05.01 Training – Organization and Administration.

B. AD HOC COMMITTEES.

1. Interest Based Problem Solving Committees. These committees can be formed by members of a Bureau, Division, or work group at the direction of their Assistant Sheriff or Division Commander to consider issues of mutual interest and make recommendations at various levels of management.

2. Labor/Management Committee. The Committee considers a variety of issues of mutual interest to Management and employees. A Committee is formed by mutual agreement between the Sheriff and the relevant employee association. Recommendations may be binding or advisory, depending on the circumstances which caused formation of the Committee.

a. The Sheriff or his designee appoints representatives for Management and the relevant employee association appoints representatives for employees.

IV. PROCEDURE 1.

A. ESTABLISHMENT OF COMMITTEES.

1. All new Committees, whether standing or ad hoc, will be established by a memorandum from any Assistant Sheriff or Captain. Committees dealing with Office of the Sheriff operations will require approval of the Undersheriff. Those dealing with Bureau operations will only require approval of that Bureau's Assistant Sheriff, subject to Policy and Procedure of the Office of the Sheriff. The memorandum will provide the name of the Committee, its mission, its projected longevity, and how it will be chaired and staffed. The authority of the proposed committee is limited to processes within the represented Bureau or Division and subject to Policy and Procedure. A copy of the memorandum will be provided to the Professional Standards Division for tracking purposes.

V. PROCEDURE 2.

A. MONITORING OF COMMITTEES.

1. The Professional Standards Division will maintain an updated roster of all Committees, standing and ad hoc, and their membership. Any change in the status or membership of a Committee should be noted in a memorandum to the Undersheriff with a copy to Professional Standards.

a. Updated membership rosters will be posted on SPARKS.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.45
	RELATED ORDERS: California Administration Code - 2 – 5287; Minimum Standards for Corrections – 1218; PC 4015, 4023 Government Code Section 26640.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Injured Prisoners**	

I. POLICY.

A. The Office of the Sheriff's provides for the handling of individuals who are injured and detained by the Office of the Sheriff for the safety of the public and in accordance with government mandates.

II. DEFINITIONS.

A. CONSCIOUS. Being aware of surroundings while lacking in faintness, lethargy, sleep or stupor.

B. PRISONER. An individual who has either been arrested or detained and is in the custody of the Office of the Sheriff.

III. GENERAL.

A. Under no circumstances will an injured or unconscious prisoner be received at any Office of the Sheriff facility. The care and custody of the prisoner will be the responsibility of the arresting/transporting officer. Sheriff's Deputies will observe prisoners presented to them to determine whether the prisoner's physical or emotional behavior is acceptable for booking or housing either temporarily or permanently. Deputies will follow the guidelines listed herein with regard to refusing to accept a prisoner. The policies and procedures with regard to the care and handling of inmates will be set forth in the Detention Division policy manual.

1. GUIDELINES FOR REFUSAL TO ACCEPT PRISONERS.

a. Emotional Behavior Observations:

- State of consciousness;
- Mental status; and
- Conduct.

b. Physical Observations:

- Lacerations;
- Broken bones;

- Bruises;
- Body deformities;
- Trauma markings;
- Ease of movement;
- Pupil dilation;
- Symptoms of shock;
- Suffering from tremors; or unusual bleeding.

2. SICK/INJURED ARRESTEES/PRISONERS. Sick and injured arrestees will be transported to [redacted] and medical treatment obtained. An ambulance or patrol vehicle may be used depending on the prisoner's condition. In life threatening emergencies, the arrestee/prisoner will be transported to the nearest hospital until cleared for transport to [redacted] or upon receipt of medical treatment, and release.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.46
	RELATED ORDERS: PC 207; Hostage Negotiation Manual (Police Press 1977) CCCSO 1.06.24, 1.06.26, 1.06.27, 1.06.78, 1.06.79.	
ISSUE DATE: 2-1-2006 REVISION DATE: 3-7-2014	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Hostage and Barricade Situations	

CCCSO Red Stripe Policy

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.47
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-2-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **All Points Bulletin**	

I. POLICY.

A. All Points Bulletins are effective police communications tools. To ensure their effectiveness, specific guidelines are established for their use.

II. DEFINITIONS.

A. ALL POINTS BULLETIN/BE ON LOOK OUT (B.O.L.O.). The All Points Bulletin (A.P.B.) is a general information broadcast to all listening cars and stations in a geographical area that may be affected by the information. For example, information about a suspect on foot in West County need not be broadcast in East County. The term "Be On Look Out" (BOLO) is synonymous with All Points Bulletin (A.P.B.) and both are currently used to announce a general information broadcast.

III. GENERAL.

A. ALL POINTS BULLETIN USAGE.

1. General radio broadcasts shall be limited to only the most timely and important information. One of the most misused and extraneous types of channel use are the general information broadcasts initiated at the request of a field unit.

2. Acceptable Broadcast Criteria.

   a. Any criminal incident where an A.P.B. broadcast is within a time frame and includes sufficient description to aid in the apprehension of a suspect.

   b. Any officer safety information.

   c. Any other incident with the approval of the Station House Commander or Watch Commander.

3. Unacceptable Broadcast.

   a. Generally, information that is not timely and/or useful in the apprehension of a suspect or disseminated for officer safety is unacceptable for a general information broadcast.

   b. Some examples of unacceptable broadcasts are:

- Runaway juveniles;
- Civil details at the request of the citizen;
- "Cold" auto thefts; and
- Missing adults with no indication of foul play or unusual circumstances.

B. RESPONSIBILITIES.

1. Field Deputy.

a. Obtain the necessary information to be broadcast.

b. Contact the Communication Center and request the broadcast.

2. Dispatcher.

a. Format the information given by the field Deputy.

b. Broadcast the information in the appropriate area(s).

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.48
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Emergency Alarms Administration Office	

I. POLICY.

A. The Office of the Sheriff Administration areas on the seventh floor shall be equipped with alarm buttons that may be used to summon assistance in the event of an emergency.

II. GENERAL.

A. The location of the seventh floor Administration offices and their relative availability to the public make them vulnerable to potential hazardous contact with irate or unstable citizens. Alarm buttons have been installed in the Clerks' desks in the reception area and the Administration inner office and, when activated, sound an alarm at the alarm company.

III. PROCEDURE 1.

A. ALARM ACTIVATION.

1. In the event of any situation of apparent danger that cannot reasonably be controlled by personnel in the reception area or Administration offices, the respective alarm button will be pushed.

2. Sheriff's Communications Center employees, upon receipt of an alarm notification from the alarm company, will do the following:

a. Telephone the seventh floor Executive offices to alert those personnel to the emergency (in the event the emergency may be occurring in the reception area or out of view of the offices).

b. Telephone 9-1-1 and provide the building location, floor number, room number, and nature of emergency if known.

IV. PROCEDURE 2.

A. ALARM TESTING. The emergency alarm will be tested on a quarterly basis (January, April, July, and October), using the following procedure:

1. The Executive Secretary, or designee, will notify the alarm company prior to activating the alarm; and

2. The alarm buttons at each station will be activated separately to ensure both are working properly.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.49
	RELATED ORDERS: Volunteer Services Ride-Along Program Rules and Regulations; CCCSO 1.06.42, 1.05.56.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 11-12-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Off-Duty Deputy Ride-Alongs with Outside Agencies**	

I. POLICY.

A. Off-duty Deputies desiring to ride along with outside agencies shall conform to the guidelines outlined in this policy.

II. GENERAL.

A. This policy governs all ride-alongs with all outside agencies in any vehicles, and encompasses all other aspects or modes of being in the presence of another agency during the course of that agency's duties.

1. STANDARDS.

a. Deputies are to comply with the rules and policies of the outside agency concerning its ride-along program.

b. Employees who ride-along with outside agencies shall be appropriately attired and well groomed when participating in that program. The Office of the Sheriff employee's attire, appearance, and personal conduct shall reflect the standards of the Office of the Sheriff.

c. All off-duty ride-alongs with Outside Agencies shall be in civilian clothes. No part of the Office of the Sheriff uniform shall be worn. Nothing readily identifying the Deputy as a peace officer shall be displayed or worn during the ride-along.

d. Office of the Sheriff employees shall at all times abide by Policy 1.05.56 Off-Duty Arrest/Enforcement while riding off duty.

At no time shall our Deputies interfere with the host law enforcement personnel in the performance of their duties.

Our Deputies shall remain in the patrol vehicle or other conveyance unless their involvement is required on an emergency basis consistent with Policy 1.05.56 Off-Duty Arrest/Enforcement. Deputies shall not contact any suspects, victims, or witnesses unless an exigency exists necessitating such contact.

e. Cameras and recording devices will not be used unless prior arrangements have been made with the supervisor of the law enforcement personnel involved.

f. In ride-alongs with out-of-state agencies, Deputies are reminded that they have no law enforcement powers outside the State of California.

g. No ride-along with an outside agency shall be made without the written authorization (email acceptable) of the subject Deputy's Lieutenant.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.50
	RELATED ORDERS: Health and Safety Code Sections 11357, 11362.5 and 11362.7 et seq; Controlled Substances Act, 21 U.S.C. §844(a)(1); Gonzales v. Raich, U.S. Supreme Court, 2005; PC 1538.5; CVC 23152(a) and 23222(b).	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 4-1-2011	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Medical Marijuana**	

I. POLICY.

A. The California Health and Safety Code permits the possession and cultivation of marijuana for medical purposes under certain circumstances. Possession and/or cultivation of marijuana for non-medical purposes is illegal; however, possession of not more than 28.5 grams (approximately one ounce) of marijuana, other than concentrated cannabis, is an infraction punishable by a fine of not more than $100.00. This policy provides guidance and procedure in the investigation of subjects possessing marijuana and claiming medical marijuana status.

II. DEFINITIONS.

A. PERSON WITH AN IDENTIFICATION CARD – As defined in Health and Safety Code section 11362.7(c), this means an individual who is a qualified patient who has applied for and received a valid identification card pursuant to this article. Note: Since December 1, 2005, Contra Costa County Health Services Department has issued identification cards to qualified patients.

B. PRIMARY CAREGIVER – As defined in Health and Safety Code section 11362.7(d), this means the individual, designated by a qualified patient or by a person with an identification card, who has consistently assumed responsibility for the housing, health or safety of that patient. A Primary Caregiver is someone who regularly provides care (i.e., someone who is at the patient's bedside). A person whose care-giving consists principally of supplying marijuana and instructing on its use, does not qualify as a primary Caregiver. (People v. Mentch).

C. QUALIFIED PATIENT – As defined in Health and Safety Code section 11362.7(f) means a person who is entitled to the protections of sections 11362.5, whether or not he or she has an identification card issued pursuant to this article.

III. GENERAL.

A. PROPOSITION 215 ("THE COMPASSIONATE USE ACT"). Health and Safety Code ("H&S") section 11362.5 provides "that seriously ill Californians have the right to obtain and use marijuana for medical purposes where that medical use is deemed appropriate and has been recommended by a physician who has determined that the person's health would benefit from the use of marijuana." Individuals who are within the scope of the Compassionate Use Act are not

subject to criminal liability under H&S Sections 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570. In any situation where the provisions relating to "medical marijuana" do not apply, all criminal provisions of the H&S Code relating to marijuana remain in effect.

B. OPERATION OF A VEHICLE. Operating a vehicle under the influence of marijuana, even if medical marijuana, remains unlawful under CVC 23152(a). If articulable, objective signs of marijuana influence are observed in an individual operating a motor vehicle, field tests should be conducted and an arrest made, if appropriate. Smoking Marijuana while "in a motor vehicle that is being operated" is not authorized under medical marijuana provisions and remains unlawful under CVC 23222(b).

C. APPLICATION OF MARIJUANA PATIENTS' RIGHTS.

1. A Qualified Patient or his or her designated Primary Caregiver, in compliance with quantity and use restrictions, shall not be subject, on the sole basis of possession, cultivation or transportation of marijuana, to criminal liability.

2. Deputies encountering a subject with marijuana must ascertain whether the subject is declaring any rights under the Compassionate Use Act. Once a suspect has made such an assertion, the officer shall investigate the validity of the claim.

3. The previous limitations on the amount of marijuana a qualified patient may possess (no more than six mature marijuana plants or twelve immature plants per Qualified Patient and eight ounces of dried marijuana per Qualified Patient) have been eliminated (People v. Kelly). The only "limit" on how much Marijuana a person may possess under the Compassionate Use Act is that it must be "reasonably related to the patient's current medical needs." A Primary Caregiver may possess an equal amount to the total aggregate amount that all of his or her Qualified Patients may lawfully possess. There is no limit on the number of Qualified Patients for whom a Primary Caregiver may be responsible, but no more than one Qualified Patient may live outside the county of residence of the Primary Caregiver. A Deputy questioning a subject claiming Primary Caregiver status may ask for the names, addresses and telephone numbers of the subject's Qualified Patients for the purpose of investigating the legitimacy of the claim. The subject's failure to provide such information may be considered in determining whether or not an arrest should be made.

4. Contra Costa Health Services issues Identification Cards identifying the named individual as an authorized medical marijuana user or Primary Caregiver. However, an individual need not possess this card in order to claim protected status under the Compassionate Use Act. If a card is displayed, Deputies may make reasonable inquiries into the validity of the card.

5. Deputies investigating medical marijuana status or the legitimacy of a medical marijuana Identification Card may inquire into a patient's particular diagnosis if such a line of questioning is pertinent to the investigation.

6. Unless a Deputy has probable cause to believe an H&S violation has occurred, i.e., to believe the subject is not protected under the Compassionate Use Act or that the Act's quantity restrictions have been exceeded, the investigating Deputies shall not confiscate the marijuana. No subject shall be detained longer than the time necessary for a reasonable investigation based on the individual situation and factors presented.

    a. If the subject has more than the amount of marijuana reasonably related to the patient's current medical needs, the investigating Deputies may seize all marijuana above the maximum legal amount. Obviously, a Deputy may not be able to immediately ascertain the amount of marijuana that is reasonably related to the patient's current medical needs. But in the event of a large or major cultivation, if the amount so clearly exceeds what a single qualified patient could possibly require, or in the case of a caregiver, the amount clearly exceeds the aggregate amount possibly required by the caregiver's patients, the Deputy will have probable cause to believe that the quantity limitations permitted under the Compassionate Use Act have been exceeded, and may continue a criminal investigation for possession, possession for sales, transportation and/or cultivation of marijuana.

    b. Should a Deputy have a reasonable suspicion to believe that an H&S violation may have occurred, but less than probable cause to support an arrest, the investigating Deputy may seize only a testable sample (approximately one gram) of the subject's marijuana pending further investigation. Whenever possible, the Deputy should weigh and photograph the total quantity prior to removing the sample.

7. In any investigation for possession, possession for sales, transportation and/or cultivation of marijuana in which the subject does not claim medical marijuana status, the case shall proceed as a normal criminal investigation, keeping in mind that possession of 28.5 grams or less of marijuana is an infraction punishable by a fine of not more than $100.00. Possession of any amount of concentrated cannabis is punishable by not more than one year in the County Jail or by a fine of not more than $500.00, or both. Possession of more than 28.5 ounces of marijuana, not concentrated cannabis, is punishable by not more than six months in County Jail or a fine of up to $500.00, or both. Exceptions apply on school grounds (see PC 11357).

8. The Sheriff will not allow use of medical marijuana in any custody facility or at any time or place a suspect is in custody.

9. In all cases in which marijuana is confiscated, including only a testable sample, a report shall be written and a sample should be sent to the Crime Lab for analysis.

D. USE RESTRICTIONS.

1. Nothing in Health and Safety Code Sections 11362.5 et. seq. authorizes a Qualified Patient to engage in smoking marijuana under any of the following circumstances:

   a. In any place where smoking is prohibited.

   b. In or within 1,000 feet of the grounds of a school, recreation center, or youth center, unless the medical use occurs within a residence of an authorized user.

   c. On a school bus.

   d. While in a motor vehicle that is being operated.

   e. While operating a boat.

2. Proposition 215 provides a defense to the crimes of possession and cultivation of marijuana. It does not provide a right to use marijuana. Proposition 215 accordingly does not provide any right to use marijuana at work in violation of an employer's rules (Ross v. Raging Wire Telecommunications) nor does it restrict a city's or county's power to enact zoning laws prohibiting marijuana dispensaries (City of Claremont v. Krauss).

E. RETURN OF MARIJUANA. Whenever a determination is made under the medical marijuana provisions that confiscated marijuana should be returned to a subject, or whenever a subject requests the return of confiscated marijuana, the subject should be advised to obtain a court order under PC 1538.5 and to provide a certified copy of the court order. No confiscated marijuana will be returned in the absence of a court order.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.51
	RELATED ORDERS: County Administrative Bulletin 407.5, 416; CVC 165, 23123, 27315, 27315.3, 27315.5.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 9-10-2008	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Vehicle Operation and Parking Procedures**	

I. POLICY.

A. All Office of the Sheriff vehicles shall be driven and parked in accordance with State and Municipal codes to ensure the safety of both the employee and the public. The use of Office of the Sheriff vehicles is permitted for Office of the Sheriff business only.

II. GENERAL.

A. GENERAL OPERATIONS.

1. Employees whose duties include the driving of Office of the Sheriff vehicles shall possess a valid driver's license issued by the State of California, of a class applicable to the type of vehicle being driven. The license shall be carried at all times when operating a motor vehicle.

2. Employees shall observe courtesies of the road and practice defensive driving procedures and fuel conservation measures.

3. Drivers of Office of the Sheriff vehicles, under normal circumstances, shall observe all State and local laws and all Office of the Sheriff Policies governing the use of motor vehicles.

4. All personnel driving or riding in County vehicles shall wear safety lap/shoulder seat belts. Cars with broken seat belts will not be used. The driver shall ensure that a work order for repair of the seat belt is submitted.

   a. Prisoners, upon request, may be restrained in the rear of the vehicle using lap belts provided, with the following exceptions:

      Should the prisoner behave in such a manner as to create a potential injury to the Deputy or prisoner, the belt need not be used until the prisoner can be restrained safely.

      Prisoners riding in Transportation van and buses shall be exempt from wearing safety lap and shoulder seat belts.

5. No Office of the Sheriff employee shall drive a County vehicle while using a cell phone unless it is designed to allow hands-free listening and talking and is used in that manner while driving.

a. This section applies to all employees including sworn employees using a cell phone while operating an authorized emergency vehicle.

b. This section applies to the use of a digital two-way radio that utilizes a wireless cell phone with a push-to-talk feature, such as Nextel “Direct Connect”, except that “push-to-talk” may be used by non-uniformed personnel to support an under-cover investigation.

Exception: Cell phones may be used by sworn personnel while driving an emergency vehicle in exigent circumstances.

No “texting” or reading e-mail from hand held devices while driving.

B. VEHICLE PARKING. The intent of this information is to reduce the chance of a runaway vehicle and the corresponding injuries that often occur as the result of negligence.

1. Every parked and unattended vehicle shall be in a safe position and in compliance with California Vehicle Code regulations.

2. Vehicles with automatic transmissions shall have the shift selector in the "Park" position. Vehicles with manual transmissions shall have the shift selector in "Reverse."

3. The front wheels shall be turned against the curb, when a curb exists. When chock blocks are furnished, they shall be placed as needed.

4. The vehicle's engine shall be stopped, the parking brake set and the ignition keys removed.

5. Vehicles shall be secured by locking doors and closing windows. The driver is responsible for safeguarding the vehicle and property therein.

6. All parked and unattended vehicles will be locked, including those parked in the County lots. Emergency situations are exempt.

7. All Sheriff’s Office trucks, vans and recreational vehicles upon parking in a non- emergency response situation, shall have one 18" orange traffic cone at the front and back of the parked vehicle. Prior to moving the parked vehicle, check for obstructions and secure doors, gates and transported items.

8. No vehicle (except K-9 units) shall be left standing with the engine running.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.52**
	RELATED ORDERS: CVC 165, 2800.1, 2800.2, 2800.3,14602.1,17004, 17004.7, 21052, 21055, 21056, 21057, 21806, 21807, 25102, 25252, 25258, 25259, 25269, 27002; Contra Costa County Police Chiefs' Emergency Vehicle Operation Protocol, September 28, 1988; CCCSO 1.06.61, 1.06.21, 1.06.53.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 7-11-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Vehicle Pursuits**	

I. POLICY.

A. Vehicle pursuit guidelines are established to comply with the California Vehicle Code, current case law, and to assist Deputies in determining whether to initiate, continue or terminate a pursuit. Deputies involved in a vehicle pursuit shall use good judgment with due regard for public safety and follow the below established guidelines.

B. On an annual basis, all peace officers will certify in writing that they have received, read, and understand the policy. (Vehicle Code Section 17004 et seq.)

II. DEFINITIONS.

A. BARRICADE. Blocking the roadway with police or other vehicles or other types of obstructions.

B. CONCLUDE. A vehicle pursuit "concludes" when the fleeing vehicle voluntarily or involuntarily comes to a stop.

C. DISCONTINUE/TERMINATE. The decision and actions of the Deputy to stop pursuing the fleeing vehicle. Actions to discontinue and/or terminate a vehicle pursuit may include turning off the lights and sirens, reducing speed, observing the applicable rules of the road, intentionally allowing the distance between the law enforcement vehicle and the fleeing vehicle to increase, changing direction away from the fleeing vehicle, and notifying the Dispatcher of the decision to discontinue and/or terminate the pursuit. Additionally, a pursuit should be discontinued when the Deputy is directed by a Supervisor to terminate the pursuit. Once a pursuit is terminated, Deputies should not follow the suspect vehicle.

D. FAILURE TO YIELD. The actions of a driver who fails to stop his/her vehicle in response to the activation of the emergency lights and sirens of a law enforcement vehicle, but continues to travel forward at or below the speed limit, observing traffic control devices and other applicable rules of the road, and does not change the direction of travel in an evasive manner.

E. FOLLOW/FOLLOWING/TRAIL/TRAILING. A Deputy staying behind and attempting to keep a vehicle in sight, while complying with applicable laws and rules of the road without activating emergency equipment. If the pursuit is at a slow rate of speed, the trailing unit will maintain sufficient distance from the pursuit units so as to clearly indicate an absence of participation in the pursuit. An area check is not considered follow/following/trail/trailing.

F. LEGAL INTERVENTION. Refers to pursuit intervention techniques and other forcible techniques used to stop a suspect vehicle.

G. SUSPECT/OFFENDER. Refers to the driver and occupant(s) of a pursued vehicle.

H. VEHICLE PURSUIT. An active attempt to stop a moving motor vehicle when the driver is aware and is ignoring the Deputy's attempt to stop the vehicle, or is resisting apprehension by maintaining or increasing speed, and failing to comply with applicable rules of the road.

I. STARCHASE PURSUIT MANAGEMENT SYSTEM The StarChase system allows an officer to remotely affix a GPS tracking device to a pursued (or about to be pursued) vehicle using an air pressure system to discharge the tracker from the front of the StarChase equipped patrol car to the vehicle in front of it. Once the tracker is affixed, its location can be tracked by an employee (StarChase Monitor) using a computer with an internet connection.

III. GENERAL.

A. LEGALITY OF DEPUTIES' ACTIONS.

1. A peace officer driving a vehicle must comply with normal "rules of the road" governing driving. The officer is only exempt from following these rules while driving in response to an emergency call, or immediately pursuing an actual or suspected violator of the law. The vehicle must sound a siren and display a lighted red lamp visible from the front. (Vehicle Code Section 21055.) The exemption from following normal "rules of the road" does not relieve the driver of a vehicle from the duty to drive with due regard for the safety of persons using the highway or protect a peace officer from the consequences of an arbitrary exercise of the privileges exempting the officer from normal driving rules. (Vehicle Code Sections 21056, 21807.)

2. A peace officer operating an authorized emergency vehicle in the line of duty in response to an emergency call or in immediate pursuit of an actual or suspected violator of the law, will not be personally liable for civil damages due to the personal injury or death of any person or damage to property resulting from the operation of the vehicle. (Vehicle Code Section 17004 et seq.)

B. OBJECTIVES. The objective of a pursuit is to apprehend a violator who refuses to voluntarily comply with the law, requiring the violator to stop. Pursuits should be initiated when, in the Deputy's judgment, the individual(s) exhibits an intent to avoid arrest by using a vehicle to flee. In addition to apprehension, the objectives of this Policy are to:

1. Prevent injury or death to the public;

2. Prevent injury or death to law enforcement personnel;

3. Minimize the possibility of injury or death to the occupants of the vehicle being pursued; and

4. Reduce the potential for sustaining damage to the vehicles involved or other property.

C. GUIDELINE FOR THE INITIATION, CONTINUATION, OR TERMINATION OF A PURSUIT. The following factors are a guideline to be considered when a Deputy initiates, continues or terminates a pursuit. They include, but are not limited to:

1. The seriousness of the originating violation or suspected violation and its relationship to community safety;

2. Safety of the public in the area of the pursuit;

3. Safety of the pursuing Deputy(ies);

4. Volume of vehicular traffic;

5. Volume of pedestrian traffic;

6. Location of pursuit;

7. Speeds involved;

8. Time of day;

9. Weather conditions;

10. Road conditions;

11. Familiarity of the Deputy, Supervisor or Division Commander with the area in which the pursuit is occurring;

12. Quality of radio communications between pursuing unit(s) and the Dispatcher and Supervisor;

13. The capability of the police vehicles involved;

14. The likelihood of identification and apprehension of the suspect(s) at a later time, or if the identity of the driver is known;

15. The availability of resources from other law enforcement agencies;

16. The Deputies' knowledge of factors that may affect the driving skill of the suspect, such as age, driving experience, or mental impairment;

17. Whether there are any persons in the Deputies' vehicle(s) other than sworn members of the Office of the Sheriff;

18. Whether there are other persons in or on the pursued vehicle, including children, passengers, co-offenders, and/or hostages;

19. The distance and duration of the pursuit;

20. The Deputies' experience and training;

21. The distance between the Deputies' and the suspect's vehicles; and

22. The availability of supervision.

D. PURSUIT RULES TO FOLLOW.

1. When practical, Deputies intending to stop a vehicle should have visual contact and be in close proximity to the violator's vehicle before activating their emergency lights and sirens.

2. Lights and sirens shall be used continuously throughout the pursuit. Deputies should not initiate or continue a pursuit if their lights or sirens are or become non-functional.

3. Normally, pursuits should be limited to two (2) units, a primary and a secondary unit, unless, in the Supervisor's judgment, additional units are necessary.

4. Pursuit units should attempt to keep near the center of the roadway so the red lights are visible to oncoming traffic.

5. Pursuing units should avoid passing vehicles on the right unless no other option is available.

6. Units shall not pass or attempt to pass any other unit engaged in the pursuit except at the request of the Deputies in the unit to be passed or upon direction of a Supervisor.

7. When the pursuit is initiated by a motorcycle unit or unmarked unit, the motorcycle/unmarked unit shall abandon the pursuit when a four-wheel, marked unit joins the pursuit. The initiating unit shall proceed to the termination point of the pursuit.

8. Deputies shall terminate a vehicle pursuit whenever directed to do so by a Supervisor.

9. All other units should remain alert to the pursuit progress and location, and stay off the air and away from the pursuit.

10. Pursuing units shall keep vehicles at speeds that will enable them to keep the vehicles under control at all times.

11. Units shall drive with due regard for the safety of all persons using the highway.

12. If involved in an accident, notify the Patrol Supervisor at once. Do not make statements pending the Patrol Supervisor's arrival. The accident investigation should be handled by the law enforcement agency having jurisdiction of the area in which the accident occurred. Deputies involved in such accidents will adhere to procedures contained in this Manual.

E. PRIMARY UNIT RESPONSIBILITIES.

1. The unit initiating the pursuit shall be considered the primary pursuit vehicle unless otherwise directed by the Supervisor. The primary unit shall immediately notify Dispatch of the following:

   a. A pursuit is underway;

   b. Location and direction of travel;

   c. Known law violation or reason for the pursuit;

   d. Description of the vehicle, including license number, if possible;

e. Speed of the fleeing vehicle; and

f. Number of occupants in the vehicle.

2. The primary unit shall be held accountable for the following:

a. Conduct of the pursuit until relinquished to another unit or a Supervisor;

b. Judicious operation of the vehicle during the pursuit;

c. The decision to continue or discontinue the pursuit; and,

d. Termination point scene command until the arrival of a Supervisor.

F. SECONDARY UNITS. The secondary unit joining the pursuit shall immediately notify Dispatch if it is joining the pursuit and identify the unit. This unit may take over the communication duties, if in a position to do so, at the discretion of the initiating unit. The secondary unit is to be in a position to provide cover, if needed.

G. AERIAL PATROL. The utilization of available air support should be strongly considered in every vehicle pursuit.

1. Aerial patrol can provide visual contact with pursued vehicles and provide valuable information to pursuing units such as upcoming traffic congestion, hazards, or other factors that might endanger the safety of the Deputy or the public.

2. An aerial patrol unit can maintain surveillance of a suspect vehicle if the pursuit is discontinued and direct ground units to the suspect's ultimate location.

3. An aerial unit shall never be designated as a primary or secondary pursuit unit.

a. If the suspect(s) is believed to have committed a serious violent felony crime and poses a significant, ongoing threat to public safety, the patrol units should stay in active pursuit rather than risk the suspect(s) escaping apprehension.

b. Unless the conditions listed above in 3.a. are present, once an aerial unit is overhead and has the pursued vehicle under surveillance, the pursuit should be terminated. The patrol units should then, with the Supervisor's approval, begin trailing the pursued vehicle. The aerial unit should then be used to direct the trailing units to the pursued vehicle's location and the location of the suspect(s) related to the pursued vehicle.

4. The aerial unit shall advise the patrol units if the helicopter's amount of fuel left is at a point that the helicopter can no longer follow the suspect vehicle.

H. PURSUITS INTO OTHER JURISDICTIONS. When a pursuit extends into another area or jurisdiction, Deputies shall notify Dispatch and Dispatch shall notify the affected agency and include all relevant information.

1. Request for another agency to supply assist units for pursuit and arrest.

a. Supervisors are encouraged to request that the affected agency provide a unit with knowledge of the area to assume the calling of the pursuit and to provide advice and assistance to the primary unit as the pursuit travels though the jurisdiction of the affected agency.

b. If the affected agency is unable or refuses to provide the assistance requested, the Supervisor shall consider the factors and make a determination relating to continuing or terminating the pursuit.

2. Request for another agency to assume control of the pursuit.

a. The Patrol Supervisor or primary unit (if a Supervisor is not available) in the pursuit should determine if the other law enforcement agency should assume the pursuit. The following should be considered:

- The distance involved;
- Pursuing Deputy's familiarity/unfamiliarity with the new area; and
- Other known pertinent facts.

3. Sheriff's Dispatch shall advise the outside agency of the specific level of assistance requested. The Sheriff's primary unit shall relinquish the primary role to the outside agency and shall become the secondary unit until relieved. The original Sheriff's secondary unit shall cease to participate in the pursuit.

4. In the event the Office of the Sheriff relinquishes control of the pursuit to an outside agency, the primary unit may, with permission of the Supervisor, trail the pursuit to its termination point in order to provide information and/or assistance during the arrest of the suspects(s).

5. If the Office of the Sheriff has retained arrest authority over the suspect(s), the initiating Deputy should proceed to the termination point.

I. PURSUITS FROM OTHER JURISDICTIONS INTO SHERIFF'S OFFICE JURISDICTION. When a pursuit extends into Office of the Sheriff jurisdiction, Dispatch shall relay all relevant information to affected field units and field Supervisor(s).

J. Requests for the Office of the Sheriff to supply assist units for pursuit or arrest.

1. Notification by an outside agency of a pursuit in progress shall not be construed as a request to join in the pursuit.

2. Office of the Sheriff units shall not become involved in another agency's pursuit unless specifically requested or when such assistance is included in established interagency agreements such as the Contra Costa County Police Chiefs' Protocol.

3. When involved, Office of the Sheriff units will provide support and cover to the outside agency without taking over the pursuit. Once the pursuit leaves Office of the Sheriff jurisdiction, Deputies shall terminate

their involvement in and assistance with the pursuit unless a Supervisor authorizes continuation to further public safety.

K. Request for Sheriff's Office to assume control of the pursuit.

1. When a request is made for the Office of the Sheriff to assume control of a pursuit, the Patrol Supervisor should consider the following:

   a. The original reason for the pursuit;

   b. The behavior of the suspect(s) during the pursuit, including any information known or suspected that would increase or lessen the need to continue the pursuit.

   c. Information relevant to the safety of pursuing Deputies, the suspect(s) and any passengers in the suspect vehicle, and the public, including the pursuing Deputies' familiarity, or lack of familiarity, with the area into which the pursuit is heading.

2. The initiating agency will be responsible for filing the case for prosecution of the violation that caused the pursuit. The initiating agency generally should take custody of the violator. However, if non-traffic violations have occurred subsequent to the pursuit being taken over by the Sheriff's Office, the Sheriff's Office will be responsible for the filing of the case for prosecution. The law enforcement agency having or witnessing the most serious crimes should retain custody of the violator unless mutually agreed upon otherwise.

L. COMMUNICATIONS CENTER (DISPATCH) RESPONSIBILITY.

1. Advise the Patrol Supervisor and all field units immediately when a pursuit is initiated.

2. Initiate a Code 33.

3. Maintain communications with pursuing unit(s), update the progress by broadcasting locations and information from the involved Deputies, along with ascertaining and broadcasting the suspect(s) description, violation, and direction/mode of travel.

4. Notify affected allied agencies and specify if assistance is or is not requested by the pursuing unit(s), and give details as needed.

5. Coordinate back-up units and provide stolen/registration information.

M. SUPERVISOR'S CONTROL AND RESPONSIBILITY. It is the Patrol Supervisor's responsibility to ensure that all pursuits are conducted within the guidelines contained in this Policy. If necessary, a Field Supervisor may drive Code Three in order to effectively discharge these responsibilities.

1. Upon being notified of the pursuit, the Supervisor shall:

   a. Monitor the pursuit until it is concluded.

   b. Constantly evaluate the necessity of continuing the pursuit. In making this decision, Supervisors should apply the guidelines set out in this Policy. If a Supervisor lacks sufficient information to

make an informed decision under these guidelines whether to continue or terminate a pursuit and is unable to obtain the necessary information in a timely manner, he/she is authorized to terminate the pursuit on that basis alone.

c. Ensure that no more than the required or necessary units are involved in the pursuit.

d. Ensure that the affected allied agencies are notified.

2. The Supervisor shall proceed to the termination point if at all practical to provide guidance and the necessary supervision.

3. The Supervisor overseeing the pursuit shall complete all necessary documentation regarding the incident and forward up the chain of command for review by the Division Commander. This documentation will include the following:

a. Completed CHP Form No. 187.
b. Copy of the Unusual Incident Report
c. Copy of associated crime report(s) documenting the pursuit.
d. Copy of Dispatch log and audio recording of the incident.

N. LEGAL INTERVENTION. Legal Intervention in this context refers to when a pursuing patrol car is purposefully brought into contact with a fleeing vehicle in a maneuver designed to end a pursuit safely. Deputies should avoid such intervention maneuvers except when an overriding public safety issue requires that the fleeing vehicle be immediately stopped and the Patrol Supervisor monitoring and supervising the pursuit gives consent. In determining whether to execute such Legal Intervention, the requesting Deputy and the Supervisor shall be mindful of Office of the Sheriff Policy Section 1.06.61, Use of Force, and its definition of "Deadly Force." ("Any use of force that creates a substantial risk of causing death or serious bodily injury.") Accordingly, intervention maneuvers should not generally be undertaken unless the situation warrants the immediate use of deadly force.

1. Ramming fleeing vehicles should likewise generally be avoided, and a similar Deadly Force analysis must be made by the pursuing Deputy and Patrol Supervisor prior to undertaking such action.

2. In all circumstances, such techniques shall not be undertaken unless the condition and nature of the roadway, speeds involved, and hazards to other persons are considered and the circumstances justify and require such action.

3. This Policy shall not limit the right of a Deputy to use a Patrol vehicle as a weapon when necessary to stop an imminent threat of death or grave bodily harm to the Deputy or others.

4. Barricading a roadway should be avoided unless necessary to safely end a pursuit and shall not be undertaken unless authorized by the Patrol Supervisor.

a. A roadway barricade must be constructed in a manner to allow the fleeing vehicle sufficient time and distance to bring his/her

vehicle to a complete stop prior to the barricade, should he/she decide to do so.

b. Pursuing units and outside agencies must be notified of the barricade and given sufficient prior warning as to its location.

5. The blocking of freeway exits or on-ramps is acceptable to preclude citizens from inadvertently driving into the path of a pursuit or to keep the pursued vehicle from returning to congested surface streets.

N. STARCHASE PURSUIT MANAGEMENT SYSTEM GUIDELINES FOR USE

1. For clarity of communications, radio traffic should identify the device as "StarChase".

2. StarChase equipment in the patrol vehicle will only be operated by deputies who have been trained in its use. StarChase equipped vehicles will not be assigned to deputies who are not trained on its use unless required by exigent circumstances.

3. Except as specified below, deputies shall use their own judgment regarding affixing a StarChase tag upon a pursued vehicle and do not need prior approval from a supervisor.

4. All safety decisions related to the discharge of a StarChase tag shall be evaluated by the operator prior to deployment. While supervisors may direct or approve the deployment of a StarChase equipped patrol car in a pursuit and/or the discharge of a tag, safety decisions related to passing other involved vehicles and the actual discharge of the device will be evaluated by the deputy prior to deployment. In accordance with this pursuit policy, the safety of deputies, uninvolved persons and persons inside the pursued vehicle shall be considered. The following decisions are specifically included:

a. Whether the officer can safely maneuver close enough to the suspect vehicle to come within targeting range.

b. Whether the officer can safely pass any other vehicle involved in the pursuit.

c. Whether any circumstance would indicate the device would not work (i.e., weather conditions, suspect vehicle weaving, etc.).

5. StarChase equipped patrol cars, with approval from a supervisor, are authorized to respond Code 3 to join a pursuit for potential use of the device. Code 3 response will be done in accordance with existing Sheriff's Office General Policy and Procedures.

a. Unless directed otherwise, the StarChase equipped vehicle will join the pursuit at the rear of authorized pursuing vehicles until cleared to pass.

b. Once a StarChase equipped vehicle joins a pursuit, it becomes an authorized unit as it relates to the number of authorized pursuing vehicles.

c. StarChase equipped vehicles may pass other pursuing vehicles only when deemed safe and only with specific permission from

the unit to be passed. Permission is to be sought and acknowledged one passing at a time. Deputies driving the StarChase equipped vehicle will identify which side of the overtaken vehicle they will pass.

6. StarChase tags will be deployed in accordance with training.

   a. Once the StarChase tag has been successfully deployed, if the suspect(s) is believed to have committed a serious violent felony crime and poses a significant, ongoing threat to public safety, the patrol units should stay in active pursuit rather than risk the suspect(s) escaping apprehension.

   b. If the conditions listed above in section 6.a. are not present, the pursuit should be terminated. The patrol units should then, with the Supervisor's approval, begin trailing the pursued vehicle in an effort to deescalate the actions of the pursued driver.

   c. Deputies will maintain constant communication with the StarChase Monitor (Sheriff's Office Communications) for speed/direction/location updates of the suspect vehicle.

   d. The Supervisor will coordinate with the StarChase Monitor (Sheriff's Office Communications) to direct resources and officers to appropriate locations to apprehend the suspect. This response shall be in a non-emergency response unless authorized by a supervisor.

   e. Deputies will not monitor the StarChase Monitor data while operating a motor vehicle.

7. The StarChase tag will not normally be deployed in the following situations unless the suspect poses a substantial risk to the public:

   a. During heavy rain.

   b. While driving on exceptionally rough terrain.

   c. On a motorcycle.

   d. When pedestrians are between or very near the suspect vehicle and the StarChase equipped vehicle.

8. In addition to the normal pursuit reporting procedures required by policy, deputies who use the StarChase system will report all tag deployments to their supervisor so that proper notifications can be made.

   a. Supervisors will report StarChase deployments to the Technical Services Division Lieutenant, as well as their respective Station House/Contract City manager.

   b. StarChase Monitor data will be provided by the Technical Services Division to the reporting deputy. This data will be attached in the report writing system as a supplemental report by the reporting deputy.

   c. The reporting deputy will also include the following information in their pursuit report:

- Location of StarChase tag deployment.
- Speed at the time of StarChase tag deployment.
- Serial number of StarChase tag.
- Photograph of the StarChase tag on the suspect vehicle.

d. The Technical Services Division Lieutenant will notify the Fleet Coordinator of the StarChase deployment so that GPS Launcher can be reloaded with a StarChase tag.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.53**
	RELATED ORDERS: CVC 21055, 21056, 21057, 25268, 25269; CCCSO1.06.52.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 11-08-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Code Three Vehicle Operation**	

I. POLICY.

A. To promote the safety of the public and employees, emergency vehicle operation will be in accordance with all applicable laws. Emergency lights and siren will always be utilized when driving Code Three.

II. GENERAL.

A. JUSTIFICATION FOR EMERGENCY OPERATION.

1. An incident requiring a response to prevent further injury and/or death to any person.
2. Any incident requiring the immediate presence of a law enforcement officer to prevent a dangerous situation from escalating.
3. Apprehension of a fleeing felon or other serious law violator. Refer to Sheriff's Office Policy Section 1.06.52

B. EMERGENCY VEHICLE OPERATION.

1. Authorization for operating an emergency vehicle in an emergency situation may be made by the Deputy driving the vehicle, a Patrol Supervisor, or a Patrol Manager.
2. Emergency lights and siren on emergency vehicles will be used to clear traffic for emergency vehicle and/or signal a suspect to stop. Neither the siren nor the emergency lights alone are sufficient.
    a. Except when in immediate pursuit or when affecting a traffic stop, the speed traveled should normally not exceed 20 mph over the posted speed limit in an emergency response.
    b. Blind intersections should not be entered at a speed greater than 15 mph.
    c. Emergency vehicles may proceed through traffic control devices and intersections only when it is safe to do so.

3. A safe distance shall be maintained between emergency vehicles on the same road.

4. The first unit arriving at the scene of an emergency shall evaluate the situation and advise the Communications Center as soon as possible of the number of different units required.

C. CODE THREE TRANSPORTS.

1. When providing emergency transports of persons or whole blood, the driver will consider the following:

a. The nature of the emergency;

b. The dangers and hazards involved; and

c. The emotional condition of the person being transported.

2. The Code Three escort of another vehicle that is not equipped with emergency lights and siren will only be authorized by the Patrol Sergeant when no other alternative is available to save human life.

D. DISCONTINUANCE OF EMERGENCY OPERATION. Deputies should not feel compelled to continue a Code Three response when conditions escalate to a degree that places the safety of the Deputy or others in extreme jeopardy. Conditions that must be evaluated continuously are:

1. Capabilities of the Deputy to control the situation;

2. Speed in relationship to traffic and other road conditions;

3. Degree of emergency, urgency, or threat to others; and

4. Deputies will evaluate the conditions and circumstances in order to arrive at a proper decision.

III. PROCEDURE 1.

A. DEPUTY'S RESPONSIBILITIES.

1. A Deputy initiating the use of emergency lights and siren will notify the Communications Center as soon as possible of the following:

a. That the unit is responding Code Three;

b. A brief description of the situation;

c. The direction of travel; and

d. The location of the incident.

2. A Deputy operating a vehicle Code Three will ensure that the Patrol Sergeant is notified, either via the Communications Center or by the vehicle's radio. Such notification will include the purpose for the Code Three and the need for any additional assistance. Exception: Temporary use of emergency lights and siren for the purpose of affecting a vehicle traffic stop in a non-pursuit situation requires no notification.

IV. PROCEDURE 2.

A. PATROL SERGEANT. The Patrol Sergeant will monitor and evaluate any Code Three response. If the Sergeant determines that the potential danger outweighs the need for the Code Three response, discontinue the Code Three response.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.54**
	RELATED ORDERS: CVC 16000, 16002, 16003, 17001, 17002,17003, 17004; California Government Code Section 825; County Administrative Bulletins 308.1, 407.5.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 10-5-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Vehicle Accident Reporting**	

I. POLICY.

A. The Office of the Sheriff strives to develop driving techniques which minimize the frequency of vehicle accidents. To develop such techniques, the cause and circumstances surrounding an accident must be determined. Therefore, all accidents involving on-duty Office of the Sheriff employees or off-duty employees driving County-owned vehicles shall be fully and fairly investigated.

II. DEFINITIONS.

A. ACCIDENT REPORT FORM. Refers to County Vehicle Accident Report form.

B. TRAFFIC COLLISION REPORT. Refers to an official traffic collision report completed by a law enforcement agency.

III. GENERAL.

A. REPORTABLE ACCIDENTS.

1. All vehicle accidents involving on-duty employees, either in a County vehicle or a private vehicle, and off-duty employees in a County vehicle shall be reported and subject to this policy. Additionally, off-duty employees involved in a vehicle accident causing fatal or serious injuries may be subject to the procedures in Section 1.06.62 of this manual, "Police Involved Fatal or Serious Injury Incidents."

2. On-duty vehicle accidents are listed in two categories: those requiring a "Traffic Collision Report" and those requiring only "County Reporting".

3. Traffic Collision Report Required. Accidents requiring an official outside traffic investigation and Traffic Collision Report include, but are not limited to:

   a. Accidents resulting in death or bodily injury

   b. Accidents resulting in major damage and/or towing of any vehicle

   c. Accidents involving any violation or possible violation of the California Vehicle Code.

d. Accidents involving other than minor damage to the County vehicle. Example: a small dent or paint transfer does not require a Traffic Collision Report.

e. Accidents resulting in any damage to private property.

4. The Department is responsible for the investigation of boating accidents. There is no requirement for an outside investigation into an Office of the Sheriff boat accident.

5. County Reporting Required.

a. The following vehicle accidents require "County" and Department reporting.

- All accidents that require the "Traffic Collision Report"
- Accidents in which there is no damage to property, other than minor damage to the County vehicle involved, and the accident doesn't meet any of the other criteria listed in "B"
- Malicious damage to County vehicles.

b. Vehicle accidents involving bodily injury or where the County vehicle has collided with the rear of another vehicle shall be reported immediately by telephone to the Office of the County Administrator Risk Management Division, Assistant Risk Manager, [redacted]

c. The completed County Vehicle Accident Report will be routed to the County Administrator's Office, Risk Management Division at: 2530 Arnold Dr. Ste 140, Martinez, CA 94553.

B. INVESTIGATIVE AND REPORTING RESPONSIBILITY.

1. Official Traffic Collision Report. An official traffic collision report will be taken and investigated by an outside agency, dictated by the location of the accident as follows:

a. An accident in the unincorporated area of the County or in contract cities shall initially be investigated by the Patrol Sergeant responsible for that area. The Patrol Sergeant will determine the need to involve the California Highway Patrol based upon the following criteria: potential civil action, extensive property damage, or an irate citizen. If the California Highway Patrol is needed, the affected Patrol Sergeant should contact the California Highway Patrol Supervisor and request their response. Contract cities shall not utilize adjacent contract cities as reporting and investigating agencies. Contract cities shall adhere to the aforementioned procedures.

b. An accident in incorporated cities without a contract with the Department for police services shall be investigated by the local police department. In any event, Department employees involved in a vehicle accident will not investigate their own accident; but will cooperate with the investigating agency.

2. County Accident Report and Employee Inter-office Memo.

a. Employees who are involved in a vehicle accident unless prevented by injury, are responsible for completing the County Accident Report Form in detail, and

b. An inter-office memo directed to their Division Commander to include the complete description of the circumstances involved in the accident.

3. Department Photographs and Reports. A Patrol Division Sergeant will be dispatched to the scene of all accidents that occur within Contra Costa County involving Office of the Sheriff employees. The Patrol Sergeant will do the following:

a. Take photographs of the vehicles involved; as well as the roadway and any other elements that may have contributed to the accident.

b. If there are employee injuries involved, ensure that the procedures in Policy Section 1.05.74, "Notification and Reporting on Duty Injuries, Accidents or Death" are utilized.

c. Ensure that the County Accident Report Form and an inter-office memo from the involved employee are completed and turned in to the employee's Division Commander prior to the end of shift if the accident occurred on-duty, if it occurred off-duty this must be completed upon their return to work. If the employee is unable to complete the County Accident Report Form and inter-office memo, the Sergeant will complete the County Accident Report Form and note this in the inter- office memo to the employee's Division Commander.

d. Complete an inter-office memo to the employee's Division Commander outlining the following:

- Circumstances surrounding the accident
- Number of photographs attached to the report
- Traffic Collision Report number and the agency taking the report, if any
- Whether or not all the involved employees and witnesses were interviewed and what they said.

e. Initial and date the damaged areas on the County vehicle with a waterproof marking pen.

4. If the accident occurred outside of Contra Costa County and/or a Patrol Sergeant is not able to respond the involved employee will be responsible for the following:

a. Contacting the appropriate law enforcement jurisdiction and requesting that they take an accident report.

b. Take photographs of all involved vehicles.

c. Report the accident to their immediate supervisor as soon as practical.

C. PRIVATE INVESTIGATIONS OF COUNTY-INVOLVED TRAFFIC ACCIDENTS.

1. Occasionally, an employee will be contacted directly by a private investigator or similar person requesting information regarding a contract city or County-involved traffic accident. When this occurs, the following steps should be taken.

    a. Refer the person to the Technical Services Division Records Unit to obtain a copy of the traffic accident report.

    b. Refer the person to the Office of the County Administrator, Risk Management Division. Risk Management will do the following:

        - Provide the appropriate information to the requesting person.

        - Determine if any potential County liability exists.

        - Advise this Department on how to proceed, and provide legal counsel, if required.

D. MALICIOUS MISCHIEF/UNREPORTED DAMAGE.

1. Malicious Mischief. In cases involving damage to County vehicles resulting from malicious mischief, a County Vehicle Accident Report will be completed by the employee responsible for the County vehicle at the time the damage occurred. A crime report will be completed. If the damage occurs within the county, a Patrol Sergeant will respond to obtain photographs and to inspect the crime scene. The Sergeant will submit a supplement to the original crime report, and route a copy of the report to the employee's Division Commander.

2. Unreported Damage.

    a. In cases of unreported damage to County vehicles, the employee discovering the damage will immediately call his/her Supervisor. The Supervisor will initiate a complete investigation to determine who was driving the vehicle and the cause of damage.

    b. If the Supervisor identifies the employee who drove the vehicle when the damage occurred, the employee will be directed to complete the County Accident Report Form and an inter-office memo as described in the preceding "Investigative and Reporting Responsibility" section.

c. If the Supervisor is unable to identify the employee who drove the vehicle when the damage occurred, he/she will direct the employee reporting the damage to complete the County Accident Report Form and an inter-office memo as described in the "Investigative and Reporting Responsibility" section. The Supervisor will complete an inter-office memo noting that the reporting employee is not to be considered responsible for the damage.

IV. PROCEDURE.

A. DRIVER'S RESPONSIBILITIES.

1. Employees who are involved in a vehicle accident, unless circumstances prevent compliance (i.e., injuries), shall:

   a. Ensure that first aid is provided and medical assistance is requested when needed.

   b. Notify the Patrol Sergeant responsible for the area of occurrence if the accident occurred within Contra Costa County and request any additional assistance required.

   c. If the accident occurred outside of Contra Costa County call the appropriate Law Enforcement agency having jurisdiction to take an accident report.
      1. Report the accident to your immediate supervisor as soon as practical.

   d. Do not make any admissions or sign any statements as to negligence, fault, or liability.

   e. Identify all witnesses and record their names and addresses.

   f. Complete an inter-office memo, as previously outlined, and the County Vehicle Accident Report Form, both of which are to be turned in prior to the end of shift, or upon return to work if off-duty.

2. Employees who are passengers in a County vehicle involved in an accident will adhere to the basic steps covered in "A" when applicable.

B. PATROL SERGEANT RESPONSIBILITIES. The Patrol Sergeant in the area of the accident shall:

1. Respond to the scene and ensure that a proper investigation is being conducted.

2. Sergeants will refrain from making any judgements or comments about fault, negligence or liability to anyone involved in the accident, including the employee.

3. Ensure the basic steps in Procedure 1 are being implemented.

4. Ensure notification of the Office of the County Administrator, 646-4155, in the event of bodily injury or if the County Vehicle has collided with the rear of another vehicle.

5. Ensure any employee injuries are properly reported to the employee's manager or Watch Commander.

6. Photograph the accident scene and involved vehicles.

7. Complete an inter-office memo to the employee's Division Commander, as previously outlined, and have it submitted within 24 hours after the accident.

C. ROUTING OF DOCUMENTATION.

1. Division Commanders, upon receipt of a County Accident Report Form, photographs, and memos from the drivers and Supervisors, shall route the documents as follows:

   a. Submit the documents to the Internal Affairs Lieutenant via Blue Team.

   b. Send one copy of each document to the Technical Services Division, Fleet Manager.

2. The Internal Affairs Lieutenant shall:

   a. Retain and file one copy of each document; and

   b. Add the information to the Internal Affairs Vehicle Accident database.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.55**
	RELATED ORDERS: California Vehicle Code Sections 16000, 16002, 16003, 17001, 17002, 17003, 17004; California Government Code Section 825; County Administrative Bulletin 308.1, 407.7; Sheriff's Office Policy Sections 1.06.33.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 11-08-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Accident Review**	

I. POLICY.

A. All on-duty vehicle accidents shall be reviewed to determine if the involved driver is in need of driver training and monitoring.

II. DEFINITIONS.

A. ACCIDENT REPORT FORM. Refers to the County Vehicle Accident Report form.

B. TRAFFIC COLLISION REPORT. Refers to an official traffic collision report completed by a law enforcement agency.

C. PREVENTABLE ACCIDENT. Any in which the County driver could have reasonably taken evasive action to avoid the collision.

II. GENERAL.

A. ACCIDENT REVIEW.

1. The accident review process will normally occur after the completion of the Vehicle Accident Reporting procedures covered in Sheriff's Office Policy Section 1.06.54.

2. The review process is conducted by the responding Patrol Sergeant. In cases where a Patrol Sergeant did not respond this will be done by the employee's immediate supervisor. The Supervisor or Sergeant will review all available and relevant documentation on the accident, to include:

a. The County Accident Report Form and driver's memo;

1. Sergeants and Supervisors are not required to complete the Accident Review Finding box if a more thorough investigation is needed. If further investigation is needed to determine fault write, "Investigation Pending", in the Supervisor Investigation box. If no further investigation is needed the Accident Review box shall be completed.

b. Patrol Sergeant's or Supervisor’s investigation;

c. Photographs;

d. Official Traffic Collision Report;

e. Available witness statements;

f. Related Sheriff’s Office policies and procedures;

g. Applicable Vehicle Code and Penal Code sections; and

h. Any other investigation deemed necessary by the Sergeant or Supervisor;

3. Once the review is complete, the Patrol Sergeant or Supervisor will document their findings in a memo to the involved employee’s Captain or Division Commander. The memo will include:

a. A summary of the incident;

b. Cost of repairs, if available;

c. Assessment of the damage;

d. Identified violations of policy and procedure;

e. Identified California Penal Code or Vehicle Code violations.

4. Should the Sergeant or Supervisor determine the driver violated any policies, procedures, California Penal and/or Vehicle code sections, corrective action and training will be initiated for the driver. This process may include the use of the Corrective Counseling System or the Personnel Management Regulations. The Sergeant or Supervisor will review the employee's personnel file, and discuss the facts with the employee’s chain of command, before determining what corrective action and training are appropriate.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.60
	RELATED ORDERS: U.S. Constitution First Amendment; CA Constitution Article I, Sections 2 & 3; PC 830.10 Exhibiting Identification Number or Name of Peace Officer, AB 48, SB 98, PC 13652, PC 13652.1 CCCSO POLICIES: 1.02.26 Mutual Aid; 1.06.21 Unusual Incident Notification Procedure; 1.06.27 Major Incident Critique; 1.06.41 Report Writing; 1.06.61 Use of Force; 1.06.78 News Media Relations	
ISSUE DATE: 7-10-2013 **REVISION DATE: 9-22-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Sheriff's Office Operations**	**SUBJECT:** **Crowd Control and Crowd Management**	

I. POLICY.

A. The Office of the Sheriff's Crowd Control and Management policy is established to provide direction for Deputies to distinguish between lawful assemblies, civil disobedience, and unlawful behavior in order to maintain public peace and order while upholding constitutional rights of free speech and assembly.

II. CONSTITUTIONAL ADHERENCE.

A. The rights all people have to march, demonstrate, protest, rally, or perform other First Amendment activities comes with the responsibility to not abuse or violate the civil and property rights of others. Law enforcement should not be biased by the opinions being expressed, nor by race, gender, sexual orientation, physical disabilities, appearances, or affiliation of anyone exercising his or her lawful First Amendment rights. Law enforcement personnel must have the integrity to keep personal, political or religious views from affecting their actions.

B. When it becomes necessary to control the actions of a crowd that constitutes an unlawful assembly, the commitment and responsibility of law enforcement is to control lawfully, efficiently, and with minimal impact upon the community. A variety of techniques and tactics may be necessary to resolve an unlawful assembly or to disperse an unruly crowd. Only that force which is objectively reasonable may be used to arrest violators and restore order.

III. USE OF FORCE.

A. Nothing in this policy overrides or in any manner modifies the Use of Force policy (Policy 1.06.61), and such policy shall be applicable in all instances to any actions taken pursuant to this policy.

IV. DEFINITIONS.

A. CROWD MANAGEMENT: Crowd management is defined as techniques used to manage lawful public assemblies before, during, and after an event for the purpose of maintaining the event's lawful status. Crowd management can be accomplished in part through coordination with event planners and group leaders, permit monitoring, and past event critiques.

B. CROWD CONTROL: Crowd control is defined as those techniques used to address unlawful public assemblies, including a display of formidable numbers of Deputies and Officers, crowd containment, dispersal tactics, and arrest procedures.

C. FIRST AMENDMENT ACTIVITIES: First Amendment activities include speech and expressive conduct (non-verbal expression) used to convey ideas and/or information, express grievances, or otherwise communicate with others.

1. Common First Amendment activities include, but are not limited to, speeches, demonstrations, vigils, picketing, distribution of literature, displaying banners or signs, street theater, and other artistic forms of expression. All these activities involve the freedom of speech, association, and assembly and the right to petition the government, as guaranteed by the United States Constitution (First Amendment) and the California Constitution (Article I, Sections 2 & 3).

2. The government may impose reasonable restrictions on the time, place, or manner of protected speech, provided the restrictions are justified and without reference to the content of the speech, and that they are narrowly tailored to preserve order and keep the peace.

D. DEMONSTRATION: Demonstration includes a wide range of First Amendment activities which require, or which may require traffic control, crowd management, crowd control, crowd dispersal, or enforcement actions.

1. Demonstration means a public display of sentiment, typically displayed in marches, protests, student walk-outs, assemblies, and sit-ins. Such events and activities usually attract a crowd of persons including participants, onlookers, observers, media, and other persons who may agree or may disagree with the sentiment being expressed by the demonstrators.

E. CROWD EVENT OR CROWD SITUATION: This policy covers all crowd events or crowd situations, including sporting events, festivals, concerts, celebratory crowds, and demonstrations as defined above.

V. GENERAL.

A. PLANNING.

1. Command staff shall be notified immediately of large or potentially disruptive demonstrations and/or crowd events.

2. The Incident Command System shall be used for managing crowds and acts of civil disobedience.

3. The Incident Commander shall be responsible for the development of a written operations plan.

4. The Incident Commander shall contact the on-call Duty Officer at the regional Fusion center, the Northern California Regional Intelligence Center (NCRIC), for support in the pre-event assessment. The 24-hour Duty Officer for the NCRIC can be reached at [redacted]. A pre-event assessment from the Fusion center is required for all protest events, whether spontaneous or planned. When appropriate and possible, the Office of the Sheriff's designated Terrorism Liaison Officer (TLO) shall assist the Incident Commander in maintaining coordination with the NCRIC.

5. The Incident Commander shall make every effort to establish contact and communication with the event or demonstration planners.

   i. Stakeholder involvement is critical to the overall success of managing crowd events and/or civil disobedience during demonstrations. If knowledge exists that a demonstration or crowd event may happen or will happen, the Incident Commander shall proactively and repeatedly make every reasonable attempt to establish and to maintain communication and cooperation with representatives or leaders of the demonstration or crowd event, without regard to whether a permit has been applied for or issued.

   ii. When planning for and responding to demonstrations, crowd events, and civil disobedience situations, Incident Commanders assigned to these incidents shall facilitate the involvement of stakeholders. If and when communication is established, personnel shall make every effort to identify representatives or leaders of the event and identify a primary law enforcement liaison. The primary law enforcement liaison should be requested to be in continuous contact with an assigned law enforcement representative, preferably the Incident Commander or designee with continuous access to the Incident Commander.

   iii. A group's failure to respond to the Office of the Sheriff's attempts to establish communication and cooperation prior to a demonstration shall not mitigate this Office's efforts to establish liaison and positive communication with the group as early as possible at the scene of the demonstration or crowd event.

6. Spontaneous demonstrations or crowd events, which occur without prior planning and/or without prior notice to the Office of the Sheriff present less opportunity for planning and prevention efforts. Nonetheless, the same policies and procedures concerning crowd management, crowd control, crowd dispersal, and law enforcement responses to violence and disorder apply to a spontaneous demonstration or crowd event situation as to a planned demonstration

or crowd event. Incident Commanders shall involve representatives of demonstrators or crowd events when planning and responding to both planned and spontaneous events.

7. The Incident Commander shall, as appropriate, coordinate with and use the Mutual Aid Mobile Field Force (MAMFF), the Special Weapons and Tactics Team (SWAT), and such other Office of the Sheriff and other law enforcement special teams as may be necessary to preserve or restore order and keep the peace.

B. DEPLOYMENT.

1. Crowd dispersal and general strategies about crowd containment or crowd redirection, multiple simultaneous arrests, planned individual arrests, or planned use of force shall be determined at the level of the Incident Commander or higher.

   i. If such decisions are made by higher ranking off-site Office of the Sheriff Commanders, every effort should be made to first consult the Incident Commander concerning the state of affairs in the field and the potential consequences of the decision.

   ii. All such decisions shall be documented in writing with regard to time, the identity of the person making the decision, and the precise decision and directions given. Such documentation shall be made at the time of the decision or as soon thereafter as possible and included in an After Action Report.

   iii. This directive shall not preclude individual commanders, supervisors, and Deputies from defending themselves or others from imminent danger when the delay in requesting permission to take action would increase the risk of injury.

2. Communication with the identified law enforcement liaison shall continue even if enforcement actions commence.

3. As staffing permits, Deputies should be deployed to the best available vantage points to observe and report crowd actions. Observation may be assisted by the use of video cameras focused on public areas.

4. Lines of control should be established, especially in events that involve protesters with opposing views. Whenever possible, hostile factions should be separated.

5. Considering the nature of the subject crowd is an important factor in responding properly to its behavior.

   i. Crowds may vary from cooperative or celebratory to non-compliant, hostile, and combative. Organized demonstrations in which some engage in coordinated, nonviolent civil disobedience should be distinguished, to the extent possible, from crowds in which substantial numbers of people are engaged in more serious unlawful acts.

C. POLICING A CROWD.

1. Sufficient resources to make multiple simultaneous arrests should be available at demonstrations where such arrests are a reasonable possibility.

    a. Where additional resources are needed, the Incident Commander shall determine whether it is appropriate for such additional resources to be deployed so they are not readily visible to the demonstrators, as a large and visible law enforcement presence may impact the exercise of free speech rights.

2. When possible, Deputies should be at their posts well in advance of arriving participants.

3. Each Deputy shall wear a badge, nameplate, or other device on the outside of his or her uniform or on his or her helmet which bears the name of the Deputy, as required by Penal Code§ 830.10.

    a. The Deputy's name shall be clearly visible at all times. The letters or numerals on helmets, jackets, and vests shall be clearly legible. No Deputy shall conceal his or her identify.

4. Crowd control and crowd dispersal, as well as a show of force in crowd control situations, should be accomplished whenever possible using the Office of the Sheriff's specialized units rather than on-duty Patrol Deputies.

5. It is essential to distinguish between the lawful and unlawful conduct of separate demonstrators. The Incident Commander shall seek to minimize the risk that force and arrests may be directed at innocent persons.

6. Deputies shall avoid negative verbal engagement with members of the crowd. Generally, the sole basis for verbal contact with a crowd is to provide clear instructions.

    a. Verbal abuse, unless unlawful, against Deputies shall not constitute a reason for an arrest or for any use of force against such individuals.

7. No action shall be taken solely on the content of the opinions being expressed nor by the race, gender, sexual orientation, physical disabilities, appearances, or affiliation of persons exercising their lawful rights.

8. Deputies must maintain professional demeanor despite behavior of demonstrators.

9. Deputies in non-violent crowd situations shall not deploy weapons before a dispersal order is given or other enforcement action is implemented.

10. Deputies shall not be sent into an obviously hostile crowd solely for the purpose of communication. Deputies shall not penetrate a crowd for an individual arrest unless the targeted individual is involved in

serious criminal conduct and the decision to move into the crowd is made by a supervisor or commander.

11. The Incident Commander and supervisors ensure that the law enforcement mission is accomplished as efficiently and unobtrusively as possible.

    a. The use of force shall be restricted to circumstances authorized by law and to the degree reasonably necessary in light of the circumstances facing law enforcement personnel. This directive does not preclude Deputies from taking appropriate action to direct crowd and vehicular movement; enforce ordinances and statutes; and employ the physical force necessary to maintain the safety of the crowd, the general public, law enforcement personnel, and emergency personnel.

VI. RESPONSES TO CROWD SITUATIONS.

A. EVENT OR INCIDENT (WHETHER SPONTANEOUS OR PLANNED).

1. The applicable Station House Commander, or during evening hours the Watch Commander, shall respond to the scene of spontaneous events, when practical, and take command of the incident as the Incident Commander until relieved by a ranking officer.

    a. The Incident Commander shall declare over the Sheriff's radio that he or she has assumed command of the incident. When practical, a command post shall be established as soon as possible.

2. An immediate assessment of the situation is essential for effective law enforcement response. The Incident Commander must ascertain the following information at the earliest possible time:

    a. Determining the time, location, and type of activities planned.

    b. Estimating the number of persons expected to participate or observe.

    c. Analyzing the expected means and routes of travel for participants and expected times of arrival and departure.

    d. Partnering with the state and or the NCRIC to conduct a public safety assessment of the event and its organizers to determine what public safety concerns might be associated with the event and whether violence or other criminal conduct is anticipated or might reasonably occur at the event.

B. PLANNED EVENT INVOLVING POTENTIALLY LARGE CROWDS.

1. Upon notification, the Incident Commander shall develop a written operations plan.

a. The Incident Commander shall be responsible for the overall coordination of the event as well as for crowd control and management.

b. Operations plans for large events requiring the redeployment of personnel from regular assignments shall be approved by the Undersheriff.

c. The Incident Commander shall designate an Event Coordinator, who shall gather and analyze intelligence, meet in advance with event sponsors and group leaders to exchange information and to present the Office of the Sheriff's philosophy and intent, prepare operations plans as requested, assure coordination with the NCRIC, and perform such other duties as assigned by the Incident Commander.

2. Personnel creating an operations plan to address a large crowd event should anticipate a variety of scenarios and devise a law enforcement response for each. Such scenarios and responses should be made part of the final plan and communicated to the affected personnel.

3. Personnel shall be briefed on the operations plan and their particular assignments before deployment.

VII. PERMISSIBLE CROWD CONTROL AND CROWD DISPERSAL TECHNIQUES.

A. IN THE EVENT OF AN UNLAWFUL ASSEMBLY.

1. The Incident Commander shall generally order Deputies to make multiple simultaneous arrests to deal with a non-violent demonstration that fails to disperse and voluntarily submits to arrest as a form of political protest.

2. The Incident Commander shall determine what control action, if any, will be taken to address a given crowd situation.

3. The Incident Commander shall constantly reassess and adjust tactics, as necessary, as the crowd's actions change.

4. The Incident Commander shall consider and take reasonable and appropriate steps to ensure the safety of bystanders.

5. When Deputies take action to move or disperse a crowd, steps should be taken to ensure that the crowd is not moved into a position or place that could be dangerous to persons in the crowd or bystanders, such as pushing them up against glass window.

B. WHEN AN UNLAWFUL ASSEMBLY MAY BE DECLARED.

1. The definition of an unlawful assembly has been set forth in Penal Code Section 407 and interpreted by court decisions. The terms, "boisterous" and "tumultuous," as written in Penal Code Section 407, have been interpreted as "conduct that poses a clear and present danger of imminent violence" or when the demonstration or crowd event is for the purpose of committing a criminal act.

a. Deputies may not disperse a demonstration or crowd event before demonstrators have acted illegally or before the demonstrators pose a clear and present danger of imminent violence.

2. The mere failure to obtain a permit, such as a parade permit or sound permit, is not a sufficient basis to declare an unlawful assembly. There must be criminal activity or a clear and present danger of imminent violence.

3. The fact that some of the demonstrators or organizing groups have engaged in violent or unlawful acts on prior occasions or demonstrations is not grounds, standing alone, for declaring an assembly unlawful.

4. Unless emergency or dangerous circumstances prevent negotiation, crowd dispersal techniques shall not be initiated until after attempts have been made through contacts with the law enforcement liaisons and demonstration or crowd event leaders to negotiate a resolution of the situation so that the unlawful activity will cease and the First Amendment activity can continue.

C. DECLARATION OF UNLAWFUL ASSEMBLY.

1. When the only violation present is unlawful assembly, the crowd should be given an opportunity to disperse rather than face arrest.

a. Crowd dispersal techniques shall not be initiated until the Incident Commander or designee has (or designees have) made repeated announcements to the crowd, asking members of the crowd to voluntarily disperse and informing them that, if they do not disperse, they will be subject to arrest.

b. These announcements must be made using adequate sound amplification equipment in a manner that will ensure that they are audible over a sufficient area. The dispersal orders should be repeated after commencement of the dispersal operation so that persons not present at the original broadcast will understand that they must leave the area. The announcements shall also specify adequate egress or escape routes.

c. The Incident Commander will ensure that all such announcements are made in such a way that they are clearly audible to the crowd and to deputies.

i. The Long Range Acoustic Device (LRAD) may be used to ensure that public announcements are heard when appropriate considering crowd size, distance, and ambient volume. Only LRAD devises purchased by the Office of the Sheriff may be used as such devises are not equipped with sonic weapon capability. The Incident Command shall assure, prior to the use of the LRAD, that the volume output is set at a level that is appropriate

for the delivery of the announcement without unduly causing harm to those persons (demonstrators and others) in the sound path.

2. Unless an immediate risk to public safety exists or significant property damage is occurring, sufficient time will be allowed for a crowd to comply with dispersal commands before action is taken.

3. The Incident Commander should ensure that the name of the individual making the dispersal order and the date/time each order was given is documented.

4. Dispersal orders should not be given until Deputies are in position to support/direct crowd movement.

5. Personnel shall use the following dispersal order:

   a. "I am (rank/name), a peace officer in the Contra Costa County Office of the Sheriff. I hereby declare this to be an unlawful assembly, and in the name of the people of the State of California, command all those assembled at (state location) to immediately leave. If you do not do so, you may be arrested or subject to other law enforcement action, including the use of force which may result in serious injury. Section 409 of the Penal Code prohibits remaining present at an unlawful assembly. If you remain in the area just described, regardless of your purpose, you will be in violation of Section 409. The following routes of dispersal are available (state routes). You have _____ minutes to leave. If you refuse to move, you will be arrested."

   b. Add the following chemical warning only if use is anticipated:

      i. "If you refuse to move, chemical agents may be used."

   c. The dispersal order must be given in English. It may, however, also be given in such other languages as are appropriate in the judgment of the Incident Commander.

6. When a command decision is made to employ crowd dispersal techniques, attempts to obtain voluntary compliance through announcements and attempts to obtain cooperation through negotiation shall both be continued. At any point at which a crowd is dispersing, whether as a reaction to law enforcement dispersal techniques, through voluntary compliance, or as a result of discussion or negotiation with crowd leaders, dispersal techniques shall be suspended and the crowd shall be allowed to disperse voluntarily. This directive does not preclude a command decision to reinstate dispersal techniques if crowd compliance ceases.

D. APPROVED TACTICS AND WEAPONS TO DISPERSE OR CONTROL A NON-COMPLIANT CROWD.

1. If negotiation and verbal announcements to disperse do not result in voluntary movement of the crowd, Deputies may employ additional crowd dispersal tactics, but only after orders from the Incident Commander or the designated supervisory officials.

   a. The use of these crowd dispersal tactics on a non-compliant crowd shall be consistent with the Office of the Sheriff's policy of using the minimal law enforcement intervention needed to address a crowd management or control issue.

   b. Law Enforcement Formations and Use of Batons.

      i. If a crowd refuses to disperse after the required announcements, squad or platoon formations (skirmish line, wedge, echelons, etc.) may be used to move the crowd along.

      ii. Batons shall not be used for crowd control, crowd containment, or crowd dispersal except as specified below.

         a) Batons may be visibly displayed and held in a ready position during squad or platoon formations.

2. Chemical and Impact Projectile Weapons will be used in accordance with law and CCCSO policy. Refer to Sheriff's Office Policy Section 1.06.61, Use of Force.

E. REPORTING USE OF FORCE.

1. Members who use force, or witness the use of force by another member of this office, will follow reporting procedures as described in the Sheriff's Office Use of Force Policy, 1.06.61.

F. MUTUAL AID MOBILE FIELD FORCE (MAMFF).

1. In recognition that MAMFF is a multi-agency force, nothing in this policy shall prohibit MAMFF members from other agencies from operating according to the policies of their respective agencies. MAMFF membership is comprised of 25 agencies within Contra Costa County. The Mutual Aid program (Policy 1.02.26 "Mutual Aid") mandates the implementation of cooperative law enforcement agreements with neighboring agencies and counties, and provides for the quick and efficient augmentation of resources in the event of an emergency situation requiring capabilities beyond those of the affected agency.

VIII. THE FOLLOWING ARE PROHIBITED DURING CROWD CONTROL EVENTS.

A. FIRE HOSES.

1. Fire hoses (i.e., water under pressure) shall not be used for crowd control, crowd containment, or crowd dispersal.

B. LAW ENFORCEMENT VEHICLES.

1. Law Enforcement vehicles (including Motorcycles) may not be used for crowd dispersal but may be used for purposes of observation, visible deterrence, traffic control, transportation, and area control during a crowd event, except by Deputies who have received specific training in the use of such techniques, i.e. MAMFF training.

C. SPECIALTY IMPACT LESS-LETHAL WEAPONS.

1. Skip Fired Specialty Impact Less-Lethal Munitions (Wooden Dowels) are prohibited. Stinger Grenades shall not be used against persons who are protesting civilly and passively and who are not directly involved in a criminal act. Stinger ball grenades will not be used against individuals engaged in unlawful conduct where such use might result in passive resisters being hit. When deemed appropriate by the Incident Commander, the soft blue tip 40mm rounds may be used to target a specific individual in accordance with Sheriff's Office Policy Section 1.06.61, Use of Force.

D. ELECTRONIC WEAPONS (EW'S).

1. EW's such as tasers, stun guns, and stun shields shall not be used for crowd management, crowd control, or crowd dispersal during demonstrations or crowd events.

E. AEROSOL HAND- HELD CHEMICAL AGENTS.

1. Aerosol, hand-held, pressurized, containerized chemical agents that emit a stream shall not be used for crowd management, crowd control, or crowd dispersal during demonstrations or crowd events. Aerosol hand-held chemical agents may not be used indiscriminately against a crowd or group of persons, but only against specific individuals who are engaged in specific acts of serious unlawful conduct or who are actively resisting arrest.

2. Members shall use the minimum amount of the chemical agent necessary to overcome the subject's resistance.

3. Aerosol chemical agents shall not be used in a demonstration or crowd situation or other civil disorders without the approval of a supervisor or command officer.

F. MEDIA ACCESS.

1. Any law enforcement officer is prohibited from closing the immediate area surrounding any emergency field command post or any other command post, or established police line, or rolling closure at a demonstration, march, protest, or rally where individuals are engaged primarily in constitutionally protected activity, require that a duly authorized representative of any news service, online news service, newspaper, or radio or television station or network, **ARE** allowed to enter those closed areas and a law enforcement officer is prohibited from intentionally assaulting, interfering with, or obstructing a duly authorized representative

who is gathering, receiving, or processing information for communication to the public. It is also prohibited for a duly authorized representative who is in a closed area and gathering, receiving, or processing information from being cited for the failure to disperse, a violation of a curfew, or a violation of other, specified law. If a representative is detained by a law enforcement officer, the representative is to be permitted to contact a supervisory officer immediately for the purpose of challenging the detention, unless circumstances make it impossible to do so.

IX. ARRESTS.

A. MULTIPLE SIMULTANEOUS ARRESTS.

1. The Incident Commander shall make the decisions to engage in selective individual arrests or multiple simultaneous arrests as a crowd control technique with consideration given to the following factors:

   a. The likelihood that law enforcement action will improve the situation relative to taking no action.

      i. Such consideration shall include the seriousness of the offense(s) as opposed to the potential for the arrest to escalate violence or unlawful activity by crowd members.

   b. Whether individual or mass arrests will be more effective in ending the criminal activity at issue.

   c. Whether clear and secure escape routes have been established for the crowd and law enforcement.

   d. Whether communication has been established with crowd representatives.

   e. What contingency plans are available.

   f. What types of force can be used in effecting the arrests, if necessary.

2. The Incident Commander shall ensure that evidentiary items are recovered and preserved, when possible, to corroborate unlawful acts observed by personnel.

B. ARRESTS OF NON-COMPLIANT PASSIVE DEMONSTRATORS.

1. The proper response to such actions is to verbally advise the demonstrators that they will be subject to arrest if they choose to remain, allow time for some or all the demonstrators to cease the unlawful activity, and to arrest those who deliberately remain in violation of the law.

2. In some situations, demonstrators may lock arms or use locking devices to impede the arrest process.

   a. The Deputy shall continue to give verbal directions to give the arrestee a chance to comply before force is used to unlock arms or implements used to remove locking devices.

C. ARREST OF JUVENILES.

1. Juveniles arrested in demonstrations shall be handled consistent with Office of the Sheriff policy on arrest, transportation, and detention of juveniles.

X. DOCUMENTATION.

A. VIDEO AND PHOTOGRAPHIC RECORDING.

1. Deputies will not videotape or photograph lawful First Amendment protest events, gatherings, or assemblies solely for intelligence gathering purposes. This policy is not meant to preclude the photography of criminal activities for law enforcement purposes.

2. Videotaping and photographing of First Amendment activities shall take place only when authorized by the Incident Commander or other supervisory officer.

3. Each camera operator shall provide information to be included in a crime report.

4. Unless they provide evidence of criminal activity, videos or photographs of demonstrations shall not be disseminated to other government agencies, including federal, state, and local law enforcement agencies. Where evidence of criminal activity is recorded, should such videos or photographs be disseminated or shared with another law enforcement agency, a record should be created and maintained noting the date and recipient of the recording.

XI. PUBLIC INFORMATION AND THE MEDIA.

A. The media have a right to cover demonstrations, including the right to record the event on video, film, or in photographs.

B. Deputies shall accommodate the media in accordance with the News Media Relations Policy (Policy 1.06.78).

C. The media shall be permitted to observe and to videotape the demonstration and the law enforcement response. Even after a dispersal order has been given, clearly identified media shall be permitted to carry out their professional duties in any area where arrests are being made unless their presence would unduly interfere with the enforcement action.

D. Self-identified legal observers and crowd monitors do not have the same legal status as the professional media and are, therefore subject to all laws and orders similar to any other person or citizen.

1. Such persons must comply with all dispersal orders similar to any other person or citizen.

a. A supervisor or commander may, at his or her discretion, permit a person who self-identifies as a legal observer or crowd monitor to remain in an area after a dispersal order if circumstances permit and if the person's presence would not unduly interfere with the enforcement action.

b. The media, legal observers, crowd monitors, law enforcement liaison, and/or organizers shall never be targeted for dispersal or enforcement action because of their status.

E. On request, the Incident Commander or a supervisor may inform the media, legal observers, crowd monitors, law enforcement liaison, and/or organizers about the nature of any criminal charges to be filed against arrestees, the location where arrestees are being taken, and the Office of the Sheriff's intent for arrestees to be cited out or booked at a detention facility.

XII. POST EVENT MANAGEMENT.

A. At the conclusion of the event, the Post Event Stage should be initiated. The After Action Review (AAR) should be according to NIMS (National Incident Management System) guidelines in order to assess and evaluate organizational performance.

B. Information collected as part of the pre-event assessment or during the event should be evaluated to determine whether certain pieces of information should be retained to facilitate planning and preparation for future events or whether there is a criminal predicate that may necessitate the need to retain the information. Information regarding First Amendment activities should not be retained to facilitate planning and preparation for events that are unlikely to recur or for other administrative purposes, unless needed for criminal prosecution or if the information reaches the threshold for inclusion into a 28 CFR Part 23 criminal intelligence database.

C. The Incident Commander will coordinate with Command Staff personnel to ensure the following steps and procedures are met.

1. Operational.

a. Account for all personnel engaged in the incident and assess for personal injuries.

b. Identify and interview witnesses, suspects and victims as appropriate.

c. Debrief with all supervisors involved in the event.

d. Debrief with all personnel involved in the event, including support personnel if practical.

e. Identify and appropriately document any use of force and/or injuries.

f. Ensure all crime and administrative reports are completed in a timely manner.

g. Brief the Public Information Officer on the results of the event, such as the number of arrests, charges, number of injured (Deputy/civilian), so press inquires can be resolved expeditiously and appropriately.

h. Identify staffing/logistics issues for future operational periods or deployments.

i. Hold a Command Staff meeting to debrief the event and critique the actions conducted during the event.

j. The Incident Commander will ensure an after action report is completed in a timely manner.

2. Administrative.

a. Evaluation of Information. Information collected as part of the Pre-Event Assessment or during the event should be evaluated to determine whether certain pieces of information should be retained to facilitate planning and preparation for future events or whether there is a criminal predicate that may necessitate the need to retain the information. All information retained should meet the criteria established for inclusion into a 28 CFR Part 23 criminal intelligence database and the U.S. Department of Justice law Enforcement Guidelines for First Amendment-Protected Events.

b. Video and Photographic Images**.** Upon the conclusion of the event, all video or photographic images taken at the event shall be evaluated for legal and training purposes. The video or images captured will be stored as evidence at the Property Unit.

c. Retention of Information. The retention of information will be in accordance with 28 CFR Part 23. The Office of the Sheriff will limit its retention of information as much as possible to avoid the perception of maintaining files on groups or persons who engage in protected First Amendment activities. If deemed appropriate to retain, contact information of event organizers and event logistical information, along with the response summary and any press releases, should be placed only in an administrative file in order to provide law enforcement with historical perspective on the activity, in the event that event organizers or other organizations seek to hold additional demonstrations or other law enforcement agencies request information on the event.

d. Reporting. In addition to such reports as are required pursuant to this Policy and Policy 1.06.41 "Report Writing," the "Major Incident Critique" provided in Policy 1.06.27, if applicable to a Crowd Control and Management event, and the "Unusual Incident Notification Procedure" provided in Policy 1.06.21, shall be followed.

e. Evaluation and Feedback. At the conclusion of the event, the Support Services Bureau Assistant Sheriff or designee shall initiate a review of the full process that was undertaken for the event, including the Pre-Event Stage, Operational Stage, and Post-Event Stage. The purpose of this review is to ensure that law enforcement conducted an appropriate public safety assessment and properly responded to the event. Further, the

review should evaluate the execution of the Operations Plan and identify any deficiencies or lessons learned.

D. Within 60 days of each incident, the Sheriff's Office shall publish a summary on the agency's website of any incident in which a Deputy used an impact projectile weapon or chemical agent, as those terms are defined in AB 48 for crowd control.

1. The period may be extended for 30 days for demonstrated just cause but must be completed no later than 90 days from the time of the incident.

2. The Incident Commander shall complete a written summary of the incident and submit through the MAMFF chain of command for review. Upon completion of the review, the Support Services Bureau Assistant Sheriff shall coordinate with the agency's Media Relations Director to ensure appropriate website posting of the incident summary.

    a. The summary shall be limited to that information known to the agency at the time of the report and will include only the following:

        i. A description of the assembly, protest, demonstration, or incident, including the approximate crowd size and the number of officers involved.

        ii. The type of impact projectile weapon or chemical agent deployed.

        iii. The number of rounds or quantity of chemical agent dispersed.

        iv. The number of documented injuries as a result of the impact projectile weapon or chemical agent deployment. The justification for using the impact projectile weapon or chemical agent, including any de-escalation tactics or protocols and other measures that were taken at the time of the event to de-escalate tensions and avoid the necessity of using the impact projectile weapon or chemical agents.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.61**
	RELATED ORDERS: C.A.L.E. 1.1; PC 835-845, 2652.5, 12403, 12601; Board of Corrections, Minimum Jail Standards, Title 15; CCCSO 1.07.31, 1.07.12, 1.06.52, 1.06.35, 1.05.58, 1.05.70, 1.06.62; Police Executive Research Forum Conducted Energy Policy and Training Guidelines for Consideration 2005, SB 230, SB 1421, SB 16, AB 48, and AB 26.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 9-22-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Use of Force**	

I. POLICY.

A. Deputies shall use only that degree of force that is objectively reasonable to protect themselves and other or to overcome resistance to their lawful authority.

II. DEFINITIONS.

A. CHEMICAL AGENT: A substance in either liquid or solid form, intended to produce temporary irritation and physical discomfort in a person, containing formulations of chloroacetophenone (CN), chlorobenzylidene malononitrile (CS), or oleoresin capsicum (OC).

B. DEADLY FORCE: Any use of force that creates a substantial risk of causing death or serious bodily injury.

C. DISTRACTION DEVICE: A device that produces a loud report, brilliant flash, smoke, and may disperse small rubber balls in a circular pattern that is intended to temporarily distract and disorient a person.

D. DEPLOY: Making a force option ready for use by taking it out of a vehicle, holster, or other mode of carry.

E. DISCHARGE: Firing or activating a weapon.

F. POLICE INVOLVED DISCHARGE OF A FIREARM: Any police investigation directly involving two or more people in which an on-duty or off-duty police employee has fired his or her weapon as an intentional use of force that does not result in serious injury.

G. DISPLAY: Showing a weapon for effect without discharging it.

H. ELECTRONIC WEAPON: A device that uses propelled probes or direct contact and is designed to subdue a person by inducing involuntary muscle contractions that cause temporary incapacitation.

I. CYCLE: Single trigger pull and release resulting in an electrical charge for a duration of 5-seconds.

J. FORCE: Any physical effort, use, or discharge of a weapon used to control, restrain, or overcome the resistance of another.

K. IMPACT PROJECTILE WEAPON: Any device that is designed to, or that has been converted to expel or propel a projectile by any action, mechanism, or process for the purpose of incapacitating, immobilizing, or stunning a human being through the infliction of any less than lethal impairment of physical condition, function, or senses, including physical pain or discomfort.

L. AUTHORIZED PERSONNEL: All sworn personnel and other personnel specifically authorized and fully trained and certified, as necessary, to carry and use an Electronic Weapon (EW) as specified in this policy.

M. NON-DEADLY FORCE: Any use of force other than that which is deadly force. This includes any physical efforts used to control or restrain another, or to overcome the resistance of another, other than the mere application of temporary restraining devices on a compliant person.

N. DE-ESCALATION: De-escalation is the process of using strategies and techniques intended to decrease the intensity of a situation.

O. INTERCEDE: Includes but is not limited to, physically stopping the excessive use of force, recording the excessive force, if equipped with a body-worn camera, and documenting efforts to intervene, efforts to de-escalate the offending officer's excessive use of force, and confronting the offending officer about the excessive use of force.

P. USE OF FORCE REVIEW AND EVALUATION: The supervisory review and evaluation process related to the use of force incident and proper chain of command notification.

III. GENERAL.

A. DECISION TO USE FORCE. A Deputy's decision to use force shall take into consideration the facts and circumstances of each situation in a fair and unbiased manner. Deputies should utilize de-escalation techniques, crisis intervention tactics, and other alternatives to force when feasible. Factors a Deputy should consider when deciding to use force in a given situation include but are not limited to:

1. The severity of the crime at issue;
2. Whether the suspects pose an immediate threat to the safety of Deputies or others;
3. Whether the suspects are actively resisting arrest or attempting to evade arrest by flight;
4. The time available to make decisions;
5. Number of Deputies versus the number of suspects;
6. Proximity to potential weapons (the Deputy's or others);
7. Age, size, and relative strength of Deputy versus suspect;
8. Suspect's special knowledge or skill level;
9. Deputy's injury or exhaustion;

10. Suspect's mental illness, emotional disturbance, or drug usage and impact on pain tolerance or rationality of response;

11. Knowledge of/or prior contacts with suspect;

12. The opportunity when feasible to give a warning in cases where force may result in serious injury unless such a warning would increase the risk of greater injury to Deputies, citizens, or the suspect;

13. Potential for and risk of escape;

14. Environmental factors, i.e., lighting, terrain, etc.

B. USE OF FORCE. The amount of force used shall only be the amount that is objectively reasonable to control the resistance encountered in light of all the relevant circumstances. The force used should not be escalated unless it's reasonably determined that a lower level of force would not be adequate, or such a level of force is attempted and found to be inadequate. When deciding to use force, Deputies should consider the following specific factors for evaluating their use of force:

1. The need for the use of force;

2. The relationship between the need and the amount of force to be used;

3. The extent of potential injuries that could result;

4. The threat reasonably perceived by the Deputy;

5. Other available force options that could temper the severity of a forceful response.

C. AUTHORIZED WEAPONS AND FORCE TECHNIQUES. Deputy Sheriffs shall only carry and should only use approved weapons and force techniques for which they have received and completed P.O.S.T. certified and/or Sheriff's Office authorized training. However, it is recognized that deputies are expected to make split-second decisions in circumstances that are tense, uncertain, and rapidly evolving, regarding the amount and type of force option(s) necessary in a particular situation. It may become necessary for Deputies to improvise a response to a rapidly evolving set of circumstances, wherein the use of standard weapons and/or force option techniques would be impractical or ineffective. In such circumstances, the improvised weapon or force option technique must be objectively reasonable and used only to that degree reasonably necessary to accomplish a legitimate law enforcement purpose. The need to use such a force option will be clearly stated in the required reports.

D. FORCE OPTIONS. The Office of the Sheriff recognizes a Deputy's need for a degree of flexibility in making use of force assessments given the fluid dynamics of a confrontation. The standard for evaluating a Deputy's use of force is "reasonableness under the facts and circumstances known to the Deputy at the time." Therefore, a Deputy may choose any of the following force options, including no use of force, provided the force option selected is objectively reasonable.

1. Professional Presence Non-Verbal and Verbal (no force). Includes display of authority as a peace officer and such non-verbal means of communication as body language, demeanor, and manner of

approaching. Verbalization involves the directions and commands given to the subject.

2. Control, Search, and Handcuff. Includes restraining and detaining by a Deputy laying hands on a subject to gain control of the subject. Examples include the use of a firm grip, escort position, or grappling types of techniques designed to hold a subject down by using the weight of a Deputy's body. Also included in this level would be the application of temporary restraining devices such as handcuffs and leg restraints (hobble devices).

3. Defensive Tactics. Includes techniques such as control holds, joint manipulations, pressure point applications, takedowns, and ground grappling.

4. Chemical Agents. Includes substances in either liquid or solid form, including chloroacetophenone (CN), chlorobenzylidene malononitrile (CS), or oleoresin capsicum (OC).

    a. Pepper Spray. Oleoresin Capsicum (10% by volume.)

    b. First Defense MK-9 Magnum "Pepper Fogger". This Oleoresin Capsicum fogging device is employed primarily, though not exclusively, in situations where potentially vicious animals are an obstacle to a law enforcement operation. The use of this device is to reduce the necessity of having to dispatch a family pet to gain access to the targeted property.

        i. Whenever possible, a prearranged contingency briefing for taking care of potentially vicious animals shall take place before taking action. When appropriate, Animal Control should be called to ascertain availability.

5. Electronic Weapon (EW). A department authorized handheld device or shield, which imparts an electrical charge.

6. Personal Weapons. Includes parts of the human body such as hands, feet, elbows, and knees to strike a suspect.

7. Intermediate Weapons. Includes impact weapons such as straight batons, side handle batons, and collapsible batons of either variety used in the application of a control technique or an impact mode.

8. K-9. The deployment of a specially trained dog by a certified handler. The function of the dog is to conduct building searches, assist in arrest or prevention of the escape of serious or violent offenders, protect Deputy or others from death or serious injury, or other assignments with approval of K-9 Unit Supervisor.

9. Specialized Weapons. Includes items such as impact projectiles or ammunition which is designed to immobilize, incapacitate, or stun a human being through the infliction of any less lethal impairment of physical condition, function, or senses, including physical pain or discomfort.

10. Firearms. Includes handguns, rifles, shotguns, and automatic weapons authorized for use by the Office of the Sheriff.

11. Deadly Force. The use of deadly force is not limited to the use of firearms. Deadly force options may include the intentional use of legal intervention techniques and any physical means which creates a substantial risk of causing death or serious bodily injury. Note that any force option listed above may be categorized as "deadly force" when used intentionally in a manner that falls within the definition of deadly force. For example, intentionally directing a baton strike to the head of a suspect would be a use of deadly force. A Deputy may use deadly force only where he or she has probable cause to believe that a suspect poses a significant threat of death or serious physical injury to the Deputy or others.

E. DUTY TO INTERCEDE. All Sheriff's Office sworn personnel have a duty to intercede when present and observing another Deputy or officer use force that appears clearly beyond that which is necessary, as determined by an objectively reasonable Deputy or officer under the circumstances and taking into account the possibility that other involved personnel may have additional information regarding the threat posed by the subject.

1. A Deputy who fails to intercede will be counseled or disciplined up to and including the same level of counseling or discipline as the Deputy who used the excessive force.

F. DUTY TO REPORT EXCESSIVE FORCE. All Sheriff's Office personnel have a duty to immediately report potential excessive force to a supervisor when present and observing another Deputy or officer that the Deputy believes to be beyond that which is necessary, as determined by an objectively reasonable officer under the circumstances based upon the totality of information actually known to the Deputy.

1. A Deputy who reports a suspected violation of a law by another officer to a supervisor or other person who has the authority to investigate the violation, will not be retaliated against.

IV. PROCEDURE 1.

A. USE OF PERSONAL BODY WEAPONS. A deputy's use of personal body weapons includes but is not limited to hands, feet, elbows, and knees. A deputy may use personal body weapons to strike a subject when protecting themselves, or others against a violent subject.

1. Considerations: A subject's level of resistance and the threat posed by the subject are important factors in determining what personal body weapons should be used. When deciding to use personal body weapons deputies should also consider the potential for injuries to the deputy and subject that may result from the application of force.

2. Application:

a. Prior to the use of personal body weapons deputies should consider factors such as the availability of other force options.

b. Personal body weapons shall not be used against subjects solely engaging in passive non-compliance.

c. Personal body weapons should not be used on handcuffed persons unless they are violently resisting and there is a potential risk of serious injury to the deputy or others.

d. Personal body weapon strikes to the face, head, throat, or spine should be avoided.

e. Personal body weapons may be used to prevent a violent subject from gaining an advantage in a physical confrontation and/or to allow the deputy a means to create distance/space, or to gain optimal positioning for handcuffing a violent subject.

B. USE OF CHEMICAL AGENTS. Chemical agents (CN Mace or aerosol OC) will only be used as a defensive or control weapon in those instances that threaten the safety of the Deputy or other persons, to overcome resistance, to prevent escape, and to effect an arrest. Chemical agents will not be used against compliant persons. Application:

1. The primary target area for the application of chemical agents is the facial area with coverage of the forehead, and brow. A secondary target area is the nose and mouth.

2. Use short, multiple one-half second bursts, spraying into the facial area (bursts of longer duration seldom increase effectiveness but do increase the possibility of injury).

3. CN Mace is most effective at a distance of approximately five to seven feet, although it can be used up to ten to twelve feet in calm air. Aerosol OC is most effective at a distance of approximately five to ten feet, although it can be used up to fifteen feet in calm air. If it is necessary to use CN Mace or aerosol OC at less than five feet, Deputies should avoid aiming directly at eyes.

4. Deployment sequence:

a. When feasible, a warning should be given that a chemical agent will be used prior to the deployment of the chemical agent. This warning should be given when time permits to do so and doing so does not place yourself or someone else at greater risk.

b. Spray the person.

c. Command the person to get on the ground.

d. Evaluate the person’s response. If necessary, repeat the first two steps.

e. Control the person. Handcuff if necessary. Avoid pressing down on the person’s back.

f. Care for the person. Provide medical treatment and decontamination as soon as possible.

5. Aerosol OC is effective against persons and animals, i.e., angry or attacking dogs. CN Mace is only effective against persons and will not incapacitate animals.

a. The MK-9 Magnum "Pepper Fogger" is an effective use of OC against angry or attacking dogs due to the area it covers and the

amount that is released. Its purpose is to disable the animal in question so that Animal Control or Deputies can safely contain it before there is a necessity to dispatch it.

6. Once deployed, the use of chemical agents must be reported to the immediate Supervisor and recorded in a crime or incident report.

C. USE OF ELECTRONIC WEAPONS (EW). Electronic Weapons can be used safely and effectively to temporarily incapacitate a subject. A subject who receives a discharge from an EW through a probe or a drive stun discharge should experience considerable discomfort for the duration of the application. The subject will normally recover and be physically functional after the application is terminated.

1. Electronic Weapons will only be used by authorized personnel who are trained and certified in their use and authorized by his/her Division Commander.

   a. The Electronic Weapon will be maintained in an authorized holster on the authorized personnel's non-dominant side and drawn with the non-dominant hand to avoid possible confusion with their firearm. Cross draw of the Electronic Weapon is not authorized, except under exigent circumstances. Personnel who are authorized to use and carry EWs may carry a second cartridge.

   b. Only the Office of the Sheriff authorized EWs will be used by authorized personnel.

   c. An EW which has been discharged will be taken out of service until it has been checked by qualified personnel and approved for redeployment, except in a continuing incident or exigent circumstances.

2. The EW, with proper probe placement, may incapacitate the following:

   a. Humans

   b. Domesticated animals

   c. Wild animals

3. Electronic Weapons will not routinely be used against the following subjects except under exigent circumstances:

   a. Subjects who are demonstrating passive resistance or are unresponsive.

   b. Women who are known to be pregnant

   c. Subjects who appear to be elderly

   d. Subjects who appear frail

   e. Young children

   f. Subjects who are handcuffed or restrained unless they are actively resisting or attempting to harm themselves or others.

g. Subjects who are in a location where they could fall from a substantial height or into a pool, river, or other body of water where it is likely they would suffer serious injury or death due to the fall.

4. Electronic Weapons shall not be used:

   a. In a punitive manner, or to extract contraband or evidence.

   b. In an environment where potentially flammable, volatile, or explosive materials are known to be stored (such as a clandestine lab).

   c. If it is known the subject has been exposed to flammable liquids. (Some oleoresin capsicum sprays carried by allied agencies contain flammable carriers).

   d. Against a person in control of a motor vehicle if it is reasonable to believe the vehicle could be put into motion or is in motion.

5. Electronic Weapons may be used to:

   a. Control, detain or arrest a person who is actively resisting and/or poses an immediate threat to the Deputy or others.

   b. Protect a person from serious self-injury or suicide.

   c. Prevent escape.

   d. Conduct an extraction of an aggressive or resistant person from a jail cell when other methods pose a greater risk to individuals involved.

6. Authorized personnel may display the EW and the EWs electrical arc if he/she reasonably believes it will avert a potentially dangerous situation or physical confrontation and the authorized personnel has ensured the cartridge has been removed from the EW.

7. When feasible, before discharging the EW, the authorized personnel should announce their intent to discharge the EW unless:

   a. The announcement would place the authorized personnel at risk.

   b. The circumstances do not allow time for the announcement.

8. The authorized personnel shall avoid intentionally targeting the:

   a. Head

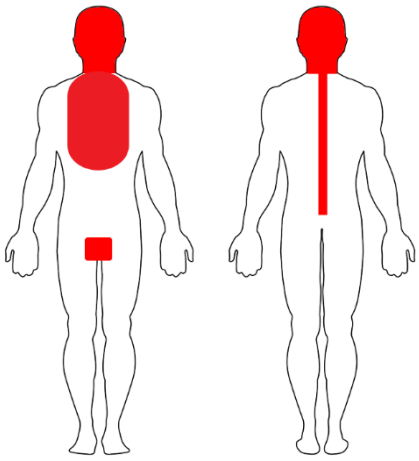
   b. Face

   c. Neck

   d. Throat

   e. Groin

   f. Spine



Front Back

Diagram of a subject, male or female, front and back, showing in red those areas where user should not intentionally aim EWs.

9. While targeting the upper chest is not prohibited, the upper chest is not the preferred target area and should be avoided when possible. The preferred target area is to "split the belt line," one probe above and one probe below the waist.

10. After the initial EW cycle, the subject should be evaluated for compliance. Only the necessary number of cycles to affect an arrest shall be used.

11. If the subject refuses to comply after the initial or multiple EW cycles, the authorized personnel should consider whether additional cycles are making sufficient progress toward compliance/restraint or if transition to a different force option is warranted.

12. Multiple EWs should not normally be used on the same subject at the same time, but based on sound judgment and based on the needs of the tactical situation and/ or officer safety, multiple EWs may be deployed (subject armed with a weapon).

13. Prolonged exposure without evaluation could have adverse effects on a subject's health. Repeated exposure or exposure to multiple EWs electrical discharge may cause strong muscle contractions which may impair breathing and respiration, particularly when the probes are placed across the chest.

14. The use of the EW should be combined with physical restraint techniques to minimize the duration of the struggle and EW use. Additional authorized personnel on the scene of an EW deployment can attempt to restrain and handcuff a subject during an active EW cycle.

15. Touching the subject between the probes or contacting the wires while the EW is activated may cause the authorized personnel to experience the effects of the EW. If the user attempting to handcuff the subject experiences the effects of the EW, the user should reposition his/her body and then re-approach to handcuff the subject.

16. After the subject is taken into custody in a patrol setting, which includes incidents related to Custody Alternative Facility (CAF), Health Services Security (HSS), and Satellite Court Houses (Courts outside of Martinez),

the subject's medical condition will be assessed before transport. Factors to consider when determining proper transport/medical treatment:

a. The behavior of the individual prior to the discharge of the Electronic Weapon.

b. Additional known/pre-existing medical conditions.

c. Probe location.

d. Secondary Injuries suffered by the individual during the application of the EW.

e. Signs of medical distress (excessive sweating, rapid or labored breathing, level of consciousness, etc.).

17. If there are any signs of medical distress or complications, the authorized personnel will request EMS personnel to evaluate and treat the subject before transport.

18. Upon exposure to an EW in a Detention Facility or any Martinez Court House, the individual who was exposed will be examined by medical personnel (Jail Nurse, Paramedic, etc.). Medical evaluation will be verified by the on-duty supervisor.

    a. On-duty medical staff will evaluate the condition of the individual with emphasis on any injuries that may have been sustained because of the use of an EW.

    b. If the EW probes have penetrated the skin, the puncture sites shall be located and brought to the attention of medical staff for the treatment and removal if necessary.

    c. If any of the probes are embedded in the following areas, the subject shall be transported to Contra Costa Regional Medical Center (CCRMC) for probe removal:

        i. Head

        ii. Face

        iii. Neck

        iv. Throat

        v. Groin

        vi. Spine

19. If the probes are still imbedded in the subject, avoid transporting the subject in a position that could further embed the probes in the subject. If this is not possible in a Patrol vehicle, an ambulance will be requested to transport.

20. If a circumstance exists that requires the removal of one or both probes to facilitate transport/treatment, the authorized personnel will advise their Supervisor and follow the proper procedure outlined in their training for probe removal.

21. When handling probes that have been used in a deployment or a subject who was exposed to a probe deployment, the authorized personnel will

take precautions for Bloodborne Pathogens and use proper evidence handling guidelines when logging the probes into evidence.

22. Whether by Patrol vehicle or ambulance, the subject will be transported to Contra Costa Regional Medical Center (CCRMC) where the probes will be removed, and the subject will be medically cleared before booking at the Martinez Detention Facility.

23. Activations of an Electronic Weapon against an individual will be reported to a Supervisor as soon as practical.

24. The Training Division will implement annual proficiency training which shall be required for all personnel who are authorized to carry and use EWs.

D. USE OF DISTRACTION DEVICES. Distraction devices will only be used as a defensive or control device in those instances that threaten the safety of the Deputy or other persons. When properly deployed as part of an overall tactical plan, the distraction device can afford an enhanced margin of officer safety.

1. The primary target area for deployment of a distraction device is the floor area immediately inside a primary entry point, i.e., a door or other available means of ingress into a room or structure. A secondary deployment area may be any area where activation of the device will provide an enhanced margin of officer safety by attracting a suspect's attention to the area of activation.

   a. Before deploying a distraction device, the Deputy deploying the device will visually check the immediate area where the device is to be deployed in order to ensure that no persons are in that immediate area. Extreme caution should be used upon deployment of a distraction device in areas where there is potential for fire hazard due to flammable vapors, gases, substances, or other flame hazards.

E. USE OF IMPACT PROJECTILE WEAPONS.

1. Impact projectile weapons are intended primarily for use against persons who engage in conduct that is likely to result in serious harm to themselves or other people.

2. Such conduct includes but is not limited to, violent, combative, assaultive, and/or resistive behavior; when the person is either armed or unarmed.

3. Impact projectile weapons shall not be aimed at the head, neck, or any other vital organs.

4. Upon assessing and determining the need for the impact projectile weapon, the Deputy will request a Supervisor to respond. Additionally, the Deputy will advise the Supervisor of the circumstances. The Supervisor, if available, should assess the circumstances and situation. In determining whether or not the impact projectile weapon system should be used, the Supervisor, or Deputy when no Supervisor is available, will consider among other factors, the following:

a. The individual is violently attacking, resisting, combative, and/or armed;

b. Tactical considerations indicate that the use of an impact projectile system would provide greater officer safety and reduce the likelihood of serious or lethal injury to the suspect(s).

5. If the circumstances permit, the Supervisor or Deputy should attempt to have the subject submit to lawful authority without the use of the impact projectile weapon, and if feasible, should warn the subject of the intended use of the weapon should the subject not submit to lawful authority.

6. If the circumstances permit the Supervisor or Deputy to authorize the use of the impact projectile weapon, it shall be deployed as prescribed and in accordance with Sheriff's Office approved training, before deployment:

a. A cover Deputy or Supervisor shall be assigned to the Deputy deploying the impact Projectile weapon;

b. Deputies shall be prepared and ready to take the suspect into custody following deployment;

c. Deputies on the scene should be advised before the deployment of the impact projectile weapon.

7. Impact projectile weapons shall be treated the same as firearms for safety practices. Refer to Office of the Sheriff Policy Section 1.07.12, Firearms Safety, and Qualification for firearm safety practices.

F. USE OF CHEMICAL AGENTS OR IMPACT PROJECTILE WEAPONS IN CROWD CONTROL SITUATIONS.

1. If chemical agents or impact projectile weapons are deployed for crowd control or crowd management, they shall be used as follows:

a. Except in exigent circumstances, chemical agents and/or impact weapons shall be deployed with the approval of the Incident Commander or designee.

b. When objectively reasonable to do so, repeated, audible announcements shall be made announcing the intent to use impact weapon projectiles and chemical agents and the type to be used. The announcements shall be made from various locations, if necessary, and delivered in multiple languages, if appropriate. Persons at the scene shall be given an objectively reasonable opportunity to disperse.

c. Impact projectile weapons or chemical agents shall not be used solely due to any of the following:

i. violation of an imposed curfew;

ii. A verbal threat;

iii. Noncompliance with a law enforcement directive.

G. USE OF BATON. When properly used, the baton can frustrate attacks on Deputies and aid in overcoming a hostile arrest situation.

1. The baton may be used as a defensive or control weapon in those instances that threaten the safety of Deputies or other persons or to subdue and arrest combative persons. Deputies will not use the baton against non-combative persons. However, Deputies may use the baton as a control device when directing, controlling, or escorting uncooperative persons.

2. The Detention Division maintains specific restrictions regarding the use and carrying of batons. Absent authorization from the Facility Commander, batons shall not be carried into the security area of any Detention Facility.

H. USE OF CAROTID HOLD. The use of the Carotid hold is not an authorized use of force restraint technique.

1. Chokeholds are not authorized restraint techniques.

I. USE OF FIREARM/DEADLY FORCE.

1. A firearm may be discharged only for one or more of the following circumstances:

a. At an approved target range, or for evidence examination purposes;

b. When killing a seriously wounded animal when other disposal is impractical or when killing an animal that poses an immediate threat of physical harm. Attempts should be made to:

i. Wait for Animal Control, if possible;

ii. Confine or contain the animal, if possible;

iii. Consider deployment of pepper (OC) spray or other less-lethal force;

iv. Use lethal force as a last resort, if other options are not reasonable.

c. When necessary in the defense of one's own life or to prevent serious physical harm;

d. When necessary in the defense of any person in immediate danger of death or serious physical injury;

e. To capture or prevent the escape of a person when ALL the conditions below are met:

i. There is reasonable belief the person is committing or has committed a violent felony which involves the use of deadly force;

ii. The person's use of deadly force threatens or results in the death or serious bodily injury of another person; and

iii. All other available means of apprehending the person have failed.

2. WHEN FIREARMS WILL NOT BE DISCHARGED. Firearms will not be discharged:

a. As a warning;

b. To effect the capture or prevent the escape of a person who is reasonably believed to be committing, or have committed, a felony which DOES NOT involve the use or threat to use deadly force;

c. In any misdemeanor case;

d. From or at a moving vehicle except in the defense of one's own life or the life of another person.

3. Deputies should consider their surroundings and potential risks to bystanders, to the extent reasonable under the circumstances, before discharging a firearm.

4. DISPLAY OF FIREARM. A Deputy may display his or her firearm or point his or her firearm at a person during any situation where the Deputy would reasonably believe there is a possible need to defend him or herself or others against a threat.

V. PROCEDURE 2.

A. PROVIDING MEDICAL AID AFTER USE OF FORCE. When the use of force causes injury, which would reasonably require medical attention, the Deputies using such force will ensure the injured person receives proper medical attention as soon as possible.

1. Deputies will normally transport or arrange for transport of injured persons to the Contra Costa Regional Medical Center unless the nature and/or extent of the injuries necessitate transport to a closer facility, or as directed by a Supervisor.

2. Medical Refusal:

a. Individuals who have had an EW exposure must make all refusals for medical treatment directly to medical personnel.

b. The reporting deputy will ensure the refusal, and the staff member’s name receiving the refusal, are documented in their report.

VI. PROCEDURE 3.

A. REPORTING USE OF FORCE. Any member of the Office of the Sheriff who either uses force or witnesses the use of force by another member of this Office shall, as soon as possible, make an oral report to their immediate Supervisor. All such reports shall be made no later than the end of duty shift on which the force was used. In all cases where there is a use of force, as defined in this policy, a DR will be drawn and details of the use of force will be reported by the Deputy who used the force on either a Crime Report or Detention Incident Report as applicable. All such reports will include:

1. Type of force used;

2. Reason for the use of force;

3. The extent of injury or lack thereof;

4. Other pertinent information the Deputy wishes to include;

5. If an animal shooting, conditions outlined in G, 1, b of this policy shall be observed;

6. If the incident preceding the use of force would normally be reported on a Crime Report, the details of the use shall be included in that report;

7. Use of force reports where impact projectile weapons or distraction devices are used will also include:

   a. Name of the Deputy deploying the munition;

   b. Supervisor's name authorizing deployment;

   c. Number of munitions deployed;

   d. Distance between the suspect and the Deputy deploying the munition;

   e. Area of suspect's body struck by the munition(s);

   f. Suspect's reaction to the munition;

   g. If the subject is admitted to the hospital, send a copy of the report to Office of the County Administrator, Risk Management Division, Assistant Risk Manager, 2530 Arnold Dr., Ste 140, Martinez, CA. 94553, Attn: Liability Claims or fax to number 335-1421 within 24 hours of the incident. An emergency room visit does not constitute a hospital admission.

8. Use of force against animals shall be documented in a separate memo to the Patrol Commander. A copy of the police report shall be attached to the memo. (The police report alone is not a substitute for this memo.) All such memos shall be cataloged by the Patrol Division for annual review by the Sheriff's Executive Team.

B. SUPERVISOR RESPONSIBILITIES. Once a supervisor has been notified of a use of force incident, he or she shall evaluate the incident to determine if the force was objectively reasonable given the circumstances. All use of force reports will be routed via the chain of command as prescribed in the report writing matrix. Should a supervisor believe that the force incident may require additional administrative inquiry, he or she shall notify his or her chain of command.

C. DIVISION COMMANDER OR DESIGNEE RESPONSIBILITIES. Once a Division Commander or designee has been advised of a use of force incident that may require further administrative inquiry, the Division Commander will review the incident and determine the need for any further investigation.

VII. PROCEDURE 4.

A. REPORTING USE OF AN EW.

1. The discharge of an EW during training does not require a report. The display of an EW does not require a report.

2. When an EW is discharged in the performance of law enforcement duties, the Deputy will thoroughly document the incident, including the details that led to its use, all pertinent aspects of the use, and all significant results and effects in a crime report. Custody Services Bureau incidents shall also be documented in a JMS incident report. In

connection with the required crime report, the Supervisor will download the EW firing data to a computer workstation and will associate the firing data with the report.

3. The discharge of an EW to control an animal normally requires prior permission from the Supervisor. Should exigent circumstances prevent prior authorization; the Supervisor will be advised as soon as possible. A memorandum to the Division Commander via the chain of command outlining the need for the action shall follow the incident.

4. When any other discharge of an EW occurs, such as an unintentional discharge and there are no injuries or death, the following shall be done:

   a. The Deputy who discharged the EW shall notify his/her Supervisor or the senior Deputy on duty as soon as time and circumstances permit.

   b. The Deputy will document the circumstances which led to the discharge of the EW in a memo to their Division Commander.

5. When any other discharge of an EW occurs, such as in unintentional discharge and there are injuries or death, the following shall be done:

   a. The Deputy who discharged the EW shall notify his/her Supervisor or the senior Deputy on duty as soon as time and circumstances permit.

   b. The senior Deputy or the Deputy's Supervisor is responsible for securing the scene and advising their Area/Facility Commander or the Watch Commander of the details of the incident.

   c. If the circumstances meet the requirements of Office of the Sheriff Policy and Procedure Section 1.06.62, Police-Involved Fatal, or Serious Injury Incidents, the provisions of that policy will be followed.

   d. If the injury is minor, the Area/Facility Commander will investigate the incident and report their findings to their Division Commander.

6. Should a thorough investigation of the incident indicate the need for corrective action the Division Commander will initiate appropriate procedures as covered in Office of the Sheriff Policy Section 1.05.58, Corrective Counseling System, and Section 1.05.70, Personnel Management Regulations.

VIII. PROCEDURE 5.

A. REPORTING USE OF FIREARMS.

1. The discharge of a firearm at a target range or for evidence collection does not require a report.

2. The discharge of a firearm to dispatch an animal normally requires prior permission from the Supervisor. Should exigent circumstances prevent prior authorization, the Supervisor will be advised as soon as possible. A memorandum to the employee’s Division Commander via the chain of command outlining the need for the action shall follow the incident.

3. Accidental discharges that result in no serious injuries or deaths, the following shall be done:

    a. The Deputy who discharged the firearm shall notify his/her Supervisor or the senior Deputy on duty as soon as time and circumstances permit.

    b. The Deputy's Supervisor will notify the Division Commander and shall protect the scene and identify witnesses pending further instructions from the Division Commander.

    c. The Deputy's Division Commander shall conduct an investigation.

        i. If the incident occurs when the Division Commander is either off duty or unavailable, the Patrol Station House Commander shall be notified and will immediately and personally conduct the investigation when notified.

        ii. The Station House Commander will submit an inter-office memo to the Deputy's Division Commander detailing the incident and the investigation.

        iii. If the area Station House Commander is unavailable, the Watch Commander will conduct the investigation.

        iv. Should a thorough investigation of the incident indicate the need for corrective action, the Division Commander will initiate appropriate procedures as covered in Office of the Sheriff Policy Section 1.05.58, Corrective Counseling System, and Section 1.05.70, Personnel Management Regulations.

    d. Following the investigation of the incident, a detailed written report shall be submitted via the chain of command to the Sheriff. This report shall include the observations and conclusions of the Division Commander.

4. When any on-duty or off-duty discharge of a firearm by an Office of the Sheriff employee results in death or serious injury, Office of the Sheriff Policy Section 1.06.62, Police-Involved Fatal or Serious Injury Incidents Policy shall apply.

    a. The Division Commander will receive a detailed written report concerning the incident completed by the Internal Affairs Detail, after review by the Undersheriff. This report shall be reviewed in conjunction with any other documents and/or information available and the Division Commander will submit a recommendation via the chain of command to the Sheriff/Undersheriff.

5. When a Police Involved Discharge of a Firearm On Duty occurs, the following shall apply.

    a. The Deputy who discharged the firearm shall immediately notify his/her Supervisor.

b. The Deputy's Supervisor will ensure that the Deputy Sheriff's Association is contacted and notified of the event.

c. The Deputy's Unit Manager or Watch Commander shall investigate. If the Unit Manager or Watch Commander is unavailable, the Division Commander will respond and investigate.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.62
	RELATED ORDERS: PC 781, 782, 783.5, 790; Government Code Section 12525.3 (a)(2), 3300 et. seq., 27491.6; CVC Section 13353; CCC's Officer-Involved Fatal Incident Protocol; CCCSO 1.06.78, 1.06.03, 1.06.77, 1.06.79.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 8-17-2021**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Police Involved Fatal or Serious Injury Incidents**	

CCCSO Red Stripe Policy

I. POLICY.

A. Investigations of police involved fatal or serious injury incidents are often complex and demanding. Such cases often attract considerable public and news media interest. The consequences of the incident can be profound and affect many people. Because of these factors, incidents of this nature shall be fully and fairly investigated. Proper disposition of such cases will be based on all the legally available relevant evidence.

II. DEFINITIONS.

A. STATION HOUSE COMMANDER/WATCH COMMANDER. The Station House Commander/Watch Commander is the on-call Manager responsible for necessary decision making during non- business hours.

B. POLICE INVOLVED FATAL OR SERIOUS INJURY INCIDENT. Any police investigation directly involving two or more people in which an on-duty or off-duty police employee is involved and death or serious injury results. Such incidents include but are not limited to:

1. Intentional and accidental shootings involving any serious injury, including police tactical incidents involving specialized response teams.
2. Intentional and accidental use of any other deadly or dangerous weapon.
3. Assaults upon police employees who are performing a law enforcement function.
4. Attempts to affect an arrest or otherwise gain physical control over a person for a law enforcement purpose.
5. Deaths of persons while in police custody or under police control, but excluding fatal injuries of prisoners which occur while the inmate is under physician's treatment for a disease or other natural condition which has been diagnosed prior to death and which does not involve custodial trauma, custodial suicide or custodial ingestion of toxic substance.
6. Any fatal injury to a person who is a passenger in a police vehicle (i.e., ride-alongs, emergency transports, etc.).

7. Physical altercations, such as mutual combat, in which the police employee is acting in a private capacity for other than a law enforcement purpose.

8. Vehicular Collisions:

a. Vehicular collisions under this Policy include:

- Collisions in which law enforcement vehicles or personnel are involved.
- Collisions by a pursued vehicle with a third party or stationary object.
  - Such a collision, if it results in a fatality, very soon after a pursuit is terminated, where it appears (based on the manner of driving and close time and distance proximity) that the subject was unaware the pursuit had been terminated and continued his attempt to evade.

b. Vehicular collisions under this Policy do not include:

- Off-duty, non-police employees.
- Solo vehicular collisions where only the police employee is fatally injured.

C. SERIOUS PHYSICAL INJURY. Any injury which creates a substantial risk of death, causes serious permanent disfigurement, or long-term loss, or impairment of the function of any bodily member or organ.

III. GENERAL.

A. INVESTIGATION GOALS.

1. The investigation goals in a police-involved fatal or serious injury incident are as follows:

a. Determine the existence or non-existence of criminal conduct.

b. If criminal conduct does exist, determine the identity of the person(s) responsible for the conduct and determine:

- The degree of the crime;
- Any legal or factual defenses to the crime; and
- The existence of any factors which would mitigate or aggravate punishment for the conduct. The investigation will be performed to develop all relevant information. It will be professional, thorough and free of conflicts.

2. The distinction between sworn peace officers and general employees is necessary to ensure proper protection of their statutory rights and the integrity of the investigation.

a. If a Reserve Deputy is involved in an incident while on duty or while performing a law enforcement purpose, the investigation will be handled the same as for any on-duty peace officer.

b. If any other temporary, or part-time general employee or volunteer is involved while on duty, the investigation will be handled as if that person was a full-time regular general employee. If such a person is not on duty or acting for a law enforcement purpose, the investigation will be handled the same as for general employees not affiliated with the Sheriff's Office.

B. INVESTIGATIVE RESPONSIBILITY.

1. The Office of the Sheriff Internal Affairs will investigate all fatal and serious injury incidents involving Office of the Sheriff personnel. This investigation will focus on administrative and non-criminal matters and will parallel but not supplant any criminal investigation. Immediately following the event, the Sheriff and Undersheriff will receive an Executive Summary of the incident. A detailed written report of the Administrative Investigation, with related attachments, shall be submitted to the appropriate Bureau Assistant Sheriff for review and appropriate action. This report prepared by Internal Affairs, shall include a review of policy and procedures related to the incident.

2. The Office of the Sheriff Investigation Division will generally handle the entire criminal investigation for fatal and serious injury incidents involving Office of the Sheriff personnel in the unincorporated County areas and Contract Cities. These investigations will be handled in the same fashion as criminal inquiries that do not involve Office of the Sheriff employees. Depending on the individual circumstances, the Sheriff may assist or accept full investigative responsibility for incidents occurring in non-contract incorporated cities or in County areas involving other agencies whether or not Office of the Sheriff personnel are involved. The following guidelines for establishing jurisdiction have been adopted in this County:

   a. The District Attorney has independent investigatory powers and responsibilities and may also investigate the incident.

   b. Vehicular collision incidents shall be investigated by accident investigation specialists, who will also have responsibility for the collection of physical evidence, and shall investigate vehicular collision incidents. On-scene collaboration with the Sheriff's Criminalistics Laboratory is encouraged. In incidents where a vehicular collision or other vehicular movement is involved but is not the direct cause of the fatality, the California Highway Patrol may be called for investigatory assistance in that phase of the incident investigation.

3. Usually, the responsibility for investigating incidents rests with the agency with territorial jurisdiction.

   a. That agency will normally conduct the investigation using its own resources. However, the agency may seek investigative assistance from the Sheriff, the District Attorney, or from other agencies.

   b. If investigative assistance is obtained, the agency may elect to maintain control of the investigation or may elect to relinquish

the primary responsibility for the investigation to the other agency from which it obtained the assistance.

4. An agency having territorial jurisdiction of an incident may elect to defer its investigative authority to another agency when the following occur:

   a. An on-duty officer from the other agency is involved but is not the victim.

   b. The officer is performing a police duty concerning a crime that originated in his/her own jurisdiction.

   c. Incidents within the joint geographical jurisdiction of more than one agency shall be jointly investigated until responsibility and authority for the investigation is clearly and promptly defined between command personnel of the involved agencies. Until agreement is reached between the agencies in a specific case, immediate investigative responsibility is determined in this order:

      - The agency with territorial jurisdiction, if readily and definitely ascertainable;
      - The agency whose on-duty employee, acting apparently for a law enforcement purpose, was involved; and
      - The agency within whose jurisdiction the victim's body was first discovered after infliction of the injury.

   d. The agency with territorial jurisdiction has the initial responsibility for the preservation and security of the scene(s). These responsibilities include but are not limited to the following:

      - Emergency life-saving measures have first priority. Should a person with serious or imminently fatal injuries be transported, an officer should accompany that person in order to:
        - Preserve, safeguard and maintain the chain of evidence;
        - Obtain a dying declaration if needed;
        - Maintain custody if the person is arrested;
        - Provide information to and from medical personnel;
        - Identify relevant people (i.e., witnesses, medical personnel); and
        - Maintain availability for contact with victim's family, if appropriate.
      - Scene(s) security to include:
        - Security perimeter; and

- Access to officials who must enter will be limited to the assigned criminal investigators, D.S.A. representatives, Internal Affairs, District Attorney personnel and assigned Forensic Services Division personnel.

- A log of those who enter or leave the scene(s) and of evidence removed or moved in any way. If items must be moved, they should be photographed first if possible.
- Security and evidence preservation of involved weapons and maintenance of the chain of evidence.
- Identification, separation and security of all witnesses and involved persons.

e. The collection of physical evidence shall normally (except as provided above for vehicular collisions) be the responsibility of the Sheriff's Criminalistics Laboratory, acting on a request from the agency with investigative responsibility.

- In unusual cases, for example where there is no physical evidence present, the involved agencies (territorial, employing and District Attorney) may all agree that the Crime Lab need not be called. However, the Crime Lab shall be called if any of those agencies desire.
- Analysis of physical evidence shall normally be done by or through the Sheriff's Crime Lab.
- If an employee of the Forensic Services Division is involved in the incident, another laboratory shall be used. The Sheriff's Crime Lab has established a standby list.

C. INTERVIEWS WITH POLICE EMPLOYEES.

1. Interviews with police employees will normally be conducted by investigator(s) from the agency having established territorial jurisdiction and a member of the District Attorney's staff. If the employing agency is not the agency with territorial jurisdiction, it will not normally have a representative present during the interview.

2. Established interview techniques will be used. The employee's constitutional and statutory rights shall be fully explained and respected when they are applicable.

D. INTOXICANT TESTING.

1. If the sobriety of a police employee is determined to be relevant to the investigation, the investigator(s) shall proceed as with any member of the public in a similar situation. The options are:

a. Obtain the employee's valid consent for the sample;

b. Obtain a sample pursuant to a valid arrest; or

c. Utilization of CVC Section 13353 Implied Consent Law, if applicable.

2. The preferred sample for testing is blood. A urine sample should also be obtained whenever possible.

3. The Office of the Sheriff requires its involved employee(s) to provide both a blood and urine sample for administrative use; if the incident investigators do not already collect such samples. The Office of the Sheriff Internal Affairs is responsible for this task.

   a. When the Internal Affairs Investigator(s) learn that the incident investigators are not taking blood and urine samples, they will arrange for the samples to be taken at the first opportunity.

   b. The Internal Affairs Investigator(s) will safeguard any sample taken for administrative use to ensure it is used only for the administrative investigation.

4. If another involved employing agency wants a sample for employee related purposes, its options, for its employee(s), are:

   a. Obtain the employee's valid consent for the sample; or

   b. Order the employee to provide the sample based on the employee-employer relationship. This sample may not be subsequently used against the employee for criminal prosecution. The employing agency's efforts to obtain a sample should not interfere with the incident investigation.

E. AUTOPSY.

1. At least one of the primary incident investigators shall attend the autopsy. A member of the District Attorney's staff will also be present. In vehicular collision cases, the accident investigation specialist will be primarily responsible for the collection and documentation of physical evidence at the autopsy with assistance from the Criminalistics Laboratory, if appropriate. In other cases, the Crime Lab has that responsibility. If the employing agency is not the agency with territorial jurisdiction, a representative may be present as an observer, subject to the discretion of the Coroner's Office.

2. The pathologist will receive a full and complete briefing prior to the post-mortem examination. The incident investigator, a member of the District Attorney's staff and an employee of the Crime Lab, or the accident investigation specialist, when applicable, will be present at the briefing and will conduct it.

F. RELEASE OF INFORMATION TO THE PUBLIC. Concurrent with the information and procedures contained in Sheriff's Office Policies 1.06.77 'Crime and Incident Records – Release of Information (Public Records Act)," 1.06.78 "News Media Relations," 1.06.79 Press Releases and Media Inquiries," the following shall apply:

1. Employee's Name.

   a. In all police involved fatal or serious injury incidents over which the Sheriff's Office has enforcement responsibilities, the name(s)

of the involved employee(s) will be withheld from the news media for a minimum of 16 hours and a maximum of 24 hours.

b. In incidents involving employees from other police agencies, the news media will be referred to that agency for details concerning employee identification.

c. This action is provided for the following reasons:

- To allow employee(s) involved in an incident time to make their family and friends aware of their involvement prior to their being identified publicly via the news media;
- To allow the Office of the Sheriff an opportunity to possess the most accurate and complete information available prior to making a news release identifying involved employees; and
- To give another police agency an opportunity to make decisions relative to the public identification of its employee who may be involved in an incident over which the Sheriff's Office has primary jurisdiction.

2. Initial Press Release. In reports relating to a serious incident in which a Sheriff's Office employee or an employee from another agency is involved; i.e., a shooting or an incident which would generate considerable media interest, the Crime Report will be withheld from the press basket. A press release will be completed giving the general information concerning the incident. The names of involved employees will be withheld in accordance with "F." above.

3. Supplemental Press Release.

a. In cases involving an employee of the Office of the Sheriff, a second press release will be completed between 16 and 24 hours following the incident.

b. The second press release will contain the following information relative to the incident:

- The employee's name;
- The employee's age;
- The employee's length of service;
- The employee's present duty assignment; and
- The most current information available, which is considered acceptable for media release.

4. Incidents Involving Other Agencies. In reports or incidents which involve employees from other police agencies, the original press release described in "2." above will be completed and all subsequent media inquiries relative to the identity of the involved employee(s) will be referred to the agency with whom the employee is employed.

G. INQUESTS. In each police involved fatal incident where a member of the public dies and where no criminal charges have been filed, a Coroner's Inquest will normally be held.

a. The purpose of the inquest is to develop any further evidence and to inform the public of the facts of the incident. A few cases may occur where the police actions are very clearly justified and media interest is low. In such cases the Sheriff, Police Chief of the involved agency and the District Attorney may all decide that an inquest is not needed.

H. ACCESS TO REPORTS AND EVIDENCE.

1. Crime Reports/Investigations Reports/Evidence.

a. Any report or evidence created or collected by the investigating agency, the Forensic Services Division, and other assisting agencies will be made available in a timely manner to those agencies which have an interest in the investigation.

b. No other access to documents or reports will be permitted until the conclusion of the investigation and any subsequent prosecution.

2. Internal Affairs Reports. Reports of Internal Affairs investigations will be handled as any other such records.

I. ADMINISTRATIVE PROVISIONS FOR INVOLVED EMPLOYEES.

1. The incident investigations may make the involved employee feel like he/she is on the defensive and being regarded as an informational source. This is not the intent of the Office of the Sheriff. While the integrity of the investigation will be maintained, the physical and mental well being of the employee is a primary concern to this Office.

2. Prior knowledge of required procedures will normally make the employee feel less intimidated. Therefore, employees should know that the following guidelines apply to employees of the Office of the Sheriff whose actions, in a police involved fatal or serious injury incident, are the principal cause of a fatality or serious injury to another.

3. In an officer involved shooting, Internal Affairs, as well as the agency, which established territorial jurisdiction, will check and document the firearms and equipment of all Deputies present at the time of the incident.

a. The Internal Affairs Investigator will also ensure that all discharged firearms are identified and collected, and specifically identify those weapons which were not fired.

b. Collected weapons will be transported to the Crime Lab, along with all rounds of extra ammunition, while preserving the chain of evidence.

c. Internal Affairs Investigators, via authorization from the Internal Affairs Lieutenant will replace firearms as soon as possible unless reasons indicate otherwise.

4. The employee will be given the opportunity to obtain legal counsel prior to investigation interviews taking place.

5. The employee will have the Office of the Sheriff policy on intoxicants testing explained to him/her.

6. Transportation to interviewing locations will be provided for investigative interviews.

7. The employee will be provided transportation home.

8. The employee will be placed on Administrative leave (with pay), by his/her Division Commander, for the 48 hours immediately following the incident.

9. The employee will be required to have a counseling session with an Occupational Health Services (OHS) professional, or a professional counselor assigned by the Office of the Sheriff.

10. A employee's duty assignment will be changed to an office placement until the counseling session and other necessary investigation interviews are completed.

11. The employee will have an interview with the Division Commander prior to being reassigned to normal duty.

12. Employees present at the scene of an incident whose actions are not the principal cause of a fatality or serious injury are subject to the following guidelines:

    a. Interviews with incident and Internal Affairs Investigators;

    b. Interview with the Division Commander; and

    c. Counseling session with an OHS professional, or a professional counselor assigned by the Office of the Sheriff.

IV. PROCEDURE 1.

A. INITIAL RESPONSIBILITIES. Deputies initially assigned to a detail that develops into a police-involved fatal or serious injury incident are responsible for the following:

1. Ensuring that first aid is provided and medical assistance requested when necessary and possible;

2. Providing protection and security of the scene;

3. Maintaining a log of all persons entering and leaving the scene;

4. Notifying their Supervisor and requesting any additional assistance and resources needed at the incident scene(s); and

5. Identifying and separating witnesses.

V. PROCEDURE 2.

A. SUPERVISOR’S RESPONSIBILITIES. The Supervisor who responds to an incident is responsible for the following:

1. Notify the Station House Commander or Watch Commander and request the response of Investigators, Deputy Coroner Investigators, District Attorney, etc., depending on the needs of the situation.
2. Ensure the basic steps listed in “Procedure 1" are implemented.
3. In cases where the deceased or wounded person has to be moved prior to the arrival of an Investigator and Crime Scene Technician or Criminalist, the initially assigned Deputy and/or Supervisor will ensure that photographs are obtained and the body position is marked prior to disturbing the area, and then preserve the remaining scene.
4. Ensure that the evidence processing steps outlined in Sheriff’s Office Policy Section 1.06.03, Physical Evidence are carried out.
5. Determine if any of the involved Deputies discharged their firearm.
6. If a Deputy's weapon is involved, it will be obtained as evidence as soon as the scene is stabilized and it is safe to do so. When possible, a replacement firearm will be provided at the scene.
    a. If the weapon is a handgun, all spare ammunition will also be collected.
    b. An involved firearm(s) will not be opened, unloaded or tampered with in any manner except to render it safe for transportation. Do not store a weapon in the trunk near flares.
    c. Personally deliver all packaged items to the Office of the Sheriff Crime Lab personnel.
7. Ensure the employee(s) involved is/are aware of the necessity of the actions taking place, understand their rights and offer to assist in obtaining legal counsel if the employee(s) desires.
8. Obtain a public safety briefing from the involved Deputies as soon as the scene is rendered safe.
9. Police employees who were present at the scene when the incident occurred will be relieved of their duties at the scene as promptly as possible and will be dispatched to their own police station or office, unless other arrangements are made for them. A Deputy who was NOT present at the incident shall be assigned to accompany these employees either in a group or individually, and an uninvolved Deputy shall remain with the employees until they are interviewed.
    a. The employees will not discuss the incident among themselves or with uninvolved persons but are encouraged to carefully reflect upon what occurred and to make notes for their own future use.
    b. If circumstances prohibit removal of all witnesses and involved employees from the scene at once, those employees who were directly involved will be relieved first.
10. Provide transportation to any designated interview site.

VI. PROCEDURE 3.

A. STATION HOUSE COMMANDER/WATCH COMMANDER RESPONSIBILITIES.

1. The Station House Commander/Watch Commander shall ensure that the initial steps at the scene(s) are being taken and immediately notify the following as appropriate:

   a. Investigation Division;

   b. Forensic Services Division;

   c. Internal Affairs (all cases). Should a situation arise where no one from Internal Affairs, including the Internal Affairs Lieutenant can be reached, the Station House Commander/Watch Commander will respond as an administrative observer;

   d. Coroner's Office;

   e. California Highway Patrol;

   f. Other involved agencies;

   g. District Attorney's Office (all cases);

   h. Occupational Health Services (all cases) or a professional counselor assigned by the Office of the Sheriff; and

   i. On-call DSA representative (all cases). The DSA will provide an updated list of its on-call representatives.

   j. Contact Office of the County Administrator, Risk Management Division, Assistant Risk Manager, by [redacted] Copies of relevant reports shall be routed to Risk Management Division, 2530 Arnold Dr. Ste. 140, Martinez, CA 94553, Attn: Liability Claims.

2. If the injured person is an employee of the Office of the Sheriff, the Station House Commander/Watch Commander will:

   a. Notify the employee's Division Commander, Bureau Assistant Sheriff, and the Undersheriff/Sheriff via the chain of command; and

   b. Ensure that all the procedures in Office of the Sheriff Policy Section 1.05.74, Notification and Reporting On-Duty Injuries, Accidents or Death are carried out. In the absence of the Division Commander, the Station House Commander/Watch Commander will handle the notification of the employee's family.

   c. If the involved police employee is not injured, the Station House Commander/Watch Commander will:

   d. Arrange for the employee to be accompanied home and provide transportation if necessary; and

e. Arrange for assistance to be given to the employee in notifying his/her family of the situation. Provide any other assistance that may be needed at the time.

VII. PROCEDURE 4.

A. INVESTIGATION DIVISION COMMANDER RESPONSIBILITIES

1. The Investigation Division Commander or designee shall ensure the California Department of Justice (DOJ) is immediately notified when an officer-involved shooting results in the death of an unarmed civilian. When situations arise and it is undetermined if the civilian was unarmed, a notification to DOJ is still requested. The Los Angeles Regional Criminal Information Clearinghouse (LA CLEAR) will be the central point of contact for all officer-involved shooting incident notifications: [redacted]

2. An unarmed civilian is defined as "anyone who is not in possession of a deadly weapon." "Deadly weapon" includes, but is not limited to, any loaded weapon from which a shot, readily capable of producing death or other serious physical injury, may be discharged, or a switchblade knife, pilum ballistic knife, metal knuckle knife, dagger, billy, blackjack, plastic knuckles, or metal knuckles, as defined by Government Code § 12525.3(a).

VIII. PROCEDURE 5.

A. REPORTS BY SHERIFF'S DEPUTIES. Any Sheriff's Deputy involved in or performing any function pertaining to an incident investigation, will submit written reports detailing such involvement. Reports will be completed and submitted prior to end of tour of duty during which the incident occurred.

1. To avoid conflicting reports, if an involved or witness Deputy has been formally interviewed by the Investigation team, that Deputy shall not submit a written report unless specifically instructed to do so.

IX. PROCEDURE 6.

A. DIVISION'S RESPONSIBILITY. Inclusive of the general information and directives contained in this section of the Manual, employees performing any function pertaining to an incident investigation will follow the policies and procedures of their Divisions.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.63
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Report of Law Enforcement Officers Killed or Assaulted	

I. POLICY.

A. The Office of the Sheriff shall report all incidents of Deputies killed or assaulted in the line of duty to the Federal Bureau of Investigation. This report is necessary to enable the F.B.I. to compile accurate nationwide statistics on officers killed or injured.

II. DEFINITIONS.

A. LAW ENFORCEMENT OFFICERS KILLED OR ASSAULTED. The F.B.I./DOJ DO-71 Form. This Form is used to report the number of Deputies who were killed or assaulted in the line of duty. The Form is submitted to the Federal Bureau of Investigation monthly.

B. LAW ENFORCEMENT OFFICERS KILLED OR ASSAULTED. The Sheriff's Office Form (SDI). This Form is a modification of the above F.B.I./DOJ Form and is used in- house at the Division level.

III. PROCEDURE 1.

A. REPORTING ASSAULTS OR DEATHS.

1. In the event a Deputy is assaulted or killed in the line of duty, the respective Division Commander will ensure that a Sheriff's Office Law Enforcement Officers Killed or Assaulted report is completed and forwarded to Technical Services Division, Records Unit.

2. Upon receipt of the above Form, Technical Services Division will complete the monthly, F.B.I. Law Enforcement Officers Killed or Assaulted report, with figures for the entire month. The report will be sent to the Federal Bureau of Investigation each month.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.64
	RELATED ORDERS: Attorney General Opinion 03-205, July 14, 2003; Government Code Sections 6250-6270.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	SUBJECT: **Release of Booking Photographs**	

I. POLICY.

A. Booking photographs will generally not be released to the public except as authorized by this Policy. The Office of the Sheriff has established a procedure for processing requests for the release of booking photographs and a system for tracking them. Booking photographs will be released or withheld pursuant to this Policy.

II. DEFINITIONS.

A. BOOKING PHOTOGRAPH. (Also known as a "mug shot".) A photograph of an individual taken during the process of being booked into a detention facility.

B. BUSINESS RECORD. A public record that includes any writing containing information relating to conducting business that is prepared, owned, used, or retained by any state or local agency.

C. CRIME/INCIDENT REPORTS. Reports that are written in the daily course of business of a law enforcement agency are public records and subject to release under the Public Records Act, with certain exemptions.

III. GENERAL.

A. In accordance with the California Attorney General's Opinion 03-205, the Technical Services Division, Records Unit, shall be the designated location for the release of information, including booking photographs. Employees shall provide to requestors the location and business hours of the Technical Services Division, Records Unit.

1. PERSONNEL AUTHORIZED TO RELEASE BOOKING PHOTOGRAPHS.

a. The Technical Services Division, Records Unit Manager and all Office of the Sheriff Lieutenants and above or his/her designee(s) are authorized to release booking photographs.

b. Booking photographs may be released to the public, news media, Public Defender, District Attorney's Office, bail bond agents, or other law enforcement agencies for the following reasons:

- For the apprehension of criminals wanted in connection with an investigation, or wanted on an outstanding warrant;
- Public defenders and bail bond agents are authorized to obtain a booking photograph upon verification of his/her identity (picture ID) and by providing documentation that the subject in question is their client;
- When the release would be in the best interest of the public and clearly outweighs the public interest in withholding the booking photograph.

c. Once an agency discloses an exempt record, such as an arrest record, to a person who is not authorized to receive it on a confidential basis, it must then disclose that record to all who request it. The information disclosure requirement is limited to contemporaneous information relating to persons currently within the judicial system, and excludes the booking photograph.

IV. PROCEDURE 1.

A. ACCEPTING AND RECORDING BOOKING PHOTOGRAPH REQUESTS .

1. Requests for information can be accepted in person, mail, telephone, fax or through the Office of the Sheriff website located on the Technical Services Division, Records Unit, web pages. To properly track such requests, employees should complete, or assist the requestor to complete, an Office of the Sheriff Application for Release of Information form.

2. Requests received in writing, by email or fax do not by law necessitate the completion of the Office of the Sheriff Application for Release of Information form and are acceptable documentation alone for request purposes, but use of the form should be encouraged for audit purposes.

3. Requests for a certified copy of a booking photograph shall be referred to the Custody Services Bureau, which is the authorized body to attest to the photograph(s) authenticity. Such requests require the completion of an Office of the Sheriff Application for Release of Information form.

V. PROCEDURE 2.

A. REQUEST PROCESSING.

1. Office of the Sheriff employees should refer requesting parties to the Technical Services Division, Records Unit, for all general public releases:

a. Technical Services Division, Records Unit staff shall review and research the request to determine if the request meets the release criteria or if the photograph has been previously released.

b. Release the photograph, when applicable, and forward the written request, faxed request, email or completed Application for Release of Information to the appropriate staff member for tracking purposes.

2. Should circumstances warrant a booking photograph be released from field locations, such as station houses or Office of the Sheriff contract cities, an Office of the Sheriff Application for Release of Information form should be completed prior to the release of the photograph, and the completed form, written request, or faxed request forwarded to the Technical Services Division, Records Unit for tracking purposes.

VI. PROCEDURE 3.

A. TRACKING RELEASES. The Technical Services Division, Records Unit Manager shall maintain a tracking system of all booking photograph releases:

1. Completed Office of the Sheriff Application for Release of Information forms shall become a part of the associated booking/case file and be kept in an automated database for future release decisions.

2. Booking Photographs from outside agencies shall be stored, indexed and maintained; and

3. Booking photographs taken by law enforcement agencies outside the jurisdiction of the Office of the Sheriff (in-county and out-of-county) require a written authorization from those agencies permitting use by the Office of the Sheriff. Any Division or Unit utilizing booking photographs from outside agencies shall maintain a file of all written authorizations.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.65
	RELATED ORDERS: Penal Code Section 849; Penal Code Section 851.6; Penal Code 11115; Penal Code 13151; Penal Code 841.5, Penal Code 853.6, *Schmidt v. California Highway Patrol*, (2016), DOJ Disposition Reporting Guide (2015)	
ISSUE DATE: 6-5-2017 **REVISION DATE: 6-14-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Arrest Disposition Reporting**	

I. POLICY.

A. To provide Sheriff's Office personnel a guideline for disposition reporting for all arrest events mandated by the Department of Justice (DOJ).

B. In all cases where a person has been arrested, but no accusatory pleading is filed with the court, a disposition must be filed within 30 days of release or transfer to another agency (PC § 11115). In cases where charges are filed, the courts will update the arrest record electronically through their own procedures.

C. To ensure positive identification, The Contra Costa County Office of the Sheriff will submit electronic fingerprint transactions or fingerprint cards to the California Department of Justice (DOJ) for a felony or misdemeanor arrest. For each arrest reported to DOJ, it is essential that the Contra Costa County Office of the Sheriff report the final disposition, or outcome, to allow for a complete accounting of events on the criminal history record.

II. DEFINITIONS AND GENERAL PROVISIONS

A. Arrest – The seizure of a person(s) by legal authority and taking into custody.

B. Disposition – Information about events, actions and decisions taken or made by the law enforcement agencies, prosecutors, probation departments, courts and the California Department of Corrections, subsequent to an arrest. Dispositions are the outcome of arrests and contribute to the accuracy and completeness of a subject's master criminal history record maintained in the California State's Automated Criminal History System.

C. Extradition – The action of extraditing a person accused or convicted of a crime from one jurisdiction to another or from a foreign jurisdiction.

D. Final Disposition – This occurs at the arrest level when all charges have been released and there are no further proceedings. Final disposition must be reported to DOJ within 30 days from the date of disposition (Penal Code §§ 11115 & 13151).

III. FORMS

A. ADULT DISPOSITION OF ARREST AND COURT ACTION

1. California Department of Justice form (JUS 8715) used to report the final

disposition of arrests (see attachment).

B. DETENTION CERTIFICATE

1. CCCSO form (DET 016) form used to release suspects per PC 849 (see attachment).

C. DISPOSITION SHEET

1. The Disposition Form will be completed by Investigation Division personnel to relay disposition codes to the FOB clerk who will complete the JUS 8715 form (see attachment).

IV. PROCEDURE 1 – ARRESTING DEPUTY

A. ON-VIEW ARREST(S)

1. When a suspect is released per PC 849(b) **prior** to booking:

a. The arresting officer is responsible for preparing a Detention Certificate for the detainee upon release.

- Give the suspect the original
- Attach a copy to the report
- Forward a copy to Sheriff's Records

V. PROCEDURE 2 - CUSTODY SERVICES BUREAU

A. ON-VIEW ARREST(S)

1. When a suspect is released per PC 849(b) **after** booking:

a. The Custody Services Bureau Clerk will prepare a Detention Certificate for the detainee upon release. The custody sergeant will sign the certificate.

- Give the suspect the original
- Forward a copy to Sheriff's Records
- Attach a copy to the booking

b. The Custody Service Bureau Clerk will update information in the Jail Management System from ARR to DET.

B. OUT-OF-COUNTY WARRANT ARRESTS

1. The Custody Service Bureau Clerk will update the status in Jail Management System.

2. The Custody Service Bureau Clerk will complete the DOJ JUS 8715 form and forward directly to Records.

VI. PROCEDURE 3 - INVESTIGATIONS

A. FELONY CASES

1. INVESTIGATIONS (COUNTY and CONTRACT CITIES DETECTIVES) – Detective will review all felony arrests to determine if they are ready for presentation to the District Attorney's Office.

2. Cases returned by the District Attorney's Office with no charges filed

(NCF), will be documented in a supplemental report.

a. If a Detention Certificate was not already completed by the arresting deputy/officer or CSB, the detective will prepare the Detention Certificate and attach a copy to the supplemental report.

b. The detective will deliver the NCF sheet and Detention Certificate (if required under section (a) above) to the Field Operations Bureau clerk.

c. The detective will update Case Management to show the status of the case.

3. In situations when an arrest occurred and the case will not be presented to the District Attorney' Office (i.e. factual innocence, etc.), the circumstances will be documented in a supplemental report by the assigned detective.

a. If a Detention Certificate was not already completed by the arresting deputy/officer or CSB, the detective will prepare the Detention Certificate and attach a copy to the supplemental report.

b. The detective will also prepare a Disposition Sheet (attached) and deliver it and the Detention Certificate (if required under section (a) above) to the Field Operations Bureau clerk.

c. The detective will update Case Management to the show the status of the case.

B. MISDEMEANOR CASES

1. Misdemeanor Complaints will prepare misdemeanor cases involving arrests for filing with the District Attorney' Office.

a. Exception - Contract City Detective Sergeants may assign misdemeanor cases to the Contract City after advising Misdemeanor Complaints at their discretion. All subsequent procedures for misdemeanor cases will then be followed by the Contract City.

2. Cases returned by the District Attorney's Office with no charges filed (NCF), will be documented in Case Management by Misdemeanor Complaints.

a. If a Detention Certificate was not already completed by the arresting deputy/officer or CSB, Misdemeanor Complaints will prepare the Detention Certificate and deliver it to the Field Operations Bureau clerk.

b. Misdemeanor Complaints will deliver the NCF sheet to the Field Operations Bureau clerk.

3. In the unusual situation when a misdemeanor arrest occurred and the case will not be presented to the District Attorney's Office (i.e. factual innocence, etc.), the circumstances will be documented in a supplemental report by Misdemeanor Complaints.

a. If a Detention Certificate was not already completed by the arresting deputy/officer or CSB, Misdemeanor Complaints will prepare the Detention Certificate and attach a copy to the supplemental report.

b. Misdemeanor Complaints will also prepare a Disposition Sheet (attached) and deliver it and the Detention Certificate (if required under section (a) above) to the Field Operations Bureau clerk.

c. Misdemeanor Complaints will update Case management to show the status of the case.

VII. PROCEDURE 4 – FIELD OPERATIONS BUREAU CLERK

A. The Field Operations Bureau clerk will complete the JUS 8715 disposition report for all arrests where the disposition is final at the law enforcement or District Attorney level. Source documents the clerk will use to complete this task will come from detectives, Misdemeanor Complaints, and CSB clerks. The FOB clerk will also have access to JMS to obtain any needed additional information to complete the form. The California Department of Justice Disposition Reporting Guide provides detailed instructions for completing the form.

1. After completing the JUS 8715 disposition report, the clerk will send the packet to Sheriff's Records.

a. The packet will include the JUS 8715 and any Disposition Sheet, NCF form, and/or Detention Certificate given to the clerk.

VIII. PROCEDURE 5 - SHERIFF'S RECORDS

A. Sheriff's Records will review the JUS 8715 for accuracy.

1. All documents received will be scanned to Disk Image.

2. The arrest in RMS will be updated to reflect a detention only.

3. The original Detention Certificate will be mailed to the last known address of the suspect(s). If the Detention Certificate was already provided to the suspect at the jail or by the arresting deputy the copy will not be mailed.

4. The JUS 8715 will be electronically delivered or mailed to the Department of Justice per DOJ's instructions at:

California Department of Justice

Bureau of Criminal Information and Analysis

Criminal Record Update Section

P.O. Box 903417

Sacramento, CA 94203-4170

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.70
	RELATED ORDERS: None.	
ISSUE DATE: 7-23-2013 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Sheriff's Office Operations	SUBJECT: Victim Information and Notification Everyday (VINE)	

I. POLICY.

A. The Contra Costa County Office of the Sheriff is a participant in the Victim Information and Notification Everyday (VINE) program. VINE is a free and anonymous service through which members of the public can obtain information about an offender's custody status, and crime victims, their next-of-kin, and witnesses can register to receive notifications when an offender's custody status changes.

II. GENERAL.

A. WHEN TO PROVIDE VINE INFORMATION. Office of the Sheriff personnel are encouraged to provide information about VINE, and how to access it, in the following situations:

1. When a request is received for information about the VINE system or an offender's custody status.
2. When a Deputy Sheriff involved in the investigation of a crime determines that it is appropriate to provide such information to a crime victim, witness, or any other interested person.

B. INSTRUCTIONS FOR USE OF VINE.

1. Accessing VINE. VINE is a 24-hour system accessible by telephone or Internet, and available in both English and Spanish.
   a. Information Required. To search for information about an offender's custody status, or to register to receive notifications when an offender's custody status changes, VINE requires that the requesting individual provide only the offender's name.
   b. Telephone Access. VINE can be accessed telephonically using the toll-free California VINE Service Number: **(877) 411-5588**.
   c. Internet Access. VINE can be accessed on the Internet at www.vinelink.com (VINELink). VINELink can also be accessed through the Office of the Sheriff webpage

(www.cocosheriff.org). From that webpage, select the "Community Information" tab, and then the "V.I.N.E. Victim Notification" link, which will redirect the user to VINELink.

2. Searching for Custody Information.

   a. Availability. Anyone can use VINE to search for the custody status of an offender.

   b. Information Provided. VINE will provide the following information about an offender, if in custody:

      Name
      Identification Number
      Custody Location
      Current Custody Status

3. Registering for Custody Status Change Notifications.

   a. Availability. Only crime victims, their next-of-kin, and witnesses may register through VINE to receive custody status change notifications.

   b. Custody Status Changes. VINE includes an offender's release, death, or escape as custody status changes for which notification is provided to registrants.

   c. Registration Process. After locating the offender, a qualifying registrant will need to provide VINE with the following information to register for notification:

      A telephone number or email address where they can be reached for notification;

      A 4-digit Personal Identification Number (PIN); and,

      Registrant Contact Details (for registration confirmation purposes).

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.71**
	RELATED ORDERS: Administrative Bulletin 20.0; California Evidence Code Section 1040 et. seq.; California Constitution Article I, Section 1; California Government Code Section 6251, et. seq.; 13960(b), 12525.2; California Labor Code Section 432.7; PC 1301, 11105, et seq., 11167, 11167.5, 13652, 13652.1; CVC 20012, 20001, 23153, W&I 825 – 828, 5328; "Criminal Intelligence File Guidelines" California DOJ 1982 "Criminal Offender Record Information: Authorized Agency List" United States Department of Justice Regulations; CCCSO 1.06.64, 1.06.80, 1.06.75, 1.06.77, Appendix 8.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 5-2-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Dissemination of Law Enforcement Information**	

I. POLICY.

A. The Office of the Sheriff shall conduct its activities in an atmosphere of openness in its relationship with the public. The dissemination of law enforcement information shall be limited only by legal constraints, by the need to preserve evidence, to prevent interference with criminal investigations, to prevent unreasonable interference with the operations of the Office of the Sheriff and to protect the constitutional and statutory rights of any person.

II. DEFINITIONS.

A. AUTHORIZED PERSON OR AGENCY. Any Person or Agency authorized by court order, statute, or case law to receive specified information.

B. CAL-PHOTO. Network and application are maintained by the California Department of Justice and California's law enforcement agencies to provide access to mug shot images entered by many California agencies as well as photographs and data from the Department of Motor Vehicles (DMV).

C. CRIMINAL JUSTICE AGENCY. Any agency or component thereof, which performs a Criminal Justice activity as its principle function.

D. NEED TO KNOW. The necessity to obtain information in order to execute official responsibilities.

E. RIGHT TO KNOW. The right to obtain information pursuant to court order, statute or case law.

F. SUMMARY CRIMINAL HISTORY INFORMATION (SCHI): (PC 11105(2)(l), 13300(a)(1) The master record of information compiled by a criminal justice agency pertaining to the identification and criminal history of any person, such as name, date of birth, physical description, date(s) of arrest, arresting agencies and booking numbers, charge(s), dispositions, and similar data about such persons.

G. CRIMINAL OFFENDER RECORD INFORMATION (CORI): (PC 11075(a), 13102) Records and data compiled for the purposes of identifying criminal offenders and maintaining as to each a summary of arrests, pretrial proceedings, the nature and disposition of criminal charges, sentencing, incarceration, rehabilitation and release.

H. CONFIDENTIAL INFORMATION. Information, which may or must be withheld from persons or agencies in accordance with statute or court decision.

I. CONTEMPORANEOUS. Arrest Information available to the public for a period of seven days.

J. PUBLIC RECORD. Information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency (to include law enforcement).

K. PUBLIC RECORDS ACT. The California Public Records Act is found at Gov. Code § 6250 *et seq*. CCCSO policy implementing the Public Records Act is stated in Policy 1.06.77 "Crime and Incident Records – Release of Information (Public Records Act)."

L. SERIOUS BODILY INJURY: (Gov. Code § 12525.2 (d).) A bodily injury that involves a substantial risk of death, unconsciousness, protracted and obvious disfigurement, or protracted loss or impairment of the function of a bodily member or organ.

III. GENERAL.

A. DISSEMINATION OF INFORMATION.

1. The dissemination of information relative to the Office of the Sheriff law enforcement activities strictly regulated by local, State and Federal statutes. It is the responsibility of every employee to handle such information in a professional manner and in compliance with existing statutes.

2. The release of any law enforcement information shall be in conformance with the guidelines in this policy and in compliance with all applicable statutes. Records and information contained in or derived from law enforcement information generally falls within one of three categories:

   a. That which must be held confidential;

   b. That which may be held confidential; or

   c. That which must be disclosed.

3. Confidential information may generally be disseminated to criminal justice and law enforcement agencies and personnel for official purposes.

4. All records prepared, maintained, filed or preserved by the Office of the Sheriff are public records and are generally subject to disclosure pursuant to the California Public Records Act. Information contained in a public record or the record in its entirety may be withheld from disclosure only if nondisclosure is permitted or required by statute, court decision or court order. Review Policy 1.06.77 "Crime and Incident Records – Release of Information (Public Records Act)" for instructions relating to the release of Public Records. Note that certain records must be released

pursuant to SB 1421 and AB 748, as stated in Policy 1.06.77 at Procedure 10.

5. Personnel files are confidential and shall not be released to the public or the media.

6. Sheriff's Bulletins are for law enforcement personnel only.

7. Cal-Photo information shall not be released to the media. Only the owner of the image/information may release it to the media if it meets the agency's policy. Images owned by the Office of the Sheriff shall only be released in accordance with Office of the Sheriff Policy 1.06.64, Release of Booking Photographs. DMV image/information may only be released by the DMV.

8. Criminal Justice Agency documents not authored by Office of the Sheriff personnel shall not be released to the public or the media. Such requests shall be referred to the agency of origin.

B. CRIMINAL OFFENDER RECORD INFORMATION (CORI)

1. CORI information is confidential and may be released only to criminal justice or law enforcement agencies or personnel for official purposes. Improper disclosure of CORI is a misdemeanor and may violate the subject's right to privacy. The only exceptions are as follows:

   a. The following contemporaneous information pertaining to arrested persons shall be made available to a member of the public upon request (GC 6254(f) (1)):

      - Full name (adults only);
      - Occupation (adults only);
      - Physical description including date of birth, color of eyes and hair, sex, height and weight;
      - Time, date and location of arrest;
      - Refer requestor to the Division or Agency that made the arrest for factual circumstances surrounding the arrest;
      - Time and date of booking;
      - The location where the person is currently being held;
      - Amount of bail set; and
      - All charges on which the person is being held, including any outstanding warrants from other jurisdictions and parole or probation holds.
      - Time and manner of release.

b. Exception: Some or all of the above items of information will not be released if the release of that information might reasonably:

- Endanger the safety of a person involved in the investigation; or
- Endanger the successful completion of the investigation or a related investigation.

c. All requests for arrest information pertaining to out-of-custody matters shall be referred to the Technical Services Division, Records Unit. Information shall be released in accordance with the laws governing the release of information and this Policy.

d. All requests for information pertaining to in-custody matters shall be referred to the Custody Services Bureau. Information released to the public and the media shall be in accordance with the laws governing the release of information and this Policy.

e. Information regarding juveniles arrested or cited shall be released through the Technical Service Division, Records Unit in accordance with the current policies of the Juvenile Court regarding juvenile record information (TNG Order).

f. Requests for the release of booking photographs shall be processed pursuant to Office of the Sheriff Policy 1.06.64.3

2. The Sheriff and the Command Staff at the rank of Lieutenant or above may exercise discretion to override any policy stated herein otherwise prohibiting the release of certain information to the public when a dominating public interest favors disclosure.

C. SUMMARY CRIMINAL HISTORY INFORMATION (SCHI) "Rap Sheets": (PC 11105- 11105.3, 1140-11144; 13300-13305).

1. There are two types of Summary Criminal History Information (SCHI) and local SCHI. SCHI is confidential information and may be disclosed only to criminal justice or law enforcement agencies or personnel for official purposes or to other persons or agencies as authorized by statute, court decision or court order. The list of persons and circumstances for which this information may be released is extensive and specific.

a. In order to maintain adequate control, the release of all State and Local SCHI shall be through the Technical Services Division, Records Unit. Persons requesting SCHI shall be referred to the Technical Services Division, Records Unit. To authorize disclosure of either type of information to unauthorized persons is a misdemeanor and may be a violation of the privacy rights of the subject of the information.

2. As peace officers, Deputies have a right-to-know Summary Criminal History Information. However, they must also have a need-to-know to have legal access to SCHI. The collection of criminal information about local persons by a Deputy for use as an investigative tool is a valid use of SCHI. Due to the sensitive nature of SCHI the following guidelines will be strictly followed:

a. Deputies will only disclose SCHI to other peace officers that have a need to know.

b. Deputies will safeguard SCHI in their possession.

c. SCHI will not be kept in private vehicles or private residences.

d. Hard copies of SCHI (Rap Sheets) will not be retained in a Deputy's personnel file.

e. Once the copy of SCHI is not needed, the document will be destroyed by shredding.

3. Only authorized law enforcement or criminal justice personnel may access Cal-Photo.

a. Any information or image accessed by Cal-Photo is confidential and for official use only by authorized personnel on a need-to-know and right-to-know basis.

b. Authorized personnel shall not inquire into their own record nor have anyone else inquire for them.

c. All Cal-Photo information retained must be stored in a secure and confidential file. When that Division or Bureau no longer requires that image or information it shall be destroyed by shredding.

D. URSUS – STATE DOJ USE OF FORCE REPORTING (Gov. Code § 12525.2)

1. Gov. Code § 12525.2 requires that each law enforcement agency in the state reports on a monthly basis all instances when a peace officer employed by that agency is involved in any of the following:

a. An incident involving the shooting of a civilian by a peace officer.

b. An incident involving the shooting of a peace officer by a civilian.

c. An incident in which the use of force by a peace officer against a civilian results in serious bodily injury or death.

d. An incident in which use of force by a civilian against a peace officer results in serious bodily injury or death.

2. The Professional Standards Division Commander will review all use of force reports on a monthly basis to identify any incidents that are required to be reported.

3. If any incidents are identified as being required to be reported, the Professional Standards Division Commander will forward the reports to the Technical Services Division - Records Unit Manager to ensure the incidents are reported to the state DOJ.

IV. PROCEDURE 1.

A. DIVISION COMMANDER RESPONSIBILITIES.

1. Each Division Commander will develop and maintain adequate policies for the control and dissemination of law enforcement information within his/her division. Division policies shall be in compliance with the manual and all applicable statutes. Specifically, the following Divisions' policies and procedures will address the informational items listed for their responsibility. Other Divisions will not disseminate information designated as the specific responsibility of another Division, unless it is also listed as their responsibility.

   a. Technical Services Division – Records Unit.

      - The Records Unit will collect all necessary and appropriate fees for copies of reports, records, etc.
      - Criminal Offender Record Information;
      - Summary Criminal History Information (SCHI), both State and local;
      - Traffic reports;
      - Incident and Crime (case file) reports, photographs of scenes and evidence (considered part of the crime report for record keeping purposes);
      - Dispatch log information; and
      - Out-of-custody arrest information.

   b. Patrol Division. The Patrol Division may release information that is defined as public when the need is immediate. The release may be verbal or in the form of a press release. Requests for copies of reports will be referred to the Technical Services Division, Records Unit.

   c. Custody Services Bureau. The Custody Services Bureau is responsible for the dissemination of information defined as public upon request.

      - Persons requesting information regarding the factual circumstances surrounding the arrest will be referred to the Division or other agency making the arrest.
      - In-custody arrest information.

   d. Investigation Division. The Investigation Division may release information that is defined as public when the need is immediate. The release may be verbal or in a press release. Requests will be referred to Technical Services Division-Records Unit.

   e. Forensic Services Division.

      - The Forensic Services Division shall release the following when presented with a proper motion for legal discovery or a Subpoena Duces Tecum:
        - Laboratory reports
        - Examiners’ notes

- Evidence
- Scene Photographs

- The Coroner's Office is responsible for the dissemination of all Coroners' records.

2. Each Division Commander may release statistical data regarding the operations of their division.

V. PROCEDURE 2.

A. EMPLOYEE RESPONSIBILITIES. All employees shall be aware of the confidential and sensitive nature of information with which they work. Employees will not routinely disseminate information, unless in compliance with their Division's policies and their assigned duties.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.72
	RELATED ORDERS: PC 290, 290.4 CCCSO 1.06.79	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-20-2013	**CLEARANCE:** Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	**SUBJECT:** Dissemination of Information on Registered Sex Offenders	

I. POLICY.

A. Pursuant to State law, the Contra Costa County Office of the Sheriff will disseminate information regarding sex offenders for the purpose of allowing members of the public to protect themselves and their children from sex offenders.

II. DEFINITIONS.

A. MEGAN'S LAW WEB SITE. This site provides access to information on more than 53,000 registered sex offenders in the State of California. Home addresses are provided on many offenders and many others are listed by zip code, city and county. This site can be accessed by going directly to www.meganslaw.ca.gov or through the Megan's Law link on the Sheriff's web site.

B. DISCLOSURE LEVELS. Differing levels of offenses require different degrees of disclosure as to the offender's information.

1. Full Disclosure. A sex offender who is identified on the Megan's Law Internet Web Site with his or her full address.

2. Zip Code Only Disclosure. A sex offender who is identified on the Megan's Law Internet Web Site by only the zip code where he or she resides.

3. Non-Disclosure. A sex offender who is not identified on the Megan's Law Internet Web Site.

C. SARATSO. Acronym for the State-Authorized Risk Assessment Tool for Sex Offenders.

D. RISK ASSESSMENT. Assessment of any individual sex offender by means of the SARATSO by trained law enforcement or other professionals. In the absence of a scored actuarial assessment of an offender's risk for recidivism (such as "high," "moderate," or "low risk"), Office of the Sheriff personnel must rely upon information known to them about a specific offender when determining whether public notice is necessary to ensure the public safety. No assessment of risk by the SARATSO (such as "moderate risk" or "low risk") precludes law enforcement from making a public notice or disclosure of

information about a specific sex offender if information about that offender gives reasonable cause to believe notification was necessary to ensure the public safety.

III. GENERAL.

A. The California Legislature has found there are compelling interests justifying the disclosure of certain information about specified sex registrants "to allow members of the public to adequately protect themselves and their children from these persons." The Office of the Sheriff will take a proactive role to ensure members of the public are notified of sex offenders who move into their communities and those sex offenders who pose a specific threat to public safety based on information available to law enforcement. There are two primary statutes:

1. Penal Code Section 290.45:

   a. Permits law enforcement entities to provide information to the public about any person required to register as a sex offender pursuant to Section 290 by "whatever means the entity deems appropriate, when necessary to ensure the public safety based on information available to the entity concerning that specific person." (See 290.45(a)(3) for specific limitations on the disclosure of this information by Internet Web site.)

   b. Permits law enforcement entities to authorize "persons and entities who receive the information" about a registered sex offender to "disclose information to additional persons only if the entity determines that disclosure to the additional persons will enhance the public safety and identifies the appropriate scope of further disclosure."

   c. Provides that "A designated law enforcement entity and its employees shall be immune from liability for good faith conduct under this section."

2. Penal Code Section 290.46:

   a. Mandates that the California Department of Justice make available to the public via an Internet Web site (Megan's Law Internet Web Site) information concerning persons who are required to register pursuant to Section 290.

   b. States criteria for the California Department of Justice to identify a sex offender by his or her full address or zip code and identifies those sex offenders who may apply for exclusion from the Megan's Law Internet Web Site.

   c. Permits law enforcement entities to disclose specified information about an offender "by way of an Internet Web site" when necessary to ensure the public safety based upon available information.

   d. Sets additional penalties of no less than $10,000 and no more than $50,000 for any person who uses disclosure information to commit a misdemeanor; and a penalty of a five-year term of

imprisonment, to run consecutively with any other punishment, for anyone who uses disclosure information to commit a felony.

e. Sets a fine of $1,000 and/or imprisonment up to six months for any person who enters an Internet Web site established pursuant to this section if that person is required to register as a sex offender.

IV. PROCEDURE 1.

A. DISCLOSURE OF INFORMATION ABOUT SEX OFFENDERS.

1. Limitations on the Disclosure of Information About Sex Offenders.

a. Under Penal Code Section 290.45(a)(1), the Office of the Sheriff may disclose certain information about a person required to register as a sex offender by whatever means appropriate, when necessary to ensure the public safety based upon available information concerning that person.

b. Any and all disclosures shall include a statement that the purpose of the release of information is to allow members of the public to protect themselves and their children from sex offenders. The information may be provided by one or more of the following methods: personal contacts, telephone contacts, Internet Web site postings, and/or distribution of written notices or flyers by law enforcement or authorized citizens (including mail service). Community notification by way of an Internet Web site shall be governed by PC 290.46, and no posting on an Internet Web site may be made of any information identifying an individual as a person required to register as a sex offender except as provided in that section unless there is a warrant outstanding for that person's arrest. Information about a sex offender will not be initially disclosed by means of a press release unless the Investigation Division Commander determines that such a release is necessary for public safety.

c. The Investigation Division Commander or his designee shall decide whether to provide information about a sex offender. In determining whether to provide information, the following shall be considered: the awareness of a community where a sex offender has relocated or been released from confinement, the nature of the sex offender's suspicious behavior or activity; the nature of the sex offender's convictions; whether children or other persons at risk are located within approximately one-quarter mile (or more if circumstances warrant) of the sex offender; and other factors deemed relevant under the particular circumstances.

d. If information about a sex offender is to be provided, only the following information about the sex offender may be disclosed:

- Full name;
- Known aliases;
- Gender;
- Race;
- Physical description;

- Photograph
- Date of birth;
- Crimes (and dates of those crimes) resulting in registration under Penal Code Section 290;
- The address of the sex offender only if the sex offender is listed on the Megan's Law Internet Web Site as a full address disclosure or if the Investigations Division Commander determines that disclosure is necessary for the safety of children or other persons at risk. No address of any sex offender may be disclosed until the address is verified;
- Descriptions and license numbers of vehicles in which the offender is known to drive;
- A victim profile (but excluding information that would identify the victim).
- Relevant conditions of probation or parole (such as one prohibiting contact with children); and
- The date of release from confinement.
- Any additional information as allowed per Penal Code 290.45/46.

e. The information disclosed will be limited to that information deemed relevant and necessary to allow members of the public to protect themselves and their children from the sex offender. Disclosure of information that would not enhance the public protection is not to be released.

f. The following statement must accompany every notification concerning a sex offender: "The purpose of this notification is to allow members of the public to protect themselves and their children from sex offenders. Any use of this information except as authorized by law is subject to criminal and/or civil penalties."

- If the disclosure is in written form, this statement must be included in the written form.
- If the disclosure is verbal, the making of the statement must be fully reported in writing.

g. Disclosure will be made to public and private educational institutions, day care establishments and organizations that primarily serve individuals likely to be victimized or community members who may be at risk. Disclosure will not be made to employers, unless the nature of the employment places the offender in contact with persons likely to be victimized.

h. The Dispatch Supervisor and the appropriate Station House Commander will also be notified of all public disclosures.

B. DESIGNATION OF DISCLOSURE RESPONSIBILITY.

1. The Investigation Division Commander, or Watch Commander during non-business hours, will be responsible for:
    a. The approval of disclosure of information under this Policy;
    b. Notifying the Sheriff of each disclosure via the chain of command; and
    c. Ensuring the proper maintenance of all required records.

2. Field Officer Responsibility.
    a. Patrol Deputies will not provide legal advice to the public or the media on any issue related to this Policy, but will refer citizens to the Megan's Law Internet Web Site.
    b. The Investigation Division may request Patrol Deputies to make personal notification to institutions, establishments, and organizations/individuals when necessary to ensure the public safety. Each instance of notification will be documented in a supplemental report and/or by notation in the Supervised Release File Record.
    c. When disseminating information, Patrol Deputies must state the information is being provided to allow members of the public to protect themselves and their children from sex offenders.
    d. Patrol Deputies who encounter sex offenders, and determine that prompt notification to a third party is necessary for public safety, will notify the appropriate Sergeant. The Sergeant, if possible, will respond to the scene and determine if notification to a third party is necessary, lawful, and within this Policy. If the Sergeant determines that notification is necessary, he/she shall notify the Investigation Division Commander, or Watch Commander during non-business hours, report the situation and seek his/her approval for notification. The Patrol Deputy will make an entry in the Supervised Release File Record and write a report, which will be forwarded to the Special Victims Unit.

C. REQUIRED RECORDS

1. A request for authorization to disclose information pursuant to this Policy will be submitted in written memo form, via the chain of command, to the Investigation Division Commander. The memo and any accompanying documentation will include:

    a. Identification of the sex offender and general background information describing his/her history of offenses;

    b. A description of the person or persons who are believed to be at risk;

    c. A description of his/her current activities that give rise to the reasonable

2. Those registrants classified by the Department of Justice as zip code only disclosures will have their full address listed as a secondary address (seen only by Sheriff's Office employees who access the database through a Sheriff's Office terminal) and the zip code where they live listed as their

primary address. Automated e-mail notifications will not be authorized for these registrants except in the event that specific circumstances give cause to believe that the registrant poses a threat to public safety.

3. Those registrants classified as non-disclosures will have their full address listed as their secondary address (seen only by Sheriff's Office employees who access the database through a Sheriff's Office terminal) and no address listed as their primary address. Automated e-mail notifications will not be authorized for these registrants except in the event that specific circumstances give cause to believe that the registrant poses a threat to public safety.

4. The detective assigned to sex offender registration and enforcement in the Sexual Assault Detail will be responsible for verifying the registrant's status (full address disclosure, zip code only disclosure or non disclosure) at each registration event and updating the registrant's file accordingly.

D. LAW ENFORCEMENT APPLICATION

1. The sex offender database will be available at every station house. Full read-only access passwords will be provided by the supervisor of the Sexual Assault Unit or the detective assigned to sex offender registration and enforcement.

2. The database will be used by each station house to account for every registrant in Sheriff's Office jurisdiction and to assist the Sexual Assault Unit in conducting regular scheduled address verifications.

3. The database can also be used to conduct refined searches of all sex offenders registered in Sheriff's Office jurisdiction by criteria such as: physical description; proximity to crime locations; types of vehicles associated with offenders; and crimes for which offenders are required to register. This function is vital in active investigations in the field.

4. Patrol personnel can provide updated information of additional addresses, vehicles, and the whereabouts of registered sex offenders by completing FI cards. This information will be added to the Sheriff's Office database and could trigger a notification or investigation of the registrant's compliance with registration laws or involvement in possible criminal activity.

5. The Investigation Division Commander will be responsible for:

   a. Ensuring the security of the database, monitoring its use, and the use of information obtained from it within the operations of the Sexual Assault Detail.

6. The Patrol Division Commander will be responsible for:

   a. Ensuring the security of the database, monitoring its use, and the use of information obtained from it within the operations of the Patrol Division.

V. PROCEDURE 2.

A. DISCLOSURE OF INFORMATION ABOUT SEX OFFENDERS

1. Limitations on the Disclosure of Information About Sex Offenders.

   a. Under Penal Code Section 290.45(a)(1), the Office of the Sheriff may disclose certain information about registered sex offenders by whatever means the entity deems appropriate, when necessary to ensure the public safety based upon available information concerning the specific registrant.

   b. The provision of information by any appropriate means shall be deemed necessary to allow members of the public to protect themselves and their children from sex offenders. The information may be provided by one or more of the following methods: personal contacts, telephone contacts, Internet Web site postings, e-mail notices, and/or distribution of written notices or flyers by law enforcement or authorized citizens (including mail service). Information about a sex offender will not be initially disclosed by means of a press release unless the Investigation Division Commander determines that such a release is necessary for public safety.

   c. The Investigation Division Commander or his designee shall decide whether to provide information about a sex offender. In determining whether to provide information, the following shall be considered: the awareness of a community where a sex offender has relocated or been released from confinement, the nature of the sex offender's suspicious behavior or activity; the nature of the sex offender's convictions; whether children or other persons at risk are located within approximately one-quarter mile (or more if circumstances warrant) of the sex offender; and other factors deemed relevant under the particular circumstances.

   d. If information about a sex offender is to be provided, only the following information about the sex offender may be disclosed:

      - Full name;
      - Known aliases;
      - Gender;
      - Race;
      - Physical description;
      - Photograph;
      - Date of birth;
      - Crimes (and dates of those crimes) resulting in registration under Penal Code Section 290;
      - The address of the sex offender only if the sex offender is listed on the Megan's Law Internet Web Site as a full address disclosure or if the Investigations Division

Commander determines that disclosure is indispensable for the safety of children or other persons at risk. No address of any sex offender may be disclosed until the address is verified;

- Descriptions and license numbers of vehicles in which the offender is known to drive;
- A victim profile;
- Relevant conditions of probation or parole (such as one prohibiting contact with children); and
- The date of release from confinement.

e. The information disclosed will be limited to that information deemed relevant and necessary to allow members of the public to protect themselves and their children from the sex offender. Disclosure of information that would not enhance the public protection is not to be released.

f. The following statement must accompany every notification concerning a sex offender: "The purpose of this notification is to allow members of the public to protect themselves and their children from sex offenders. Any use of this information except as authorized by law is subject to criminal and/or civil penalties."

- If the disclosure is in written form, this statement must be included in the written form.
- If the disclosure is verbal, the making of the statement must be fully reported in writing.

g. Disclosure will be made to public and private educational institutions, day care establishments and organizations that primarily serve individuals likely to be victimized or community members who may be at risk. They will not notify employers, unless the nature of the employment places the offender in contact with persons likely to be victimized.

h. The Dispatch Supervisor and the appropriate Station House Commander will also be notified of all public disclosures.

B. DESIGNATION OF DISCLOSURE RESPONSIBILITY.

1. The Investigation Division Commander, or Watch Commander during non-business hours, will be responsible for:

a. The approval of disclosure of information under this Policy;

b. Notify the Sheriff of each disclosure via the chain of command; and,

c. Ensuring the proper maintenance of all required records.

2. Field Officer Responsibility.

a. Patrol Deputies will not provide legal advice to the public or the media on any issue related to this Policy, but will refer citizens to

either the Office of the Sheriff's Internet Web Site, or to the Megan's Law Internet Web Site.

b. The Investigation Division may request Patrol Deputies to make personal notification to institutions, establishments, and organizations/individuals when necessary to ensure the public safety. Each instance of notification will be documented in a supplemental report and/or by notation in the Supervised Release File Record.

c. When disseminating information, Patrol Deputies must state the information is being provided to allow members of the public to protect themselves and their children from sex offenders.

d. Patrol Deputies who encounter sex offenders, and determine that prompt notification to a third party is necessary for public safety, will notify the appropriate Sergeant. The Sergeant, if possible, will respond to the scene and determine if notification to a third party is necessary, lawful, and within this Policy. If the Sergeant determines that notification is necessary, he/she shall notify the Investigation Division Commander, or Watch Commander during non-business hours, report the situation and seek his/her approval for notification. The Patrol Deputy will make an entry in the Supervised Release File Record and write a report, which will be forwarded to the Sexual Assault Detail.

C. REQUIRED RECORDS

1. A request for authorization to disclose information pursuant to this Policy will be submitted in written memo form, via the chain of command, to the Investigation Division Commander. The memo and any accompanying documentation will include:

   a. Identification of the sex offender and general background information describing his/her history of offenses;

   b. A description of the person or persons who are believed to be at risk;

   c. A description of his/her current activities that give rise to the reasonable suspicion that a person is at risk and the nature and frequency of the contact or interaction that does or is likely to occur between the offender and the person at risk. Attach any reports that document the observed or suspected behavior or activities;

   d. A description of the proposed mechanism of disclosure (press release, flyers distributed to schools, etc.); and,

   e. A listing of the information to be disclosed.

2. Authorization for disclosure must be in writing, noted on the original request, by the Investigation Division Commander. The authorization will include any additions or amendments to the contents of the request.

3. Written disclosure of sex offender information, if necessary, may be in the form of a form letter, flyer, e-mail, postal mailing or other document.

Such information in the form of a press release requires approval of the Investigation Division Commander. Any verbal disclosure of sex offender information by a field officer shall be fully reported in the comments section of the Supervised Release File Record.

4. Written documentation of any disclosure will be noted either in a Uniform Crime Report and/or the registrants file kept in the office of the Special Victims Unit. The report or documentation will include the dates and times of the disclosure and the scope of the disclosure.

5. All Office of the Sheriff Disclosure documentation shall be maintained by the Investigation Division for at least five years.

CCCSO Yellow Stripe Policy

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.73**
	RELATED ORDERS: CCCSO 1.06.39, 1.06.62, 1.06.71, 1.06.73, 1.06.74, 1.06.77, 1.06.80.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 2-4-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	SUBJECT: **Information to Citizens**	

I. POLICY.

A. In order to earn and preserve the public's trust, confidence and support, information to citizens will be limited only by imposed legal restraints, the need to preserve evidence, to prevent interference with criminal investigations, to prevent unreasonable interference with Office of the Sheriff operations, and to protect the constitutional rights of persons accused of a crime.

II. GENERAL.

A. OFFICE OF THE SHERIFF INFORMATION. Information of a general nature about the Sheriff's Office organization, operations, goals and objectives are published in the Sheriff's Annual Report, Office of the Sheriff Newsletter, County Website, Social Media, and other publications. This type of information is routinely made available to all members of the public (except in-custody inmates). Employees are encouraged to assist citizens in obtaining information of this nature.

B. LAW ENFORCEMENT INFORMATION.

1. Employees shall be aware of legal restraints, the need to preserve evidence, to prevent interference with criminal investigations, to prevent unreasonable interference with Office of the Sheriff operations, and the obligation to protect the constitutional rights of persons accused of a crime, when dealing with law enforcement information.

2. The specifics of what law enforcement information may be released to the public is included in numerous Office of the Sheriff Policies, most notably 1.06.62 "Police Involved Fatal or Serious Injury Incidents Policy," 1.06.71 "Dissemination of Law Enforcement Information," 1.06.77 "Crime and Incident Records—Release of Information (Public Records Act),"and 1.06.80 "Citizens' Complaints / Internal Investigations." Employees will strictly comply with these policies when dealing with law enforcement information.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.74
	RELATED ORDERS: Office of the Sheriff Policy Sections, 1.06.39, 1.06.36.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	SUBJECT: **Control of Office of the Sheriff Information**	

I. POLICY.

A. To ensure the confidentiality, accuracy and security of Office of the Sheriff information, specific guidelines for the control of information are established.

II. DEFINITIONS.

A. Office of the Sheriff Information. This term is inclusive of all official business of the Office of the Sheriff, both law enforcement and business operations.

III. GENERAL.

A. SHERIFF'S OFFICE INFORMATION.

1. The law enforcement functions of the Office of the Sheriff create a situation in which most information handled by Office of the Sheriff employees is legally confidential and the rest can be considered sensitive to public disclosure. Because of this situation, employees have a public trust and legal obligation to handle all Office of the Sheriff information in a professional manner.

2. Employees shall treat Office of the Sheriff information as confidential. They shall not discuss nor impart Office of the Sheriff information to anyone except those for whom it is intended.

3. The contents of any criminal record or record of a complaint or investigation conducted by the Office of the Sheriff shall be disclosed only in compliance with Office of the Sheriff Policy Section 1.06.71, Dissemination of Law Enforcement Information.

B. ACCESS TO AND USE OF RECORDS AND FILES.

1. Information contained in the records and files of the Office of the Sheriff or records and files available to the Office of the Sheriff because of its status as a law enforcement agency, are for the official use of law enforcement/criminal justice agencies only.

2. "Official use" shall be broadly construed to mean that an inquiry into a record or file or the use of any information obtained from such records

and files is either required or is helpful in accomplishing the objectives or mission of this or another law enforcement or criminal justice agency.

3. Inquiring into such records or files or using any information from them for personal reasons is prohibited. An example of unauthorized use would be requesting vehicle registration information in order to be able to contact the owner to inquire about purchasing the vehicle. Another example would be accessing the name index to determine if an acquaintance has a criminal record.

IV. DUTY TO REPORT INFORMATION.

A. Employees shall accurately report any situation observed by them or any information given in good faith by any member of the public regarding the need for action by the Office of the Sheriff.

V. FALSE INFORMATION.

A. Employees shall not knowingly or willfully enter or cause to be entered any inaccurate, false, or improper information or material matter into any Office of the Sheriff books, records or reports.

VI. REMOVAL OF OFFICIAL RECORDS.

A. Employees shall not remove any official record of the Office of the Sheriff and/or copies thereof, unless directed by their Supervisor or under due process of law.

CCCSO Yellow Stripe Policy

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.75
	RELATED ORDERS: CLETS Operating Policies, Practices and Procedures; PC 502, 11105-11144, 13100-13400, 15150-15167; CCCSO 1.05.81, 1.06.71.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	SUBJECT: **Criminal History Security**	

I. POLICY.

A. The Office of the Sheriff shall ensure compliance with statutes and State and Federal regulations pertaining to rap sheet security. Access to local, State and Federal Automated Criminal History Systems (ACHS) is controlled by statutes and regulations issued by agencies responsible for those systems. The Office of the Sheriff is subject to periodic mandatory audits of our compliance. Failure to comply with requirements imposed by statute or regulation could cause the Office of the Sheriff to lose its access to this very important information. The purpose of this Policy is to set forth the means by which the Office of the Sheriff will ensure compliance with all statutory and regulatory requirements pertaining to Automated Criminal History Systems.

II. GENERAL.

A. PHYSICAL SECURITY OF TERMINALS.

1. Terminals with access to State or Federal Automated Criminal History Systems shall be located in areas not open to Non-Office of the Sheriff personnel without escort and must not be visible to an unauthorized observer.

2. Strict sign-on/sign-off security will be observed. The individual accessing the system(s) will ensure that he/she is signed-on and will sign-off when ceasing work at the terminal.

B. TRAINING REQUIREMENTS.

1. Any person accessing the California Law Enforcement Telecommunications System (CLETS) or National Crime Information Center (NCIC) communications networks shall have received training required by the California Department of Justice for persons using the CLETS and NCIC networks.

2. All personnel having access to local, State or Federal criminal history information shall have in their personnel file a signed statement indicating understanding of the penalties for misuse of such information.

C. AUDIT LOG REQUIREMENTS.

1. All sites with terminal access to State or Federal criminal history will use the Rap Sheet Control Log in compliance with CLETS regulations.

2. Every receipt of criminal history information whether or not printed, will be entered on the Rap Sheet Control Log.

3. Division Commanders will ensure that Rap Sheet Control Logs for each month will be sent to Technical Services, Division Records Unit by the 10th of the following month, where they will be kept for a minimum of two years. Name inquiries or receipt of Personal Data Record (PDR) information only does not require an entry on the Rap Sheet Control Log.

D. SYSTEMS USAGE REQUIREMENTS.

1. CLETS Policy prohibits access to or use of CLETS/NCIC Automated Criminal History Systems for employment, licensing or certification purposes. Unauthorized use of CLETS, National Law Enforcement Telecommunications System (NLETS) or information obtained from automated systems may constitute a crime under any of several applicable statutes and will be a violation of Office of the Sheriff Policy.

2. Use of the RTE (route) field in either free-format or in formatted screens is mandatory. The operator will include in the field as a minimum requirement the name or employee number of the person for whom the record is requested. A case number, booking number, citation number or other specific reference to the purpose for the inquiry must also be included. Example: RTE/28699 90-12345 or: RTE/JJones 90-34567.

E. RETENTION, DESTRUCTION OF RAP SHEETS.

1. Rap sheets will not be appended to a report nor retained in a booking record after release of the subject.

2. When no longer needed, rap sheets will be destroyed by shredding.

F. OBTAINING ACCESS TO ACHS. The responsible Division Commander must make requests for ACHS access for any terminal in writing to the Technical Services Division Commander. Upon verification of need and determination that security requirements will be met, the Technical Services Division Commander will request such access and a new CLETS mnemonic if necessary from CLETS. Such requests must be in writing and several weeks should be allowed for the request to be acted upon by the State.

G. ENFORCEMENT. The Technical Services Division Commander shall be responsible for enforcement of the provisions of this Policy by ensuring that all personnel are advised of changes to CLETS and NCIC security regulations and their operating policies and procedures. If necessary due to changes in CLETS, NCIC requirements or Office of the Sheriff needs, immediate changes to this Policy may be placed in effect by verbal or written order of the Technical Services Division Commander pending approval by the Sheriff.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.76
	RELATED ORDERS: MUPS Training Manual.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 8-26-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Validation of CJIS and NCIC Automated System Entries**	

I. POLICY.

A. The Office of the Sheriff will ensure that its use of State and Federal automated systems databases is in compliance with all published policies and required procedures of those systems.

II. DEFINITIONS.

A. CRIMINAL JUSTICE INFORMATION SYSTEM (CJIS). This is the collection of databases maintained by the California Department of Justice and includes the Stolen Vehicle System, Missing and Unidentified Persons System, Wanted Persons System, etc.

B. NATIONAL CRIME INFORMATION CENTER (NCIC). This is the FBI's version of CJIS. It is a collection of databases to which we have access, such as the Automated Property System, Automated Warrant System, Missing Person System, etc.

C. AGENCY CLETS COORDINATOR (ACC). The California Department of Justice is the Control Terminal Agency (CTA) for the National Law Enforcement Telecommunication System (NLETS) as designated by the FBI. The CTA is responsible for ensuring system security as well as accuracy of entries in databases on a statewide basis. DOJ designates one Agency Head in each County as the Agency CLETS Coordinator. The ACC is responsible for ensuring system security in the County and the accuracy of entries by the Office of the Sheriff. The Sheriff is the designated ACC for Contra Costa County and has delegated the responsibility of ACC to the Records Unit Manager.

D. ACHS: Automated Criminal History System

E. AFS: Automated Firearms System

F. AWS: Automated Warrant System

G. DOJ: California Department of Justice

H. DROS: Dealer's Record of Sale (firearms sales records)

I. MPS: Missing Persons System

J. MUPS: Missing and Unidentified Persons System

K. SBS: Stolen Boat System

L. SVS: Stolen Vehicle System

M. WPS: Wanted Person System

III. GENERAL.

A. The Criminal Justice Information Systems and National Crime Information Center provide automated systems, which allow, and in some cases require, law enforcement agencies to make entries, which are accessible to other law enforcement agencies. These systems have files for warrants (WPS/AWS), missing persons (MUPS/MPS), stolen vehicles (SVS), stolen boats (SBS), and stolen (and lost and found) firearms (AFS).

1. Our use of these systems is subject to policies and procedures promulgated by the governing bodies of CJIS and NCIC. Among the most important of the policy requirements is that the Office of the Sheriff must periodically "validate" every active entry in the systems to ensure that the entries are currently valid and contain all available information.

IV. PROCEDURE 1.

A. DESIGNATED RESPONSIBILITIES.

1. As the designated Agency Terminal Coordinator, the Technical Services Division Captain is responsible for ensuring the compliance of the Sheriff's Office with validation requirements and for coordinating the activities of involved Divisions.

2. The Validation Coordinator shall be the Records Unit Manager of Technical Services Division. The Validation Coordinator shall:

a. Receive the validation materials from DOJ;

b. Notify DOJ of receipt of the validation checklists;

c. Distribute the validation lists to the appropriate Divisions or Police Service Contracts with copies of the reports;

d. Provide assistance as necessary to involved Divisions and Police Service Contracts; and

e. Certify completion of the validation to DOJ.

V. PROCEDURE 2.

A. GENERAL VALIDATION PROCEDURES. The Investigation Division Commander will ensure validation procedures are completed for the following systems: Vehicles, Boats, Missing or Unidentified Persons, and Firearms.

1. Check the report for any supplemental information and compare against the entry in the system. Update or cancel the entry as appropriate.

a. For example, if a supplement to a Missing Person report indicates the person has been located or returned, but there is no cancellation of the original entry, the report is no longer in "active status" and the entry must be removed immediately. Keep a copy of the cancellation message with the supplemental report.

2. Ensure that the report includes appropriate available source record documents such as the DMV vehicle registration or DROS printout.

3. If the report reflects active status, contact the reporting party as indicated on the report. Also, determine if the reporting party has any new information to add to the report. Often victims will report an item stolen only to discover later that they have misplaced it. If they then fail to notify us, the information is left in the computer unnecessarily.

4. After reviewing the report and verifying the property or person's status, check the computer entry against the report to make sure correct information has been entered.

    a. For example, a stolen gun entry shows a caliber of .357. However, the report shows .22. The entry should be modified to reflect the correct information.

5. Once the accuracy has been confirmed, check to make sure all the information available on the report has been included in the entry.

    a. For example, the report shows a gun having a category of "semi-automatic," but the entry does not contain this information. This entry should be modified to reflect the data. Remember, NCIC does not accept a gun entry without a category. Chances of making a positive identification are greater when the item can be fully described.

6. Document action taken and results in a supplement to the report.

7. Return the "Validation Check List" to the Records Unit Manager.

VI. PROCEDURE 3.

A. REMOVAL OF ENTRIES WITHOUT RECOVERY. Entries in the various systems may be canceled even if the item or person has not been recovered or has not returned. The following criteria shall be applied. However, if in the judgment of the assigned Investigator the entry should be retained, it need not be canceled.

1. Vehicle/Boats (SVS, ABS).

    a. After 3 years, if the estimated value of the item is less than $1000, the entry may be canceled.

2. Firearms (AFS).

    a. All firearms entries are indefinite until they have been recovered.

    b. Entries for firearms, which are not assault weapons as defined in Penal Code Section 12276, will be canceled after 10 years.

3. Missing Persons (MUPS).

    a. If the missing person is an adult, the entry will be removed if the person is determined to be voluntarily missing.*

    b. Upon reaching the age of emancipation, persons reported missing as juveniles will be removed from the system (MUPS) if the person is determined to be voluntarily missing.*

c. Retaining an adult, or "emancipated juvenile" or voluntarily missing person in MUPS will require a statement signed by a legal guardian, physician, psychiatrist or psychologist that the person is not competent to make decisions regarding where or how they live, giving the reasons for that determination.

d. When an adult or "emancipated juvenile" is determined to be voluntarily missing, the reporting persons will be so notified. The reporting person will not be informed of the location or living arrangements of the missing person. If the reporting person(s) requests it, the missing person may be informed of the address and or telephone number of the reporting person for the purpose of initiating contact if the "missing person" wishes to do so.

4. "Voluntarily Missing" shall be construed to mean that:

a. The person is an adult.

b. The person is not at risk (see MUPS Training Manual, P.6.) or

c. The person is "at risk" due to medical problems or mental impairment but is aware of the problem or impairment and is competent to make decisions regarding his/her own care and treatment.

VII. PROCEDURE 4.

A. SECOND CHECK REQUIREMENT. A second check is required for all entries into the CLETS or NCIC systems. A second check is a review of the entry by a second person who did not make the original entry.

1. Dispatch Responsibilities: Dispatchers have the second check responsibility for entries made by Dispatch and by field Deputies.

2. Patrol Responsibilities: Attach CLETS entry for stolen vehicles and guns to the original report and confirm that the information matches that provided in the report.

3. Investigation Responsibilities: Investigators are responsible for confirming the information on the entry and attaching the entry to the original report.

4. Records Unit staff are responsible for restraining order, warrant, and gun entries.

VIII. PROCEDURE 5.

A. GENERAL VALIDATION PROCEDURE FOR WARRANTS.

1. Because of the volume of warrants handled by the Office of the Sheriff and because the greatest majority of those warrants relate to cases filed by other agencies, it is not feasible to consult with other agencies or departments to determine the "validity" of each warrant at this time. Staff will, however, ensure that:

a. Each warrant entry is compared to the automated warrant and/or the physical warrant when applicable and the Master Case Record. Incomplete or inaccurate information will be corrected;

b. Entries which do not meet current requirements for entry into NCIC-AWS are canceled; and

c. All warrants over 3 years old are researched to attempt to locate additional information on the subject. The warrant entry will be updated as appropriate.

d. All check lists, DOJ entry printout responses, shall be scanned and indexed into Disc Image by Records Unit staff for audit purposes.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.77**
	RELATED ORDERS: Government Code Sections 6250 et seq. (California Public Records Act); 13960(c) PC 293, 832.7, 841.5, 12022.7(f); California Constitution Article I; CCCSO Directive, Appendix 8, Personnel Files; CCCSO 1.05.82, 1.06.80, 1.06.75, 1.06.71; SB 1421 (effective 1-1-2019) and AB 748 (effective 7-1-2019).	
ISSUE DATE: 2-1-2006 **REVISION DATE: 1-20-2021**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Crime and Incident Records – Release of Information (Public Records Act)**	

I. POLICY.

A. The public release of records will be handled in accordance with applicable statutes. In the processing of requests for records under the Public Records Act, every attempt will be made, consistent with law, to balance the public's right to certain information with the privacy rights of individuals and the Office of the Sheriff interest in ensuring the successful completion of investigations and prosecutions.

B. The Office of the Sheriff must determine, within 10 days from the receipt of a request for public records, "whether the request, in whole or in part, seeks copies of disclosable public records" that are in the possession of the Office of the Sheriff, and "promptly notify the person making the request of the determination and the reasons therefore." Under certain defined circumstances, the deadline may be extended by written notice to specify a date that would result in an extension of no more than 14 days (Gov. Code §6253 (c)).

II. DEFINITIONS AND GENERAL PROVISIONS.

A. Public Records Act (PRA) – The California Public Records Act, Gov. Code § 6250 Government Code, et seq.).

B. Confidential Personal Information - Any information regarding crimes and other incidents that identifies or describes an individual, including but not limited to, his or her name, social security number, physical description, home address, home and cellular telephone numbers, education, financial matters, and medical or employment history. It includes statements made by, or attributed to the individual. It also includes identification of confidential informants and information relating to juveniles except per statue or decisional law (Refer §6251, §1798.1 Civil Code, and Article, Section 1, CA Constitution).

C. Public Records – Any non-exempt writing containing information relating to the conduct of the public's business prepared, owned,

used or retained by the Sheriff's Office. "Writing" includes documents, including emails, audio and video recordings, regardless of the manner in which the record has been stored. (Refer to Gov. Code §6252 (g)).

D. Arrest/Booking Logs – Records of all public data about a person arrested by the Contra Costa County Office of the Sheriff, to include Contract Cites, and those persons booked into the Martinez Detention Facility. This contemporaneous booking information is released by the Records Unit on a continuous basis to the public in accordance with the California Public Records Act.

III. GENERAL.

A. The purpose of this policy is to provide guidance on the release of information in accordance with the law, while safeguarding the privacy rights of community members and ensuring that Office of the Sheriff investigations and security procedures are not compromised.

B. Public Records Act requests, depending on the record sought, are handled and fulfilled by (a) the Records Unit, (b) the Communications Center Director, (c) the Planning & Research Unit, (d) the Public Affairs Director, (f) the appropriate Division Commander, (g) a Contract City Police Manager, and (h) the Sheriff, Undersheriff, or their designee. All Public Records Act requests shall be forwarded without delay to the appropriate handling unit. No Member of this Office, other than those listed above, shall respond to, or fulfill, a Public Records Act request.

C. See Procedure 10 for mandatory document release requirements involving:

1. Records of officer-involved shootings;
2. Records of officer uses-of-force that result in death or great bodily injury;
3. Records of sustained incidents involving sexual assault against a member of the public;
4. Records of sustained incidents of dishonesty;
5. All video or audio recordings involving "critical incidents," as defined.

D. Nothing in this policy requires the disclosure of a video or audio recording that was created during the commission or investigation of the crime of rape, incest, sexual assault, domestic violence, or child abuse that depicts the face, intimate body part, or voice of a victim of the incident depicted in the recording (Gov. Code § 6254.4.5). Such records may be withheld pursuant to Gov. Code § 6255 with the denial demonstrating that on the facts of the particular case, the

public interest served by not disclosing the recording clearly outweighs the public interest served by disclosure of the recording.

E. Responses to Public Records Act requests will be sent on Sheriff's Office letterhead via US Mail along with any disclosable records unless specifically requested in another format, such as electronic.

IV. PROCEDURE 1.

A. PUBLIC INFORMATION – The Office of the Sheriff shall maintain a daily log of arrests that shall be made available to the public and/or media representatives. Release of information on daily arrests shall not constitute a waiver of any exemptions from disclosure provided under the Government Code.

B. Contemporaneous Arrest Reporting. To the extent it is recorded, the following information pertaining to persons arrested by this agency (to include contract cities) shall be made available to the public on the Office of the Sheriff's website for ten (10) days at: www.cocosheriff.org (Gov. Code § 6254 (f) (1)). This information will also be made available at the public counter of the Records Unit for a period of ten (10) days. This ten (10) day period is known as the "Contemporaneous Period" (See, Kusar (1993) 18 Cal.App.4th 588, interpreting § 6254 (f)(1)). This information may not be available for public release after the Contemporaneous Period and will be subject thereafter to the same processing and analysis as all other Public Record Act requests.

1. Name and occupation.
2. Physical description including sex, date of birth, height, weight, hair color, eye color.
3. The time, date, location of the arrest.
4. Charges, including outstanding warrants from other jurisdictions, parole or probation holds, bail amount, location where the person is held or time and manner of release.
5. The circumstances of the arrest.

C. Contemporaneous Calls for Service Logs. To the extent it is recorded, contemporaneous information regarding crimes and other incidents shall be made available to the public and the press. Calls for service information shall be made available to the public on the Office of the Sheriff website for ten (10) Days at: www.cocosheriff.org (Gov. Code §6254(f)(2)). This information will also be made available at the public counter of the Records Unit for a period of 10 days. After the Contemporaneous Period, this information will need to be requested under the Public Record Act.

1. The time and date, of all complaints or requests for assistance.
2. The location of the incident
3. A brief description of the incident type.

Additional information, including the following, is available under the Public Records Act upon request:

4. Time and date of the report.
5. The nature of the response.
6. Name, and age of the victim, unless withheld at the victim's request.
7. Factual circumstances surrounding the crime or incident.
8. A general description of any injuries, property, or weapons involved.

Crime Reports containing the information described above shall be edited to remove other information and made available at the public counter of the Records Unit for a period of 10 days.

D. The Daily Booking Log from the Jail Management System will be made available at the public front counter for 10 days and will list information of all individuals booked into Contra Costa County jails.

E. Members of the public seeking information not available at the public counter may be encouraged to make their requests in writing in order for the staff processing the request to understand the scope of the request with clarity. Note, however, that Public Records Act requests need not be made in writing and are valid as verbal request.

F. Releasable information about contemporaneously arrested persons not included in the above contemporaneous listings may be acquired from the Jail Management System and provided to the requestor verbally.

G. Exceptions to the Required Release:

1. The name of the victim of any of the following crimes shall not be disclosed without the consent of the victim (Gov. Code §6254 (f) (2)): Penal Code sections 220, 236.1, 261, 261.5, 262, 264, 264.1, 265, 266, 266a, 266b, 266c, 266e, 266f, 266j, 267, 269, 273a, 273d, 273.5, 285, 286, 288, 288a, 288.2, 288.3, 288.5, 288.7 or 289, 422.6, 422.7 and 422.75.
2. Juvenile police records, defined in W&I 827.9(m) as records or information relating to the taking of a minor not custody, temporary custody or detention, will not be released without a court order, per "Notice to Contra Costa County Law Enforcement Agencies" issued by Hon. Rebecca C. Hardie dated Nov. 7, 2018 Requests for juvenile information must be made in writing, completing a Release of Juvenile Information Form (§827 W&I and TNG v. Superior Court).
3. The address and telephone number of a victim or witness will not be disclosed to an arrested person or a person who may be a defendant in the alleged offense (§841.5 PC).
4. Information which would identify a particular person as having received services, whether voluntary or involuntary, pursuant to Welfare and Institution Code

sections pertaining to protective custody, mental health or similar activities, shall not be disclosed (Refer Gov. Code §6254 (c)).

V. PROCEDURE 2. DESIGNATED INFORMATION FOR RELEASE TO SPECIFIED PERSONS.

A. Records of complaints or investigations conducted by criminal justice agencies are generally exempt from disclosure requirements for public records (Gov. Code § 6254 (f)). Also exempt from release are intelligence and security files of a criminal justice agency. However, certain information must be released to specific persons in the following specified incidents unless the disclosure would endanger the successful completion of an investigation or a related investigation. The analysis of conclusions of an investigating deputy may also be redacted from a report or not disclosed (Gov. Code § 6254 (f):

1. Specified Incidents:
    a. Arson;
    b. Burglary;
    c. Fire;
    d. Explosion;
    e. Larceny;
    f. Robbery;
    g. Vandalism;
    h. Vehicle theft;
    i. Carjacking;
    j. A crime as defined in § 13951(b) California Government Code.
2. Specified Persons:
    a. The victim;
    b. An authorized representative of the victim (e.g., attorney, insurance company, parent or legal guardian of juvenile victim, etc.); and
    c. An insurance carrier against which a claim has been or may be filed.
    d. Any person suffering bodily injury or property damage or loss.
3. Specified Information:
    a. The names and addresses of all persons involved in the incident, and witnesses to the incident, except for confidential informants. For this section, the following definitions shall apply:
        i. “Persons involved” means persons listed in the report other than the requester

who suffered bodily injury or property damage as a result of the incident.

ii. "Witness" means a person who has direct knowledge of the events leading up to or the occurrence of the incident for which the requester is characterized as a victim.

b. A description of any property loss involved.

c. The date, time, and location of the incident.

d. Statements of all witnesses, other than confidential informants, and other involved persons.

e. Any diagrams.

4. Manner of Release:

a. If necessary, a report may be edited or redacted, prior to release, to remove information which does not fall into the above categories or which must be withheld by statute.

b. Suspects statements and information identifying them will be redacted.

c. Supplemental reports will be released only as necessary to satisfy the above requirements for release. (Generally, the required information will be found in the Original Report, and no Supplemental Report will generally need to be released; if however, some required information is only found in the Supplemental Report, then an edited or redacted copy of the Supplemental Report, removing all non-required and redundant information, shall be released.)

VI. PROCEDURE 3. DISCLOSURE OF ADDRESS INFORMATION.

A. Addresses of Arrested Persons. Addresses of arrested person shall be disclosed as provided above.

B. Addresses of Victims. Addresses of victims of crimes and incidents are not to be disclosed except in accordance with the following procedures (Gov. Code §6254 (f) (3), § 841.5 PC):

1. The address of the victim of any of the following crimes shall not be disclosed without the consent of the victim (Gov. Code § 6254 (f) (2); Penal Code §§ 220,236.1, 261, 261.5, 262, 264, 264.1, 265, 266, 266a,266b, 266c, 266e, 266f, 266j, 267, 269, 273a, 273.5,285, 286,288, 288a, 288.2, 288.3, 288.7, 289, 422.6, 422.7, 722.75, 646.9, and 647.6.

2. The addresses of juvenile victims, including victims of the above crimes will not be released without a Juvenile Court Order (§ 827 WI and TNG v. Superior Court).

3. Address and telephone number of a victim or witness will not be disclosed to an arrested person or person who may be a defendant in alleged offense (§ 841.5 PC).

C. Addresses of both Suspects and Victims. Notwithstanding 1 and 2, above, the current address of every individual arrested, and of a victim of a crime, not otherwise disclosable, will be disclosed to persons who state under the penalty of perjury, that their interest in receiving the information is:

1. Journalistic;
2. Scholarly;
3. Political;
4. Governmental Purpose;
5. Is made by a licensed private investigator for investigation purposes.

D. Information released pursuant to 3, above, may be released electronically. However, this information will not be made available on the website. Requestors shall make each request for address information in writing, preferably on an Office of the Sheriff form. The form will require the requester to:

1. Identify the individual requester and/or the publication, institution, party or person they represent;
2. State under penalty of perjury that address information provided will not be used directly or indirectly to sell any product or service; and
3. Specifically identify the record that contains the address requested.

E. If, in the best judgment of the Technical Services Division Commander or his/her designee, the requester is deemed to have a commercial purpose, he/she will be denied access to address information and will be so notified in writing (Gov. Code § 6254 (f)(3), (§ 6255 (b)).

VII. PROCEDURE 4. DISCLOSURE OF INFORMATION TO VICTIMS.

A. Adult Records. Records which are otherwise exempt from release pursuant to § 6254(f), must be made available to victims in a limited or redacted manner. Upon the request of a victim (or the victims authorized representative, or an insurance company, the Office of the Sheriff will disclose "the names and addresses of persons involved in, or witnesses other than confidential informants to, the incident, the description of any property involved, the date, time, and location of the incident, all diagrams, statements of the parties involved in the incident, [and] the statements of all witnesses, other than confidential informants."

1. This requirement will generally be fulfilled by providing a copy of the applicable report, redacted to leave visible the categories of information required to be released. Note that if all the required information is available in the Original Report, Supplemental Reports will not be provided. If, however, the required information is not present in the Original Report, but is provided in a Supplemental Report, then the Supplemental Report will

also be provided, also redacted to leave visible only the required information.

B. Juvenile Records. Records or information relating to the taking of a minor into custody, temporary custody, or detention require different processing per W&I Code § 827, the "TNG" Order issued by Judge Lois Haight on December 12, 2001, and the Notice to Contra Cosa County Law Enforcement Agencies" issued by Judge Rebecca Hardie on November 7, 2018. Such records may be provided, without a court order and without notice or consent from the person who is the subject of the juvenile police records, to the following persons or entities:

1. The person who is the subject of the juvenile police record;
2. The parent or guardian of the person who is the subject of the juvenile police record; or
3. The attorney for the parent or guardian.

If the request is from someone other than those individuals specified above, the records shall not be released without an order from the Juvenile Court. Refer to Judge Hardie's Notice for compliance procedures in connection with such a request.

VIII. PROCEDURE 5.

A. DETERMINING THE RELATIONSHIP OF A PERSON TO AN INCIDENT. Due to the nature of Office of the Sheriff reports, it is not always possible to determine whether a particular person is entitled to receive information based solely on how that person is classified in the report. It is often necessary to read the report and "look beyond" the classification of a person as a "witness," "lead," or "other." For example:

1. A person classified as a "witness" may have suffered property damage as the result of a criminal act. In this situation it would be appropriate to disclose or release information to the person because he/she is the "victim" of vandalism.
2. In a case of "mutual combat" each party is the victim of an assault as well as the suspect in an assault. In such a case, it may be reasonable to release to each person the information he/she would receive if he/she were only classified as a victim.
3. Parents of juvenile victims can exercise the right of the juvenile to receive information. The Personal Representatives (Executors, Administrators, etc.) of deceased victims are entitled to the rights of the deceased. The request of an attorney representing a victim will be treated as if the request came directly from the victim.

B. WITHHOLDING INFORMATION.

1. Information normally required to be released may be withheld per statutory authority or decisional law. Authorization from the Commander of the Division handling an active case or his/her designee, is required prior to the release of that information (§ 6254 (f), §6254 (k), and Gov. Code §6255 (a)(b)) if:

   a. Release would reveal the identity of a confidential informant.

   b. Release would place any person in jeopardy.

   c. Release would be detrimental to the completion of the investigation or a related investigation.

   d. Release would expose confidential Office of the Sheriff operations or procedures, including security procedures.

   e. Release would cause harm to the reputation of, or cause an unreasonable embarrassment to, or constitute an unreasonable invasion of the privacy of, a citizen (Civil Code § 1798.1 and Article 1, Section 1 CA Constitution).

   All reports, or information contained therein, not required to be released to the public, will not be released without specific authorization.

C. Privacy Concerns. Any person's driver's license number, social security number, home telephone number, work telephone number, and residential address shall not be released unless disclosure is specifically required by law or upon specific authorization. Additionally, a person's employer's name and address will not be released unless the person's involvement pertains to the employment.

IX. PROCEDURE 6.

A. TRAFFIC AND BOATING ACCIDENT REPORTS. Traffic and Boating Accident Reports shall be disclosed only to persons who have a proper interest in the report. This includes, but is not limited to, the following persons (§ 20012 Vehicle Code (VC), § 656 (f) Harbors and Navigation (HN):

1. The involved driver(s) or operator(s).
2. Injured persons.
3. The legal guardian or parent of a minor driver or operator.
4. The authorized representative of an involved driver or person injured in the accident.
5. The owner of involved vehicles or vessels or damaged property.

6. For traffic collisions: Persons who may incur civil liability, including liability based on a breach of warranty.
7. For traffic collisions: Any attorney who declares under penalty of perjury that he/she represents any of the above persons.
8. Traffic collision reports involving a juvenile driver or juvenile information may be released in conformity with Procedure 4, Item 2.
9. The information disclosed will, to the extent possible, be limited to information directly related to the occurrence of the collision or accident. This will typically be recorded on Forms CHP 555, Traffic Collision Report and CHP 556, Narrative/Supplemental or DBW Form VAR-1. This will also include photographs of the collision.
10. Photographs of persons receiving medical attention or which otherwise do not contribute to an understanding of the collision should not be disclosed to anyone other than the person so depicted. (Gov. Code § 6253 (c), Civil Code §1798.7, Article 1, Section 1 CA Constitution). Photographs of deceased persons or body parts shall not be released pursuant to a Public Records Act request, without a court order (Code of Civil Procedure § 129).

X. PROCEDURE 7.

A. NON-CRIMINAL REPORTS. Application of this procedure requires that a clear distinction be made between criminal and non-criminal incidents. Many incidents that begin as criminal complaints or investigations are determined to be non-criminal in nature. This final determination does not change the purpose of the response or the nature of the investigation. Non-criminal reports are reports of incidents that begin and end as inherently public assistance activities. Examples of such incidents would be the search for a missing child, assistance to an injured motorist, and response to a hazmat incident (but only if it is clear that the hazmat incident was not caused by a criminal act)..

1. Except for that information which will be released pursuant to “Procedure 1 and 2" above, in the interest of privacy rights of the involved persons, personal information contained in these reports will be withheld from all but those with a statute-based proper interest. The following persons are considered to have a proper interest (1798.1 CC and Article 1, Section 1 CA Constitution):

    a. The involved parties.

    b. The legal guardian(s) of involved parties.

c. Parents who have legal custody of juveniles who are involved parties.

d. The authorized representative of involved parties.

e. Persons who may have suffered property damage or incurred civil liability.

f. An attorney representing any of the above parties.

XI. PROCEDURE 8.

A. OTHER REPORTS AND INFORMATION THAT MUST BE WITHHELD. The following reports shall not be released pursuant to a Public Records Act request except to the persons specified therein or upon specific approval by a Captain or above:

1. Reports relating to incidents pertaining to Welfare and Institution Code Sections 5000 et seq. (hospitalization, mentally ill commitment, etc.) may not be released, except to the subject, guardian or conservator and treatment provider. Release to any other person shall be only with the written consent of one of the foregoing persons (§ 5328 W&I, § 6253 (c) and Gov. Code § 6254 (k).
2. Reports of child abuse made pursuant to Penal Code Sections 11166 and 11166.2 (reports of child abuse by "child care provider" or "child care custodian", etc.) are confidential and may be released only to child protective agencies, the District Attorney, or to agencies responsible for licensing childcare facilities.
3. Elder abuse reports are confidential and not releasable per § 15633 WI.
4. Juvenile information is generally not releasable (§ 827 WI and TNG v. Superior Court).

XII. PROCEDURE 9.

A. CORONER'S REPORTS. Coroner's Reports are public records and are made available when completed. These records include the toxicology report, autopsy report, and finalized death certificate. However, if the decedent was the victim of a crime all documents, including the toxicology report and autopsy report, are exempt from disclosure (Gov. Code § 6254 (f) and Katheryn J. Dixon v. Superior Court of El Dorado Co.). Other medical records, or law enforcement agency records, including crime reports obtained by Coroner's staff, are not releasable as part of the Coroner's Report. Photographs taken by the Coroner’s staff, including autopsy photographs, are not to be disclosed (§ 129 Code of Civil Procedure).

XIII. PROCEDURE 10.

A. MANDATORY PRA RELEASES PER SB 1421 (Amending Penal Code §832.7).

1. GENERAL. Notwithstanding that "the personnel records of peace officers and custodial officers and records maintained by any state or local agency pursuant to Section 832.5, or information obtained from these records, are confidential and shall not be disclosed in any criminal or civil proceeding except by discovery pursuant to Sections 1043 and 1046 of the Evidence Code," and notwithstanding the Investigatory Exception found in Gov. Code 6254(f), peace officer personnel records relating to the following incidents shall not be confidential and shall be made available for public inspection pursuant to the California Public Records Act:

   a. An incident involving the discharge of a firearm at a person by a peace officer;

   b. An incident in which the use of force by a peace officer against a person resulted in death, or in "great bodily injury";

      i. For purposes of this policy, "great bodily injury" is a significant or substantial physical injury, as defined under Penal Code § 12022.7(f); it is an injury greater than minor or moderate harm.

   c. An incident in which a sustained finding was made that a peace officer engaged in sexual assault involving a member of the public; and

      i. "Sexual assault" is defined under Penal Code § 832.7 as "the commission or attempted initiation of a sexual act with a member of the public by means of force, threat coercion, extortion, offer of leniency or other official favor, or under the color of authority. For purposes of this definition, the propositioning for or commission of any sexual act while on duty is considered a sexual assault.

      ii. "Member of the public" is defined under Penal Code § 832.7 as "any person not employed by the officer's employing agency and includes any participant in a cadet, explorer, or other youth program affiliated with the agency."

d. an incident in which a sustained finding was made of dishonesty by a peace officer directly relating to the reporting, investigation, or prosecution of a crime, or directly relating to the reporting of, or investigation of misconduct by, another peace officer, including, but not limited to, any sustained finding of perjury, false statements, filing false reports, destruction, falsifying, or concealing of evidence.

2. CLASSES OF INFORMATION TO BE RELEASED.

a. With respect to1.a-d above, the records that shall be released include all investigative reports; photographic, audio, and video evidence; transcripts or recordings of interviews; autopsy reports; all materials compiled and presented for review to the district attorney, or whether the officer's action was consistent with law and agency policy for purposes of discipline or administrative action, or what discipline to impose or corrective action to take; documents setting forth findings or recommended findings; and copies of disciplinary records relating to the incident, including any letters of intent to impose discipline, any documents reflecting modifications of discipline due to the Skelly or grievance process, and letters indicating final imposition of discipline or other documentation reflecting implementation of corrective action. (Any fees that are statutorily allowed may be collected prior to the release of these records.)

b. Any record relating to an incident in which a sustained finding was made by any law enforcement agency or oversight agency of dishonesty by a peace officer or custodial officer directly relating to the reporting, investigation, or prosecution of a crime, or directly relating to the reporting of, or investigation of misconduct by, another peace officer or custodial officer, including, but not limited to, any sustained finding of perjury, false statements, filing false reports, destruction, falsifying, or concealing of evidence.

c. A record from a separate and prior investigation or assessment of a separate incident shall not be released unless it is independently subject to disclosure.

d. If an investigation or incident involves multiple officers, information about allegations of misconduct by, or the analysis or disposition of an investigation of, an officer, shall not be released unless it relates to a sustained finding against that officer. However, factual information about that action of an officer during an incident, or the statements of an officer about an incident, shall be released if they are relevant to a sustained finding against another officer that is subject to release.

3. REDACTIONS. With respect to 1. a-d, the only allowed redactions are for any of the following purposes:

a. To remove personal data or information, such as a home address, telephone number, or identities of family members, other than the names and work-related information of peace and custodial officers.

b. To preserve the anonymity of complainants and witnesses.

c. To protect confidential medical, financial, or other information of which disclosure is specifically prohibited by federal law or would cause an unwarranted invasion of personal privacy that clearly outweighs the strong public interest in records about misconduct and serious use of force by peace officers and custodial officers.

d. Where there is a specific, articulable, and particularized reason to believe that disclosure of the record would pose a significant danger to the physical safety of the peace officer, custodial officer, or another person.

e. Notwithstanding paragraph 3.a-d, a record disclosed pursuant to this section, including personal identifying information, may be redacted if, on the facts of the particular case, the public interest served by not disclosing the information clearly outweighs the public interest served by disclosure of the information.

4. WITHHOLDING RELEASE DURING ACTIVE INVESTIGATION. The release of information relating to the incident enumerated in 1a-b may be withheld, for a limited time period, during an active criminal or

administrative investigation, in accordance with any of the following:

a. During an active criminal investigation, disclosure may be delayed for up to 60 days from the date the use of force occurred or until the district attorney determines whether to file criminal charges related to the use of force, whichever occurs sooner. If disclosure is delayed pursuant to this clause, the specific basis for the determination that the interest in delaying disclosure clearly outweighs the public interest in disclosure, must be provided to the Public Records Act requester in writing. This writing shall include the estimated date for disclosure of the withheld information.

b. After 60 days from the use of force, the disclosure of records or information may be further delayed if the disclosure could reasonably be expected to interfere with a criminal enforcement proceeding against an officer who used the force. If disclosure is further delayed pursuant to this clause, at 180-day intervals as necessary, the specific basis for the determination that disclosure could reasonably be expected to interfere with a criminal enforcement proceeding shall be provided in writing. The writing shall include the estimated date for the disclosure of the withheld information. Information withheld shall be disclosed when the specific basis for withholding is resolved, when the investigation or proceeding is no longer active, or by no later than 18 months after the date of the incident, whichever occurs sooner.

c. After 60 days from the use of force, disclosure may continue to be delayed if the disclosure of records or information could reasonably be expected to interfere with a criminal enforcement proceeding against someone other than the officer who used the force. If disclosure is delayed under this clause, at 180-day intervals, the specific basis why disclosure could reasonably be expected to interfere with a criminal enforcement proceeding shall be provided in writing and shall include an estimated date for the disclosure of the withheld information. Information withheld shall be disclosed when the specific basis for

withholding is resolved, when the investigation or proceeding is no longer active, or by no later than 18 months after the date of the incident, whichever occurs sooner, unless extraordinary circumstances warrant continued delay due to the ongoing criminal investigation or proceeding. Such extraordinary circumstances must demonstrate by clear and convincing evidence that the interest in preventing prejudice to the active and ongoing criminal investigation or proceeding outweighs the public interest in prompt disclosure of records about use of serious force by peace officers. All information subject to disclosure that does not cause substantial prejudice, including any documents that have otherwise become available, shall be released

5. WITHHOLDING RELEASE DURING PROSECUTION. If criminal charges are filed related to the incident in which force was used, disclosure of records or information may be delayed until a verdict on those charges is returned at trial or, if a plea of guilty or no contest is entered, the time to withdraw the plea pursuant to Penal Code § 1018.

6. WITHHOLDING RELEASE DURING ADMINISTRATIVE INVESTIGATION. During an Internal Affairs or a Divisional administrative investigation into (a) an incident involving the discharge of a firearm at a person by a peace officer; or (b) an incident in which the use of force by a peace officer against a person resulted in death, or in great bodily injury, the disclosure of records or information may be delayed until it is determined whether the use of force violated a law or agency policy, but no longer than (a) 180 days after the date a manager or supervisor authorized to initiate an investigation learned of the use of force, or allegation of use of force, or (b) 30 days after the close of any criminal investigation related to the peace officer's use of force, whichever is later.

7. NO RELEASE OF FRIVILOUS AND UNFOUNDED COMPLAINT. A record of a civilian complaint, or the investigations, findings, or dispositions of that complaint, shall not be released if the complaint is frivolous or if the complaint is determined to be unfounded.

8. RELEASE OF A COPY OF THE COMPLAINT TO THE COMPLAINING PARTY. In every case, and

without regard to any of the delays allowed by law, a copy of the Complaining Party's own statements shall be released to the Complaining Party at the time the complaint is filed.

9. PUBLIC COMMENT. The Sheriff or his specific designee may release factual information concerning a disciplinary investigation if the officer who is the subject of the disciplinary investigation, or the officer's agent or representative, publicly makes a statement he or she knows to be false concerning the investigation or the imposition of disciplinary action. Corrective information may not be disclosed unless the false statement was published by an established medium of communication, such as television, radio, or a newspaper. Disclosure of factual information is limited to facts contained in the officer's personnel file concerning the disciplinary investigation or imposition of disciplinary action that specifically refute the false statements made public by the peace officer or his or her agent or representative.

10. PITCHESS MOTIONS. Prior to these changes, the only method for obtaining peace officer personnel files was through a Pitchess motion, at which the person seeking those files (or certain records therein, usually Internal Affairs documentation) would have to make a proper showing in court that the public interest in making those files available, usually to a defendant in a criminal trial, outweighed the officer's interests in the privacy of his or her personnel files. This requirement was based on PC § 832.7 as previously formulated. Per SB 1421, when peace officer personnel files are sought in connection with any of the four incident types listed in this Procedure 10 at A.1.a-d, those disclosures must be made under the Public Records Act without the need for a Pitchess motion. There remains a difference, however, as to the documentation received under the Pitchess process and that received under the Public Records Act:

    a. The successful Pitchess motion would previously result in the release of only a witness list from an Internal Investigation (though additional documents would occasionally be ordered to be released), while SB 1421 mandates the release of all personnel records relating to the four incident types.

    b. Any materials that the Court previously ordered released under Pitchess would generally be released unreacted, but with a Protective Order prohibiting further use or distribution, while

personnel records now released pursuant to SB 1421 relating to the four incident types may be redacted and withheld for certain periods of time as stated above, but are not protected against further use or distribution.

11. NOTIFICATION. The Professional Standards Division will notify an employee when a Public Records Act request is received, and it is believed there may be responsive records that are required to be disclosed. Subsequently, the involved employee will receive a copy of any disclosures made simultaneous to the release of such records.

B. MANDATORY PRA RELEASES PER AB 748 (Adding subsection (4) to Gov. Code § 6254(f)).

1. GENERAL. Notwithstanding the Investigatory Exception found in Gov. Code 6254(f), commencing July 1, 2019, a video or audio recording that relates to a "critical incident," as defined below, may be withheld from release only as follows:

a. During an active criminal or administrative investigation, disclosure of a recording related to a critical incident may be delayed for no longer than 45 calendar days after the date a Manager or Supervisor knew or reasonably should have known about the incident, if, based on the facts and circumstances depicted in the recording, disclosure would substantially interfere with the investigation, such as by endangering the safety of a witness or a confidential source. If disclosure is delayed pursuant to this paragraph, the requester will be informed in writing of the specific basis for the determination that disclosure would substantially interfere with the investigation and the estimated date for disclosure.

b. After 45 days from the date a manager or Supervisor knew or reasonably should have known about the incident, and up to one year from that date, disclosure of a recording may be further delayed upon a showing that disclosure would substantially interfere with the investigation. After one year from the date the Office of the Sheriff knew or reasonably should have known about the incident, disclosure of a recording may be further delayed only if it can

be shown, by clear and convincing evidence, that disclosure would substantially interfere with the investigation.

If disclosure is delayed pursuant to (a) or (b), The requester must be promptly provided in writing with the specific basis for the determination that the interest in preventing interference with an active investigation outweighs the public interest in disclosure and provide the estimated date for the disclosure. Withholding must be reassessed, and the requester notified every 30 days. A recording that has been withheld shall be disclosed promptly when the specific basis for withholding is resolved.

2. §6255 EXEMPTION. If on the facts of the particular case, the public interest in withholding a video or audio recording clearly outweighs the public interest in disclosure because the release of the recording would, based on the facts and circumstances depicted in the recording, violate the reasonable expectation of privacy of a subject depicted in the recording, the requester must be provided in writing with the specific basis for the expectation of privacy and the public interest served by withholding the recording; however redaction technology, including blurring or distorting images or audio, may be used to obscure those specific portions of the recording that protect that interest. In all cases, the redaction shall not interfere with the viewer's ability to fully, completely, and accurately comprehend the events captured in the recording and the recording shall not otherwise be edited or altered.

   a. Except as provided in clause (b), below, if the reasonable expectation of privacy of a subject depicted in the recording cannot adequately be protected through redaction and that interest outweighs the public interest in disclosure, the recording may be withheld from the public, except that the recording, either redacted or unredacted, shall be disclosed promptly, upon request, to any of the following:

      i. The subject of the recording whose privacy is to be protected, or his or her authorized representative.

      ii. If the subject is a minor, the parent or legal guardian of the subject whose privacy is to be protected.

iii. If the subject whose privacy is to be protected is deceased, an heir, beneficiary, designated immediate family member, or authorized legal representative of the deceased subject whose privacy is to be protected.

b. If disclosure pursuant to clause (a) (relating to privacy expectations) would substantially interfere with an active criminal or administrative investigation, the requester must be provided in writing with the specific basis for the determination that disclosure would substantially interfere with the investigation. Thereafter, the recording may be withheld for 45 calendar days, subject to extensions as set forth in B.1.(b), above.

3. "CRITICAL INCIDENTS." A video or audio recording relates to a "critical incident" if it depicts any of the following incidents:

a. An incident involving the discharge of a firearm at a person by a peace officer or custodial officer.

b. An incident in which the use of force by a peace officer or custodial officer against a person resulted in death or in great bodily injury.

4. NON-CRITICAL INCIDENTS. All Public Records Act requests seeking audio or video not related to "Critical Incidents," as defined above, shall be handled in accordance with the other provisions of this policy and with Policy 1.06.82 "Mobile Audio Video & Body-Worn Camera."

5. CONTEXT. Releases under this section shall consist of relevant video imagery that depicts the actions and events leading up to and including the critical incident. The release of video shall be accompanied by additional information to provide context based on the evidence available at the time of release.

6. NOTIFICATIONS. The Professional Standards Division will make reasonable attempts to notify the following individuals or entities prior to the release of video under this section:

a. Deputies depicted in the video and/or significantly

involved in the use of force;

b. Subject(s) upon whom force was used.
i. If the subject is deceased, the next of kin, if known, will be notified;
ii. If the subject is a juvenile, the subject's parents, if known, or the subject's legal guardian, if known, will be notified;
iii. If the subject is represented by legal counsel, that counsel will be notified.

c. District Attorney's Office and County Counsel

d. Other individuals or entities as deemed appropriate

7. LIMITATIONS. The Public Records Act defines records that must be released upon a proper PRA request and defines exceptions to those requirements. An agency may choose to withhold records based on these exceptions and exclusions, or it may choose to provide greater public access to the requested records than is required under the Act. Nothing in this subsection B (MANDATORY PRA RELEASES PER AB 748) alters, limits, or negates any other rights, remedies, or obligations with respect to public records regarding an incident other than a "critical incident" as defined above.

8. OVERLAP WITH SB 1421. The statutory requirement in AB 748 to release an audio or video recording that relates to a "critical incident," as defined in ¶3, may overlap the disclosure requirements in SB 1421, in which case the operative date is January 1, 2019 (SB 1421), and not July 1, 2019 (AB 748), Note, however, that SB 1421 requires only the release of certain "Peace Officer personnel records," while AB 748 relates to audio or video recordings without regard to whether they are contained within Peace Officer personnel records.

Contra Costa County Office of the Sheriff **General Policy and Procedure**	**CCCSO**	**NUMBER: 1.06.78**
	RELATED ORDERS: PC 409.5; California Government Code Section 6254 et sec.; CCCSO 1.06.62, 1.06.71, 1.06.64, 1.06.72, 1.06.73, 1.06.74, 1.06.77, 1.06.79.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 1-27-2021**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **News Media Relations**	

I. POLICY.

A. To create and maintain a positive working relationship with the news media, employees will cooperate with all accredited members of the news media in their efforts to gather information of public interest.

II. GENERAL.

A. GENERAL RELATIONSHIP.

1. Generally, the news media are entitled to the same information that is available to any other member of the public. The specifics of what information may be released is included in numerous Office of the Sheriff Policies, notably 1.06.71 “Dissemination of Law Enforcement Information,” 1.06.62 “Police Involved Fatal or Serious Injury Incidents Policy,” 1.06.64 “Release of Booking Photographs,” 1.06.72 “Dissemination of Information on Registered Sex Offenders,” 1.06.73, “Information to Citizens,” 1.06.74 “Control of Sheriff’s Office Information,” 1.06.77 “Crime and Incident Records – Release of Information (Public Records Act),” 1.06.79 “Press Releases and Media Inquiries,” and 1.06.80 “Citizens’ Complaints / Internal Investigations.” However, the timeliness and method of releasing information have an impact on the news media's efforts to gather information of public interest.

2. Therefore, response to the requests from the press for details of criminal activity or services rendered to the community shall be limited only by (a) the time required to analyze the request, consult with the appropriate Divisions, with the Chain of Command, and with others, such as counsel, when deemed appropriate, and to gather, review, collate, redact, and respond, as well as (b) the legal restraints imposed or permitted, the need to preserve evidence, to prevent interference with criminal investigations, to prevent unreasonable interference with operations of the Office of the Sheriff, and to protect the constitutional rights of all citizens.

B. RELEASE OF INFORMATION. The law requires the release of certain law enforcement information to the public. See Office of the Sheriff Policy 1.06.77

"Crime and Incident Records – Release of Information (Public Records Act)," and 1.06.79 "Press Releases and Media Inquiries."

C. RESTRICTED INFORMATION. Normally, statements of policy expressing official positions of the Office of the Sheriff, official responses to criticism of the Office of the Sheriff, or statements pertaining to pending or ongoing civil litigation involving the Office of the Sheriff shall be made only by the Sheriff, Undersheriff, Assistant Sheriffs or designee. Likewise, statements about internal investigations, disciplinary matters, and officer-involved fatal incidents shall only be made by the Sheriff, Undersheriff, Assistant Sheriffs or designee.

D. WITHHOLDING INFORMATION. The California Public Records Act provides for the release of certain information to the public and for the exclusion of other information on specific grounds. See Policy 1.06.77 "Crime and Incident Records – Release of Information (Public Records Act)."

E. GUIDELINES FOR RELEASE OF INFORMATION.

1. The following information may be released to the media:

    a. Adult arrestee's name, age, occupation, and residence;

    b. The substance of the crime;

    c. Facts and circumstances of the arrest;

    d. Time, date, and place;

    e. Resistance offered by the suspect;

    f. Pursuit, if necessary, to apprehend the suspect;

    g. Use of weapons or force by officers or suspect;

    h. Identification of investigating and arresting officers; and

    i. Length of the investigation.

2. The following information shall not be released (due to either its prejudicial nature or legal prohibitions on its release):

    a. Juvenile suspect or victim's name and residence;

    b. Information that would identify the victim of any sex crimes per Penal Code Sections 261, 264, 264.1, 286, 288, 288a, and 289; or child abuse reports per 273a and 273d; or domestic violence per 273.5; or bias crimes per 422.6, 422.7, and 422.75;

    c. Prior to arrest, do not release the identity of a suspect unless the disclosure will aid in the investigation, assist in the apprehension of the suspect, or will warn the public of danger;

    d. Prior criminal record of any individual;

    e. Observation about character or reputation;

    f. Existence or contents of any confession or statement given by a suspect, or information regarding the refusal to make a statement;

g. Reference to investigative procedures, such as fingerprints, polygraph examinations, ballistics tests, or laboratory tests, or to the refusal by the suspect to submit to such tests or examinations;

h. Statements concerning the identity, testimony, or credibility of prospective witnesses;

i. Any personal opinion as to the suspect's guilt, innocence, or merits of the case;

j. Statements concerning evidence in the case, whether or not it is anticipated such evidence will be used at trial; and

k. Any photographs or mug shots, unless the release will aid in the arrest of the suspect, aid in the investigation, or warn the public of danger.

F. CRIME SCENE INFORMATION AND ACCESS. The news media will be allowed reasonable access at crime scenes, accidents and other news scenes for photographic and news gathering activities, as long as it does not interfere with any Office of the Sheriff investigation.

1. Should an employee deny access to a crime scene to a media representative, they will refer the media representative to a Supervisor or Public Information Officer for additional information.

2. Suspects will not be moved or posed solely for the purpose of allowing photographs or news film to be taken; however, news photographers will not be prevented from taking pictures in public places.

3. Crime scenes that are located in areas of public access may be opened for media inspection after any search, preservation and processing of evidence has been completed and the scene has been secured.

4. News media personnel will be directed to the concerned Division Commander, Assistant Sheriff, Public Information Officer or designee for the release of any information developed during subsequent investigation of a crime, accident or newsworthy incident.

5. When employees of the Office of the Sheriff are assisting other law enforcement agencies, news inquiries will be referred to the respective agencies involved.

G. POLICE INVOLVED FATAL OR SERIOUS INJURY INCIDENTS. All police involved fatal or serious injury incidents will be handled as outlined in Office of the Sheriff Policy Section 1.06.62.

H. DISASTER SCENES. While the Office of the Sheriff may exclude members of the general public from a disaster area for safety reasons, the media is exempt from this exclusion and must be allowed into the disaster area, Penal Code 409.5.

1. The media, however, may be restricted from specific areas within a disaster scene when police personnel at the scene reasonably determine that unrestricted media presence will interfere with emergency operations. Restriction on media access may be imposed only for so long and only to the extent necessary to prevent actual interference.

2. Disaster scenes, such as airplane crash sites, shall not be designated crime scenes unless the Commanding Officer at the scene determines from facts then available that there is reasonable cause to believe the disaster may have been the result of criminal activity.

3. The Office of the Sheriff has the authority to close a disaster area to all but authorized personnel or "duly authorized representative of any news service, newspaper, radio, or television station or network". To avoid confusion, the Office of the Sheriff recognizes media-issued identification or business cards to identify members of the news media. These credentials will identify the bearers as accredited press members.

I. MAJOR INCIDENTS. At the scene of major pre-scheduled demonstrations, the Incident Commander will designate a Press Liaison Officer. The designated Officer shall be assigned to the incident command post, and will be responsible for all news releases relevant to the incident. At spontaneous events at which large numbers of media personnel show up, the Watch Commander should notify the Public Information Officer or designate a Press Liaison Officer.

J. INTERNAL AFFAIRS INVESTIGATIONS. Comments to the media regarding any investigation being conducted by the Internal Affairs Investigations Detail, litigation involving Office of the Sheriff employees, and investigations conducted by other agencies regarding Office of the Sheriff employees is prohibited. Only the Sheriff, Undersheriff or a designated representative may provide such information to the media.

K. OFFICE OF THE SHERIFF PERSONNEL ACTIONS. Each Division Commander or manager shall notify the Public Information Officer of newsworthy events occurring within their respective Divisions. The Public Information Officer shall be responsible for the preparation of press releases announcing significant personnel transactions, such as promotion, reassignment of management staff and professional recognition, such as F.B.I. Academy attendance, or any other noteworthy department events.

L. OTHER CONTACTS WITH MEDIA. Any Sheriff Office employee who has contact or interactions with the media will report that contact up through his or her immediate chain of command, who will provide this information to the Sheriff for operational awareness. The Public Information Officer will also be notified. This will be done as soon as practical, normally within 4 hours. Examples of such contacts are interviews of staff on topics not otherwise listed above, requests for information at the line or field level not otherwise listed above, and community-type media reports in which a Sheriff's Office employee participates.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.79**
	RELATED ORDERS: PC 409.5; California Government Code Section 6254; CCCSO 1.06.71, 1.06.78.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 9-12-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Press Releases and Media Inquiries**	

I. POLICY.

A. The Office of the Sheriff shall provide accurate information to the public in a professional and transparent manner. Fostering relationships with the public, government officials, news media and allied law enforcement shall be the primary objective. As with any dissemination of law enforcement information, it shall be limited only by legal constraints, the need to preserve evidence, and to prevent interference with criminal or administrative investigations. A formalized process on writing, reviewing and disseminating a Press Release will ensure proper, accurate and prompt release of information.

II. DEFINITIONS.

A. **AUTHORIZED PERSON**. An Assistant Sheriff must review and authorize a Press Release before dissemination and responses to media inquiries related to a press release.

B. **Press Release** refers to information provided to members of the media on the Press Release template or during a press conference. A press release **is not** a notification to the public or press by any Division in the field during rapidly involving incidents that jeopardize public safety and require prompt notification.

C. **Media Inquiries** are calls from any media outlet about ongoing events, operations, or follow up generated from a Press Release.

D. **Public Information Officer** (PIO) is the staff member designated as the person whose primary responsibility is to liaise with the media and who is responsible for drafting Press Releases. This is normally the Director of Public Affairs unless otherwise designated or unavailable.

III. GENERAL.

A. All staff must be aware that incidents or activities that necessitate a Press Release are reported very quickly to the press by persons outside of the Sheriff's Office, often with an inaccurate account of events or information. This situation necessitates that the Press Release be issued and that it is prompt, accurate and does not jeopardize public safety or ongoing investigations. The Press Release

must provide enough facts for the public to be informed and confident in our law enforcement actions.

B. On an active incident in the field that may generate a Press Release, the Incident Commander and the affected Division Commander must make the gathering and dissemination of information needed to facilitate responses to media inquiries the utmost priority.

C. Media inquiries received by field, line, or office staff will be directed to the PIO for proper handling in accordance with this policy (See Procedure 3). If the PIO is not available the media inquiries will be directed to the appropriate Facility or Station House Commander. In situations when the Facility or Station House commander is unavailable the Watch Commander will be routed the media inquiry for proper handling (See procedure 3).

IV. PROCEDURE 1.

A. BUREAU ASSISTANT SHERIFF RESPONSIBILITIES.

1. Assistant Sheriffs will be responsible for the final approval of all Press Releases and media inquiries stemming from Press Releases.
    a. The Assistant Sheriff of the Bureau responsible for the incident or activity in the Press Release will have approval authority.
    b. If the Assistant Sheriff responsible for the command producing the Press Release is not available, another Assistant Sheriff or the Undersheriff may approve.

V. PROCEDURE 2.

A. DIVISION COMMANDER RESPONSIBILITIES.

1. The Division Commander shall ensure the Public Information Officer (PIO) is told of the need for a Press Release.
2. The Division Commander will review and provide the final draft of the Press Release to the Assistant Sheriff in a timely manner for approval.
3. In instances in which the PIO is not available, the Division Commander will designate a staff member to draft the Press Release.
4. If the information involves an incident or activities involving criminal investigations, other divisions, or an administrative investigation, the Division Commander shall ensure that all involved parties have reviewed the Press Release.

VI. PROCEDURE 3.

A. PUBLIC INFORMATION OFFICER RESPONSIBILITIES *(to be completed in the following order).*

1. The Public Information Officer will draft the Press Releases.
2. The Press Release will always be written on the Press Release Template.
3. The PIO will provide the draft Press Release to the Divison Commander for review before final approval by the Assistant Sheriff.

4. Once approved by the Assistant Sheriff, the PIO will e-mail or otherwise distribute the Press Release to the Sheriff, Office of the Sheriff Command Staff, County Administrator and Contra Costa County Board of Supervisors members before release (Normally waiting 10 minutes before release to media is sufficient).

5. After the Press Release has been disseminated, the PIO is to post the Press Release on the official Office of the Sheriff Facebook page. All other social media postings will refer the reader to the Facebook posting.

6. The Director of Media Relations is responsible for maintaining a contact list for Press Releases to minimally include current email addresses in A(4) above, as well as all media outlets and provide that list quarterly to all Division Commanders with the current Press Release Template in Microsoft Word (Figure 1).

7. The PIO will forward all media inquiries to the responsible Division Commander to obtain information for an accurate response.

8. The PIO is responsible for immediately notifying the responsible Assistant Sheriff of a need for a Press Release.

9. **Community outreach type postings not associated with a Press Release or media inquiry may be posted on Social Media by the PIO without prior approval.**

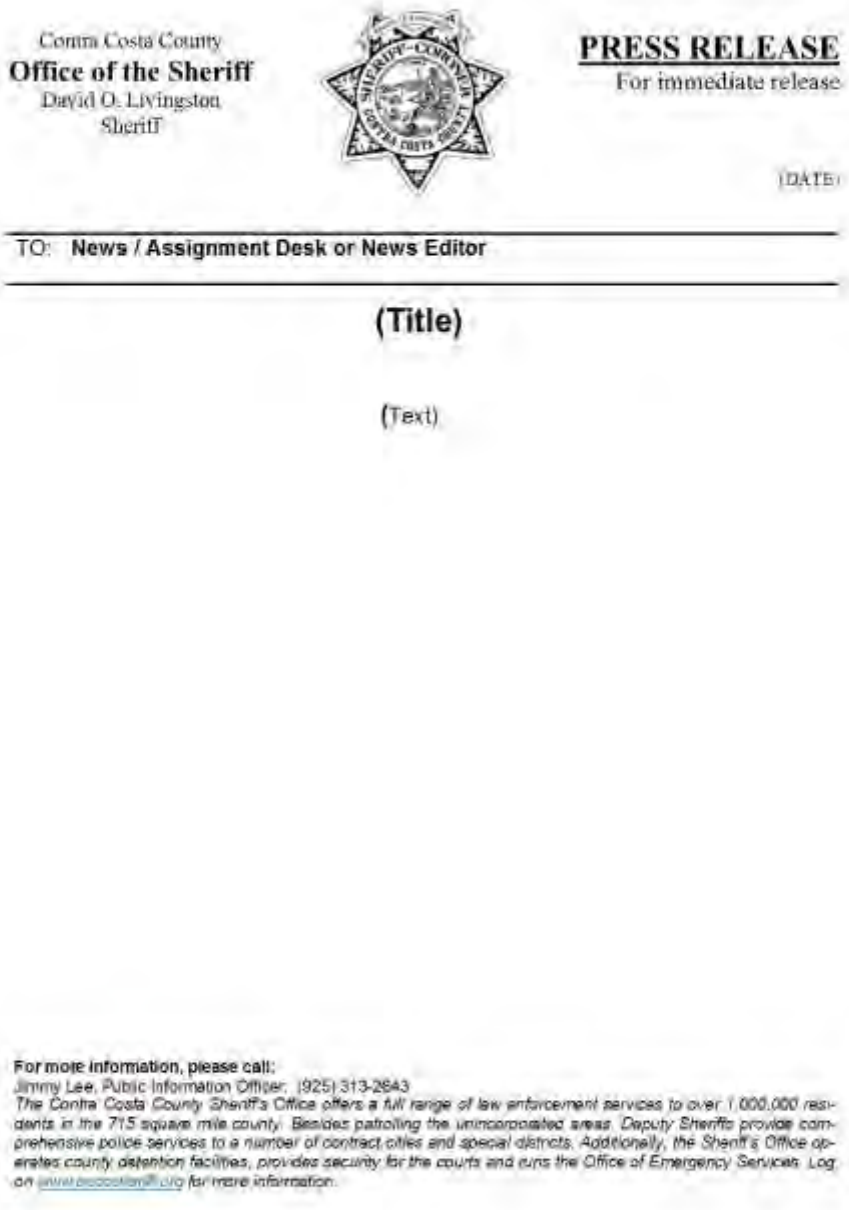
VII. PROCEDURE 4.

A. CONTRACT CITY POLICE SERVICE MANAGERS

1. The Contract City Police Service Managers may approve and disseminate Press Releases on behalf of the City.

2. The Contract City Police Services Manager shall notify his/her chain of command of all Press Releases with a nexus to the Office of the Sheriff before release.

Figure 1.



Contra Costa County
Office of the Sheriff
David O. Livingston
Sheriff

PRESS RELEASE
For immediate release

(DATE)

TO: **News / Assignment Desk or News Editor**

(Title)

(Text)

For more information, please call:
Jimmy Lee, Public Information Officer, (925) 313-2643
The Contra Costa County Sheriff's Office offers a full range of law enforcement services to over 1,000,000 residents in the 715 square mile county. Besides patrolling the unincorporated areas, Deputy Sheriffs provide comprehensive police services to a number of contract cities and special districts. Additionally, the Sheriff's Office operates county detention facilities, provides security for the courts and runs the Office of Emergency Services. Log on www.cocosheriff.org for more information.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.80
	RELATED ORDERS: Penal Code Section 832.7(b); CCCSO 1.05.58, 1.06.77, Appendix 2.	
ISSUE DATE: 2-1-2006 REVISION DATE: 5-27-2021	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Citizens' Complaints / Internal Investigations	

I. POLICY.

A. The Office of the Sheriff is dedicated to providing the highest quality law enforcement to County residents. To achieve this, the Office of the Sheriff welcomes public comment, constructive criticism, suggestions and complaints regarding the action or inaction of its employees or issues regarding Office of the Sheriff policy. The Office of the Sheriff shall accept, record and promptly initiate an investigation into all complaints of misconduct concerning its employees.

II. DEFINITIONS.

A. Available Findings.

1. Sustained. The investigation disclosed sufficient evidence to clearly prove the allegation.
2. Not sustained. The investigation failed to disclose sufficient evidence to clearly prove or disprove the allegation.
3. Unfounded. The investigation has clearly established that the allegation is not true.
4. Exonerated. The actions of the peace officer which formed the basis for the complaint are not violations of Office of the Sheriff policy.
5. Frivolous. The investigation established that the complaint is totally and completely without merit or for the sole purpose of harassing the named employee.

   a. In the event the Internal Affairs Lieutenant or the applicable Division Commander, at the preliminary stages of an investigation, view a complaint as Frivolous, a recommendation to this effect shall be made to the Undersheriff. The Undersheriff may, upon review, make a determination that the matter represents a Frivolous complaint prior to the completion of that investigation.

   b. In the event such a determination is made, Internal Affairs will notify the complainant and further investigation will be suspended.

6. General Personnel File. As used in this Policy, "General Personnel File" means the file maintained by the Office of the Sheriff containing the primary records specific to each employee including evaluations, assignments, status changes, and imposed discipline.

    a. All complaints, investigatory materials and other documents related to Internal Investigations, conclusions and recommendations, other than those recording imposed discipline, shall be maintained in a file or files other than, and separate from, the subject employee's General Personnel File.

B. CITIZEN REPORT PROCEDURE FORM. This refers to the Form made available to the public by the Office of the Sheriff and its Contract Police Units for complaints, constructive criticism, suggestions, and information.

C. CRIMINAL COMPLAINT INVESTIGATION. This refers to any criminal investigation of an employee conducted by the Investigation Division of the Office of the Sheriff or any other outside agency having jurisdiction of the case.

D. CITIZEN'S COMPLAINT. A Citizen's Complaint is an allegation of a violation of the law, Office of the Sheriff Policies and Procedures, or County regulations. If sustained, such an allegation could result in formal discipline as covered in Office of the Sheriff Policy Sections 1.05.70, Personnel Management Regulations or correctional action, training, or counseling, as covered in Office of the Sheriff Policy 1.05.58, Corrective Counseling System.

E. COMPLAINANT. Any person making a Citizen's Complaint including private persons, employees of this Office, and any inmate of the Office of the Sheriff Detention Facilities where the issue is not one properly handled as an inmate grievance, pursuant to Custody Services Bureau Policies and Procedures. Inmate grievances include any questions relating to an inmate's conditions of confinement including: medical care; general classification procedures; general discipline procedures; inmate programs participation; telephone, mail, and visiting procedures; food, clothing, bedding; and/or religious preference.

F. ADMINISTRATIVE INQUIRY. Any inquiry into allegations of employee misconduct initiated by the chain of command, or initiated upon the invocation of the "Law Enforcement Involved Fatal Incidents" protocol (Appendix 2).

G. INTERNAL INVESTIGATION. Any investigation by Internal Affairs, Bureau Assistant Sheriff or Contract Police Manager regarding employee misconduct or a complaint about procedures.

H. MISCONDUCT. Violation of any law, Office of the Sheriff Policies and Procedures, or County regulation.

1. Punitive Action. Any action which may lead to dismissal, demotion, suspension, reduction in salary, written reprimand or transfer for purposes of punishment.

III. GENERAL.

A. ALL COMPLAINTS.

1. Complaints of employee misconduct, whether received by letter, telephone or in person, shall be accepted by any employee of this Office. Verbal complainants should be encouraged to submit the complaint in writing. To facilitate public participation, a Citizen Report Procedure Form shall be made available.

2. Complainants do have the option of remaining anonymous. However, they should be informed of the problem associated with conducting an investigation under those circumstances. All complaints alleging misconduct by an employee will be treated with serious consideration, investigated, and appropriate notifications and action will be taken.

3. Complaints involving violations of Office of the Sheriff Policies or Procedures will normally only be investigated if received within six months from the date of occurrence. Exceptions may be made as the Sheriff deems necessary. Complaints alleging violations of law shall be investigated if received within the normal statute of limitation for the crime(s) involved.

    a. All complaints will continue to be accepted, even when they appear to exceed the time limits. The allegations will be reviewed by the Undersheriff or his/her designee and if a determination is made to not investigate due to time factors, Internal Affairs will notify the complainant.

4. All information, data, and investigation procedures pertaining to Citizens' Complaints shall be treated as confidential by all employees.

    a. Should Investigator(s) obtain reliable information that an employee of this Office has withheld information and/or supplied false information in the course of an Internal Investigation, it shall be considered a new and separate act of misconduct.

    b. During an Internal Investigation, the Investigator(s) shall administratively order an employee to refrain from discussing his or her interview with other employees or involved parties. Any violation of such an order will be considered a new and separate act of misconduct.

    c. During either a criminal or administrative investigation, no employee will surreptitiously audio or video record any other person or employee, except as authorized by law. Internal Affairs and Division Investigator(s) may record interviews with the full knowledge of the person being interviewed.

5. Discussions of cases will be contained to the smallest number of people possible and only on a need-to-know basis.

6. Before interrogation of a sworn or non-sworn employee who may be subject to discipline, a standardized form letter advising the employee of his/her rights will be given to the employee. A copy of this advisement will be reviewed at the time of the interview and will be signed by all parties present. This standardized advisement form(s) may be obtained from the Internal Affairs Unit office.

7. All interviews will be audio recorded in Division cases where the misconduct may lead to Punitive Action.

    a. Each recording will be placed on media that can be stored with the case file (i.e. tape or CD) and clearly marked with the I.A. case number, date of interview, person interviewed and name of

interviewer. Recordings shall be forwarded to I.A. for storage as part of the final package.

8. Should the Internal Affairs Investigator(s), or the employee's Bureau Assistant Sheriff, determine a need to reassign an employee under investigation, he/she will notify the Internal Affairs Unit Lieutenant as soon as practical. The Internal Affairs Unit Lieutenant will provide the subject employee's Bureau Assistant Sheriff with the information that may be provided to the employee concerning the investigation.

9. The Internal Affairs Investigator(s) will keep the Division Commander of the affected employee informed of any Internal Affairs interviews (employee, inmate, etc.) being planned/conducted within that Commander's area of responsibility. If that Division Commander is unavailable, a message will be left and the Assistant Division Commander will be informed.

B. ANNUAL REVIEW.

1. Internal Affairs will submit a report every calendar year listing all completed cases. The report shall provide sufficient information on issues, findings, and action taken to determine consistency and uniformity of treatment.

2. The Internal Affairs Unit will assist in the preparation of a POBOR Claim Form for reimbursement of SB-90 funds from the State.

IV. PROCEDURE 1.

A. VERBAL COMPLAINTS. An employee receiving a verbal complaint shall immediately refer the complainant to a Supervisor of the affected Division or Contract Police Unit. During hours when no Supervisor is on duty in that Division or Contract Police Unit, the Watch Commander or Patrol Sergeant shall act in this capacity.

1. The Supervisor will interview the Complainant and determine the facts.

   a. The Supervisor should attempt to reach a resolution to the Complainant's satisfaction.

      - Within a Division, such a successful resolution does not require official documentation unless specified by Divisional procedures. Supervisors are encouraged to keep personal notes on such public contacts.

   b. If the Watch Commander or Patrol Sergeant is handling the complaint for another Division or Contract Police Unit, he/she will report the incident to the affected Division Commander or Contract Police Manager via the Patrol Division Commander on an inter-office memo.

2. If the seriousness of the allegation warrants a formal investigation by Internal Affairs or the affected Division, but the circumstances do not demand an immediate investigation, the Supervisor handling the case initial inquiry will fully document the incident.

   a. The Supervisor will prepare an inter-office memo and fully document the incident then forward it to his/her Division

Commander or Contract Police Manager. The Division Commander or Contract Police Manager will forward all available documentation concerning the complaint to Internal Affairs via his/her Bureau Assistant Sheriff.

b. The Undersheriff will determine if an internal investigation is warranted after consulting with the affected Bureau Assistant Sheriff.

c. If an internal investigation is warranted, the Undersheriff will determine if the investigation will be conducted by Internal Affairs or by a Division Staff member after consulting with the affected Bureau Assistant Sheriff.

3. If it is determined that Internal Affairs should conduct an immediate investigation, the following guidelines apply:

a. The Supervisor will contact the Division Commander or the Contract Police Manager via the chain of command and advise him/her of the complaint. This notification will be followed up with an interoffice memo.

b. During normal business hours the Undersheriff and/or appropriate Bureau Assistant Sheriff shall be fully informed of the complaint by the affected Division Commander, Contract Police Manager or his/her designee and a determination will be made as to who will conduct the investigation.

c. After business hours and/or on weekends, Internal Affairs Investigator(s) or the Internal Affairs Unit Lieutenant shall be contacted at his/her residence(s) by the Supervisor handling the complaint, following the notification of the Watch Commander.

4. Internal investigations may also be initiated at the discretion of the Sheriff or the Undersheriff.

5. Once a determination has been made to conduct an internal investigation, Internal Affairs will open a case file to include an IA number and all originating documents.

a. In cases being investigated at the Division level, Internal Affairs will prepare a case file folder with all necessary paperwork and forward that to the effected Bureau Assistant Sheriff. This case file will be used by the assigned Division investigator to complete the case.

B. ADMINISTRATIVE INQUIRIES. When anyone in the chain of command becomes aware of an incident in which there is alleged employee misconduct that could lead to discipline, they shall document the incident. Unless the circumstances dictate otherwise, this documentation will be forwarded via the Chain of Command to the Undersheriff no later than the next business day.

1. Follow procedures 2-5, outlined in section A above.

V. PROCEDURE 2.

A. CRIMINAL CONDUCT COMPLAINT. Criminal conduct complaints against an employee where the Complainant wishes to pursue the incident criminally will be handled as follows:

1. The complaint will be documented by the employee receiving the complaint on an inter-office memo. The memo will include a synopsis of the incident and the contact information of the complainant. It will be forwarded to the Undersheriff via the Chain of Command no later than the first business day following receipt of the complaint.

2. The Complainant shall be informed that he/she will be contacted later for necessary criminal investigative interviews.

3. The Sheriff or Undersheriff will direct the affected Bureau Assistant Sheriff to coordinate any necessary criminal investigation by this Office and/or another law enforcement agency having jurisdiction in the case to be undertaken.

   a. A separate and parallel administrative internal investigation may be conducted by the Internal Affairs Detail. The timing of the administrative investigation will be predicated on the activities of the criminal investigation. Under no circumstances will the administrative investigation compromise the criminal investigation.

   b. If during an administrative investigation, Internal Affairs Unit or a Divisional Investigator identifies that criminal conduct has occurred, the appropriate criminal investigation will be initiated. Division and/or Internal Affairs Unit Investigators will follow the Public Safety Officers' Procedural Bill of Rights Act and current case law governing criminal and administrative investigations.

   c. In most circumstances where criminal conduct surfaces prior to the administrative review, it is better to interview the subject employee after the criminal interview.

   d. If during the interview process criminal conduct is identified, the interview should be stopped and the affected Bureau Assistant Sheriff will be contacted and will coordinate any necessary criminal investigation.

VI. PROCEDURE 3.

A. ROUTING CITIZEN'S COMPLAINTS AND ADMINISTRATIVE INQUIRIES.

1. All Citizen's Complaints not resolved by the initial Supervisor will be routed to Internal Affairs via the chain of command. The Complaint will be reviewed and the final decision as to who will handle the investigation will be made. Internal Affairs will mail a letter of receipt to the Complainant with a copy of the complaint received, per Penal Code Section 832.7(b).

2. All administrative inquiries that could lead to discipline will immediately be routed to Internal Affairs via the chain of command. The allegations

will be reviewed and the final decision as to who will handle the investigation will be made.

3. Internal Affairs will assign a number and either investigate the complaint and/or allegations or forward a copy to the affected Bureau Assistant Sheriff for investigation as directed by the Undersheriff.

4. Whenever a case has been assigned to Division for investigation:

   a. Internal Affairs will prepare the case folder, which includes the Case Log, Management Review and POBOR Forms. This folder will be forwarded to the investigating Supervisor's Manager via the chain of command.

   b. The Case Log, Management Review and POBOR Forms will become part of the permanent investigative package that is submitted by the investigating Supervisor and shall accompany that package through all review levels until finally archived by Internal Affairs. The POBOR Form shall be removed and filed separately from the Internal Affairs case after being entered into the POBOR database.

   c. Internal Affairs will maintain a Complaint Log and a cross-referencing system indicating names of Office of the Sheriff employees, the allegations and conclusive findings.

5. All internal investigations based on complaints of misconduct by employees should be completed within 45 days, absent any special circumstances.

   a. Internal Affairs is responsible for maintaining a weekly status log and ensuring that the Undersheriff, Bureau Assistant Sheriffs, Division Commanders and Contract Police Managers are cognizant of the time frame associated with each active internal investigation.

VII. PROCEDURE 4.

A. COMPLETED INTERNAL INVESTIGATIONS.

1. Regardless of the level of investigation (Division or Internal Affairs), the affected Bureau Assistant Sheriff shall act as the case manager, ensuring the investigation is conducted in a professional, thorough and timely manner; that the report is free of spelling and grammatical errors and that each allegation has been adequately addressed.

2. All management levels within the chain of command are required to review the report, sign the management review sheet and make appropriate comments. Any Manager who orders changes in the investigative Officer's conclusions, or requires additional work, should outline his/her directives on the Management Review Sheet.

3. Internal Affairs shall assume responsibility for all correspondence or other forms of contact with complainants to include notification of results.

4. Upon completion of the Internal Affairs Investigation, the Investigator(s) will submit a complete type-written report.

5. Internal investigations will be thoroughly documented in a standardized format provided by I.A. as outlined below.

   a. The I.A. report format shall contain the following: (The left side of the file shall include an attached summary of previous investigations generated from the Internal Affairs database.)

      - Face Sheet. The face sheet shall contain the name(s) of the investigating officer(s) who prepared the document, Internal Affairs number, date of complaint, and complainant's name.
      - Final Disposition Sheet. Lists the allegation(s) and short description for each involved employee.
      - Table of Contents.
      - Recommended Finding. Lists employee's name(s), allegation(s) and recommended finding.
      - Witness Page. Includes name(s), address(es), and phone number(s). List of attached documents, tape recordings, photographs or other evidence submitted. This shall include an attached summary of previous investigations within the past five years generated from the Internal Affairs database
      - Synopsis of the Complaint. Include how the complaint was reported and a short summary of the incident and alleged violations.
      - Investigative Summary. Shall contain a thorough, chronological, first person account of the events to include a summary of all witness statements.
      - Recommended Findings/Conclusions. Shall list policies/procedures violated, not violated, supported by facts and/or statements obtained during the investigation, along with a proposed finding of "Sustained", "Not Sustained", "Unfounded", "Exonerated", or "Frivolous", with respect to each separate allegation investigated. Also include peripheral issues discovered as a result of the investigation if warranted.

6. Should the Investigator find sufficient information to sustain a separate act of withholding information and/or making false statements, an additional recommendation of untruthfulness will be included with the findings.

7. Should the Investigator find sufficient information to sustain a separate act of violating Office of the Sheriff Policy or an Administrative Admonishment Order to refrain from discussing an interview with other employees or involved parties, an additional recommendation of insubordination will be included with the findings. This will be reviewed at each step of the chain of command.

8. Investigations completed by Division investigators will be forwarded through the appropriate chain of command, starting with the Lieutenant or Manager of the subject officer/employee's unit.

9. Investigations completed by Internal Affairs shall be forwarded, via the Internal Affairs Unit Lieutenant to the Undersheriff for review.

10. The Undersheriff may assign the completed case to the appropriate Bureau Assistant Sheriff for review.

    a. Bureau Assistant Sheriffs receiving the completed investigation from the Undersheriff or from within their Division shall review the completed case and shall complete the following steps:

        - On the Management Review form either concur or not concur with the recommend findings, and make notations for recommendations about the final disposition of the officer/employee (i.e. corrective counseling, roundtable, etc.)
        - If the person reviewing the case does not agree with the recommended findings they must document this in a memorandum with the supporting arguments and new recommended findings. This memorandum will be placed into the case folder and forwarded with the case file.
        - The Undersheriff may concur with the recommended finding, change the finding or return it for more information.
        - All documents and evidence not associated with a separate criminal investigation, but associated with a complaint, shall be forwarded to Internal Affairs for record maintenance. Thereafter, possession of either an original or copy of an Internal Affairs document by any unauthorized personnel is a violation of policy.
        - The Internal Affairs Unit Lieutenant shall prepare and forward a written response to the Complainant indicating the disposition of the complaint.

    b. The written response shall be provided to the Complainant within 30 days of the disposition of the complaint. The date of disposition is defined as the date the Undersheriff approves the recommended findings.

11. Internal Affairs shall be responsible for delivery of appropriate copies of all relevant material to involved employees. A receipt and acknowledgment form shall become part of the record.

    a. The receipt will include a notice to the employee that the Internal Affairs documents are considered confidential and any failure by the employee to maintain the confidentiality of the documents could result in disciplinary action as a violation of Sheriff's Office Policy Sections 1.05.57, Unbecoming Conduct, and/or 1.06.74, Control of Sheriff's Office Information.

12. An internal investigation case shall be considered closed when Internal Affairs receives all signed data relative to the case, including a copy of the signed response to the complainant and the Sheriff's or Undersheriff's final finding.

a. Internal Affairs will be responsible for entering the Sheriff's or Undersheriff's final finding on Internal Affairs' final disposition sheet prior to sending copies to the affected personnel.

b. Possession of either an original or a copy of an I.A. document by any unauthorized personnel is a violation of this Policy. The subject employee/officer shall not make public his/her copy of the document.

c. Should any civil litigation or claim be imminent or filed concerning any matter under investigation, the results will be considered confidential and will not be released to the complainant. Release will be made pursuant to appropriate legal mandate.

VIII. PROCEDURE 5.

A. SECURITY OF RECORDS.

1. All records in the control of the Internal Affairs Unit shall be carefully monitored to protect this sensitive information.

a. Original records will never leave the control of the Internal Affairs Unit for any reason without the authorization of the Internal Affairs Lieutenant or his/her designee.

b. The Internal Affairs Unit employee releasing the original record shall complete the entry on the I.A. File Check-Out Log.

2. Requests for copies of Internal Affairs Investigations, Corrective Counseling Memos and/or Letters of Reprimand shall only be accepted from Office of the Sheriff Managers, Contra Costa County Counsel, outside counsel representing the Office of the Sheriff (pending positive verification), or a representative of Contra Costa County Risk Management.

a. The requesting Manager or his/her designee must show that he/she has a need-to-know and a right-to-know the information requested.

B. COPIES OF RECORDS.

1. INTERNAL REVIEW. Internal Affairs records shall not be copied or released without the prior approval of the Internal Affairs Unit Lieutenant. The copying of Internal Affairs records, Corrective Counseling memos and/or Letters of Reprimand shall be done by the Internal Affairs Unit staff.

a. All copies circulated for internal use must be stamped in red ink with "CONFIDENTIAL" and "DO NOT DUPLICATE" on all pages.

b. A control number will be stamped in red ink on the cover of the document. This number shall indicate the day, month, year and sequence.

c. The Internal Affairs Unit employee circulating the documents for internal use will complete the entry on the. Internal Affairs

Unit's "Copy Out Log" with the stamped control number. Return date will be filled in upon return of the document.

d. The documents will be sealed in a manila envelope and marked "CONFIDENTIAL" in red ink on the outside of the package.

e. Documents will be hand-delivered to the requestor who will be instructed to return the copy to the Internal Affairs Unit when the copy is no longer required.

2. PUBLIC DISTRIBUTION. Internal Affairs records will be made publicly available only in response to a valid subpoena or valid Public Records Act request.

a. Subpoenas. We will honor all valid subpoenas, but we may contest their validity in court. Subpoenas for Internal Affairs records will be reviewed by the Internal Affairs Unit Lieutenant and by the Professional Standards Division's Planning and Research Unit, and will be referred to County Counsel for the filing of a Motion to Quash if the records sought in the subpoena are, or should be, protected from release. Subpoenas made in an effort to bypass the discovery process for records in an ongoing criminal case will not be honored.

b. Public Records Act requests for Internal Affairs records will not be honored, except as stated below. In all cases where investigatory or personnel records are requested, except with respect to those matters stated below, the request will generally be denied by the Professional Standards Division's Planning and Research Unit pursuant to exclusions permitted by the Public Records Act.

However, in the case of records sought under the Public Records Act with respect to --

- An incident involving the discharge of a firearm at a person by a peace officer;
- An incident in which the use of force by a peace officer against a person resulted in death, or in great bodily injury;
- An incident in which a sustained finding was made that a peace officer engaged in sexual assault involving a member of the public; and
- An incident in which a sustained finding was made of dishonesty (including any sustained finding of perjury, false statements, filing false reports, destruction, falsifying, or concealing of evidence) by a peace officer directly relating to the reporting, investigation, or prosecution of a crime.

-- such records will be released. See Policy 1.06.77 "Crime and Incident Records – Release of Information (Public Records Act" (at Procedure 10) for appropriate procedures.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.81
	RELATED ORDERS: None.	
ISSUE DATE: 9-26-2008 **REVISION DATE:** 3-7-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **CopLogic Online Citizen Reporting**	

I. POLICY.

A. In the interest of more efficient crime reporting through communication with the citizenry, the Office of the Sheriff shall provide the ability for citizens to report crime on line through CopLogic Online Citizen Reporting.

II. DEFINITIONS

A. ONLINE REPORT. An online police self-reporting system that is designed to eliminate the cost of having deputies physically respond to document no-suspect reports while still recording the incident and collecting reportable data for additional investigation, statistical analysis and state reporting requirements.

B. TEMPORARY CASE NUMBER. A case number issued by the online reporting system that is provided to the citizen upon completion of the report and is also sent by e- mail if an e-mail address is provided. This number is replaced by a permanent case number once the report is reviewed and approved.

C. PERMANENT CASE NUMBER. A Contra Costa County Office of the Sheriff's case number that is issued once an Online Report has been reviewed and approved.

III. GENERAL INFORMATION

A. The Office of the Sheriff will respond to in-progress incidents and all crimes with evidence or information, which may lead to the identity of a suspect and his/her apprehension, or if the incident just occurred and there is a likelihood the suspect may still be in the area.

IV. PROCEDURE

A. The following crimes and reports may be referred to the Online Reporting System as long as the reporter is at least 18 years old and there is no suspect information available:

1. Abandoned Vehicle (11-24 & CVC 22651 & 22669)
2. Civil Dispute
3. Public Nuisance (PC 370)
4. Littering (PC 374)

5. Barking Dog (PC 415BD)
6. Theft of Access Card
7. Stolen Credit Card
8. Petty Theft Bicycle
9. Petty Theft from Building
10. Petty Theft from Coin-Op
11. Petty Theft from Vehicle
12. Petty Theft Other
13. Fraudulent Access of Computer
14. Defrauding an Innkeeper
15. Vandalism Misdemeanor
16. Harassing Phone Call
17. Crime Tip
18. Lost Property
19. Patrol Requests
20. Vacation House Check

B. COMMUNICATIONS PERSONNEL RESPONSIBILITIES

1. When Communications personnel receive a call from a citizen wishing to report an incident, the Communications Dispatcher will determine if the call falls within the scope of an online report. If so, Communications personnel shall:

    a. Determine if the citizen has Internet access

    b. Explain the online reporting process and the requirements of the party filing the report. Ensure that citizens are aware that there is no cost associated with the process.

    c. Advise the caller of the Contra Costa County Office of the Sheriff's address: www.cocosheriff.org and the link titled, "File a Report."

2. If the call screener determines the report is not suitable for online reporting based on the listed criteria, they will prioritize the call and send a Deputy Sheriff to take the report.

3. If the citizen interjects and demands to file a report with a deputy, or if a citizen calls back and states they are having difficulty filing the report online, the incident will be prioritized, and a Deputy Sheriff will take the report.

C. SERGEANT RESPONSIBILITIES

1. Patrol stationhouse Sergeants will accept the reports and import accepted reports in the Online Reporting System queue within 24 hours of their

submission. Stationhouse Sergeant's will only be responsible for accepting reports submitted in their assigned areas.

2. Sergeants will refrain from making grammatical corrections to citizens' reports, unless they are minor in nature, such as, "Sheriff" spelled as "Sherif" etc.

3. If the Sergeant determines the report was misclassified, it may be modified to fit the most appropriate section. The Sergeant shall ensure that reports contain adequate information, recognizing that the reports may be forwarded to outside agencies or used for future prosecution.

4. Prior to rejecting an online report, the Sergeant shall attempt to telephone the citizen for clarification of the issue. If a report is rejected, the reason for rejection will be appropriately and professionally noted in the rejection box, which is sent via e-mail to the citizen and a duplicate to a department storage mailbox.

5. The Sergeant may issue a follow-up request to the reporting citizen in-lieu of approving or rejecting an online report. A follow-up request shall only be issued after first attempting to contact the citizen via telephone or in person to clarify the issue in question.

6. The Sergeant shall request a Patrol response when, in their reasonable judgment, circumstances indicate an investigation is warranted. In this circumstance, a rejection should be sent to the citizen and the Sergeant will state in the rejection box that a response will be made.

7. Lost Passport Reports shall not be approved and imported; all other lost property is acceptable.

8. Supplemental reports may be filed through the Online Reporting System for any of the qualifying incidents to document additional information or loss, unless the information would tend to identify a suspect(s). Online Supplemental Reports may also be filed for burglaries/thefts where there is no suspect information. Serialized property and firearms cannot be reported via the Online Reporting System.

9. The stationhouse Sergeant shall check the general e-mail account on a regular basis (at least once per shift) for responses to follow-up requests initiated by any supervisor.

D. FIELD PERSONNEL RESPONSIBILITIES

1. Deputies dispatched to a call for service shall prepare a report when appropriate. If a deputy determines the report is suitable for online reporting, they may advise the citizen of their option to use this method of reporting if the citizen has internet access.

   a. The deputy will then provide the citizen with the Sheriff's website address and the location of the link to file the report.

   b. In all cases in which a deputy in the field has referred a caller to use this feature and the caller agrees the deputy will close the call out appropriately using the specially designated disposition code OLR (Online report).

2. Deputies will not exploit this reporting method as a means to avoid taking calls for service or writing reports when requested by the reporting party.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.82**
	RELATED ORDERS: Office of the Sheriff Policy Sections: 1.06.71, 1.06.73, 1.06.74, 1.06.77, 1.06.78, 1.07.53, 1.07.58. AB 459 (eff. 1-1-2018) adding Gov. Code §6254.4.5.	
ISSUE DATE: 11-20-2014 **REVISION DATE: 10-30-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Mobile Audio Video & Body-Worn Camera**	

I. POLICY

A. This policy is applicable to personnel operating Mobile Audio Video (MAV) or Body-Worn Camera (BWC) recording systems. Such systems are used to record Deputies in the performance of their duties by providing a visual and/or audio record of their activities, as outlined in this policy. Video recordings are intended to provide an objective visual/audio record of the incident and to augment the Deputy's report.

B. The purpose of this equipment is to accurately document the events, actions, conditions and statements made during vehicle stops, pedestrian stops, arrests, disruptive inmate confrontations, medical responses and other critical incidents in order to verify the accuracy of crime reports, jail incident reports, collection of evidence, and testimony in court. Recordings also enhance the ability to review procedures for the purpose of employee evaluation and training.

C. Deputies will make every reasonable effort to record such contacts and incidents listed in section B above. If circumstances prevent a Deputy from recording such a contact, then this must be documented with the explanation in any subsequent report.

II. DEFINITIONS

A. MOBILE AUDIO VIDEO (MAV) & BODY WORN CAMERA (BWC) RECORDING SYSTEMS. For purposes of this policy, these systems refer to equipment mounted on a movable object, such as a dashboard camera in a vehicle, or mounted to an aircraft, or may also refer to video equipment affixed to a person, such as body-worn or lapel cameras. References in this policy to video recording systems are in regards to all types of mobile systems, including vehicle and body-worn cameras.

III. LEGAL ISSUES

A. Body-worn camera equipment and all data, images, video and metadata captured, recorded, or otherwise produced by the equipment is the property of the Sheriff's Office. Use of body-worn cameras for any purpose other than in accordance with this policy is prohibited.

1. BWC equipment purchased and maintained by Sheriff's Office Contract Cities shall remain the property of the city; however, the equipment shall be operated in accordance with this policy.

B. Employees shall not **surreptitiously** record department personnel without their expressed permission.

IV. TRAINING & ASSIGNMENT

A. Deputies shall not use a recording system until they have been trained in its proper use and care.

B. Training will be provided by a qualified trainer, will be documented, and will consist of a review of the recording system, its functions, usage, and recommended activation.

C. Deputies who have been assigned to a vehicle equipped with a MAV recording system shall use it and the portable audio transmitters pursuant to the provisions outlined in this policy.

D. Deputies who have been assigned a BWC recording system and deployed with it during the course of their respective shift shall wear and use it pursuant to the provisions outlined in this policy.

E. BWC recording systems shall be assigned to the following Deputies in Detention Facilities:

1. Intake Deputies working in booking facilities.

2. Escort Deputies.

3. SERT supervisors during cell extractions and other disturbances.

4. Other Deputy assignments as determined by the Facility Commander.

V. DEPUTY RESPONSIBILITIES

A. Employees are responsible for the reasonable care and maintenance of recording equipment issued or assigned for their use.

B. The systems will be operated according to the manufacturer instructions and recommendations.

C. Deputies shall be certain that their MAV/BWC recording system is fully charged at

the start of his or her shift. At the conclusion of their shift, Deputies shall ensure their MAV/BWC system is powered down and no longer recording.

D. At the beginning of each shift, Deputies shall determine whether their recording equipment is working satisfactorily. If a MAV/BWC system malfunctions or becomes inoperable during the Deputy's shift, this shall be noted in all written reports in which a recordable incident occurs. The Deputy shall immediately report the malfunctioning equipment to his/her supervisor. The Deputy will make every reasonable effort to acquire a replacement BWC once it is discovered to be inoperable.

E. Deputies shall only use those devices issued by the Office of the Sheriff or designee (i.e. Contract City). All devices must be approved by the Division Commander or Facility/Station Commander.

F. Officers shall wear body-worn cameras above the midline of their torso and in position designed to produce an effective recording.

VI. SUPERVISOR RESPONSIBILITIES

A. Patrol vehicles with MAV recording systems shall be deployed whenever possible and should be utilized prior to a vehicle without a video camera system.

B. The shift supervisor is responsible for issuing BWC recording equipment and logging the assignments during lineup or at the beginning of the shift.

C. The shift supervisor shall ensure issued BWC equipment is returned at the end of the shift.

D. Supervisors are responsible for ensuring Deputies download video files and recharge the equipment from the previous shift as early in their shift as practical, to ensure it will be ready for the following shift.

E. Supervisors shall, upon learning a MAV/BWC is inoperable, make arrangements to have the device fixed or replaced.

F. Supervisors who are made aware a Deputy's BWC has become inoperable during the Deputy's shift will make a reasonable effort to provide a working device to the Deputy, if one is available.

G. Supervisors may review video recordings at any time for approved purposes, such as training, reviewing a Deputy's performance, resolving citizen complaints, or during any necessary administrative inquiry. If, after reviewing a recording, a supervisor has developed cause for further inquiry (officer safety, use of proper procedures, or other administrative or operational issues), the recording may be used for such authorized inquiries or investigations.

VII. ACTIVATION

A. MAV recording systems can be activated either automatically (depending on the device specifications and settings) or manually. BWCs can only be activated

manually. The systems need not be recording during normal shift activity. However, if either system (BWC or MAV) is intentionally activated (either automatically or manually) to record an incident, it shall remain on until the incident has reached a conclusion.

1. For a primary Patrol unit, the term "conclusion" in this context means when the Deputy places the arrestee into the Patrol vehicle, releases an involved subject, or turns the subject over to a third party.

2. For assisting Patrol units, the term "conclusion" in this context means the assisting Deputy has left the scene.

3. In a Detention Facility, the term "conclusion" in this context means when the combative or resistive inmate(s) has been secured inside a housing unit cell, holding cell or safety cell, the inmate(s) has been medically cleared (if applicable), and Central Control has acknowledged the situation is "Code Four."

B. The MAV/BWC recording systems shall be activated as soon as practical and safe to record the following incidents:

1. All vehicle stops, including DUI's.

2. All pursuits, or suspects attempting to evade arrest.

3. Major incidents (fires, explosions, protests, rescues via helicopter, critical incidents, etc.), any Code 3 response or when responding to an emergency or "in progress" type of crime or incident (Felony or Misdemeanor).

4. Suspect(s) held or transported in the rear of the patrol car. The recording of suspects shall continue through the pre-booking process, or until the suspect is turned-over to custody staff. Additionally, all transports or courtesy transports shall be recorded.

5. Major traffic accident investigations. (Deputies may use discretion during lengthy accident investigations and turn off the camera once the scene has been stabilized).

6. Investigative contacts such as Field Interviews, In-Field show-ups, and suspicious subject contacts.

7. Detention Deputies should activate BWC equipment before dealing with hostile inmates, before any anticipated use of force, and as soon as they realize a situation is escalating. The equipment shall be activated before responding to notice of a combative arrestee being brought into the jail for booking. BWC equipment shall be activated before escorting inmates who are known to be hostile, combative, or who routinely make allegations of excessive use of force. BWC equipment shall be activated when responding to any code called in the facility.

8. Any other incident where the Deputy deems it necessary to gather and retain evidence.

9. Deputies should make every reasonable effort to record non-enforcement contacts should they become confrontational, assaultive, or enforcement-oriented.

C. Deputies are not required to advise or obtain consent from a citizen when:

1. In a public place; or

2. In a detention facility or temporary holding facility;

3. In a location where there may be an expectation of privacy but the Deputy is lawfully present.

D. Deputies will notify the supervisor as soon as practical, of any recorded sequences that may represent significant evidence. The supervisor will determine if a copy of the recording should be made and placed into evidence.

E. No employee shall modify, alter, erase or record over any portion of an audio/video recording.

F. Deputies shall not be required to activate body-worn cameras when engaged in conversations with individuals with whom the officer is in a privileged relationship (e.g., spouse, attorney, police peer counselor, labor representative, minister, etc.).

G. In general, Deputies should not activate BWC equipment and/or use caution when entering a public locker room, changing room, restroom, jail showers, doctor or lawyer offices or interviews, or other places where individuals unrelated to the law enforcement incident are present and would have a heightened expectation of privacy.

H. BWC equipment shall not be activated during routine inmate strip searches, unless the situation becomes combative and/or violent.

I. No recording or portion thereof may be copied or released without the approval of the Division or Facility Commander. Requests for copies made pursuant to the Public Records Act shall be handled in accordance with Section XI. C. and D. Copies may be made for court or at the request of the District Attorney's Office and County Counsel. Copies of recordings for training purposes require prior approval from the Division or Facility Commander.

VIII. REVIEW OF RECORDINGS

A. Recordings may be reviewed in any of the following situations:

1. By a supervisor reviewing a Deputy's performance.

2. By a department detective who is engaged in an official investigation.

3. By the recording Deputy who needs to review his or her own recordings for report preparation or sworn testimony.

4. Recordings may be shown for the purposes of training value with prior review and approval of the Division or Facility Commander. If an involved Deputy objects to the showing of a recording, his/her objection will be submitted through the Chain of Command to determine if the training value outweighs the Deputy's objection to showing the recording.

5. Deputies desiring to view any recording, not their own, shall submit a request in writing to the supervisor.

6. By authorized Departmental personnel for purposes of potential or actual litigation review and preparation, and by authorized personnel of the County's Risk Management Division and County Counsel.

7. In no event shall any recording be used or shown for the purpose of entertainment or ridicule.

8. Recordings will not be posted to any social media internet site without the approval of the Bureau Assistant Sheriff.

IX. DOCUMENTING USE

A. Any incident recorded by a MAV or BWC system shall have a notation in the synopsis of the report indicating that there is video/audio evidence. If a citation is issued during a citizen contact of which a recording was made, the front of all copies shall have the notation, "VIDEO ON FILE" indicating there is video/audio evidence.

B. The Department recognizes that video images cannot always show the full story nor do video images capture an entire scene. The use of body-worn cameras does not reduce the requirement to provide thorough written documentation of an incident. Persons reviewing recordings must also be cautious before conclusions are reached about what the recordings show.

X. VIDEO MEDIA STORAGE AND INTEGRITY

A. Evidence videos may be booked in hard copy formats (e.g., DVD, Thumb Drive) or "soft" copy format into a server solution (cloud or local) that is CJIS compliant and approved by the Division Commander or Contract City Chief. The method of booking the videos shall be documented in the incident or crime report.

B. All video/audio recordings that are not booked into evidence in a "hard" copy format will be retained in approved storage for a period of two years, after which they will be deleted if no longer needed for an ongoing proceeding. Recordings relevant to on-going criminal or civil proceedings must be retained for so long as the proceedings are pending.

C. The Station House, Facility Commander, or Technical Services designee shall maintain control of all media storage resources relating to equipment used at their respective work station.

XI. COPIES OF VIDEO/AUDIO RECORDINGS

A. MAV/BWC recordings shall not be used for any purpose other than as outlined in this policy.

B. Stored recording media copies may be released in response to:

1. A Public Records Act Request (but see C and D, below);
2. A valid court order or subpoena (see Section XIII, below);
3. To the District Attorney's Office for purposes of prosecution;
4. To authorized Departmental personnel for purposes of review, investigation, training, or potential or actual litigation defense;
5. To County Counsel; or
6. Upon approval by the Division or Facility Commander.

C. MAV/BWC recordings are subject to the Public Records Act and shall be released except where an exemption, such as the "investigations" exemption (Govt. Code 6254(f)), applies. Generally, investigative video recordings shall not be released pursuant to a Public Records Act request, but a release may be authorized under the provisions set forth in "D" below.

D. MAV/BWC recordings may be released to the public and to the media upon the specific approval of the Division or Facility Commander where such release will assist the interests of justice. However, a recording that was created during the commission or investigation of the crime of rape, incest, sexual assault, domestic violence, or child abuse that depicts the face, intimate body part, or voice of a victim of the incident depicted in the recording, shall not be released except upon the approval of the FOB Assistant Sheriff. If a decision is made not to release such video, the denial letter provided to the requester shall justify withholding such a video or audio recording by demonstrating, pursuant to Section 6255, that on the facts of the particular case, the public interest served by not disclosing the recording clearly outweighs the public interest served by disclosure of the recording.

XII. RECORDINGS AS EVIDENCE

A. If a hard copy of a MAV/BWC recording is booked into evidence, it shall be packaged and labeled and a Chain of Custody Label is to be affixed to the outside of the packaging in the same manner as other property and the collection and disposition of such evidence shall be referenced in the crime report (see Section IX.A).

B. If a soft copy of a MAV/BWC recording is booked into a digital evidence storage solution, it shall be identified by the case number and the retention status will be changed to an evidence category allowing for indefinite storage until the evidence is

no longer needed and manually deleted.

XIII. EXTERNAL REQUESTS - PROCEDURE FOR DISCOVERY OF EVIDENCE AND CITIZEN REVIEW

A. Upon receipt of a subpoena, a supervisor or designated Custodian of Records will be responsible to make a copy of the requested recording or segment thereof as ordered by the court or other authorized party. The procedure to complete the discovery recording copy process will be as follows:

1. A supervisor will make a copy of the identified video recording from video recording storage.

2. The supervisor will forward the discovery copy of the recording to the court pursuant to established procedures.

3. Recordings shall not be released under informal discovery requests, i.e. without a subpoena.

XIV. INTERNAL REQUESTS - PROCEDURES FOR DISCOVERY OF EVIDENCE

A. Upon written or email request by a Deputy or other staff member who requires a copy for court or administrative purposes (other than an Departmental Personnel specifically authorized to view the video pursuant to Sections VIII and XI), a supervisor or designated Custodian of Records will be responsible to make a copy of the requested recording. The procedure to complete the recording copy process will be as follows:

1. A supervisor will make a copy of the identified video recording(s) from video recording storage.

2. The supervisor will then forward the copy of the original recording(s) to the Deputy or staff member.

XV. REQUEST FOR DELETION OF ACCIDENTAL RECORDINGS

A. In the event of an activation of a BWC where the resulting recording contains personal and/or private conversations of a Deputy unrelated to any ongoing criminal or Internal Affairs investigation, or otherwise has no valid official purpose, and which has no apparent evidentiary or investigatory value, a Deputy may request the deletion of he accidentally recorded BWC video file by submitting a written request to the Division or Facility Commander. If the Commander determines the BWC recording meets the above criteria, the video file may be deleted after 30 days.

B. In the event of an accidental activation of a BWC where the Division or Facility Commander determines a BWC recording contains the personal and/or private conversations or images of any other individual unrelated to an ongoing criminal or Internal Affairs investigation, or otherwise has no valid purpose, and which has no apparent evidentiary or investigatory value, it may be deleted after 30 days by direction of the Commander.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.06.83**
	RELATED ORDERS: California Code of Regulations (OSHA) – Title 8, Chapter 4, Section 1598; Code of Federal Regulations – Title 23, part 634; ANSI/ISEA 107-2004, 2007-2006, 207-2011	
ISSUE DATE: 4-3-2015 **REVISION DATE:** 7-16-2015	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Office of the Sheriff Operations**	**SUBJECT:** **Personal Protective Gear – High Visibility Vests**	

I. POLICY.

A. The high visibility vest policy is established to provide guidance to Sheriff's Office personnel regarding the use and wear of reflective vests, as well as to conform to legal requirements as outlined in California Code of Regulations (CCR) and California Occupational Safety and Health Administration Standards (OSHA) Title 8, Section 1598, Title 23 Code of Federal Regulations (CFR) part 634, the American National Standards Institute (ANSI), and the International Safety Equipment Association (ISEA), commonly referred to as ANSI/ISEA.

B. ANSI/ISEA publications 107-2004, 207-2006, and 207-2011 outline the performance specifications of safety vests and the requirements of employees when using these vests while exposed to the hazards of vehicular traffic. The ANSI/ISEA standards exist to protect first responders who are working on foot and in the right of way of a roadway or highway.

C. Department personnel will adhere to Sheriff's Office policy and codified law when working on foot and in the right-of-way of a roadway. Supervisors will regulate the issuance and utilization of reflective vests to conform to the provisions outlined in this policy and with the publications and legal requirements regulated by CCR/OSHA, ANSI/ISEA, and federal and state law.

II. GENERAL.

A. High visibility vests are reflective clothing used to increase the visibility of personnel who are on foot and adjacent to roadways. The Office of the Sheriff high visibility vest is "HiVis" yellow, and has reflective fabric across the chest, waist, and neck, with "SHERIFF" embossed on the front and rear of the vest. Vests issued by contract cities shall be made of similar material, have reflective fabric, and be embossed with "POLICE" on the front and rear of the vest.

III. PROCEDURE.

A. GENERAL RULES.

1. Personnel who are on foot and performing tasks such as, but not limited to, traffic control, evidence collection, scene documentation, or on the outer perimeter of an

incident or event for the purposes of directing traffic away from or around an event and exposed to vehicular traffic, shall wear high visibility vests.

a. Personnel will only use those vests issued by the Office of the Sheriff and within the provisions of this policy. If personnel are assigned to a contract city, they will use only vests provided by their respective contract city. An Office of the Sheriff issued vest may be used in the absence of an issued vest by their respective city.

B. DEPUTY RESPONSIBILITIES.

1. Office of the Sheriff personnel who are on foot shall wear high visibility vests while performing their duties when:

Exposed to the hazards of passing traffic for the purposes of controlling, directing, or diverting vehicular traffic.

On foot and conducting crime scene documentation or evidence collection within any roadway.

Directed to by a supervisor.

2. High visibility vests are not required during a tactical operation or enforcement action when it would compromise the safety of the deputy.

3. High visibility vests are not required during traffic stops, unless such an incident evolves into a scene where the deputy is in a traffic environment for a prolonged period of time and reasonably has the ability to don a high visibility vest.

C. SUPERVISOR/MANAGER RESPONSIBILITIES.

1. PATROL SERGEANT. The Patrol Sergeant or applicable supervisor/manager will monitor and ensure that personnel are properly donning vests in the appropriate manner and in the necessitated environments and circumstances.

2. Supervisors/managers will ensure vest specifications conform to the standards outlined in this policy and the law.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.06.84
	RELATED ORDERS: CCCSO 1.06.37 – Evidence Retention; Government Code Section 26614; Title 49 USC Section 40102(a)(41)(c) and (d), Title 49 USC Section 40125(b); Federal Aviation Administration Part 107	
ISSUE DATE: 01-05-2017 REVISION DATE: 5-25-2021	CLEARANCE: Office of the Sheriff	
CHAPTER: Office of the Sheriff Operations	SUBJECT: Small Unmanned Aircraft System (sUAS)	

I. POLICY.

A. The Sheriff has established procedures for promoting safe, efficient, and lawful operation of the Contra Costa County Sheriff's Office small Unmanned Aircraft System (sUAS). Safety, above all else, is the primary concern in each operation, regardless of the nature of the mission.

B. It shall be the mission of sUAS personnel to use this resource to protect the lives and property of citizens of Contra Costa County and first responders in full compliance with applicable laws and regulations, including but not limited to applicable State and Federal Constitution and Federal Aviation Administration (FAA) regulations.

C. The use of a sUAS can support first responders in situations which would benefit from an aerial perspective and enable responders to detect dangers that could otherwise not be seen. The sUAS can also be utilized for approved training missions.

II. DEFINITIONS.

A. SMALL UNMANNED AIRCRAFT SYSTEM (sUAS): Consists of the small unmanned aircraft weighing under 55 lbs., the command system, a secure control link, and other related safety and support equipment.

B. UNMANNED AIRCRAFT (UA): An aircraft that is intended to navigate in the air without an on-board pilot.

C. UA FLIGHT CREWMEMBER: A pilot, visual observer, or other persons assigned duties for a sUAS for the purpose of flight.

D. PILOT IN COMMAND (PIC): A trained and certified (FAA Part 107) person exercising control over unmanned aircraft during flight, ultimately responsible for the safe operation of the aircraft.

E. CERTIFICATE OF AUTHORIZATION (COA): A document issued by the FAA which grants permission to fly within specific boundaries and parameters. Training and operational flights are only allowed if there is a valid Blanket Area COA in place with the FAA. Contra Costa County's Blanket Area COA allows for sUAS flights in class G airspace within Contra Costa County (uncontrolled airspace, not under the jurisdiction of an Air Traffic Control Tower). If a sUAS mission is required in restricted air space, an emergency addendum to the existing COA must be obtained.

F. OBSERVER: The crew member responsible for the visual observation of the sUAS while in-flight. Outside exigent circumstances, such as indoor flying, the observer will maintain a visual observation of the sUAS while in flight and alert the pilot of any conditions (obstructions, terrain, structures, air traffic, weather, etc) which may affect the safety of flight. The observer will be responsible for all aviation related communications required by the FAA. To accomplish this, the observer will be in close proximity to the pilot to ensure instant relaying of information. The observer will be trained in the operation of the sUAS by successful completion of an approved training course.

G. PART 107: The Federal Aviation Administration (FAA) rules for small unmanned aircraft (sUAS) operations other than model aircraft – Part 107 of FAA regulations – cover a broad spectrum of commercial and government uses for sUAS weighing less than 55 pounds.

III. AUTHORIZED EQUIPMENT.

A. Only sUAS equipment authorized under this policy will be used in conjunction with Office of the Sheriff sUAS operations.

1. Authorization of equipment under this policy must be approved by the Special Operations Division Commander or his designee.

2. It is recognized that sUAS equipment evolves at a rapid pace and new and/or loaned equipment may be used on a trial basis for development of the program, with the authorization of the Air Support Unit Commander or his designee.

IV. GENERAL.

A. DEPLOYMENT REQUIREMENTS: Any on-duty Sergeant or manager may approve a sUAS deployment for an on-duty sUAS member to complete an authorized mission. If an sUAS mission is requested when no on-duty sUAS members are available, the Officer of the Day may initiate a call-out.

1. The assigned pilot is responsible for evaluating the mission for legal and safety issues, and accepting or declining the mission based on these parameters.

2. When the sUAS is being flown, operators will take steps to ensure the camera is focused on the areas necessary to the mission and to minimize the inadvertent collection of data about uninvolved persons or places.

    a. The sUAS program will not be used for the purpose of creating or maintaining intelligence files on public or private citizens or agencies who are lawfully exercising their constitutional rights.

3. CCCSO will maintain a policy and procedure regarding the operation of the sUAS program.

4. The sUAS will not be equipped with any weapons.

5. The authorized missions for the sUAS are:

    a. Post-incident crime scene preservation and documentation;

    b. Explosive ordnance disposal (EOD) missions;

    c. Response to hazardous materials spills;

    d. Search and Rescue (SAR) missions, as defined in California Government Code Section 26614;

    e. Providing situational awareness during public safety and life-preservation missions to include barricaded suspects, hostage situations, active shooters, apprehension of armed and dangerous and/or violent fleeing suspects, K-9 tracks and searches, and high-risk search warrants;

    f. Disaster response and recovery to include natural or human caused disasters including a full overview of a disaster area for post incident analysis and documentation;

    g. Training missions;

    h. In response to specific requests from local, state or federal fire authorities for fire response and prevention;

    i. When there is probable cause to believe that (1) the sUAS will record images of a place, thing, condition, or event; and (2) that those images would be relevant in proving that a crime had occurred or is occurring, or that a particular person has committed or is committing a crime;

    j. Special events, such as fairs, festivals, parades, and protests, where the on-scene supervisor, manager, or incident commander believes the flight would help to assess the deployment of security personnel and equipment, identify unsafe conditions, or increase public safety and security;

1. A sUAS team can be staged in the area of protest activity, but the craft may only be launched when the supervisor, manager, or incident commander has reason to believe the flight falls within one of the subsections above and the scope of that flight is limited to such purpose;

k. To observe and record training with other divisions if requested;

l. In or about any Sheriff's Office facility for security or observation of any condition deemed necessary by the facility manager or his designee;

m. In support of a valid search warrant or other legal search or court order.

6. Situations may arise which do not fall within the provisions set forth in this policy. In any such case, a standard of objective reasonableness shall be used to review the decision to use a sUAS in view of the totality of the circumstances.

B. REQUESTS FOR ASSISTANCE: Allied agencies will request the use of sUASs through the standard communication process, normally through their respective dispatch centers. At the time of the request, the requesting agency will provide the facts and circumstances surrounding the incident they are working. Any on-duty Manager or Supervisor can approve a request for assistance. The request will be reviewed by the sUAS operator to assure the use will meet the requirements of this policy.

C. All procedures, laws, and regulations on sUAS usage, shall be reviewed by the Special Operations Division Commander and be kept in the Sheriff's Office G-drive for historical reference. The Field Operations Bureau will compete a quarterly report documenting mission information to be provided to the Sheriff and placed in the annual report.

V. PROCEDURE.

A. A sUAS operation requires a Certificate of Authorization (COA) from the FAA.

B. A sUAS will only be operated by personnel who have been trained and certified (Part 107) in the operation of the system. All agency personnel with sUAS responsibilities, including command officers and observers, will be provided training in the policies and procedures governing sUAS use.

C. All flights for on-duty sUAS members will be approved in advance by the on-duty Sergeant or manager when feasible.

D. A call-out of off-duty sUAS personnel may be authorized by the Air Support Unit Commander, his designee, or the Officer of the Day.

E. All flights will be documented on the mission dispatch form designed for that purpose and all flight times shall be accounted for on the form. The mission dispatch form will be kept on the G: Drive in the sUAS folder.

1. The following will be documented on the mission dispatch form:
2.
    a. Date and time
    b. Case Number, if applicable
    c. Pilot and Observer employee number
    d. UAV number and model
    e. Number of flights
    f. Total flight time
    g. Notice to Airmen filed
    h. Mission Type

3. If the flight is in support of a call where a report has already been generated, the sUAS pilot will write a supplement to the original report to document the flight.

4. If the flight is flown in support of an incident where a report has not already been issued, the pilot will draw a new report number to document the flight.

F. The administration, safety policy, training requirements, general operating procedures, and pre/post flight actions are contained within the CCCSO sUAS Operations Manual.

G. All sUAS equipment will be checked weekly to ensure it is ready for service. This includes an inventory of all equipment, checking for software updates, and making sure all batteries are charged.

VI. FLIGHT RESTRICTIONS.

A. If a sUAS mission is required in restricted air space, an emergency addendum to the existing COA must be obtained.

1. Authorization to fly in restricted air space may be obtained through a Low Altitude Authorization and Notification Capability (LAANC) FAA approved application during daylight hours.

B. Under the Blanket Area COA, the FAA will permit flights at or below 400 feet for UAS operators with a Section 333 exemption for aircraft weighing less than 55 pounds and for government UAS operations. Operators must keep the UAS within visual line of sight of the pilot and stay certain distances away from airports or heliports as defined below:

1. Five nautical miles (NM) from an airport having an operational control tower, or
2. Three NM from an airport with a published instrument flight procedure, but not an operational tower, or

3. Two NM from an airport without a published instrument flight procedure or an operational tower, or

4. Two NM from a heliport with a published instrument flight procedure.

C. Indoor UAS flights do not fall under FAA regulations or the Blanket Area COA, and therefore are not subject to the same limitations as outdoor flights. An observer should be used when feasible, but an observer may be unable to follow the UAS indoors in all circumstances, such as when trying to locate a suspect inside a residence.

VII. DATA RETENTION AND PROCESSING.

A. Upon completion of each sUAS mission, any recorded data shall be reviewed and evaluated for evidentiary value.

1. Data found to have evidentiary value will be turned over by the pilot to the primary investigating deputy, who is responsible for ensuring it is booked into evidence in the form of a flash drive, CD, DVD, or other "hard' copy format in accordance with CCCSO General Policy and Procedure Section 1.06.37, Evidence Retention.

2. If the evidence collected is part of another agency's case, this evidence will be signed over to the agency making the request and thoroughly documented in an outside assist report.

2. Data collected that is not found to have evidentiary value will destroyed, unless it is deemed by the Air Support Unit Commander or his designee to have training value for the development of the unit. Data that is kept for training purposes will be stored on a sUAS external hard drive for a period of 2 years. Any collected data is not to be released without the consent of the Sheriff or his designee.

VIII. PROTECTION OF RIGHTS AND PRIVACY CONCERNS.

A. sUAS managers, supervisors, operators and observers will consider the protection of individual civil rights and the reasonable expectation of privacy as a key component of any decision made to deploy the sUAS. Each sUAS operator and observer will ensure that operations of the sUAS are consistent with local, state, and federal laws.

Former Policy Deleted

Contra Costa County Office of the Sheriff
Policies and Procedures Manual

Chapter Seven:

Equipment and Property Management

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.11
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE: 9-18-2014	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Care and Maintenance of County Equipment	

I. POLICY.

A. Properly maintained equipment provides long service life and safety of operation. Office of the Sheriff employees shall ensure the proper care, maintenance and serviceable condition of all County property issued to them or assigned for their use.

II. GENERAL.

A. EMPLOYEE RESPONSIBILITIES.

1. Employees are responsible for the reasonable care and maintenance of equipment issued or assigned for their use.

2. Employees will notify their Supervisors upon discovering damage to, loss of, or the unserviceable condition of County property assigned or issued to them.

3. Willful, unauthorized, negligent use or abuse, or destruction of County property by an employee is cause for entry into the Corrective Counseling System or the County Disciplinary System.

4. Presumption of Responsibility. In the event County property is found bearing evidence of damage which has not been reported, it shall be prima facie evidence that the last employee using the property was responsible for the damage.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.12
	RELATED ORDERS: Administrative Bulletin 100.4; CCCSO 1.07.13, 1.07.32, 1.07.33, 1.07.41, 1.07.56.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-19-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Inventory Control**	

I. POLICY.

A. An accurate inventory of County property in the Office of the Sheriff is necessary to ensure adequate control of that property. Each division shall perform an annual inventory of items as defined in Section II below and deliver the results to the Support Services Bureau annually.

B. Each division shall ensure its weapon systems inventory conforms to the information maintained by the Support Services Bureau in the Sheriff's Personnel Administrative Record Keeping System (further referred to as SPARKS).

II. DEFINITIONS.

A. EQUIPMENT POSSESSION LIST FORM. Refer to County Form M166.

B. REQUEST FOR CHANGE OR RELEASE OF CUSTODY OF FIXED ASSETS FORM. Refer to County Form M349.

C. WEAPONS SYSTEMS. Firearms or other devices that are authorized for deployment as described in Sheriff's Policies and Procedures 1.07.32, Authorized Firearms and Ammunition.

D. FIXED ASSET. An item with a threshold cost of $5,000.00 (including sales tax, shipping costs, etc.)

E. OTHER ASSETS TO BE INVENTORIED. Other items that must be inventoried are:

1. Vehicles (to include motorcycles, ATVs, trailers, boats, etc.).
2. Gas masks.
3. Cellular telephones (including cellular air cards).
4. Computer CPUs and MDCs.
5. Computer monitors.
6. Printers.
7. Video projectors.

8. Camcorders.

9. Radios.

III. GENERAL.

A. DIVISION INVENTORY. Each Division shall have on file an annotated copy of the computer printout from the County Auditor's Office listing all County property maintained by that Division.

B. ANNUAL INVENTORY. The Auditor's Office, on an annual basis, provides each County Department a printed list of assigned fixed assets. The Sheriff's Office Fiscal Unit is responsible for distributing the appropriate inventory list to each Division.

C. MISAPPROPRIATION OF PROPERTY. Sheriff's Office employees shall not appropriate for their own use any County property, evidence or found property.

D. CHANGES IN EQUIPMENT STATUS. Upon approval of the County Administrator, fixed assets can be discarded, traded in for new equipment, or donated to another organization. Upon approval of the Bureau Assistant Sheriff, weapons systems may be returned to the Support Services Bureau via the Law Enforcement Training Center for decommissioning. With the approval of the Bureau Assistant Sheriff, other assets as described in section II above can be discarded, traded in for new equipment, or donated to another organization compliant with policy, procedure, and the law.

IV. PROCEDURE 1.

A. EQUIPMENT INVENTORY.

1. In the event of inventory changes of fixed assets, the Division Commander shall notify the Fiscal Unit, using County Form M349, Request for Change or Release of Custody of Fixed Assets.

2. The Fiscal Unit shall be responsible for notifying the Auditor's Office, using Form M349, upon receipt of changes from Divisions. The affected Division Commander shall arrange removal and storage of the unneeded/unserviceable equipment.

3. In the event of inventory changes of weapons systems, the Division Commander shall notify the Support Services Bureau Assistant Sheriff by memo via the chain of command. The Division Commander will initiate the removal of unneeded or unserviceable fixed assets from his/her Division, forwarding County Form M349 to the Fiscal Unit. The Division Commander will initiate the removal of unneeded or unserviceable weapons systems from his division by memo to the Support Services Bureau Assistant Sheriff via the chain of command.

4. In the event of inventory changes of other assets as described in section II above, the Division Commander shall notify the Support Services Bureau Assistant Sheriff by memo via the chain of command.

V. PROCEDURE 2.

A. ANNUAL INVENTORY.

1. Each Division Commander, upon receipt of the annual list of Assigned Fixed Assets from the Fiscal Unit, will provide the following inventory control documents:

    a. An annotated Auditor's Office printout indicating the location of those items in the Division that are on the inventory list. Items on the inventory list, but not physically in the Division, will be so described on the annotated list.

    b. A list of those items physically in the Division but not on the inventory lists, using County Form M166.

2. The lists will be forwarded to the Fiscal Unit for collation of an Office of the Sheriff inventory list.

B. WEAPONS SYSTEM INVENTORY

1. Each January, each Division Commander, upon receipt of the annual list of Assigned Weapons System Assets from the Support Services Bureau Assistant Sheriff, will provide the following inventory control document:

    a. An annotated copy indicating any discrepancies from the list provided. If the provided list is accurate, the Division Commander shall note it as such.

    b. The Division Commander shall send the annotated copy of the list to the Support Services Bureau Assistant Sheriff via chain of command for review no later than the first day of February.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.13
	RELATED ORDERS: PC Chapter 13; County Administrative Bulletin 100.4; Government Code Section 1090.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 8-30-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Use of Unclaimed Property, Confiscated Property and Evidence**	

I. POLICY.

A. Items of unclaimed found property, confiscated property and evidence may be retained for Office of the Sheriff use in lieu of being sold at auction, destroyed or being turned over to other agencies. Sheriff's employees are prohibited from directly or indirectly purchasing unclaimed property sold at regional auctions.

II. DEFINITIONS.

A. IMMEDIATE FAMILY. The immediate family members are limited to the Office of the Sheriff employee's spouse, children, stepchildren, parents, stepparents, siblings, grandchildren, parents-in-law, children-in-law, and siblings-in-law.

B. PROPERTY FOR DEPARTMENT USE FORM. Office of the Sheriff form used to request items of unclaimed/confiscated property.

C. REQUEST FOR CHANGE OR RELEASE OF CUSTODY OF FIXED ASSETS FORM. Refer to County Form M349.

III. GENERAL.

A. REQUESTS FOR USE OF UNCLAIMED/CONFISCATED PROPERTY.

1. Divisions may request items of unclaimed found and confiscated property for their use by completing a Property for Department Use Form.

2. Division Commanders may submit lists of types of items desired to the Director of Property Services, via the Forensic Services Division Commander. The Director of Property Services will use these as a guide and, whenever possible, will set such items aside for the requesting Division Commander.

3. Division personnel are responsible for maintaining control of the property while it is in the possession of the Division.

4. Capital items will have County identity tags affixed by the County Auditor-Controller.

B. OFFICE OF THE SHERIFF USE OF FIREARMS/DANGEROUS WEAPONS.

1. The Training Unit is responsible for inventory and control of all firearms obtained from Property Services.

2. The Director of Property Services will issue firearms to the Training Unit when requested, see “Procedure 3".

3. The Training Unit will issue firearms to individual employees as required.

4. Firearms that have been received for Office of the Sheriff use shall not be issued to retiring employees.

5. The Training Unit shall return firearms to the Sheriff’s Property Services Manager when they are no longer needed for Sheriff’s Office use.

6. All transactions involving dangerous weapons shall be in accordance with Federal and State dangerous weapons laws regulations.

C. RELEASE OF EVIDENCE.

1. The release of evidence for County use is governed by Penal Code, Chapter 13, Disposition of Evidence in Criminal Cases.

2. Employees shall ensure that all provisions of the Penal Code are met prior to release of any evidence for County use.

D. PROHIBITION AGAINST AUCTION PURCHASES.

1. Office of the Sheriff employees are prohibited from directly or indirectly purchasing any Office of the Sheriff property offered for sale at any regional auction, whether the auction is conducted by a County contractor or the County.

a. Indirect auction purchases include purchases by:

- Any member of the Office of the Sheriff employee’s immediate family;
- Any person who received inside information about auction items from the Office of the Sheriff employee; or
- Any third party acting for the Office of the Sheriff employee.

IV. PROCEDURE 1.

A. DIVISION RESPONSIBILITY.

1. The Division Commander must authorize all transactions and shall sign the Property for Department Use Form (PS-23) for issuance of specified items.

2. All requests must be submitted to and approved by the Forensic Services Division Commander.

3. If the item is of capital value, the Division Commander will ensure it is entered into the County Computerized Inventory System by submitting County Form M349 to the Personnel and Finance Division.

4. If the item has no capital value, it will be entered on Division inventory records only. Expendable small items of low value are not subject to inventory and may be excluded from all inventory records.

5. If the item requested is a firearm, obtain approval from a Judge of the Court or District Attorney to retain the firearm on the Certification of Retention form.

V. PROCEDURE 2.

A. DIRECTOR OF PROPERTY SERVICES RESPONSIBILITY. Upon issuing the requested property, the Director of Property Services will:

1. When the property is a firearm, provide the Division representative with a Certification of Retention;

2. Obtain signatures on the property receipts and the Property for Department Use form (PS-23) of person receiving the property;

3. Maintain a file of fulfilled written requests. Cards will be kept in the section file;

4. In the case of firearms, notify the State Department of Justice of the transaction; and

5. The Certification of Retention form is to be filled out completely and distributed to the appropriate units.

VI. PROCEDURE 3.

A. TRAINING MANAGER'S RESPONSIBILITY.

1. Take receipt of completed copy of the Certification of Retention and a copy of the Division's completed Property for Department Use Form.

2. Return the Certification of Retention to Property Services who shall release the firearm to the Training Unit.

3. The firearms will be added to the Training Unit inventory and released to the appropriate Division.

4. The Training Unit will provide the Records Unit with a copy of the Certification of Retention for inclusion with the case file report.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.14
	RELATED ORDERS: Contra Costa County Administrative Bulletin 518.2; CCCSO 1.05.72.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 2-27-2006	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Personal Property-Lost or Damaged**	

I. POLICY.

A. The Office of the Sheriff will reimburse employees for loss of, or damage to personal property under certain conditions and in accordance with guidelines established by the Office of the Sheriff and the County.

II. DEFINITIONS.

A. PERSONNEL PROPERTY REIMBURSEMENT CLAIM FORM. Refer to Sheriff's Office Form AK130.

B. COUNTY DEMAND FORM. Refer to Sheriff's Office Form D-15.

III. GENERAL.

A. REIMBURSEMENT CONDITIONS.

1. To qualify for reimbursement, the loss or damage to personal property must have resulted from a sudden, unexpected event not normally encountered or anticipated on the job, and which was not subject to the control of the employee.
2. Ordinary wear and tear on personal property used on the job is not compensable.
3. Employee tools or equipment provided without the express approval of the Sheriff or his representative are excluded from reimbursement under this Policy.
4. The loss or damage must have occurred in the line of duty.
5. The exercise of good judgment under the prevailing circumstances at the time of loss or damage is an important consideration. Negligence or lack of proper care by the employee are grounds for denial of claims.
6. The personal property damaged or lost must have been worn or carried by the employee in order to adequately fulfill the duties and requirements of the job.
7. In the case of lost property that meets all of the claim criteria, proof of loss must also be submitted and rests with the claimant.

8. Personal automobiles are excluded from reimbursement under this Policy.

9. Personally owned computers used for report writing or for any other purposes are excluded from reimbursement under this policy.

B. AMOUNT OF REIMBURSEMENT.

1. The amount of compensation allowed will be the actual cost to repair damages, limited to no more than the original cost and subject to a determination of reasonable and necessary costs. Some items will be depreciated if part of the useful life of that item is gone. Expensive items will not be reimbursed at full cost if it is reasonable that a less expensive type is normally used.

2. Reimbursement for items damaged beyond repair will be limited to the actual value of the item at the time of loss or damage. For example, in the case of broken eyeglasses, only the replacement of broken lenses and repair to frames would be allowable. The cost of reexamination and a new prescription for glasses is not compensated.

IV. PROCEDURE 1.

A. CLAIMS PROCEDURE. Claims for compensation are processed in the following manner:

1. The claimant shall complete a Personal Property Reimbursement Claim (AK-130) and a County Demand Form (D-15) to include:

a. The amount of the loss as claimed by the employee and the method used to determine this amount. There should be included an invoice of the actual cost of repair or a quotation of this cost. A statement indicating the original purchase price, date of purchase and estimated useful life should be completed for items damaged beyond repair or lost.

b. A confirming statement from any other person who witnessed the accident and from the immediate Supervisor of the employee.

2. The forms will be forwarded to the claimant's Division Commander for signature along with the damaged article, if possible. After review by the Division Commander, the property may be discarded.

3. The Division Commander will forward the Claim and Demand forms to the Fiscal Unit.

4. The Sheriff's Chief of Management Services, or designee, will check the claim for accuracy and conformity to policy. If all is in order, the claim will be signed and sent to the appropriate County Office for further processing. Claims in excess of $300 require a Board Order. (Procedures for submission are detailed on Form AK-130.) If there are any problems or questions, the claim will be returned to the claimant for clarification.

V. PROCEDURE 2.

A. FISCAL SERVICES UNIT RESPONSIBILITY-

1. For Lost or damaged property demands, the Fiscal Services Unit will:

   a. Review the County Demand Form (D-15) and Personnel Claim Form (AK-130) for completeness;

   b. If the claim is over $300.00, a Board Order will be prepared and attached.

   c. Forward the claim to Risk Management for review;

   d. The Sheriff or representative will sit on the review committee; and

   e. Forward approved claims to the County Auditor for payment. Return disapproved claims to the employee.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.15**
	RELATED ORDERS: Department of Defense (DoD) Defense Logistics Agency (DLA)	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 10-20-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Screening Government Surplus Property**	

I. POLICY.

A. The Office of the Sheriff recognizes the significant cost savings that can be achieved from obtaining "free issue" surplus property through the Department of Defense (DoD) Defense Logistics Agency (DLA) Disposition Services 1033 Program and shall utilize this benefit when appropriate.

II. DEFINITIONS.

A. LEA. Law Enforcement Agency, an authorized agency for purposes of screening excess military equipment and supplies. The Sheriff's Office has an identifier of 2YTCR1.

B. DD Form # 1348. Issue Release/Receipt Document.

C. DLA. Defense Logistics Agency.

D. DTID. Document Turn-in Identification Number found at the bottom of the DD Form # 1348.

E. DRMO. Defense Reutilization and Marketing Offices, the locations at which available surplus property and equipment is located.

F. DRMS. Defense Reutilization and Marketing Services.

G. LESO. Law Enforcement Support Office.

H. R/T/D. Reutilization, Transfer, or Donation.

I. RCP. Recycle Control Point.

J. C 5 RTD Program "Letter of Authorization." Must be completed and forwarded to DRMO in order to release acquired property.

K. SCREENERS. Sheriff's employees authorized to select and procure approved government surplus property.

III. GENERAL.

A. PROPERTY REQUIREMENTS.

1. Liability. The Office of the Sheriff agrees to hold the United States Government and the State of California harmless from any and all suits, actions, demands, or claims of any nature arising out of the condition of acquired property.

2. Transportation and Storage. Transportation, storage, proper use, maintenance, internal review, control, accountability, documentation and disposal of all property received is the responsibility of the Office of the Sheriff throughout the properties life cycle.

3. Use of Property. Property received must be placed into use within one year of receipt and used for a minimum of one year, unless its condition renders it unusable or there is an operational reason to hold it as back up. The property may not be sold, bartered, or given to non-certified CLEA entities. Property with demilitarization codes of "C", "D", or "L" must be returned to an authorized DRMO site if no longer needed or is deemed unusable.

IV. PROCEDURE.

A. BUREAU ASSISTANT SHERIFF (OR DESIGNEE) RESPONSIBILITIES.

1. The Bureau Assistant Sheriff or designee shall select employees to screen Federal and State Government surplus property;

2. Review and approve or deny items placed on hold by the screeners; and

3. Ensure proper pick-up for all obtained property.

B. SCREENER RESPONSIBILITIES.

1. Screeners may view property in person at the DRMO or by using the Internet.

2. Screeners viewing State surplus property at a DRMO site are required to wear the Screener's Identification Badge.

3. Government regulations permit only two screeners per visit to the DRMO.

4. Selecting surplus property for acquisition via the Internet.

5. Once the property has been placed on hold, the screeners shall obtain the approval of the appropriate Bureau Assistant Sheriff or designee.

a. If approval is granted, screeners shall submit form C 5, Letter of Authorization to Remove Property, to selected DRMO:

- LESO approves transfer, then prepares and submits to the applicable DRMO an Issue Release/Receipt Document (DD Form 1348) for each item approved.
- Screeners are responsible for ensuring the approved property is picked up within ten (10) days from authorization.

- Items obtained from a Recycle Control Point (RCP) location will be shipped free of charge.
- After receipt of government surplus property, the screener shall forward form 1348 for each item to the State Coordinator and send a copy to the Sheriff's Office Emergence Services Support Unit Lieutenant (or designee).
- All received property must be "Receipted" in the Federal Excess Property Management Information System (FEPMIS)

C. ESSU LIEUTENANT (OR DESIGNEE) RESPONSIBILITIES.

1. Shall maintain an updated inventory database of all State Donation Program property.
2. Shall ensure the property is being utilized in accordance to federal guidelines and disposed of properly when no longer used.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.21**
	RELATED ORDERS: CCCSO 1.07.22	
ISSUE DATE: 2-1-2006 **REVISION DATE: 6-20-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Dress Code/Uniforms**	

I. POLICY.

A. In order to maintain a professional image, the Office of the Sheriff maintains standards relating to the clothing, uniforms, and equipment worn by employees. Members shall only wear prescribed uniforms. Adornments must be authorized by Office of the Sheriff Policy. No part of the uniform will be worn in a discrediting fashion or off-duty in public.

II. DEFINITIONS.

A. BELTS.

1. Basketweave. Black leather.
2. Plain. Black leather.

B. BRAIDED CORDS.

1. 100% nylon, solid gold, solid black or combination of gold/black.

C. CLOTH BADGE.

1. The sewn on cloth badge is authorized for wear with the Class "D" TDU uniform shirt, and as an optional item for the foul weather jacket, or rain jacket/pants for Class B, C, and D uniforms. The badge will indicate appropriate rank (deputy, sergeant, lieutenant, etc.). Sewn on badges are not authorized for any other uniform shirts or jackets.
2. The cloth badge authorized is the version made by "Stadri Emblems."

D. DUTY BELT.

1. Black basketweave leather two and one-quarter inch wide, with plain brass buckle.

E. BELT KEEPERS.

1. Black basketweave leather, with plain brass snaps.

F. GLOVES.

1. Black. Plain leather.

2. White. Formal. Polyester with three seams on top.

G. HATS.

1. Black Felt. Stratton Campaign style, model F40 with gold cord, acorn, and hat shield (Ed Jones Catalog No. 668) worn on the facing.

2. Tan Straw. Stratton Campaign style, model S-40DB with black band, black strap, gold cord, acorns, and hat shield as above.

3. Cap. Baseball style, black, 100% wool, New Era brand, sized (non-adjustable) with the prescribed Sheriff's cap insignia.

4. Cap. (Authorized only for specialized units as approved by this policy) Baseball style, black, (red for Rangemaster/Firearms Instructors). 100% wool, New Era brand or similar, sized (non-adjustable.) The prescribed lettering in ½ inch gold embroidered letters "Contra Costa Sheriff" in a semi-circle on the front with designated specialized unit (i.e. Marine Patrol, Rangemaster, Chaplain Unit, Off-Highway Vehicle Unit, Reserve Motor Unit, etc.) on the bottom in a straight line.

5. Cap. Utility, tan, or red if authorized per Section II.G.4 above, 65%, Nylon, 35% Cotton Ripstop, 511 style, model number 89422.

H. JACKETS.

1. Foul Weather. Flying Cross brand, model #59131WP.

2. Foul Weather with Fur Collar. Flying Cross brand, model #59131.

3. The above foul weather jackets shall have appropriate rank insignia, name tape, and badge when worn as the outer most garment.

4. Class A Jacket. Flying Cross brand, model #COCOIKE01. Shall be California Highway Patrol style but using Raeford #645-561 material, 55% poly/45% wool, 17-17.5 oz/sq yd, elastique weave, black. To have a peak lapel, front fastened with zipper, pleats in back with adjustable strap on back. Sleeve braids shall be A.H. Rice brand, ½'' nylon lacquered braids sewn on both sleeves. Braids shall be sewn 3'' above sleeve hem. Braid color is Sunset, part number #4631. Four braids sewn on both sleeves are designated for the Sheriff. Three braids sewn on both sleeves are designated for the Undersheriff. Two braids sewn on both sleeves are designated for Assistant Sheriffs. Captains and below shall have one braid sewn on both sleeves.

5. Motorcycle Unit Jacket. Tour Master brand, model Flex LE 2.0 Jacket, 8703-1005-xx ("xx" based on size). The jacket shall have an Office of the Sheriff patch and motor officer patch with gold winged wheel and whit arrow on each shoulder, a cloth badge or Office of the Sheriff badge, and name tape on the front.

6. Rain Jacket. Blauer brand, Gortex, model #GTX9691, black/yellow reversible with "Sheriff" in reflective 3" block lettering on the back.

I. PANTS.

1. Black / Tan Utility. Propper brand, button fly #9500, style 89706, 65% polyester, 35% cotton (for wear with specialty uniforms/ESSU worn/authorized as described in Procedures 7 & 8).

2. Rain Pants. Blauer black Gortex, model #GTX9561 or black vinyl.

3. Slacks. Black, Navy, Beige, or Khaki.

4. Black Uniform Trousers.

   a. Class A: Flying Cross Poly Wool, model number #SCSTR01.

   b. Class B and C: Flying Cross Poly Wool, model number SCSTRS02, with side seam zipper pockets.

   c. Class B and C: Flying Cross Polyester, model number COCOTRS0, without side seam zipper pockets.

   d. Above listed trousers shall have quarter top pockets, hidden flexible waistband, keystone belt loops, button tab closure on left and rear pockets, and side seam glove pockets.

5. Black Utility. Black TDU, ripstop, 65% polyester, 35% cotton, cargo pockets. Authorized: 511 brand TDU black (black, per 511 Corp.)

6. Tan Utility. Tan TDU, ripstop, 65% polyester, 35% cotton, cargo pockets. Authorized: 511 brand TDU tan (khaki, per 511 Corp.)

7. Tan Utility (optional). For Class "E" attire as outlined in Sections IV.4.A and V.A.4.a., and "Specialty Uniforms" as outlined in Section X.A.8.

   a. First Tactical. Men's Velocity Tactical, 52% polyester, 48% cotton, Style #114001

   b. First Tactical. Women's Velocity Tactical, 52% polyester, 48% cotton, Style #124001

   c. First Tactical. Men's Specialist Tactical, 65% polyester, 35% cotton, Style #114005

   d. First Tactical. Women's Specialist Tactical, 65% polyester, 35% cotton, Style #124005

J. SHIRTS.

1. Black Utility. Camo Distributors, stock #8415-01-084-1647, 65% polyester, 35% cotton.

2. Black Mock Turtleneck. Cotton or cotton poly/lycra blend such as, but not limited to, Port Authority K321 or Flying Cross 52610. The mock turtleneck shall be embroidered with gold "CCCSO" on the wearer's left side in ¾ inch block lettering (just as the embroidered name-tape used on the TDU uniform). Embroidery should be centered between the left seam and the front center of the collar. The thread used should match the shoulder patch gold thread (for example, Madera Corporation, rayon thread, color 1137).

   a. Authorized Wear: with long sleeve uniform shirts only, Class C-winter uniform or the Class D TDU-long sleeve shirt. The mock turtleneck will not be worn with a short sleeve shirt in any uniform configuration, or outside the "C" and "D" uniforms described above.

3. Button-Down. Long sleeve “Munsingwear” sanded twill button-down collar long sleeve shirt. Hunter green (navy blue for Law Enforcement Training Center only) 100% combed cotton, 4.5 oz., two button adjustable cuffs and single button sleeve plackets, contrasting inside neck band and yoke back with center box pleat. Mens style #40452, Ladies style #40752.

    a. Approved Assignments: Administration, Administrative & Community Services, A.C. Transit, Air Support, Backgrounds Unit, Civil, Communications, Coroners, Custody Services, Dispatch, Emergency Services, Fleet, Forensic Services, Homicide, Instructor, Inspection & Control, Internal Affairs, Investigations, Marine Patrol, Patrol, Photography, Property, Recruiting, SWAT, Technical Services, Training Staff, and Volunteer Services.

    b. Embroidery. See J.4. (Polo.)

4. Polo. Long or short sleeve, navy or black (red is authorized for the rangemaster, firearms instructor, and defensive tactics instructor only). 100% polyester fabric, with collar, gusseted sleeves, and three buttons. Left breast area shall have “Contra Costa” with “Sheriff” positioned directly below, and an embroidered Sheriff’s badge centered below the writing. Right breast area shall have the employee title positioned above the first initial and last name. All lettering shall be ½ inch block style, Madeira #1137 gold thread.

    a. Polo shirt examples meeting the above criteria include, but are not limited to:

        - 5.11 Performance Polo
        - Under Armour Tactical Performance Polo
        - Fechheimer Vertx Action Polo

5. Black Utility. Black TDU, ripstop, 65% polyester, 35% cotton. Authorized: 511 brand TDU black (black, per 511 Corp.)

6. Tan Field Utility. Propper Brand, two pocket with epaulette, #9600, style # 89706, 65% polyester, 35% cotton (for wear with specialty uniforms/ESSU worn/authorized as described in Procedures 7 & 8).

7. All shirts listed below shall have shoulder straps, badge holder, two front pleated pockets, scallop pocket flaps, five permanent creases, and hidden pencil pocket:

- Tan Long Sleeve. Flying Cross Poly Rayon, model number #19W6604.
- Tan Short Sleeve. Flying Cross Poly Rayon, model number #69R6604. .
- Black Long Sleeve. Flying Cross Poly Wool, model number #305W8510Z.
- Black Short Sleeve. Flying Cross Poly Wool, model number #655R8510Z.

- Black Long Sleeve. Flying Cross Poly Rayon, model number #47W66610.
- Black Short Sleeve. Flying Cross Poly Rayon, model number #97R6610.
- White. Long or short sleeve Flying Cross model number #35W5400, or Elbeco 65/35%, cotton/poly blend.

K. SHOES/BOOTS.

1. Dress (female). Black, closed toe slip-on with heel not to exceed 2". Worn with plain conventional nylons.
2. Plain. Black leather shoes or boots with a smooth shined finish.
3. Boots/high tops (for training at Range or EVOC only). Combat/jump/jungle style, laced, with ankle support. Suede desert tan/coyote brown.

L. SKIRTS.

1. Black. Serge, 75% polyester 25% wool fabric. The style shall be A-line with conventional zipper, no belt loops and no pockets. The length shall be no more than 2" above or below the middle of the knee. Sinatra, #JK420DW; Poly, Sinatra, #JK420. Female only.

M. SOCKS.

1. Black when visible above uniform shoes or boots.

N. SUSPENDERS.

1. Load bearing ballistic nylon or Cordura suspenders, in either black or tan, manufactured by various companies including: Blackhawk, HWC, and BMP 911.
2. Optional for wear by sworn staff, but when worn, shall be worn under the uniform shirt in any uniform configuration (Class A, B, C, or D (TDU)). Staff opting to wear the suspenders will be required to have openings tailored into their shirts in the appropriate positions to allow for suspenders to be worn under the shirt. The suspenders shall be fastened to the trouser belt, not the gun belt/Sam Brown Belt.

O. SWEATERS.

1. Cardigan. SFKM, style #5600, black button-up, 100% acrylic.
2. Wooly Pully. Blauer, or Flying Cross, Models 721,731 or 74010 black, “wooly pully" style. 70% piltrol acrylic, 100% nylon patches left breast and shoulders with epaulets and "wind stopper" gore lining. (This sweater must be worn over the uniform shirt.) V-neck model is for Lieutenants and above and must be worn with a tie. The crew neck is for Sergeants and below. Sweater is to be worn with patches on both shoulders with rank designations on the collar. The sweater may be either tucked inside uniform trousers or left outside when wearing uniform leather/duty belt.

P. T-SHIRT.

1. Black crew neck.

2. Orange crew neck (Search and Rescue).

Q. TIES.

1. Black. 3" wide non-crushable Dacron-wool with breakaway neck loop or clip. Female Deputies may wear the cross tie.

2. Blue. 3" wide non-crushable Dacron-wool. Females may wear the cross tie.

3. Bow. Black bow tie made of Dacron-wool.

R. UNIFORM: Dress of a distinctive design or fashion worn by employees of the Office of the Sheriff that serves as a means of identification.

S. EXTERNAL VEST CARRIER: The external vest carrier utilizes the employee's existing ballistic vest panels and is designed to look like a uniform shirt. Employees can move gear off their duty belt and onto the external vest carrier, **except for their duty firearm, primary ammunition magazines and electronic weapon.** The firearm, primary ammunition magazines and electronic weapon are to remain on their duty belt as prescribed by policy. The exterior vest carrier is to be worn in conjunction with the uniform shirt, or the optional external vest carrier undershirt. Employees are required to affix their department issued badge to the front of the external vest carrier. External vest carriers are optional and all associated costs will be incurred by the employee. Employees who choose to equip themselves with the external vest carrier shall train with the vest carrier to better prepare for use in the field. Models with forward facing external Molle webbing (Safariland and Point Blank) must be covered by pouches to conceal at least 75% of the Molle webbing.

1. Black or Tan (dependent on assignment).

2. The following brands and models are authorized:

a. Point Blank. Model – Modified Guardian

b. Safariland. Model - USC Sac-PD

c. The Vest Man. Model – Hybrid

1. No longer authorized for new purchase

2. Authorized for wear until January 1, 2024

T. EXTERNAL VEST CARRIER UNDERSHIRT (OPTIONAL).

1. Black or Tan (dependent on assignment). 5-11 PDU Rapid Assault. Long or short sleeve.

III. GENERAL.

A. The uniform of our Office represents our reputation and is a symbol of our authority. If it is properly maintained and displayed, it defines and reinforces the professionalism of the Sheriff's Office. A monthly uniform allowance is provided for the purchase of Sheriff's Office uniforms for those who are required to wear a uniform (excludes clerical and Forensics). It is each employee's responsibility to maintain the standards set forth in this Policy.

All uniform shirts, jackets, wind breakers, “wooly pullys” will have the Sheriff’s Office patch and rockers if appropriate on both sleeves located one-half inch below the sleeve head. (Exceptions: polos, button-downs, cardigans and non-uniformed employee wind breaker.)

Information on approved uniform insignia including approved tie bars, stars, hash marks, chevrons, etc. can be located in Sheriff’s Office Policy Section 1.07.22, Rank and Service Insignia.

1. UNIFORM WEARING AND CONDITION.

   a. Clothing will be clean, neat and pressed.

   b. Sleeves will not be cuffed or rolled.

   c. Military creases will not be sewn into any clothing.

   d. Uniform shirts will have ironed military creases.

   e. Shoes and leather goods will be kept clean and polished.

   f. All metal work will be kept cleaned and polished.

   g. Uniforms and other apparel will be kept in good condition.

   h. Clothing and equipment bearing excessive wear or in need of repairs are prohibited.

   i. A black tie is required when wearing a Class “A” uniform.

   j. The Class “C-Winter” and Class “C-Summer” uniforms may be worn without calendar or seasonal limitations. The seasonal references serve only to distinguish the two uniform specifications.

IV. PROCEDURE.

A. UNIFORMED SAFETY EMPLOYEES.

1. Class "A" Duty Uniform (Required)

   a. This uniform shall be required at all formal functions or as directed by the Sheriff. The Class "A" uniform may be worn at any time:

      - Hat, black felt (Optional)
      - Black dress jacket
      - Tie, black
      - Shirt, black long sleeve
      - Pants, black poly wool
      - Duty belt
      - Socks
      - Shoes/boots
      - Holster

- Magazine Holder
- Single Handcuff Case
- Belt Keepers (Four)

b. Belt, holster, magazine holders and handcuff case in regulation black basketweave, shall be worn on occasions representing the Office of the Sheriff when firearms are authorized.

c. Optional items that may be worn with the Class "A" Duty uniform:

- Rain jacket/pants (with optional sewn-on cloth badge)

2. Class “A” Inspection Uniform (Required):

a. This uniform shall be required at all formal Sheriff’s Office Uniform Inspections or as directed by the Sheriff.

- Hat, black felt (Required)
- Black dress jacket
- Tie, black
- Shirt, black long sleeve
- Pants, black poly wool
- Duty belt
- Socks
- Shoes/boots
- Holster
- Belt Keepers (Four)

3. Special Detail Class "A.” This uniform shall consist of the Class "A" dress uniform with the addition of a braided cord. The braided cord will be worn on the right shoulder. This uniform is to be worn by a small contingent of designated personnel at special occasions and ceremonies. Approval to wear the Special Detail Class "A" uniform will be given by the Patrol Division Commander or the Sheriff's Office Funeral Coordinator.

4. Class "B" Uniform. This uniform is authorized for normal Office of the Sheriff functions. This uniform may be worn at any time of the year the formal dress uniform is not required.

a. Class “B” Uniform:

- Tie, black
- Shirt, black long sleeve
- Pants, black
- Duty belt
- Socks

- Shoes/boots
- Optional items that may be worn with the Class "B" uniform:
- Hat, black felt, or cap with wooly pully sweater
- Foul weather jacket (with optional sewn-on cloth badge)
- Rain jacket/pants (with optional sewn-on cloth badge)
- Wooly pully sweater
- Gloves, black
- External Vest Carrier and EVC Undershirt (optional)

5. Class “C” Uniform

a. Class “C-Winter” Uniform:

- Shirt, black long sleeve
- Pants, black
- Duty belt
- Socks
- Shoes/boots
- Optional items that may be worn with the Class “C-Winter” uniform:
- Cap
- Foul weather jacket (with optional sewn-on cloth badge)
- Rain jacket/pants (with optional sewn-on cloth badge)
- Black mock turtleneck
- External Vest Carrier and EVC Undershirt (optional)

b. Class "C-Summer" Uniform:

- Shirt, black short sleeve
- T-shirt, black
- Pants, black
- Duty belt
- Socks
- Shoes/boots

- Optional items that may be worn with the Class "C-Summer" Uniform:
- Foul weather jacket (with optional sewn-on cloth badge)
- Rain jacket/pants (with optional sewn-on cloth badge)
- Cap
- External Vest Carrier and EVC Undershirt (optional)

6. Class "D" Uniform:

   a. This uniform is authorized for certain tasks and for the following assignments: Patrol (as specified in b. below), Marine Patrol, J-Team, Civil Unit, Coroners, Transportation, Detention (MDF, MCDF, WCDF), Canine Officer, Litter Control Officer, Vehicle Abatement Officer, Lab Crime Scene Unit, with approval of the Division Commander.

   b. Patrol personnel may wear this uniform in the event of inclement (stormy, severe, or harsh) weather. In cases not involving inclement weather, this uniform may be authorized by the Patrol Division Captain, or Station House Commander for a period no longer than seven days, or by the on-duty Watch Commander who may authorize it for the duration of the current shift. In either case, authorization will be documented by a memo to the Field Operations Bureau Assistant Sheriff stating the justification for the authorization and the specific day/time when the authorization will end.

   c. Class "D" Uniform:

      - This uniform is not authorized as court attire.
      - Shirt, black utility
      - T-shirt, black
      - Pants, black utility, worn un-bloused, except in Detention Divisions, Coroners Division, K-9 Unit, and Civil Unit
      - Duty belt
      - Socks
      - Boots only
      - Optional items that may be worn with the Class "D" uniform:
      - Rain jacket/pants (with optional sewn-on cloth badge)
      - Cap

- Foul weather jacket (with optional sewn-on cloth badge)
- Black mock turtleneck (long-sleeve only)
- External Vest Carrier and EVC Undershirt (optional)

7. Class “E” Attire:

a. This attire is authorized to be worn only when business or uniform dress is impractical or when identity and informality are critical to the task with authorization of the Division Commander.

- Specific examples are training exercises or classes where informal dress is expected or tasks that are likely to result in dirty clothing (dusting for fingerprints, firearms qualification, cleaning/moving items).

b. The polo and button-down shirt may not be substituted for business attire or uniform dress.

c. Shirt, button-down or polo

d. Utility, tan as described in sections II.I.6 and II.I.7 of this policy. Un-bloused.

e. Belt

f. Socks

g. Shoes/boots

h. Optional:

- Foul weather jacket
- Rain jacket/pants
- Cap

V. PROCEDURE 2.

A. UNIFORMED GENERAL EMPLOYEES. Dispatchers, Sheriff's Specialists, and Sheriff's Aides assigned to field work and all other uniformed general employees are authorized to wear the uniforms listed below:

1. Class “B” Uniform:

a. This uniform is authorized for normal Sheriff’s Office functions.

b. This uniform is required at all formal functions and may be worn at any time.

c. Shirt, black long sleeve

d. Tie, black

e. Pants, black

f. Skirt, black for female dispatcher (dress shoes required)

g. Belt, basketweave

h. Socks

i. Shoes/boots

j. Optional for field personnel:

- Hat, black or cap when jacket is worn
- Foul weather jacket
- Rain jacket/pants

k. Optional for Dispatchers:

- Wooly pully sweater may be worn over long or short sleeve shirt, tie optional.
- Cardigan sweater, SFKM style #5600, black button-up.

2. Class "C" Uniform:

a. Shirt, black short sleeve

b. Pants, black

c. Belt, basketweave

d. Socks

e. Shoes/boots

f. Optional:

- Wind breaker
- Skirts, black for female dispatcher (dress shoes required)

g. Optional for field personnel:

- Cap
- Foul weather jacket
- Rain jacket/pants

3. Class "D" Uniform:

a. This uniform is authorized for uniformed general employees working the MDF, MCDF and WCDF, and for certain FOB assignments with appropriate approval.

b. Shirt, black utility

c. Pants, black utility

d. Belt, basketweave

e. Socks

f. Shoes/boots

4. Class "E" Attire:

a. This attire is authorized to be worn only when business or uniform dress is impractical or when identity and informality are critical to the task with authorization of the Division Commander.
Specific examples are training exercises or classes where informal dress is expected or tasks that are likely to result in dirty clothing (dusting for fingerprints, firearms qualification, cleaning/moving items). The polo and button-down shirt may not be substituted for business attire or uniform dress.

- Shirt, button-down or polo
- Utility, tan as described in sections II.I.6 and II.I.7 of this policy. Un-bloused.
- Belt
- Socks
- Shoes/boots
- Optional:
- Foul weather jacket
- Rain jacket/pants

VI. PROCEDURE 3.

A. SHERIFF'S RANGERS. Sheriff's Rangers assigned to Court Security, Patrol, or other non-field assignments are required to adhere to the following prescribed uniform:

1. Class "A" Uniform:

a. Authorized for use at court appearances

b. Foul weather jacket

c. Tie, black

d. Shirt, long sleeve tan

e. Pants, black

f. Belt, basketweave

g. Socks

h. Shoes/boots

2. Class "B" Uniform:

- Shirt, long or short sleeve tan
- Tie, black (with long sleeve only)
- Pants, black
- Belt, basketweave
- Socks
- Shoes/boots

- External Vest Carrier and EVC Undershirt (optional)

VII. PROCEDURE 4.

A. STUDENT WORKERS. Student Workers assigned to Patrol or other non-field assignments are required to adhere to the following prescribed uniform:

1. Class "A" Uniform:

   a. Authorized for use at court appearances

   b. Foul weather jacket

   c. Tie, black

   d. Shirt, long sleeve tan

   e. Pants, black

   f. Belt, basketweave

   g. Socks

   h. Shoes/boots

2. Class "B" Uniform:

   - Shirt, long or short sleeve tan
   - Tie, black (with long sleeve only)
   - Pants, black
   - Belt, basketweave
   - Socks
   - Shoes/boots
   - External Vest Carrier and EVC Undershirt (optional)

VIII. PROCEDURE 5.

A. CLERICAL UNIFORM – OPTIONAL. The following uniform is authorized as an option to traditional business attire:

1. Class "A" Uniform. This uniform may be worn at all formal functions, as directed by the Sheriff, or anytime.

   a. Blazer, black

   b. Shirt, white long sleeve

   c. Skirt or pants, black

   d. Tie, black

   e. Belt, basketweave

   f. Shoes, dress (skirt) or shoes/boots (pants)

g. Nylons (skirt) or socks

2. Class “B” Uniform. This uniform may be worn for normal Sheriff’s Office functions.

a. Shirt, white long sleeve

b. Skirt or pants, black

c. Tie, black

d. Belt, basketweave

e. Shoes, dress (skirt) or shoes/boots (pants)

f. Nylons (skirt) or socks

g. Optional:

- Cardigan or wind breaker, black
- Skirt, black (plain shoes and nylons required)

3. Class “C” Uniform. This uniform is authorized during the summer months. Other specified periods of time can be authorized by a Lieutenant or above when written notification citing logic and duration is forwarded up the chain of command.

a. Shirt, white short sleeve

b. Skirt or pants, black

c. Belt, basketweave

d. Shoes, dress (skirt) or shoes/boots (pants)

e. Nylons (skirt) or socks

f. Optional:

- Cardigan or wind breaker, black
- Skirt, black (plain shoes and nylons required)

IX. PROCEDURE 6.

A. PRESCRIBED COURT ATTIRE. The following uniforms are authorized for use in court appearances:

1. Class "A" dress uniform

2. Class "B" uniform

3. Contract cities uniform - long sleeve shirt and tie

4. Prescribed uniform of the day

5. Appropriate civilian attire as described in “PROCEDURE 9, “NON-UNIFORM DRESS CODE.”

X. PROCEDURE 7.

A. SPECIALTY UNIFORMS. Special uniforms may be necessary to meet the demands of specialized functions. Division Commanders shall describe, in

writing, the need for a different uniform and the duration it is to be worn. This document will be reviewed by the Sheriff's Office Uniform Committee which will forward its recommendation via the chain of command to the Sheriff for his approval. Specifications for the following uniforms can be obtained from the appropriate Division Commander:

1. Bicycle Uniform:
    a. Helmet, black bicycle
    b. Jacket, black water repellent Zephyr embroidered with Deputy's name on right breast, Sheriff's badge on left breast, and "Sheriff" on the back
    c. Shirt, black long or short sleeve. Coolmax fabric with the same embroidery as jacket
    d. Shorts/pants, black, Supplex water resistant with velcro belt keepers, two cargo pockets, pen pocket, one rear pocket, side reflective stripe and seat padding
    e. Shoes, black tennis
2. Helicopter Flight Crew Uniform:
    a. Helmet, white or black with dual safety visors
    b. Inclement weather jacket, black with Sheriff's Office patches and cloth badge
    c. Flight suit, black two-piece Nomex with Sheriff's Office patches and cloth badge
    d. Gloves, black Nomex
    e. Duty belt, web style or flight vest
    f. Shoes/boots
3. Marine Patrol Uniform:
    a. Cap, as described in Section II. G. 3 and 5 of this policy.
    b. Jacket, flotation (cloth badge required)
    c. Shirt, polo, navy short or long sleeve
    d. Shorts, Sportif tan six pocket style #670-170-01, or tan 5.11 Taclite Pro 11.
    e. Duty belt, web style
    f. Shoes, deck
    g. Optional:
        - Wind breaker
4. Motorcycle Unit Uniform:
    a. Cap, black, as described in Section II.G. 3. of this policy.
    b. Black, short or long sleeve shirt

c. Black motorcycle breeches by Sinatra with black and gold stripe

d. Duty belt

e. Black motorcycle boots

f. Helmet, gold and black D.O.T. approved. Metal badge with "SHERIFF" across the banner

g. Tie, black bow

h. Optional Motorcycle Unit jacket as described in Section II.H. 7. of this policy.

i. Optional for training and maintenance only:

- Black utility pant and shirt

5. Forensic Unit Crime Scene Processing Uniform:

a. Slacks, black or utility pants, tan

b. Polo shirt, black

c. Cap

d. Foul weather jacket or wind breaker with "Contra Costa County", "Sheriff" and "Crime Lab" printed on back

e. Shoes/boots

6. S.W.A.T. Tactical Team Uniform:

a. Utility shirt, olive drab Tru-Spec XTREME combat

b. Utility pants, olive drab Tru-Spec XTREME combat

c. Cap, S.W.A.T. Team logo

d. Cap, Utility, black

e. Balaclava mask (only to be worn in authorized situations – i.e.: deployment of diversionary devices)

f. Black T-shirt with "Contra Costa Sheriff's S.W.A.T. Team" on the back

g. Gloves, olive drab or black

h. Rain gear, olive drab

i. Boots/high-tops, combat/jump style with ankle support

j. Duty gear, black tactical nylon with heavy stitching

7. Hostage Negotiations Team and Tactical Dispatcher Team Uniform:

a. Polo shirt, black, long or short sleeved, as described in Section II.4. of this policy with the addition of "NEGOTIATOR" or "TACTICAL DISPATCHER" above the name.

b. Utility pants, black
c. Jacket, black, 5.11 Chameleon Soft Shell, with "SHERIFF" heat transfer on the back flap and the embroidered Sheriff's star on left breast.
d. Cap, Utility, black
e. Shoes/boots
f. For H.N.T. team members only:

- Duty belt (If the optional external outer carrier is not worn)
- Optional: External outer carrier, with vest and safety equipment, black, with gold "Sheriff" patches on front and back. The carrier will be worn when deploying in a tactical situation in place of duty belt.

8. Defensive Tactics/EVOC/First Aid/Force Options/Electronic Weapons/Rangemaster/Firearm Instructors:

a. Cap, black, (red for Rangemaster/Firearm Instructors), as described in Section II.G.3. or 5. of this policy.

b. Polo shirt, blue or black, (red for Rangemaster/Firearm Instructors).

c. Utility pants, tan, as described in Section II.I.6. and II.I.7 of this policy. Un-bloused.

d. Foul weather jacket

e. Boots/high tops, as described in Section II.K.2. or 3. of this policy.

f. Optional:

- Hat, tan straw

9. K-9 Officer:

a. Utility shirt, black, with cloth name tag and badge sewn on and "SHERIFF K-9" embroidered on the back.

b. Utility pants, black.

10. Mutual Aid Mobile Field Force (MAMFF):

a. Cap. Baseball style, black, 100% wool, New Era brand or similar, sized (non-adjustable) with approved MAMFF patch affixed.

b. Utility shirt, black, with cloth name tag and badge sewn on. The Office of the Sheriff shoulder patch will be worn on the right shoulder and the MAMFF patch will be worn on the left shoulder.

c. Utility pants, black.

11. Pipes and Drums:

    a. Hat, plain black Glengarry (no checkers) with black badge rosette, to be worn with hat badge.

    b. Long or short sleeve uniform shirt (determined by the bandleader depending on the venue) in accordance with uniform shirt specifications including rank insignia and badge. Contract city members may wear their uniform shirts in accordance with the above guidelines, if approved for the occasion. Civilian members shall follow the same regulations wearing a badge indicating their civilian status.

    c. A black, V-neck Blauer poly/cotton "wooly pully" with epaulets is authorized when authorized by the bandleader. It will be worn with name tag and badge. This sweater will be worn tucked in to the kilt.

    d. Kilt, wool black watch regimental tartan with buckles and fringe. All kilts will have matching tartan.

    e. Sporran (pouch), white with black tassels, gold metal chain and cantle. Slight variations are acceptable.

    f. Belt, holster, and magazine holders in regulation black basketweave, shall be worn on occasions representing the Office of the Sheriff when sidearms are authorized. Members from outside agencies may wear their own issued sidearms in black basketweave holster, belt and magazine holders. Members not authorized to wear sidearms shall wear a black basketweave Sam Browne belt with brass buckle. A black leather "box pouch" may be worn on the Sam Browne belt for the storing of piping accessories. A black water bottle may be worn on the belt during parades only.

    g. Black kilt hose (socks) with Black Watch tartan flashes (ribbons). A Scottish "skian dube" (black knife) of any tasteful design may be worn inside the top of the right kilt hose.

    h. Black marching shoes shall be worn with white spats.

12. Emergency Services Division - Homeland Security Unit Supervisor, Emergency Services Support Unit Supervisor, Deputy Sheriffs, Civilian Managers, Emergency Planners, Crime Analysts, and Student Workers are authorized to wear the optional uniform listed below only when business or uniform dress is impractical or when identity and informality are critical to the task, and it has been authorized by the Division Commander:

    a. Shirt, polo, long or short sleeve, Navy blue, as described in Section II.J.4. of this policy. Embroidered as described in that section.

    b. Utility Pants, Tan, button fly, as described in Section II.I.6. of this policy.

    c. Belt, black

d. Socks

e. Shoes/Boots, black leather

f. Optional:

- Foul weather jacket
- Rain jacket/pants
- Wind breaker

XI. PROCEDURE 8.

A. Emergency Services Support Unit (ESSU). The ESSU is comprised of several volunteer units. These volunteer units have specific uniforms which are necessary to meet the demands of their specialized functions.

1. Air Squadron:

a. Cap, black, as described in Section II, G.3. of this policy.

b. Shirt, polo, long or short sleeve, Navy blue, as described in Section II.J.4. of this policy. Embroidered as described in that section.

c. Utility pants, tan, button fly, as described in Section II.I.1 of this policy.

d. Belt, black basketweave

e. Socks

f. Shoes/Boots, black leather

g. Optional:

- Foul weather jacket
- Rain jacket/pants
- Wind breaker

2. Chaplain Unit:
This attire is authorized to be worn only when business attire (As outlined in Procedure 8) is impractical or when identity and informality are critical to the task with authorization of the Division Commander.

a. Cap, black, as described in Section II.G.3. of this policy.

b. Shirt, polo, long or short sleeve, navy blue, as described in Section II.J.4. of this policy. Embroidered as described in that section.

c. Tan Slacks

d. Belt, black

e. Socks

f. Shoes/Boots

g. Optional:

- Rain jacket/pants
- Contra Costa Law Enforcement Chaplaincy Program jacket

3. Dive Team:

   a. Cap, black, as described in Section II.G. 3. of this policy.

   b. Shirt, polo, long or short sleeve, Navy blue, as described in Section II.J.4. of this policy. Embroidered as described in that section.

   c. Utility Pants, tan, button fly, as described in Section II.I.1. of this policy.

   d. Belt, black basketweave

   e. Socks

   f. Shoes/Boots, black leather

   g. Optional:

      - Foul weather jacket
      - Rain jacket/pants
      - Wind breaker

4. Explorer/Scouts Program:
   Class "B" Uniform:

   a. Shirt, tan long sleeve

   b. Tie, black

   c. Pants, black

   d. Belt, black basketweave

   e. Socks

   f. Shoes/Boots

   g. Optional for field personnel:

      - Cap
      - Foul weather jacket
      - Rain jacket/pants

5. Food Service Unit:

   a. Cap, black, as described in Section II.G.3. of this policy.

   b. Black T-shirt, long or short sleeve.

   c. Utility Pants, tan, button fly, as described in Section II.I.1. of this policy, 65% Polyester, 35% cotton.

   d. Apron, black or tan, with Food Service Unit/Sheriff Insignia

   e. Belt, black basketweave

f. Socks

g. Shoes/Boots, black leather

h. Optional:

- Foul weather jacket
- Rain jacket/pants
- Wind breaker

6. Mutual Aid Mobile Support Unit and Mutual Aid Medical Support Unit:

a. Utility Shirt, black, two pocket, with epaulette, as described in Section II, I.5 of this policy, 65% polyester, 35% cotton, with cloth name tag and badge sewn on. The Sheriff's Office shoulder patch will be worn on the right shoulder and the MAMFF patch will be worn on the left shoulder.

b. Utility Pants, black, button fly, as described in Section II.I.5. of this policy, 65% polyester, 35% cotton.

c. Optional:

- Foul weather jacket
- Rain jacket/pants

7. Off-Highway Vehicle Unit:

a. Cap, Black, as described in Section II.G.3 of this policy.

b. Shirt, black utility

c. T-shirt black

d. Pants, black utility as described in Section II.I.5. of this policy.

e. Duty belt

f. Socks

g. Boots only

h. Optional:

- Foul weather jacket
- Rain jacket/pants

8. Sheriff's Auxiliary Volunteer Extended Services (S.A.V.E.S.):

a. Shirt, polo, long or short sleeve, navy blue, as described in Section II.J.4. of this policy. Embroidered as described in that section.

b. Slacks

c. Belt

d. Shoes/boots

e. Optional:

- Foul weather jacket

- Rain jacket/pants

9. Search and Rescue:

   a. Cloth badge, silver Search and Rescue

   b. Utility Shirt, tan, two pocket, with epaulette, as described in Section II.J.12. of this policy, 65% polyester, 35% cotton.

   c. Search and Rescue shoulder patches are worn on both the left and right shoulders

   d. Utility Pants, tan, button fly, as described in Section II.I.1. of this policy, 65% polyester, 35% cotton.

   e. Cap, utility

   f. Orange T-shirt

   g. Socks

   h. Boots

   i. Duty Gear

      - Foul weather jacket – Mountain Uniforms brand, orange/black (custom #34 and/or #004m long length matching soft shell) or equivalent.
      - Rain jacket/pants

10. Sheriff's Reserve Deputy:

    a. The Sheriff's Reserve Deputies will comply with the uniform requirements as outlined in Procedure 1 and Procedure 2 of this policy based on their specific assignment.

    b. Reserve Deputy Sheriffs who are members of Search and Rescue and are providing security in the field for a Search and Rescue mission may wear the modified Search and Rescue uniform. The uniform shall consist of duty leather, firearm and Search and Rescue utility uniform. The shirt shall have a Search and Rescue patch on the right shoulder and a Sheriff's Office patch on the left. This uniform is only to be worn during Search and Rescue functions.

11. R.A.C.E.S. (Radio Amateur Communications Emergency Service)

    a. Cap, black as described in Section II. G.3. of this policy

    b. Embroidered shirt, polo, long or short sleeve, navy blue, as described in Section II J.4. of this policy.

XII. PROCEDURE 9.

A. NON-UNIFORM DRESS CODE. Unless otherwise specified by the Division Commanders, the following is the dress code for employees working in an administrative non-uniform assignment:

1. Men shall wear a suit, dress shirt and tie or a sport coat, dress belt, dress shirt, tie and slacks with appropriate shoes and socks when conducting all forward-facing public activities.

2. Men shall wear a dress shirt, dress belt, slacks with appropriate shoes and socks, with or without a suit jacket, sport coat, or tie when not conducting forward-facing public activities. An off-the-shelf short

sleeve polo shirt in a modest color pallet with no star or Sheriff designation is approved when no meetings (including virtual meetings) or contacts outside of the office are scheduled or anticipated.

3. Women shall wear a dress, dress suit, pants suit or slacks/skirt, blouse and jacket with appropriate shoes when conducting all forward-facing public activities.

4. Women shall wear a dress, dress suit, pants suit or slacks/skirt, blouse, with appropriate shoes, with or without a jacket when not conducting forward-facing public activities. An off-the-shelf short sleeve polo shirt in a modest color pallet with no star or Sheriff designation is approved when no meetings (including virtual meetings) or contacts outside of the office are scheduled or anticipated.

5. Except when specifically authorized by the Division Commander for a limited time and special purpose (e.g. clean-up days) shorts, jeans, jean-type trousers and T-shirts are prohibited.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.22
	RELATED ORDERS: CCCSO 1.07.21	
ISSUE DATE: 2-1-2006 REVISION DATE: 7-23-2019	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Rank and Service Insignia	

I. POLICY.

A. Uniform rank and service insignia are established to identify an employee's classification, rank, assignment, awards, and time in service. Insignia worn on uniforms must be in conformity with this policy or approved by the Sheriff.

II. DEFINITIONS.

A. RANK INSIGNIA. Rank insignia are a set of symbols that represent the organizational hierarchy of safety positions.

B. SERVICE INSIGNIA. Service insignia are symbols that represent assignments, specialized positions, awards, time of service and identify the employee.

III. GENERAL.

A. RANK INSIGNIA USED ON UNIFORMS. The insignia identifying the rank of the positions are:

1. Sheriff.
   a. Sheriff's badge inscribed with "Sheriff-Coroner" or "Sheriff"
   b. Four gold stars
   c. Four embroidered gold stars if worn on the TDU Class "D" uniform. Stars shall be five point, 17 millimeters in size, thread color Madeira Rayon, number #1137.
2. Undersheriff.
   a. Sheriff's badge inscribed with "Undersheriff"
   b. Three gold stars
   c. Three embroidered gold stars if worn on the TDU Class "D" uniform. Stars shall be five point, 17 millimeters in size, thread color Madeira Rayon, number #1137.
3. Assistant Sheriff.
   a. Sheriff's badge inscribed with "Assistant Sheriff"

b. Two gold stars

c. Two embroidered gold stars if worn on the TDU Class "D" uniform. Stars shall be five point, 17 millimeters in size, thread color Madeira Rayon, number #1137.

4. Captain.

a. Sheriff's badge inscribed with "Captain"

b. Two gold bars

c. Two embroidered gold bars if worn on the TDU Class "D" uniform. Bars shall be .827 x .791 in size, thread color Madeira Rayon, number #1137.

5. Chief – Forensic Services.

a. Sheriff's badge inscribed with "Chief – Forensic Services"

b. Two gold bars

c. Two embroidered gold bars if worn on the TDU Class "D" uniform. Bars shall be .827 x .791 in size, thread color Madeira Rayon, number #1137.

6. Lieutenant.

a. Sheriff's badge inscribed with "Lieutenant"

b. One gold bar

c. One embroidered gold bar if worn on the TDU Class "D" uniform. Bars shall be.827 x .307 in size, thread color Madeira Rayon, number #1137.

7. Deputy Sheriff Forensic Manager.

a. Sheriff's badge inscribed with "Forensic Manager".

b. One gold bar

c. One embroidered gold bar if worn on the TDU Class "D" uniform. Bars shall be.827 x .307 in size, thread color Madeira Rayon, number #1137.

8. Sergeant Major.

a. Sheriff's badge inscribed with "Sergeant Major"

b. Three gold chevrons over three gold rockers, and a gold star in center on black background

c. Gold collar tabs

9. Sergeant.

a. Sheriff's badge inscribed with "Sergeant"

b. Black and gold three-stripe chevron

10. Deputy Sheriff Forensic Supervisor.

a. Sheriff's badge inscribed with "Forensic Supervisor"

b. Black and gold three-stripe chevron.

11. Corporal.

a. Sheriff's badge inscribed with "Deputy Sheriff"

b. Black and gold two-stripe chevron

12. Deputy Sheriff First Class.

a. Sheriff's badge inscribed with "Deputy Sheriff"

b. Black and gold one-stripe chevron

c. Completed 15 years of service with the Sheriff's Office in grade, coincides with attainment of longevity pay

13. Deputy Sheriff.

a. Sheriff's badge inscribed with "Deputy Sheriff"

b. Upon successful completion of probation, the Training Unit will issue Deputy Sheriffs badges with name ribbons.

14. Deputy Sheriff Criminalist.

a. Sheriff's badge inscribed with "Deputy Sheriff"

b. Upon successful completion of probation, the Training Unit will issue Deputy Sheriff's Badges with name ribbons.

15. Reserve Deputy Sheriff.

a. Level I. Sheriff's badge inscribed with "Deputy Sheriff"

b. Level II and Level III. Sheriff's badge in silver or chrome (with gold or brass State seal) inscribed with "Deputy Sheriff"

16. Sheriff's Aides, Clerks, Community Service Officers, Rangers, Student Workers, and Sheriff's Specialists.

a. Sheriff's badge inscribed with "Aide", "Clerk", "Community Service Officer", "Ranger", "Student Worker", or "Specialist" as applicable

b. Rocker inscribed with "Aide", "Clerk", "Community Service Officer", "Ranger", "Student Worker", or "Specialist" as applicable

17. Communications.

a. Dispatch Director.

- Badge inscribed with "Sheriff's Dispatcher" with a metal ribbon attached inscribed with "Director"
- Rockers reading "Communications Director" on both sleeves

b. Dispatch Supervisor.

- Badge inscribed with "Sheriff's Dispatcher", with a metal ribbon attached inscribed with "Supervisor"

- Rockers reading "Communications Supervisor" on both sleeves

c. Dispatcher.

- Badge inscribed with "Sheriff's Dispatcher" Rockers reading "Communications" on both sleeves

18. Investigation Division. Detective badge (shield) issued by the Investigation Division Commander to all Deputies and Sergeants upon transfer to the Investigation Division.

a. Sergeant.

- Detective badge (shield) with a metal ribbon attached to the bottom inscribed with "Sergeant"

b. Deputy Sheriff.

- Detective badge (shield) with a metal ribbon attached to the bottom inscribed with a number

B. CONTRACT CITY UNIFORM RANK INSIGNIA.

1. Lafayette Police Department.

a. Lieutenant serving as Chief or Contract Police Manager.

- Lafayette shield inscribed with "Chief"
- One gold star

b. Sergeant.

- Lafayette shield inscribed with "Sergeant"
- Yellow on blue, three-stripe chevron

c. Officer.

- Lafayette shield inscribed with "Police Officer"

2. Danville Police Department.

a. Lieutenant serving as Chief or Contract Police Manager.

- Danville shield inscribed with "Chief"
- One gold star

b. Lieutenant.

- Danville shield inscribed with “Lieutenant.”

c. Sergeant.

- Danville shield inscribed with "Sergeant"
- Yellow on blue, three-stripe chevron

d. Officer.

- Danville shield inscribed with "Police Officer"

3. Orinda Police Department.

   a. Lieutenant serving as Chief or Contract Police Manager.

      - Orinda shield inscribed with "Chief"
      - One gold star

   b. Sergeant.

      - Orinda shield inscribed with "Sergeant"
      - Yellow on blue, three-stripe chevron

   c. Officer.

      - Orinda shield inscribed with "Police Officer"

4. Oakley Police Department.

   a. Lieutenant serving as Chief or Contract Police Manager.

      - Oakley badge inscribed with “Chief”
      - One gold star

   b. Sergeant.

      - Oakley badge inscribed with “Sergeant”
      - Yellow on blue, three stripe chevron

   c. Officer.

      - Oakley badge inscribed with “Officer”

C. SERVICE INSIGNIA USED ON UNIFORMS. The service insignia for use on uniforms are:

1. Office of the Sheriff Badge.

   a. The badge is a 7-point star in gold or brass. In the center is the circular Great Seal of the State of California. Inscribed around the Great Seal is the rank (or position) of the badge holder and the words “Contra Costa County”. All authorized badges are manufactured by the Ed Jones Co. Sworn employees issued previous regular badges (non-commemorative) and continuously wearing or carrying them, may continue to do so.

2. Office of the Sheriff Patch.

   a. The patch is gold on black embossed with a scene of Mt. Diablo with the words "Contra Costa County Sheriff". The patch shall be issued by the Training Unit.

3. Name Plate.

   a. Employee's name plates are gold tone metal, 2 1/4 inches wide by 3/8 inches high inscribed with the member's first initial and last name. Exception: Criminalistics Laboratory employee name plates are inscribed with first and last names. Name plates serve to identify individual employees to the public.

4. Service Stars.

   a. Service stars shall be worn by the ranks of Lieutenant and above.

   b. Each star represents five years of completed service with the Office of the Sheriff in any uniformed capacity. Laterally hired Deputies may wear one service star for each five years of California law enforcement experience.

5. Hash Marks.

   a. Hash marks shall be worn by the ranks of Sergeant and below.

   b. Each hash mark represents five years of completed service with the Office of the Sheriff in any uniformed capacity. Laterally hired Deputies may wear one hash mark for each five years of California law enforcement experience.

6. Training Pins.

   a. Training pins are a 3/8” gold tone metal cut out pin with periods between the letters. The training pins indicate a position in Training Programs and denote either "F.T.O.”, or "D.T.O.”.

7. Employee of the Year Name Pin.

   a. The "Employee of the Year" name pin is awarded to each "Employee of the Year"; the pin is gold tone metal and will have the employee's name on top and "Employee of the Year 20__" on the bottom.

8. S.W.A.T. Pins.

   a. The S.W.A.T., H.N.T., and T.D.T. pin indicates a position with the Sheriff's Office Special Weapons and Tactics Team and is a 3/8” gold tone metal cut out pin with periods between the letters.

   b. S.W.A.T. Veteran’s Pin. A gold-colored pin displaying an eagle holding a banner in its talons. This pin may be worn on the uniform only after voluntary departure in good standing from the team by members who have served on the Tactical, H.N.T., or T.D.T. units of the S.W.A.T. team for more than two years.

9. S.E.R.T. Pin.

   a. The S.E.R.T. pin indicates a position with the Sheriff’s Emergency Response Team and is a 3/8” gold tone metal cut out pin with periods between the letters.

10. K-9 Patch.

    a. The K-9 patch is yellow on black and indicates the position of Dog Handler.

11. K-9 Pin.

    a. The K-9 pin is a 3/8” gold tone metal cut out pin and indicates the position of Dog Handler.

12. J-Team Pin.

    a. The J-Team pin indicates a position with the Sheriff's Justice Team and is a 3/8" gold tone metal cut out pin.

13. Deputy Sheriff's Association Pin.

    a. The current pin issued by the Deputy Sheriffs' Association may be worn.

14. Sheriff's Aides, Clerks, Community Service Officers, Rangers, Student Workers, and Specialists.

    a. A cloth rocker designating "Aide", "Clerk", "Supervising Clerk", "Community Service Officer", "Ranger", "Student Worker", and "Specialist" is worn on both sleeves under the Sheriff's Office patch.

15. "Serving Since" Name Plate Attachment (Optional).

    a. Gold tone with black lettering. Indicates year that service with a California law enforcement agency began in center, flanked to one side with the word 'serving' and to the other side with the word 'since'. Resembles "pilot wings" and attaches to clutchback name plate.

16. Medal of Valor.

    a. Gold with blue/white ribbon bar; Silver with red/white ribbon bar; or Bronze with red/blue ribbon bar.

17. 10851 Award Pin.

    a. General White pin; with or without ribbon.

    b. Blue Master pin; with or without ribbon.

    c. Gold Lifetime Achievement pin with center stone and ribbon.

18. Flag Pin.

    a. Gold tone with stars and stripes depicted in the appropriate colored paint/enamel. Flag pin shall be no larger than 7/8" by 5/8".

D. INSIGNIA USED ON SPECIALTY UNIFORMS.

1. Insignia used on specialty uniforms are established by the Divisions responsible for the special unit. Specialty uniforms and insignia shall be approved by the Sheriff or the Undersheriff. The descriptions presented here are informational only. Regulations for their use are the Division's responsibility.

2. Contract Cities.

    a. Danville patch

    b. Lafayette patch

    c. Orinda patch

    d. Oakley patch

e. Service hash marks. Contract cities wearing blue uniforms use the "hash marks" on the uniform sleeve to replace the service star used on the County uniform.

3. Communications.

a. Communications rocker

b. Lightning bolt pin

4. Patrol.

a. Sheriff's Office patch blackened for S.W.A.T. use

b. S.W.A.T. patch

c. Marine Patrol pin (gold anchor) indicates an assignment in the Marine Services Unit

d. S.T.A.R.R. pin (star with wings) indicates an assignment in the Air Support Unit

e. Motorcycle pin (wings with a wheel) indicates an assignment in the Motorcycle Unit

E. RESTRICTIONS ON WEARING INSIGNIA.

1. Only those insignia listed in this Policy are authorized to be worn by employees.

2. Employees may only wear specialty Unit pins when assigned to that specific specialty Unit or involved in the specific activity.

3. The current Deputy Sheriffs' Association (DSA) pin is authorized to be worn. Any design changes to a DSA pin that will be worn on a uniform must be submitted to the Sheriff.

4. Insignia for specialty uniforms is generally established at the Division level. Such insignia shall be approved by the Sheriff or the Undersheriff.

5. General employees who carry badges will not display badges in such a way as to impersonate a Deputy. Badges will be worn on uniforms while on official duty only.

IV. PROCEDURE 1.

A. INSIGNIA STANDARDS/MAINTENANCE.

1. Standards. The insignia described in the above General Information are the insignia standards. Only those insignia authorized by this Policy are to be worn.

2. Maintenance. Sheriff's insignia shall be kept clean and in good repair. Metal insignia shall be kept polished.

V. PROCEDURE 2.

A. WEARING OF INSIGNIA. The Sheriff's insignia shall be worn as follows:

1. Sheriff's Badge. The Sheriff's badge shall be worn above the left breast pocket of the outer-most uniform garment. Optional: Badge backing -

black leather basketweave design. Exception: As authorized by the appropriate Bureau, plain clothes Deputies wearing a weapon shall display their badge on their belt.

2. Sheriff's Office Patch. The patch is gold on black embossed with a scene of Mt. Diablo and the words "Contra Costa County Sheriff." The patch shall be worn on both sleeves.

3. Name Plate. The employee's name plate shall be worn immediately above the right breast pocket of the outer-most uniform garment, with the exception of the foul weather and rain jacket.

4. Metal Rank Insignia (Stars, Bars, and Chevrons).

    a. Small set of stars shall be worn on the shirt collar. Small set of bars will be worn on the shirt collar between the collar tips and the neck opening, positioned along the seam on the front edge of the collar. The stars or bars shall be embroidered gold (as in General above) if worn on the TDU Class “D” uniform.

    b. Large set of stars or bars shall be worn on the epaulette (shoulder strap) of the uniform jacket, one inch from the seam.

    c. Small set of chevrons may be worn on the crew neck, wooly-pully sweater at the point where the collar of the uniform shirt tucks beneath the sweater.

5. Patch Chevrons.

    a. Chevrons shall be centered one inch below the Sheriff's patch on shirt and jacket sleeves.

    b. Chevrons shall not be worn on rain jackets.

    c. Chevrons shall be issued by the Training Unit

6. Service Stars.

    a. Class “A” Jacket service stars shall be embroidered directly onto the left sleeve, beginning ½ inch above the top of the sleeve braid. The service stars shall be embroidered as a single row, with a maximum of 5 stars per row. The service stars shall be five point, 17 millimeters in size, and the thread color shall be Madeira Rayon, color number #1137.

    b. Long sleeved shirt service stars shall be embroidered directly onto the left sleeve, beginning ½ inch above the top of the sleeve cuff. The service stars shall be embroidered on to the left sleeve as a single row, with a maximum of 5 stars per row. The service stars shall be five point, 17 millimeters in size, and the thread color shall be Madeira Rayon, color number #1137.

7. Service Hash Marks.

    a. Class “A” Jacket hash marks shall be sewn onto the left sleeve, beginning ½ inch above the top of the sleeve braid. Each service stripe shall be 7/16” tall and 1 ½” wide per hash mark. Multiple hash marks shall be sewn as one continuous piece. The thread

material shall be comparable to Madeira Rayon #1137, and be embroidered onto a black twill background.

b. Long sleeved shirt hash marks shall be sewn onto the left sleeve, beginning ½ inch above the top of the sleeve cuff. Each service stripe shall be 7/16" tall and 1 ½" wide per hash mark. Multiple hash marks shall be sewn as one continuous piece. The thread material shall be comparable to Madeira Rayon #1137, and be embroidered onto a black twill background.

8. Training Pins and Unit Pins.

   a. Only one training pin or unit pin may be worn on the uniform at one time.

9. Training Pins. The training pins shall be positioned directly above the employee's name plate.

10. S.W.A.T. Pins. If worn, they shall be positioned directly above the employee's name plate.

11. S.E.R.T. Pin. If worn, it shall be positioned directly above the employee's name plate.

12. Employee of the Year Name Plate. This name plate may be used instead of the regular name plate.

13. K-9 Patch. The K-9 Patch shall be worn centered one-half inch below the Sheriff's patch on the left sleeve of the uniform shirts and jackets.

14. K-9 Pin. If worn, it shall be positioned directly above the employee's name plate.

15. J-Team Pin. If worn, it shall be positioned directly above the employee's name plate.

16. D.S.A. Pin. If worn, it shall be positioned directly above the employee's name plate.

17. Sheriff's Aides, Clerks, Community Service Officers, Rangers, Student Workers, and Specialists rockers. The "Aide", "Clerk", "Lead Clerk", "Community Service Officer", "Ranger", "Student Worker", and "Specialist" rockers shall be worn on both sleeves, one-half inch below the Sheriff's patch.

18. Shooting Badge. As of January 1, 2013, shooting badges are no longer authorized for wear on the Sheriff's Office Uniform.

19. Firearms Instructor Badge. As of July 01, 2019, Firearm Instructor Badges are no longer authorized for wear on the Sheriff's Office Uniform.

20. "Serving Since" Name Plate Attachment. When worn, attaches to name plate via clutch posts and shall be worn directly below the name plate. The name plate shall be adjusted upwardly to accommodate the attachment.

21. Medal of Valor Ribbons. Will be worn above the left breast pocket centered under the Sheriff's Badge. When appropriate, the silver or bronze valor award ribbon will be worn second to the gold. The bronze

will be worn second to the silver. When all three valor award ribbons have been earned, the gold valor award ribbon will be centered with the silver ribbon on its right and the bronze ribbon on its left. It shall be mandatory to wear the ribbon on the dress uniform and optional on the duty uniform.

22. Flag Pin. When worn, the pin shall be placed on the uniform shirt or jacket centered above the employee's name plate and other pins. No other pins or devices shall be worn above the flag pin.

23. 10851 Award Pin. May be worn above the right pocket, centered above the name plate.

24. General Employee Badge Pin. All general employees will be issued a Badge Pin by Sheriff's Training. The pin shall be worn on the employee's lapel or above the breast pocket.

25. County Service Pins. Uniformed personnel shall wear the pin on the uniform shirt, in the center of the right pocket flap. General employees dressed in business attire may wear the pin on their jacket lapel.

26. Tie Bar. Brass tie bar to be worn on traditional style tie.

27. Badge Mourning Ribbon. Black mourning ribbons worn "in memoriam" of the death of an Office of the Sheriff employee or fellow peace officer shall be 1/4" wide and shall be worn on the badge from the top right to lower left on the badge (See illustration in Policy 1.05.75 at III. D.)

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.23**
	RELATED ORDERS: CCCSO 1.02.01, 1.06.61.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 5-7-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Personal Protection Equipment**	

I. POLICY.

A. In order to maintain a professional image and ensure Deputy Sheriffs carry only quality personal protection equipment, specific equipment standards are established.

II. DEFINITIONS.

A. DEPUTY SHERIFF. As defined in Office of the Sheriff Policy Section 1.02.01 (II) (C) and 1.02.01 (II) (D).

III. GENERAL.

A. LEATHER GEAR. All leather equipment shall be of good quality black leather, basketweave design, with exposed brass metalwork.

1. Gun Belt. 2 1/4 inches wide, with brass buckle

2. Holster. Level Three Retention with covered trigger and covered hammer. (Holsters purchased prior to March 14, 1994, will be "grandfathered"). Constructed of at least eight to nine ounce cowhide or a high quality, sturdy, synthetic leather, basket weave design, with exposed brass metalwork.

   a. All holsters must be equipped with a safety strap which has a reinforced inside thumb break with a durable metal snap. Shall be constructed so the weapon cannot be accidentally cocked while worn in the holster with the safety strap snapped. Safety straps shall be used.

   b. Shall be constructed and designed to fit the weapon carried. Holster will allow little or no free play while the weapon is seated. The end of the weapon's barrel will not protrude beyond the lowest portion of the holster. Must fit the standard Sam Browne belt on the lined portion snugly so the holster does not slide or move on the belt during withdrawal of the weapon.

   c. Shall completely, or nearly so, enclose, cover, and contain the weapon (except grips) as to protect the weapon against damage, foul weather, dust, grime, mud, accidental discharge, etc.

d. Shall be constructed so the trigger portion of the weapon is not exposed when the weapon is in place.

e. Other break front or front opening type holsters not listed may be approved for uniformed duty. Any such holster must meet Sheriff's official standards and be approved by the Training Unit prior to use.

f. All duty holsters shall be maintained in proper repair and as equipped by manufacturer.

g. Deputies in plain clothes assignments shall use holsters shaped to fit the weapon.

h. If constructed of synthetic leather, it shall have the look and feel of genuine leather. Bianchi *Accumold Elite* and Safariland *Safari-laminate* are examples of acceptable synthetic leather.

i. Performance Requirements:

- The holster must retain the firearm with the safety strap unsnapped without manual assistance) while wearer performs the following job-related maneuvers:
  - Seated in a patrol car (left and right front seats).
  - Entering and exiting patrol car (left and right front seats).
  - While jogging and running.
  - Climbing a six-foot fence of any construction.
  - Jumping from atop a six-foot fence.
  - When wearer bends over at the waist, touching the ground.
  - Moving from a standing position and dives to the ground, rolling at least completely while on the ground (both directions).
  - Kneeling or squatting.

- Wearer must be able to withdraw the firearm while in a seated position in a patrol car without moving his or her upper body, except to grasp the firearm (wearer should not have to contort his or her upper body or raise his or her buttocks in order to reach and remove their firearm while seated).

- Wearer must be able to reholster the firearm with one hand in one movement (excludes snapping of safety strap).

- Wearer must be able to reach and draw the firearm with secondary hand.

- With the safety strap snapped, holster must retain the firearm while 75 pounds of direct pull is exerted on the firearm. Pull shall be at an approximate 90 degree angle from the holster forward, backward, up, and away from the body. Additionally, a torquing pressure is applied to the butt of the firearm in an effort to twist it loose. The safety strap must survive this "pulling test"

and remain snapped, and the holster is to remain on the belt without integral portions ripping or tearing loose.

3. Handcuff Case. Covered type, molded to fit the handcuffs.

4. Ammunition Case. Covered double magazine pouch with magazines or speed loader case with speed loaders.

5. Baton Ring. With brass snap.

6. Chemical Agent Holder. With or without cover and snap.

7. Key Strap. With or without skirt, or silent.

8. Belt Keepers. Two snap style.

B. SHERIFF'S OFFICE ISSUED SAFETY EQUIPMENT.

1. Handcuffs. Smith and Wesson or Peerless. Other types are issued for some transportation details.

   a. A key for the handcuffs carried will be maintained by the Deputy at all times while on duty.

2. Baton. L.A.P.D. type, 26" wood, with black finish; PR-24 type 24" foam filled aluminum with side handle; the Monadnock expandable PR-24FX side handle baton; or the expandable straight baton type, 16"-26" steel, with a ball bearing or friction lock mechanism. Each requires a P.O.S.T. certified class before it may be carried.

3. Flashlight. Streamlight Model SL-20L, or any other comparable flashlight issued by the Training Division. Individually issued flashlights are considered mandatory safety equipment and shall be readily available by the employee during their tour of duty. Issued flashlights shall remain the property of the Office of the Sheriff.

4. Chemical Agents. Oleoresin Capsicum (OC) spray as issued. Deputies shall only carry and/or use the chemical agent for which they have received P.O.S.T. certified or Sheriff's Office authorized training.

5. Electronic Weapons. The TASER model X26E, X26P, or other issued by the Sheriff's Office. All Deputy Sheriffs must complete the Office of the Sheriff POST certified TASER Operator Course prior to carrying the TASER on duty. After successful completion of the course, all Deputy Sheriffs assigned to any uniformed position shall carry the Office of the Sheriff issued TASER while on uniform duty. Personnel assigned to administrative positions (example: Administrative Deputies/Sergeants, Station House Commanders, etc.) who are not required to have regular or recurring enforcement contact with the public are exempt.

   a. All TASERS must be carried on the wearer's duty belt, in an authorized holster worn on the non-dominant hand side of the body. The holster must be configured for draw with the non-dominant hand.

   b. Issued holster: Blackhawk Serpa Taser Duty Holster.

6. Safety Vest. As issued.

a. Deputies assigned to any uniformed position requiring regular and/or recurring public contact shall wear the Office of the Sheriff issued safety vest or a personal safety vest while on uniform duty.

b. Exceptions:

- Marine Patrol Deputies while on active boat operations.
- Any Deputy Sheriff at the discretion of his or her Division Commander.

c. Vests issued to Deputies as described above, irrespective of usage, shall be removed from service after five (5) years. Replacement safety vests will be coordinated by the Training Unit who will track the age of vests and notify Deputies, via their chain of command, when their vests approach five years length of service.

d. The Training Unit will issue vests to all Deputy Sheriffs. Deputy Sheriffs may wear their own safety vest while on duty in lieu of wearing an Office of the Sheriff issued safety vest.

e. Deputies wearing a personal vest must ensure that the vest is, at a minimum, the same protection level (determined by the National Institute of Justice) as those issued by the Office of the Sheriff: Level II.

f. Deputies electing to wear a personally owned vest will remove the vest from service as prescribed by the manufacturer.

g. Deputies that choose to purchase personal safety vests other than the vest issued by the Office of the Sheriff must place the order through the Training Unit. The Deputy will reimburse the Office of the Sheriff for the amount exceeding the cost of department-issued vests. Checks made payable to the Contra Costa County Office of the Sheriff must be delivered to the Training Unit before the vest is ordered. The Training Unit will maintain a list of authorized personal safety vests and vendors.

h. Investigators and Civil Unit Deputies shall wear the Sheriff's Office issued safety vest under circumstances set forth in the respective Division Manuals.

i. Detention Division shall maintain a pool of safety vests and sanitized cloth carriers at each work location for Deputies assigned to duties that involve public contact on a periodic basis.

7. Ballistic Steel Plate (2), Carrier, and Ballistic Helmet. As issued.

a. Sworn personnel assigned to the Patrol Division, Investigations Division, AC Transit, and Marine Patrol will be assigned an “Active Shooter” kit. This kit will contain; two ballistic steel plates (10x12), vest carrier, one Kevlar helmet, and a carrying case.

b. Once assigned this equipment, employees are required to have this equipment readily available to them during on-duty hours. For purposes of this policy, readily available means in near proximity for deployment to an active shooter or other applicable call for service.

c. The ballistic steel plate and carrier will be worn directly over the employees existing uniform of the day. It is intended to provide

additional protection to the employee and is not intended on replacing the employees existing ballistic safety vest.

d. This equipment is to be maintained in good working condition as prescribed by policy.

e. If the employee is transferred out of the above listed assignment, they are required to turn in the issued equipment to the Training Division for redistribution.

f. Special Operations Division Contract Cities are authorized to provide similar equipment to their employees. Contract City employees issued this equipment will be required to adhere to (b), (c), and (d) of the above mentioned policy (7).

IV. OPTIONAL EQUIPMENT.

A. Only the following optional equipment may be purchased by Deputies for use on duty.

1. Handcuffs. Extra handcuffs may be carried on the duty belt in an appropriate case, Smith & Wesson or Peerless.

2. Flashlight.

a. Must be no larger than a typical 5 “C” or “D” cell flashlight.

b. May be rechargeable.

c. May be metal or high impact plastic.

3. Optional Leather Belt Equipment. Shall be of good quality black leather with basketweave design.

a. Shotgun Shell Holder: Designed to hold three (3) or four (4) shells, with or without cover and snap.

b. Audio Recorder Case: Designed to fit the type of recorder carried.

c. Audio Recorder: No brand specified.

d. Knife Case: Designed to fit the type of folding knife carried.

e. Knife: Folding type knife with maximum of a 4-inch blade

f. Knuckle Sap Gloves: Good quality plain black leather.

g. Police Whistle: Good quality Thunderer Model or equivalent, black plastic or brass.

h. Disposable Plastic Handcuffs: No brand specified.

4. Optional Holster and Weapon-mounted Flashlights

a. The following black basket weave Level II Plus Retention holsters are authorized for weapon-mounted flashlights:

- Safariland Model 6360 (mid-ride belt loop)
- Safariland Model 6365 (1.5" belt drop)

(The optional "Sentry" device is authorized to convert the above-mentioned holsters to Level III Plus Retention.)

b. Weapon-mounted flashlights from the following manufacturers, meeting these listed specifications, are authorized for on-duty use:

- Manufactured by: Streamlight, Surefire, or Insight.
- Must be powered by two CR123 batteries.
- Must be a minimum of 80 lumens.
- On/off switch must be ambidextrous.
- Must fit authorized weapons without adapters.
- Either L.E.D. or conventional bulbs are acceptable.
- Remote pressure pad on/off switches are not authorized.
- Laser sighting devices and on/off flashlight combinations are not authorized.

c. Deputies choosing to use a weapon-mounted flashlight shall also have an additional flashlight, meeting Office of the Sheriff specifications, available to them.

d. Deputies may not carry the weapon-light on their firearm, nor use the appropriate fitted holster, until they have qualified with each at the range.

e. Neither the weapon-light, nor the fitted holster, are issued by the Office of the Sheriff and may be acquired by the employee at his/her own cost.

f. It shall be the responsibility of the Assistant Patrol Commander to review this section on even-numbered years to ensure conformity with industry standards.

5. Optional Holster for Electronic Weapons

a. Optional holster: Blade-Tech Taser Holster with Thumb Break and Tek Lok may be purchased by the Deputy Sheriff as an optional authorized holster. Carry requirements specified in section III apply.

V. PROCEDURE 1.

A. STANDARDS, MAINTENANCE, AND REPLACEMENT.

1. Standards. The equipment described above establishes the Office of the Sheriffs personal protection equipment standards. All Deputy Sheriffs shall ensure their equipment conforms to these standards.

2. Maintenance. All leather goods shall be kept clean and polished. Most commercially available leather polish and wax are satisfactory for cleaning and conditioning leather.

a. All metalwork will be kept clean and polished.

b. All equipment will be kept in good condition. Leather goods bearing excessive wear or repairs are prohibited.

3. Replacement. All leather goods issued by the department may be replaced after five years of service. Deputies wishing to have their leather goods replaced shall contact the Training Division and request new leather gear. Equipment will be replaced on a one-for-one exchange.

a. Replacement gear may be issued prior to the five-year service period under the following conditions:

- Equipment which is severely damaged or broken in the performance of one's duties.
- Equipment which is defective.
- Proper medical documentation supports earlier replacement.
- At the discretion of the employee's division commander.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.24
	RELATED ORDERS: CCCSO 1.05.22	
ISSUE DATE: 2-1-2006 REVISION DATE: 12-18-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Uniform and Safety Equipment Inspection	

I. POLICY.

A. The image and morale of the Office of the Sheriff is enhanced when uniformed employees properly maintain their uniforms and equipment. Therefore, Class A Uniform inspections are required to ensure uniforms and personal safety equipment are properly maintained.

II. DEFINITIONS.

A. Uniformed Employees. For the purpose of this Policy, the term "Uniformed Employees" includes all employees who receive a uniform allowance.

B. Uniform Committee. The Uniform Committee is comprised of all levels of Office of the Sheriff personnel who set forth guidelines, for approval by the Sheriff, on the appearance and wearing of the Contra Costa County Office of the Sheriff Uniform. The Uniform Committee also coordinates activities pertaining to the Sheriffs Annual Inspection.

III. GENERAL.

A. COMMITTEE COMPOSITION. The composition of the Uniform Committee is as follows:

1. Undersheriff
2. 1 Lieutenant
3. 1 Sheriff's Specialist
4. 2 Sergeants
5. 3 Deputies
6. The Deputy Sheriff's Association may assign a representative
7. Other members assigned by the Sheriff

B. INSPECTION REQUIREMENTS.

1. All Uniformed employees are expected to maintain a Class A uniform, except for Sheriff's Dispatchers, Sheriff's Aides, Sheriff's Specialists,

Sheriff's Ranger and Sheriff's Clerk who will maintain their uniform as specified. This requirement is based on:

a. The desire of the Office of the Sheriff to present a professional image to the public.

b. The need of the Office of the Sheriff to ensure that all employees required to have a uniform can report to work in proper attire when needed, to include such times as:

- County or Statewide emergencies which require all employees be on duty
- Police funerals
- Other specialized functions that dictate that all be in full uniform

c. The need to ensure that the employee's uniform/equipment is maintained in a clean serviceable condition.

2. Such inspections will be made to ensure compliance with all applicable policies concerning personal appearance, uniforms and equipment maintenance.

IV. PROCEDURE 1.

A. DIVISIONAL UNIFORM INSPECTIONS.

1. Each Division Commander or designee will conduct a formal inspection of all employees each year. This inspection is to be completed during the first quarter of each year.

a. Formal inspections should be conducted by the Division Commander or his/her designee. However, the person conducting the inspection shall hold the rank of Lieutenant or higher.

b. Division Commanders are encouraged to schedule more than the one required formal inspection each year.

2. Division Commanders will provide their inspection findings via the chain of command to the Sheriff/Undersheriff by the end of the third week in April of each year.

V. PROCEDURE 2.

A. SELECTION OF DIVISION REPRESENTATIVES.

1. Each Division Commander will select 10 percent of his/her employees to represent the Division at the Sheriff's Annual Inspection Ceremony, Sheriff's Office Policy Section 1.05.22, Sheriff's Annual Inspection Ceremony.

2. These representatives should be employees who have maintained the best uniform and equipment, and display a demeanor that enhances the professional image of the Office of the Sheriff.

3. Division Commanders will submit a list of their selected representatives to the Sheriff by the end of April each year.

    a. The list should also reflect the fiscal impact on the Division (if any) based on overtime, replacement costs, etc., of employees attending the ceremony.

    b. Division Commanders are encouraged to minimize overtime expenditures through advance scheduling, expanded use of volunteers, and short term reduction of non-critical programs and services.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.25**
	RELATED ORDERS: Injury and Illness Protection Program (I.I.P.P.); CCCSO; POST Model Respiratory Protection Program for Law Enforcement, Jan 2004; POST Bulletin 04-01	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-20-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Respiratory Protection Equipment**	

I. POLICY.

A. The Sheriff has established a respirator issuance and maintenance plan in compliance with Cal/OSHA requirements and POST guidelines to protect employees from airborne hazards or potentially hazardous materials during the performance of their duties.

II. DEFINITIONS.

A. AIR PURIFYING RESPIRATOR. A unit with an air-purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the air-purifying element. (For example: The MSA brand “Millennium” full-face respirator.)

B. ATMOSPHERE-SUPPLYING RESPIRATOR. A respirator that supplies the user with breathing air from a source independent of the ambient atmosphere and includes supplied-air respirators (SARS).

C. CANISTER OR CARTRIDGE. A container with a filter, absorbent, or catalyst, or combination of these items, which removes specific contaminants from the air that passes through the container.

D. FILTER. A component used in respirators to remove solid or liquid aerosols from the air intake.

E. FILTERING FACE PIECE. A negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium often referred to as a dust mask.

F. FIT TEST. Use of a protocol to quantitatively or qualitatively evaluate the fit of respirators on each individual who uses one. This protocol is also used to ensure proper filtering action of the respirator. Documentation shall be generated each time and records shall be filed and preserved by Contra Costa County Risk Management.

G. PARTICULATE FILTERING RESPIRATOR (N-95). A half-face cloth respirator designed to remove specific airborne particulates from the ambient air.

H. N.I.O.S.H. National Institute of Occupational Safety and Health.

III. GENERAL.

A. The Office of the Sheriff will issue respirators to all sworn personnel as well as non-sworn personnel whose potential job hazards require them. . Most issued full-face respirators will be MSA brand “Millennium” or it’s equivalent except in situations where different respirators are required, as in the Forensic Services Division. In addition, the N-95 particulate respirator will be issued for the prevention of airborne communicable diseases. The issuance, fitting and maintenance of all respirators will follow POST guidelines as set forth in the Model Respiratory Program for Law Enforcement, issued in January 2004, which complies with Cal/OSHA Regulation 5144 and specifications of N.I.O.S.H.

IV. PROCEDURE 1.

A. GENERAL USE.

1. Only respiratory protective equipment authorized by Risk Management will be used.
2. No modifications or substitutions to equipment are permitted unless authorized by Risk Management.
3. Employees that have assigned respirators shall keep them available (at the ready).
4. A respirator shall be used only by the person to whom it is issued.
5. Individuals with facial hair, scars, or physical issues that prevent a tight seal of the respirator, as determined by a professional fit test, shall not wear the respirators.
6. The user shall inspect his/her respirator for damage before donning and after doffing the respirator.
7. Supervisors will ensure employee compliance and understanding of the Risk Management protocols and standard operating procedures on respirator use.
8. For personnel assigned to the Field Operations Bureau, respirators are to be used for Riot and Crowd Control events, where the use of chemical agents is possible.
9. Respirators shall not be used to enter any area that is designated as the “warm” (contamination reduction) zone or the exclusion (“hot” or “red”) zone of a hazardous materials incident or in any major event involving a weapon of mass destruction. They also should not be used to enter any areas that are known or suspected to be oxygen deficient, or that contain concentrations of hazardous substances that are unknown or are immediately dangerous to life or health (IDLH).

B. INSPECTION OF RESPIRATORS.

1. All respirators shall be inspected by the employee to whom it was assigned before each use including a positive and negative pressure check to ascertain a good seal, after each use and when cleaning and

storing in accordance with the manufacturer's recommendations to ensure proper function.

C. RESPIRATOR USAGE.

1. Using a respirator may place a physiological burden on employees and should not be used if the ability to wear a respirator is compromised by a medical condition. Any employee whose medical status changes shall immediately advise their chain of command. A determination as to the ability to wear the respirator will then be made by Risk Management.

2. The P.O.S.T. Medical History Statement (POST 2-252), or its equivalent, shall be used for medical health clearance and respirator use authorization.

3. Risk Management shall establish and retain written information regarding medical evaluations, fit testing, and the respirator training program. This information will facilitate the administering of the program, assist in auditing the adequacy of the program, and provide a record of compliance with Federal or State OSHA requirements.

4. Further medical evaluations are required for any employee if:

a. The employee reports signs or symptoms of difficulties that relate to the use of a respirator;

b. A health care professional, supervisor, or the Office of the Sheriff Safety Coordinator/Designee determines the employee needs to be reevaluated;

c. Observations made during fit testing and program evaluation indicate a need for reevaluation; or

d. A change occurs in workplace conditions such as increased physical exertion, protective clothing or temperature change that may result in a substantial increase in the physiological burden placed on an employee.

V. PROCEDURE 2.

A. FORENSIC SERVICES EXCEPTION.

1. The Forensic Services Division requires special accreditation standards that may exceed the requirements of this policy. There is a special Forensic Services Division Respiratory Protection Program managed by the Chief of the Forensics Services Division. This Respiratory Protection Plan is regulated by California Code of Regulation Title 8, Section 5144.

B. OTHER EXCEPTIONS.

1. The Narcotics Enforcement Unit, Special Weapons and Tactics Team (S.W.A.T.), Mutual Aid Mobile Field Force (M.A.M.F.F.) and personnel from the Coroner's Division may require special respiratory protective equipment depending on the nature of their operations. Any specialized equipment use shall comply with Title 8, California Code of Regulations, section 5144, and NIOSH Standards.

VI. PROCEDURE 3.

A. SERGEANTS RESPONSIBILITIES.

1. Supervising sergeants are responsible for overseeing the care, maintenance, replacement, repair, storage, protection, cleaning, and disinfecting of respirators in coordination with the Safety Services Manager.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.26
	RELATED ORDERS: State of California General Safety Orders; CCCSO Injury and Illness Prevention Program.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-18-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Ergonomics Program**	

I. POLICY.

A. In conjunction with State standards, the Office of the Sheriff has developed an ergonomic program for the prevention and/or healing of job-related repetitive motion injuries.

II. DEFINITIONS.

A. ERGONOMICS. An applied science dealing with the design and arrangement of equipment in the working environment to ensure that it interacts with employees with the utmost safety, comfort and efficiency.

III. GENERAL.

A. The Office of the Sheriff has developed an ergonomic program that consists of a coordinated evaluation process for worker's injuries, repetitive motion problems and other ergonomic problems that could potentially threaten an employee's health. This program will include:

1. Appropriate ergonomic training for Supervisors and employees;
2. Evaluations and required modifications;
3. Tracking requests and referrals for ergonomic assistance;
4. Tracking the timeliness and cost of installing the required equipment;
5. Training of employees in the use of the new or altered equipment;
6. The reconditioning and redistributing of used ergonomic equipment.

IV. PROCEDURE 1.

A. INJURY PREVENTION ERGONOMIC EVALUATIONS.

1. Upon the request by an employee for an ergonomic accommodation, the employee's Supervisor or Manager shall forward the request, on the approved form, to the Sheriff's Safety Services Manager, who shall evaluate the request and recommend such action as is consistent with the Sheriff's Injury and Illness Prevention Program Manual (I.I.P.P.), the

County's Ergonomic Program, and applicable State and Federal regulations and law.

2. An Ergonomic Equipment Recommendation Form will be filled out by the Sheriff's Safety Manager or an ergonomic evaluator contracted through the County Ergonomics Laboratory and forwarded through the Sheriff's Safety Services Manager to the Supervisor or Manager of that work site. Once the Supervisor or Manager has approved the expenses involved, the Sheriff's Safety Services Manager will order the necessary equipment.

3. This form will contain instructions for equipment or furniture return procedures should the employee relocate to another work site or terminate Office of the Sheriff employment.

4. The Supervisor or Manager and the employee involved must sign the Ergonomic Equipment Acknowledgement Form to acknowledge the receipt and installation of the equipment.

B. COMPLETION AND TRACKING OF EVALUATIONS.

1. All internal evaluations for preventative ergonomics will be retained by the Sheriff's Safety Services Manager.

2. Evaluations for preventative ergonomics shall be completed as soon as reasonably possible based upon the circumstances following approval of the request.

3. The Supervisor or Manager will be notified of the cost of the equipment and/or furniture at the time the evaluation is completed.

C. DELIVERY AND INSTALLATION OF ERGONOMIC EQUIPMENT AND/OR FURNITURE.

1. The County Ergonomic Lab shall inform the Sheriff's Safety Services Manager of large deliveries so that preparations can be made. All approved vendors contracted by the County are required to provide professional delivery and installation of ergonomic equipment and/or furniture.

2. Small items that do not require installation will normally be drop shipped directly to the Supervisor, Manager or employee who will then notify the Sheriff's Safety Services Manager of the delivery.

3. Work site ergonomic modifications shall be coordinated among the site Supervisor or Manager, the Sheriff's Safety Services Manager and the County General Services Division.

D. TRAINING.

1. The employee shall carefully review and follow the manufacturer's usage instructions, and may receive further guidance from the Sheriff's Safety Services Manager.

2. The Sheriff's Safety Services Manager will fill out an Ergonomic Evaluation Request Form after the appropriate initiation period, if needed.

E. EQUIPMENT REUSE.

1. Upon leaving a job site or assignment, the Sheriff's employee shall notify his or her Supervisor or Manager that he has ergonomic equipment or furniture that must be relocated or returned. The work site Supervisor or Manager shall notify the Sheriff's Safety Services Manager and ensure that the equipment or furniture is returned to the County Ergonomic Coordinator. Such notification is also required if it is determined that the employee no longer requires the use of the ergonomic equipment or furniture.

V. PROCEDURE 2.

A. WORKERS COMPENSATION.

1. Workers Compensation related evaluations are handled by the County Risk Management Division. These evaluations are filled out by approved ergonomists at the County Ergonomics Laboratory, 2020 N. Broadway, Suite 203, Walnut Creek, (open 9 A.M. to 5 P.M. Monday through Friday). Call (925) 646-6041. FAX (925) 646-6042.

2. The County Ergonomic Laboratory will process all requested evaluations submitted by County Risk Management and the Sheriff's Safety Services Manager. The lab maintains a supply of testing equipment for this purpose.

VI. SUPERVISORS REPONSIBILITIES.

1. In the event the Supervisor or Manager of the work site becomes aware that employees are not using the prescribed ergonomic equipment in the manner prescribed, the Supervisor or Manager will take appropriate action to assure that the employee conforms to the prescribed usage.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.30
	RELATED ORDERS: Government Code §§ 7070-7075; Appendix 16	
ISSUE DATE: 4-29-2022 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Government Code § 7070 Defined Equipment**	

I. POLICY.

A. The Office of the Sheriff shall conduct its public safety functions in an atmosphere of openness in its relationship with the public. The provisions in this policy are to ensure each piece of equipment listed in Assembly Bill 481 ("AB 481") (Government Code §§ 7070-7075) as "military equipment" is used in accordance with department policies and the law. Decisions regarding use and acquisition of military equipment will take into consideration the public's welfare, safety, and civil rights, and allow for community input and engagement.

B. This policy has been created in accordance with the requirements of AB 481 and is designed to meet the requirements of reporting and accountability required by AB 481. These requirements include, but are not limited to, seeking Governing Body approval of specific items deemed to be military equipment and requirements related to use, compliance, annual reporting, cataloging, complaints, and community engagement regarding these items.

II. DEFINITIONS.

A. GOVERNING BODY: The Contra Costa County Board of Supervisors.

B. MILITARY EQUIPMENT: Any of the items as listed in California Government Code section 7070, subsections (c)(1) through (c)(16).

C. DEPLOYMENT AND USE: The deployment or use of military equipment shall refer to the use of the military equipment for an authorized purpose. The handling of a firearm or a less lethal device is not considered a deployment. These primer-based items must be fired during an incident to be considered a deployment. Training with any of the items listed in Government Code §7070(c)(1) through (c)(16) is excluded and is not considered a "deployment" or "use" pursuant to Government Code section 7072.

III. PROCEDURE.

A. The Office of the Sheriff shall obtain approval of the Governing Body annually prior to engaging in any of the following activities:

1. Requesting military equipment made available pursuant to Section 2576a of Title 10 of the United States Code.

2. Seeking funds for military equipment including, but not limited to, applying for a grant, soliciting, or accepting private, local, state, or federal funds, in-kind donations, or other donations or transfers.

3. Acquiring military equipment either permanently or temporarily, including by borrowing or leasing.

4. Collaborating with another law enforcement agency in the deployment or other use of military equipment within the territorial jurisdiction of the Governing Body.

5. Using any new or existing military equipment for a purpose, in a manner, or by a person not previously approved by the Governing Body.

6. Soliciting or responding to a proposal for, or entering into an agreement with, any other person or entity to seek funds for, apply to receive, acquire, use, or collaborate in the use of, military equipment.

B. In seeking the approval of the Governing Body, the Office of the Sheriff shall submit a proposed military equipment use policy, or subsequent amendment(s), to the Governing Body and the public via the Office of the Sheriff's internet website at least 30 days prior to any public hearing concerning the military equipment at issue.

C. The military equipment acquired and authorized by the Office of the Sheriff is:

1. Necessary because there is no reasonable alternative that can achieve the same objective of officer and civilian safety.

2. Reasonably cost-effective compared to available alternatives that can achieve the same objective of officer and civilian safety.

D. The Office of the Sheriff shall submit an annual military equipment report to the Governing Body.

1. The annual military equipment report shall, at a minimum, include the following information for the immediately preceding calendar year for each type of military equipment:

a. A summary of how the military equipment was deployed and the purpose of its deployment.

b. A summary of any complaints or concerns received regarding the military equipment.

c. The results of any internal audits, any information about violations of the military equipment use policy, and any actions taken in response.

d. The total annual cost for each type of military equipment, including acquisition, personnel, training, maintenance, upgrade, and other ongoing costs, and from what source funds will be provided for the military equipment in the calendar year following submission of the annual military equipment report.

e. The quantity possessed for each type of military equipment.

f. If the Office of the Sheriff intends to acquire additional military equipment in the next year, the quantity sought for each type of military equipment.

2. The Office of the Sheriff shall also make each annual military equipment report publicly available on its internet website for as long as the military equipment is available for use.

3. Within 30 days of submitting and publicly releasing an annual military equipment report, the Office of the Sheriff shall hold at least one well-publicized and conveniently located community engagement meeting, at which the general public may discuss and ask questions regarding the annual military equipment report and the Office of the Sheriff's funding, acquisition, or use of military equipment.

E. All military equipment kept and maintained by the Office of the Sheriff shall be cataloged in a way to address each of the following requirements:

1. The manufacturer's description of the equipment.

2. The capabilities of the equipment.

3. The purposes and authorized uses for deployment by trained Office of the Sheriff personnel.

4. The expected lifespan of the equipment.

5. The fiscal impact of the equipment, both initially and for on-going maintenance.

6. The quantity of the equipment, whether maintained or sought.

7. The training requirements for the particular equipment.

F. Any member of the public can register a question or concern regarding military equipment by contacting the Sheriff's Office via email at webmaster@so.cccounty.us or by mail attention of the Professionals Standards Division at 1850 Muir Road, Martinez CA 94533. A response to the question or concern shall be completed by the appropriate Division and routed to the Professional Standards Captain in a timely manner.

G. Any member of the public can register a complaint regarding military use equipment by using the Citizen Report Procedure Form which can be found at https://www.cocosheriff.org/community-information/citizen-complaint-form. All complaints received will be sent to Internal Affairs for handling.

IV. EQUIPMENT USE

A. Each Division Commander, or designee, will ensure that each deployment or use of a piece of military equipment covered by this policy will be documented in a report. Each completed report will be forwarded to the Professional Standards Division Commander for tracking.

B. All confirmed instances of non-compliance will be reported to the Governing Body via the annual military equipment report.

V. MUTUAL AID

A. The Office of the Sheriff acknowledges that all critical incidents are unique, and incidents may arise which overwhelm local resources. These incidents may make

it necessary to call on outside agencies for assistance. Nothing in this policy shall restrict the Office of the Sheriff from calling on the assistance of allied agency partners, whether they be federal, state, county, or local agencies, and their resources being used during critical incidents. These agencies should have their own Military Equipment Use policies which have been approved by their own governing bodies, with which the agencies are to comply.

VI. MILITARY EQUIPMENT INVENTORY

A. Each Division Commander, or designee, is responsible for ensuring an accurate inventory of each make, model, and quantity of military equipment is maintained for each work location and/or unit under their command.

B. See Appendix 16 of this policy manual for the equipment inventory.

CCCSO Yellow Stripe Policy

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.31**
	RELATED ORDERS: Sheriff's Office Directive, Appendix 11, Firearms Course; PC 25100, Firearm Accident Prevention Act of 1991; PC 16850; PC 25140; PC 25452; CCCSO 1.06.35, 1.07.06, 1.07.13, 1.07.15, 1.07.37	
ISSUE DATE: 12-4-2009 **REVISION DATE: 11-8-2018**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	SUBJECT: **Firearms Safety and Qualification**	

I. POLICY.

A. Specific provisions regarding the carrying, handling and use of firearms are established to provide direction and promote the safety of the public and employees.

B. In the interest of public safety and the protection of Sheriff's Office equipment, all personnel in possession of a handgun whether on or off duty, who need to secure a handgun in a department or personal vehicle shall do so in accordance with the law.

II. DEFINITIONS.

A. SWORN PERSONNEL. This term applies to the Sheriff, the Undersheriff and all Deputies at every rank.

B. SHERIFF'S OFFICE ANNUAL TRAINING. Refers to the Annual Mandated Advance Officers Training or Annual Mandated Administrative Training (Lieutenants and above), which includes demonstrating proficiency and proper use of firearms carried on duty as authorized by this policy and the Training Division.

C. ANNUAL SHERIFF'S OFFICE FIREARMS QUALIFICATION. Refers to the scheduled annual Sheriff's Office Firearms Qualification.

D. SUPPLEMENTAL FIREARMS EXERCISE. Refers to firearms exercises and testing utilized as remediation qualification, or secondary qualifications when changing duty firearms.

E. TRANSITIONAL TRAINING. Refers to the two day semiautomatic firearms training for Deputy Sheriffs who are transitioning from revolvers to semiautomatics.

F. SHERIFF'S OFFICE FUNCTIONAL PERFORMANCE TEST. Refers to the proficiency test required for Deputy Sheriffs to carry semiautomatic firearms.

III. GENERAL.

A. FIREARMS SAFETY. The handling of all firearms shall be in accordance with established safety practices. The following are some basic rules for firearm safety. Due to the nature of law enforcement, some rules may not apply in all situations and some situations may have no pre-established rules. In such situations, common sense and good judgment must prevail.

1. Check any firearm coming into your possession to determine if it is loaded.

2. Never point a firearm at anything or anyone you do not intend to shoot if and when necessary.

3. Never insert your finger into the trigger guard unless you are ready to shoot.

4. Never display a firearm unnecessarily or draw it in public except for inspections or official use. The promiscuous or frivolous display of a firearm is expressly forbidden, and will result in severe disciplinary sanctions, up to and including dismissal.

5. A shotgun or rifle shall be loaded and unloaded outside of buildings, unless being done in a controlled manner by Forensic Services Division staff for test purposes.

6. Gun clearing safety barrels shall be utilized at those sites maintaining them.

   a. Loading, unloading, or the performance of any function check of any firearm shall be performed at a gun clearing barrel.

7. While at the firearms range, all range rules shall apply. Complete firearms range procedures are in Office of the Sheriff Policy Section 1.07.34, Firearms Range Use Regulations.

8. Teach firearm safety in your home to your family. In accordance with the Children's Firearm Accident Prevention Act of 1991, any person who keeps a loaded firearm within any premises where a child "is likely to gain access to the firearm," may be fined or sent to prison (Penal Code Section 25100.)

B. USE OF FIREARMS.

1. Official use of firearms is described in Office of the Sheriff Policy Section 1.06.61, Use of Force.

2. Deputies are not required to carry firearms or other weapons while off duty.

C. STORAGE OF HANGUNS – ON OR OFF DUTY. Whenever personnel are in possession of a handgun whether on or off duty and there is a need to secure their firearm(s) in an unattended vehicle, the following shall be done:

1. Lock the handgun in a locked container that is permanently affixed to the vehicle's interior and not in plain view.

2. This section does not apply to a peace officer during circumstances requiring immediate aid or action that are within the course of his or her official duties.

3. Secure Container Issuance: The Office of the Sheriff will issue one secure container (locked container) to each sworn member of the department for use in their department or personal vehicle.

   a. All issued locked containers are serialized. The Law Enforcement Training Center (LETC) is responsible for the inventory and issuance of the Hornady Tri-Point Lockbox/ Gun Safe for use by personnel for handgun storage in an unattended vehicle.

   b. The locked container shall remain the property of the Office of the Sheriff and shall not be modified, defaced, or in any way altered without prior approval from the LETC Division Commander.

   c. All issued locked containers must be returned to the Office of the Sheriff upon separation of employment or retirement.

4. Personnel may, at their own expense, purchase additional or different locked containers for personal vehicles. These locked containers must be a secure container that is fully enclosed and locked by a padlock, keylock, combination lock, or similar locking device. The term "locked container" does not include the utility or glove compartment of a motor vehicle (PC 16850).

D. SEMI-AUTOMATIC FIREARM AUTHORIZATION.

1. All Sworn Personnel are required to successfully complete the Office of the Sheriff Functional Performance Test with an Office of the Sheriff Firearms Instructor.

   Deputy Sheriff Recruits and probationary Deputy Sheriffs will carry semiautomatic firearms as specified in Office of the Sheriff Policy Section 1.07.32, and upon graduation are required to successfully complete the Office of the Sheriff Functional Performance Test. Probationary Deputy Sheriffs who do not successfully complete the Office of the Sheriff Functional Performance Test with a semiautomatic weapon will be assigned to a non-firearms position until successful remediation or failure to do so per Section III F.

2. Sworn Personnel carrying revolvers on duty will be required to have completed "Transitional Training," as required by the Training Division, prior to being authorized to carry a semi-automatic pistol.

E. OFFICE OF THE SHERIFF FIREARMS TRAINING. No firearm shall be pointed at another person during training. Exceptions:

1. The firearm used is a red, white or blue handled firearm that has been welded, or stripped so that it cannot be fired. These firearms will be issued by the Training Division or the Training Coordinator for each Division.

2. In a controlled classroom environment, where an Office of the Sheriff firearms instructor has personally inspected the firearm and will ensure that there is no live ammunition in the training area. Use of operational firearms during these training exercises will be approved by the Division Commander, S.W.A.T. Commander or the Training Division Commander prior to commencement of training.

F. OFFICE OF THE SHERIFF FIREARMS QUALIFICATION. All Sworn Personnel are required to successfully complete the Office of the Sheriff firearms qualifications within the time frame prescribed below and with the firearm(s) authorized for carrying while wearing the Office of the Sheriff prescribed standard uniform.

1. All Sworn Personnel assigned to a non-uniformed position which does not require the prescribed standard and/or Class "A" uniform must also qualify with the specific Office of the Sheriff authorized firearm carried while on duty in the non-uniformed positions.

2. All Sworn Personnel who change duty firearms to a different make, model, barrel length, or caliber must qualify at an Annual Office of the Sheriff Firearms Qualification or at a supplemental Firearms Exercise, with the new firearm before authorization will be given to carry the new firearm.

3. All Sworn Personnel must demonstrate firearms proficiency semiannually. Primary proficiency will be demonstrated during an Annual Office of the Sheriff Firearms Qualification, commonly referred to as the “Summer Qualification,” and secondary proficiency will be demonstrated during the Office of the Sheriff Annual Firearms Qualification or the Functional Performance Test.

   a. The Workers Compensation Liaison and Leaves Director will advise the Training Division if a Deputy Sheriff’s disability or extended leave will cause him/her to miss the next cycle of either Advanced Officers Training or Annual Firearms Qualification, thereby placing the Deputy out of compliance with Office of the Sheriff Firearms Qualification Policy.

   b. The Training Division will forward a memo to the affected Deputy and his or her chain of command indicating that disability/extended leave will cause the Deputy to be out of compliance with the Office of the Sheriff Firearms Qualification Policy, placing them in a non-firearms carrying status.

   c. If the affected Deputy is in possession of an Office of the Sheriff owned firearm, the Training Division or Sheriff’s designee may request, via the Deputy’s Division Commander, that the firearm be returned until the Deputy is able to return to full duty and complete the firearms qualification.

      - Training will retain the firearm until the Deputy’s status is determined. If the Deputy returns to full duty, he/she will be re-issued the same firearm for qualification and duty use. If the Deputy resigns, retires or is terminated, the firearm will be placed back into inventory.

4. No Sworn Personnel shall carry any firearm during working hours until satisfactorily completing the Office of the Sheriff Annual Firearms qualification or the Functional Performance Test.

5. See Policy 1.07.37, “Shotguns and Patrol Rifles” for qualification with the authorized shotgun and patrol rifle.

G. FIREARMS QUALIFICATION REMEDIATION.

1. In the event a Deputy Sheriff fails to successfully complete either semi-annual firearms qualification with their handgun, the Deputy Sheriff will no longer be able to carry his or her firearm until he or she is able to successfully complete the qualification. The instructor will then immediately provide the Deputy Sheriff with a written notice to attend a supplemental Firearms Exercise within thirty days.

   a. A copy of this written notification will be forwarded to the Deputy Sheriff’s Division.

2. The Deputy Sheriff will have the responsibility of immediately notifying his/her Division Commander of the date and time of the rescheduled qualification.

3. Upon receipt of such notification, the Division Commander/Immediate Supervisor will make any schedule adjustments necessary to allow the Deputy Sheriff to attend the rescheduled Office of the Sheriff Supplemental Firearms Exercise.

4. Non-firearm carrying assignments, made pursuant to this Policy shall last no longer than thirty calendar days. During this period, the Deputy Sheriff may attend remediation training with the approval of his or her supervisor. Overtime is not authorized for remediation training.

5. Should a Deputy Sheriff fail to qualify by the end of a qualification day, the Deputy may be temporarily re-assigned until he or she successfully completes the qualification course; the Deputy may also be subject to Departmental action for failure to meet the minimum qualifications of a Deputy Sheriff.

6. The Training Division Commander will report all such cases to the appropriate Bureau Assistant Sheriff, via the chain of command, for appropriate action.

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**NUMBER: 1.07.32**
	RELATED ORDERS: PC 12027, 12030; CCCSO 1.07.31, 1.07.33, 1.07.34.	
ISSUE DATE: 7-21-2008 **REVISION DATE: 1-6-2022**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Authorized Firearms and Ammunition**	

CCCSO Yellow Stripe Policy

I. POLICY.

A. Standards for revolvers and semiautomatic firearms, as well as ammunition are established to promote safety. All Deputy Sheriffs shall be armed in accordance with this policy at all times when on duty, except when and where firearms are prohibited by policy. Deputy Sheriffs through the rank of Lieutenant shall not be issued more than one firearm at a time, unless there is an organizational need.

II. DEFINITIONS.

A. DEPUTY SHERIFFS. For purposes of this policy, all Safety employee classifications to include: Deputy Sheriff, Sergeant, Lieutenant, Captain, Deputy Sheriff Criminalist, Deputy Sheriff Forensic Supervisor, Deputy Sheriff Forensic Manager, Chief of Forensics, Assistant Sheriff, Per Diem Deputy and Deputy Sheriff Reserve.

III. GENERAL.

A. All Deputy Sheriffs will be issued a semiautomatic firearm in accordance with this policy. This provision is applicable to both uniformed and non-uniformed assignments.

B. The .40 Cal. Sig Sauer P226R, and P229R are the standard issue Office of the Sheriff side arms. Sworn personnel assigned to plainclothes or administrative positions may be issued a 9mm Glock G48. The use of the G48 is for the duration of the assignment only. Deputies issued an Office of the Sheriff owned firearm shall be required to carry it as their on-duty firearm whenever an Office of the Sheriff uniform with full leather is required.

C. All firearms used on duty will remain in their normal factory assembled condition. No firearm will be modified in any manner, except that different authorized grips and/or night sights may be installed. An authorized weapon-mounted flashlight may also be used. This includes personally owned firearms.

D. Firearms, magazines, ammunition, and firearm-related equipment will not be affixed with any unauthorized attachments, images, symbols, adhesives, emblems, or embellishments.

IV. ON DUTY IN UNIFORM.

A. This section is applicable to on-duty Deputy Sheriffs wearing all authorized uniforms (Class A, B, C, D, and specialty uniforms), except Class E attire.

B. In place of the standard issue semi-automatic firearm, and at a Deputy's own expense, a uniformed Deputy may elect to carry on duty any revolver or semi-automatic firearm listed in subsection "1." or "2." below.

1. Revolver Specifications.

   a. Make: Smith & Wesson, Colt or Ruger.

   b. Type: Revolver, 6 shot, exposed hammer

   c. Caliber: .38 Special or .357 magnum.

   d. Barrel: 4 or 6 inch barrel length.

   e. Sights: Fixed or adjustable.

   f. Finish: Blued, Parkerized, stainless steel, titanium (Scandium) alloy or aluminum alloy.

   g. Grips: Black or Brown - Wood, hard rubber or hard plastic, without thumb rest.

2. Semiautomatic Firearm Specifications.

   a. Make: Sig Sauer, Glock (Gen3/Gen4/Gen5), or Heckler and Koch pistols with the following characteristics:

   b. Type: Semiautomatic Pistol.

   c. Caliber: 9mm, .40 Cal., or .45 Auto.

   d. Barrel: Not longer than 5 inches and does not protrude past the end of the slide.

   e. Sights: Fixed or adjustable, or replaceable night sights.

   f. Grips: Black or Brown - Wood, hard rubber or hard plastic, without thumb rest.

   g. Finish: Stainless, blue, black, or two-tone stainless over blue or black.

   h. Trigger:

      - DA/SA (Double-action/single-action)
      - DAO (double-action only)
      - DAK (Sigarms)
      - LEM (Heckler and Koch)
      - Safe Action (Glock)

   i. Decocking Lever: Spring-loaded mechanism that safely drops the hammer and leaves the pistol ready to fire.

   j. The following characteristics are specifically NOT authorized:

- Threaded barrels;
- Laser sighting devices of any kind;
- Barrel weights or barrel compensators;
- SAO (Single-action only) trigger or any variants;
- Squeeze-cocking pistols or any variants.

V. ON DUTY IN PLAINCLOTHES

A. This section is applicable to all on-duty Deputy Sheriffs wearing attire other than their uniforms, and includes business attire, Class E attire, and undercover plainclothes.

B. Deputy Sheriffs working plainclothes assignments shall carry, or have in their immediate presence at all times, an Office of the Sheriff assigned or authorized firearm while on duty.

C. Deputies in plainclothes may carry any weapon authorized for carry by on-duty uniformed Deputies. Alternatively, Deputies in plainclothes are authorized to carry the following firearms:

1. Smith and Wesson, Colt or Ruger .38+P Cal. or .357 Cal. J-Frame models with a barrel length of 3" or less:
    a. Finished in satin, stainless, matte, blue, or black;
    b. Material: steel, aluminum, scandium, titanium, or alloy;
    c. Hammer may be exposed, enclosed, or shrouded;
    d. Variants equipped with grip-mounted laser sight are not authorized; and
    e. Only those .38 caliber models rated for +P ammunition shall be used as a plainclothes firearm.
2. Heckler & Koch P2000 SK:
    a. 9mm or .40 S&W caliber
3. Sig Sauer P230, P232, or P239.
    a. .380 or 9mm caliber.
4. Glock compact or subcompact
    a. .380, 9mm, .40 or .45 caliber

VI. SUPPLEMENTAL FIREARMS

A. All Deputies carrying an authorized side arm are authorized, at their own expense, to carry a supplemental firearm.

B. Only those firearms listed immediately above in Section V(C)1, 2, or 3 or 4 for plainclothes carry are authorized as supplemental firearms.

C. Supplemental firearms (also referred to as "back-up" or "secondary" firearms) are to be carried concealed, and in such a manner to prevent unintentional cocking, discharge, or loss of physical control.

VII. DEPUTIES CARRYING PERSONALLY OWNED FIREARMS

A. Deputies in a uniformed assignment who choose to carry an authorized, privately owned firearm are not entitled to an Office of the Sheriff issued firearm. The Deputy Sheriff shall return any Office of the Sheriff issued firearm to the Training Division within thirty days.

B. Should a Deputy Sheriff elect to discontinue the use of a privately owned firearm as his/her on-duty firearm, an Office of the Sheriff owned semiautomatic firearm will be issued to the Deputy.

VIII. AUTHORIZED WEAPONS

A. Only those firearms (handguns, shotguns, rifles, etc.) issued by the Office of the Sheriff, and those firearms specifically permitted under this policy to be carried in place of an issued firearm, are authorized by this policy. Only such ammunition as is specifically permitted under this policy is authorized.

B. Deputies, either on duty or off duty, shall not carry any firearm, except those authorized by this policy, while in County facilities or while operating a County vehicle. This does not restrict Deputy Sheriffs from handling other firearms as part of their official duties. Administrative and Supervisory personnel may be held civilly liable for failure to enforce orders prohibiting the carrying of unauthorized firearms.

IX. S.W.A.T. TEAM

A. The Office of the Sheriff's S.W.A.T. Team shall only utilize such handguns, shotguns, rifles, ammunition or automatic firearms as are issued by the Office of the Sheriff while performing S.W.A.T. training and operations.

X. SERVICE AMMUNITION SPECIFICATIONS

A. Ammunition used on duty will be new factory assembled commercial ammunition.

B. Deputies may carry the ammunition issued by the Training Division or may choose to purchase and carry (at no cost to the Sheriff's Office) other authorized ammunition listed in this section.

C. Ammunition carried on duty should be replaced annually.

D. Ammunition Specifications. On duty, Deputy Sheriffs will use one of the following types of ammunition specifically listed for the type of revolver or semiautomatic carried:

1. Lightweight frame revolvers (5 shot, alloy frame, etc.):

    a. Bullet caliber: .38 special.

    b. Bullet weight: 125 to 158 grain.

    c. Bullet Configuration: Lead portion of bullet shall be of solid construction and not contain shot pellets, plungers or be segmented. Authorized types:

- Jacketed Hollow Point (JHP)
- Semi-Jacketed Hollow Point (SJHP)
- Jacketed Soft Point (JSP)
- Load limitations: All loads including +P and +P+.
  - Exception: The Smith and Wesson Company has advised that their.38 Cal. Revolvers without a model number on the frame by the cylinder are not safe to use with +P+ loads. Therefore, +P and +P+ are not authorized for those revolvers unless otherwise specified by the manufacturer.

2. Heavyweight frame revolvers: Bullet caliber: .38 special
   a. Bullet weight: 125 to 158 grain.
   b. Bullet Configuration: Same as for lightweight frame revolvers listed above.
      - Load limitation: All loads including +P and +P+.
        - Exception: The S&W company has advised their .38 cal. revolvers without a model number on the frame by the cylinder are not safe to use with +P loads or +P+ loads. Therefore, +P and +P+ are not authorized for those revolvers, unless otherwise specified by the manufacturer.
3. .357 caliber revolvers:
   a. Bullet caliber: .357 magnum or .38 special.
   b. Bullet weight: 125 to 158 grain.
   c. All other specifications are the same as for the heavyweight revolvers listed in "2" above.
4. 9mm Semiautomatic Firearms:
   a. Bullet caliber: 9mm Luger (Parabellum) Bullet weight: 115 grain to 147 grain.
   b. Bullet Configuration: Jacketed Hollow Point.
5. .380 Cal. Semiautomatic Firearms: Bullet caliber: .380
   a. Bullet weight: 85 to 105 grain.
   b. Bullet Configuration: Jacketed Hollow Point.
6. .40 Cal. Semiautomatic Firearms:
   a. Bullet caliber: .40 Cal.
   b. Bullet weight: 155 grain to 180 grain.
   c. Bullet Configuration: Jacketed Hollow Point.
7. .45 Auto Semiautomatic Firearms: Bullet caliber: .45 Auto
   a. Bullet weight: 185 grain to 230 grain.

b. Bullet Configuration: Jacketed Hollow Point.

E. The Training Division will distribute the following ammunition at Office of the Sheriff Firearms Advance Officer's Training, Functional Performance Test, and Optional Firearms Exercise:

1. 9mm Luger, .40 Cal., 45 Auto, or .380 caliber practice ammunition.

2. 9mm Luger, .40 Cal., 45 Auto, or .380 caliber initial issue - 50 rounds.

3. .38 special practice ammunition.

4. .38 special initial issue - 18 rounds.

XI. PROCEDURE 1

A. TRAINING DIVISION RESPONSIBILITIES.

1. The Training Division will maintain a current listing of firearm makes and model numbers that meet the requirements specified in this policy.

2. Firearm Issuance. Training will issue firearms to all Deputy Sheriffs who choose to carry an Office of the Sheriff owned firearm on duty.

3. Inventory. Training shall maintain a record of the make, model, serial number and current location of all Sheriff's firearms used on duty.

4. Seized Firearms. Training is responsible for converting seized firearms to County property for use by the Office of the Sheriff. All converted firearms, except those maintained in the Forensic Services Division firearms collection, shall be recorded on the Office of the Sheriff inventory. Seized firearms may not be purchased by retiring Deputy Sheriffs. Refer to Office of the Sheriff Policy Section 1.07.33, Purchase of Office of the Sheriff Firearms.

5. Serviceability and Maintenance. Training will ensure that all Office of the Sheriff firearms are inspected for safety and serviceability prior to issuance. The inspection will be performed by an authorized service facility or an authorized armorer.

a. All repairs to Office of the Sheriff owned firearms shall be contracted to an authorized service facility or an authorized armorer by the Unit. Upon request, Deputy Sheriffs may utilize the Office of the Sheriff contract to inspect or repair personally owned firearms. The cost of the service will be borne by the Deputy.

XII. PROCEDURE 2.

A. DEPUTY SHERIFFS RESPONSIBILITIES.

1. Issuance. Deputy Sheriffs choosing to carry an Office of the Sheriff owned firearm on duty shall contact the Training Division for issuance.

2. Personally owned Firearms. Deputy Sheriffs may use their own firearm while on duty. All personal firearms used as a duty firearm shall conform to Office of the Sheriff standards. Personally owned firearms shall be purchased by the Deputy at no cost to the Office of the Sheriff. The County will not reimburse or replace personally owned firearms.

3. Loss or Theft. Any loss of an Office of the Sheriff owned firearm shall be compensated for by the Deputy unless the loss occurs in the line of duty. A written report shall be made to the appropriate Bureau Assistant Sheriff as soon as possible. If the firearm is stolen, the appropriate crime report must also be submitted.

[redacted]

5. Care and Maintenance.

   a. Firearms shall be maintained in a clean operating condition at all times.

   b. Under no circumstances will Deputy Sheriffs have any Office of the Sheriff's owned firearm altered or modified, except as permitted in General "C".

   c. Office of the Sheriff owned firearms in need of repair will be turned in to the Training Division for servicing.

   d. Personally owned firearms in need of repair are the responsibility of the owner. Repairs to personally owned firearms may be serviced by the Office of the Sheriff authorized service facility or armorer at the owner's expense, or the Deputy Sheriff shall provide a "certificate of inspection" to the Training Division Commander.

   e. Personally owned firearms shall be subject to inspection by the Office of the Sheriff authorized service facility or armorer during annual training and/or summer qualifications.

      - The Training Division will issue a replacement semiautomatic firearm when needed as appropriate.

XIII. PROCEDURE 3.

A. DIVISION COMMANDERS' RESPONSIBILITY. Inspections of Deputy Sheriffs' firearms shall be conducted by Division Commanders or their designated representatives in conjunction with employee evaluations. The inspection will include:

1. Cleanliness of the firearm
2. Conformance to Sheriff's Office standards
3. Approved ammunition

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.33
	RELATED ORDERS: PC 12078, 27060, 27065; CCCSO 1.04.72, 1.07.12, 1.07.32.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 6-6-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Purchase of Office of the Sheriff Firearms**	

I. POLICY.

A. Purchase and sale of weapons systems must be approved and accomplished from a single location in order to maintain accountability. Therefore, the Administrative Services Bureau Assistant Sheriff will maintain a centralized system to approve the purchase and sale of all weapons systems for the Office of the Sheriff.

B. Ownership of Office of the Sheriff owned firearms may be transferred to a Deputy Sheriff only as prescribed by law with specific approval of the Sheriff.

II. DEFINITIONS.

A. DEPUTY SHERIFF. All sworn personnel, for the purposes of this policy.

B. HONORABLY RETIRED. Includes all peace officers who have qualified for, and have accepted, a service or disability retirement. Honorably Retired does not include an officer who has agreed to a service or disability retirement in lieu of termination.

C. WEAPONS SYSTEMS. Firearms or other devices that are authorized for deployment as described in Sheriff's Policies and Procedures 1.07.32, Authorized Firearms and Ammunition.

D. ARMORER LINK. A firearm, equipment, and training management database.

III. GENERAL.

A. Sheriff's personnel shall forward all requests to purchase weapons systems via the chain of command to the Administrative Services Bureau Assistant Sheriff for approval. This includes purchases made using open purchase orders.

B. The Fiscal Unit shall direct vendors to deliver all weapons systems to the Sheriff's Range.

C. All purchases and sales shall comply with State and Federal laws regulating weapons systems. All transactions and appropriate paperwork shall be filled out consistent with applicable laws, with the specific approval of the Sheriff, or his designee.

D. Upon delivery of weapons systems and before dispersal to the applicable divisions/employee, authorized Training Division personnel shall affix an Armorer Link asset label to each weapon and enter the weapons system information into the Armorer Link database. The information entered shall include the division where assigned, the serial number, Armorer Link asset tag number, type of weapon, caliber or gauge as applicable, the purchase order number used, the date placed in service, and the name of the grant used to purchase the item if applicable. Data entry will occur in a timely manner to ensure an accurate inventory. Inventory control shall conform with Office of the Sheriff Policy 1.07.12 Inventory Control.

E. The Office of the Sheriff may sell a duty weapon to an honorably retiring Deputy Sheriff.

1. The retiring Deputy must petition, prior to retirement, the Sheriff or his/her designee for permission to purchase the firearm(s) assigned to them at the time of retirement. Petitions to purchase must be made via written memorandum through the employee's chain of command a minimum of thirty (30) days prior to the employee's anticipated retirement date.

2. If the petition is granted, the firearm(s) will be sold for one dollar ($1.00) each.

3. Authorized Sheriff's Training Division personnel will process all firearm transfer transactions.

4. Upon approval for an employee to purchase his/her service weapon(s), payment for said weapon(s) will be made to an authorized Training Division employee. Once payment has been received, the Training Division Manager will update the Armorer Link information system and change the ownership record of the firearm(s) in the California Department of Justice Automated Firearms System (AFS) to ensure firearm inventory and ownership accuracy. The Training Division Manager will ensure the completed change of ownership is placed in the employee's personnel file.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.34
	RELATED ORDERS: CCCSO 1.07.23, 1.07.31, 1.07.32.	
ISSUE DATE: 2-1-2006 REVISION DATE: 5-6-2016	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Firearms Range Use Regulations	

I. POLICY.

A. The Office of the Sheriff Firearms Range is maintained for use by Deputy Sheriffs and authorized outside agencies. The Firearms Range is a privilege, subject to safety procedures and administrative controls. The use of the Firearms Range and classroom is restricted to active Office of the Sheriff personnel and those with a current contract.

II. DEFINITIONS.

A. RANGE AGREEMENT. A written signed document is required of all outside agencies that contract for use of the firearms range. The range agreement will contain terms and conditions for use of the range and will be renewed annually.

III. GENERAL.

A. It is the responsibility of individual Deputies/Officers to know the rules and policies concerning use of the Range. Violations of these rules and policies are subject to corrective action by the individual Deputy/Officer's chain of command.

B. The Rangemaster shall be empowered to enforce all rules and regulations concerning Range operation and use. Users of the Range must conform to the Range Rules and adhere to the directions of the Rangemaster.

1. The Marsh Creek Detention Facility Sergeant shall be responsible for enforcement of Range policy and procedure when the Rangemaster is not present.

2. The Rangemaster may inspect any weapon or ammunition to insure conformance to safety standards.

3. The final determination regarding the use of a specific type of weapon or ammunition rests with the Rangemaster.

C. WHO MAY USE THE RANGE. The following individuals and groups are authorized to use the Office of the Sheriff Firearms Range:

1. Office of the Sheriff Deputies;

2. Guests of Office of the Sheriff Deputies;

3. Members of other law enforcement organizations which have a current Range Contract on file with the Office of the Sheriff;

4. Quasi-law enforcement personnel meeting the above criteria who have been approved by the Sheriff; and

5. Special guests approved by the Sheriff or his designee.

6. Honorably retired Office of the Sheriff Deputies who have made prior arrangements with the Rangemaster.

D. RULES FOR USE OF RANGE. The following rules apply to all individuals and groups using the Office of the Sheriff Firearms Range:

1. Never fewer than two (2) persons will be allowed to use the Range when the Sheriff's Rangemaster is not present. (Shooter plus a responsible person, e.g. wife/husband, friend or other adult capable of rendering first aid or seeking help in the event of an emergency.)

2. All range users shall wear ear and eye protection whether they are actually shooting or coaching.

   a. All outside agencies will be required to provide their personnel with appropriate ear and eye protection.

   b. Failure to use ear and eye protectors will be deemed cause to cancel Range privileges and any agreement thereto.

3. Groups from outside agencies must have one person in charge to act as Rangemaster. Authorization as Rangemaster may be done via letter from their agency or by displaying a current Certified Police Firearms Instructor's Certificate. All Certificates are to be presented to the Office of the Sheriff Rangemaster prior to any confirmation of use of the Range.

4. Groups from outside agencies must also submit a lesson/training plan to the Sheriff's Rangemaster for review prior to confirmation of use.

5. Inexperienced shooters must be under the direction and supervision of an experienced shooter. (Experience met through qualification.) Shooting is permitted only when the experienced shooter is present.

6. Shooting is allowed only where permitted and only at targets.

   a. Targets will be furnished to Office of the Sheriff's personnel only.

   b. All other County agencies and outside agencies must provide their own targets and overlays, or purchase them from the Office of the Sheriff.

7. The Range grounds, facilities, or equipment shall not be damaged. Report any damage or anything in need of repair or maintenance to the Sheriff's Rangemaster or Sheriff's personnel at the Marsh Creek Detention Facility Office.

8. Upon completion of shooting, all shooters must leave the Range in a neat, orderly condition. This includes:

a. Inspecting the Range.

b. Policing the grounds (empty cartridges, targets, paper, etc.).

c. Putting supplies away and locking buildings.

d. Returning all keys to Marsh Creek Detention Facility office and signing out.

E. RANGE HOURS/SCHEDULING USE OF RANGE.

1. The Sheriff's Range is available for use Monday through Friday: 0800 - 2200 hours, and Saturdays 0900-1600, Sundays and Holidays: 1000 – 1600 hours unless prior approval has been obtained from the Training Division Lieutenant.

2. Weekend scheduling is reserved for Deputies of the Office of the Sheriff and organized groups scheduled by the Sheriff's Rangemaster.

3. Office of the Sheriff personnel shall contact the Sheriff's Rangemaster at [redacted] or the Marsh Creek Detention Facility Office at [redacted] during hours the Sheriff's Rangemaster is not present, to ascertain if the Range is available for their use.

4. Authorization to shoot will be denied if in conflict with prior reservations. Before utilizing the Range, Sheriff's personnel must wait until the Range has been vacated by persons with prior reservations.

F. EQUIPMENT.

1. Only Office of the Sheriff authorized handguns or otherwise legal firearms may be fired on the Range (except those listed as "Restricted" below).

2. Holsters will be used for all handguns.

G. RESTRICTED WEAPONS AND AMMUNITION.

1. No rifles larger than .22 caliber (Exception: S.W.A.T. Team exercises or Crime Lab or others authorized to use the Range with prior approval from the Sheriff's Rangemaster or the Training Unit.)

a. Approved rifles and shotguns are restricted for use on Ranges 5 and 6 only without prior approval from the Sheriff's Rangemaster or the Training Unit.

b. The use of rimfire ammunition (22 long rifle, etc.) is prohibited on ranges 1 and 4.

2. No automatic weapons of any kind (Exception: S.W.A.T. Team) unless prior approval is obtained from the Sheriff's Rangemaster or Training Unit.

3. No armor piercing ammunition.

4. No tracer ammunition.

IV. PROCEDURE 1.

A. SIGN IN/REGISTRATION. Prior to the start of shooting, all shooters, including Marsh Creek Detention Facility personnel, must sign in, complete a registration

form at the Sheriff's Rangemaster's Office, and ensure the Sheriff's Rangemaster is aware of their presence.

1. Shooters using the Range facilities when the Sheriff's Rangemaster is not present, must sign in at the Marsh Creek Detention Facility office at which time they will be issued the keys to the Range, telephone and restrooms. A "Group Leader" must be identified on the Range Use Roster. The Group Leader will be responsible for members of his/her group. A second Group Leader will be required for groups with more than five shooters. At no time should there be more than five shooters per Group Leader. For larger organized groups, a Rangemaster must be identified and must account for all individuals shooting.

2. During scheduled Office of the Sheriff classes or competition, registration may be taken by officials at the Range.

3. Sheriff's personnel will be provided a cardboard target and a paper target overlay by the Sheriff's Rangemaster. Sheriff's personnel may obtain targets from the target storage area when the Sheriff's Rangemaster is not present using keys issued from the Marsh Creek Detention Facility office. If the cardboard target is still useable at the end of the shoot, it should be returned to the Range equipment room.

4. The Training Unit will be responsible for providing necessary forms, auditing of completed forms and recommendation for any necessary changes.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.35
	RELATED ORDERS: PC 830, 12025, 12027, 12031, 12050 CCCSO 1.07.12, 1.07.13	
ISSUE DATE: 2-1-2006 REVISION DATE: 4-23-2015	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: On-Duty General Employee Possession of Concealed Weapons	

I. POLICY.

A. No firearm shall be carried by a general employee during the performance of Office of the Sheriff duties without possession of the appropriate legal authority and express written consent by the Sheriff or designee.

II. DEFINITIONS.

A. LEGAL AUTHORITY. A valid endorsement by an employer/agency certifying an employee to carry a concealed weapon, or possession of a valid California Concealed Weapons License.

III. GENERAL.

A. PURPOSE. Procedures regarding the carrying and handling of any firearm by general employees are established to provide direction and to promote the safety of the public and Office of the Sheriff personnel.

B. FIREARM APPLICATION. All policies and procedures not exclusive to Deputies pertaining to firearms, weapons and ammunition shall also apply to general employees in accordance with Sheriff's Office Policy Section 1.07.12, Firearms Safety and Qualification and Section 1.07.13, Authorized Firearms and Ammunition.

C. CHANGES IN JOB ASSIGNMENTS. Any changes in job assignments and/or duties will necessitate a new request for authorization to carry a concealed weapon during working hours.

D. UNAPPROVED REQUESTS. The Sheriff's disposition is final, however, should circumstances change, new requests will be considered.

E. SHERIFF'S CONSENT. General employees possessing a CCW may, upon application and the written consent of the Sheriff or his designee, carry a weapon specified in the CCW while on duty. While it is the policy of this Office that general employees, including those with CCW's, may not carry weapons with them while on duty, the Sheriff will exercise his discretion to grant such permission when warranted. In exercising his discretion, the Sheriff will be guided by factors such as: (a) whether the general employee is an honorably

retired peace officer or Federal Agent with an articulable need to carry at work, (b) whether the general employee's duties present hazards warranting the carrying of a weapon for self-defense, and/or (c) such other matters as the Sheriff may determine, in his discretion, warrant the approval of an exception to the policy. Any grant of authority under this paragraph shall not vest any right in the employee, and the Sheriff may, without a hearing, revoke such authority at any time.

IV. PROCEDURE 1.

A. REQUEST FOR AUTHORIZATION.

1. Any general employee who maintains legal authority to carry a concealed firearm and feels a need to do so during working hours must submit a written request through the chain of command to the Sheriff or designee.

    a. The request should explain the specific need or circumstances for carrying the weapon during the performance of duty.

    b. A copy of the legal authorization to carry a concealed firearm must accompany the written request.

2. Each level in the chain of command will submit a personal recommendation along with the original request for review by the Sheriff.

3. The Sheriff will approve, deny or return the request for additional information, via the chain of command.

V. PROCEDURE 2.

A. DIVISION COMMANDER'S RESPONSIBILITIES.

1. Denials and requests for additional information will be routed through the requesting employee's Division Commander.

2. Approvals will be returned to the Division Commander, who will forward a copy to Internal Affairs.

VI. PROCEDURE 3.

A. INTERNAL AFFAIRS RESPONSIBILITIES.

1. Internal Affairs will ensure the approved general applicants receive the appropriate training to ensure compliance with Office of the Sheriff's firearm qualification requirements. Carrying a concealed firearm is prohibited until qualification requirements have been met.

2. Annual reviews of approved requests will be performed by the Concealed Carry Weapons Unit / Internal Affairs for any discrepancies or recommended changes.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.36
	RELATED ORDERS: U.S. Department of Transportation-Federal Aviation Administration Regulations; FAA Administrative Message, Nationwide 7-27-02; P.O.S.T. Bulletin #2008-20; 49 CFR 1544.219.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 2-16-2009	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Flying Armed**	

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** General Policy and Procedures	**CCCSO**	**NUMBER: 1.07.37**
	RELATED ORDERS: PC 33210, 25100(b) **POLICIES:** CCCSO 1.06.61 Use of Force 1.07.31 Firearms Safety and Qualification	
ISSUE DATE: 10-27-2011 **REVISION DATE: 11-7-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Shotguns and Patrol Rifles**	

I. POLICY.

A. The Office of the Sheriff recognizes the need for a variety of force options for sworn members. Rifles and shotguns are two additional options for deputies to use in the field following the guidelines of the Use of Force Policy. This policy is established in order to provide guidance regarding the carrying, handling, deployment and use of rifles and shotguns. The intent of the policy is to promote the safety of both the public and employees.

II. GENERAL INFORMATION.

A. AUTHORIZED WEAPONS AND MUNITIONS.

1. The authorized AR-15 series rifles are as follows:

   a. Bushmaster

   b. Colt

   c. Adams Arms

   d. Daniel Defense

   e. Del-Ton

   f. Fabrique Nationale d'Herstal (FN)

   g. Land Warfare Resources Corporation (LWRC)

   h. Smith and Wesson

   i. Stag Arms

   The rifle will have a standard or adjustable stock. The rifle will have a minimum barrel length of 16 inches as defined by the manufacturer or California Law (PC 33210). The rifle will be of .223 caliber/5.56 mm.

The authorized duty round for the rifle is the .223 / 5.56 mm caliber, 53 to 75 grain bullet. Authorized duty rounds will be from a manufacturer approved by the Sheriff's Training Division and duty rounds will be obtained from Sheriff's Training.

2. The authorized shotgun is a Remington brand, model 870, pump-action, 12 gauge, 18-inch barrel, standard stock, bead and/or rifle sighting system.

   Although this particular weapon is capable of firing a multitude of different munitions for different applications, the only munitions authorized for duty use are the 12-gauge (8 or 9-pellet) 00 buckshot round and the 12-gauge rifled slug.

B. TRAINING.

1. Deputy Sheriffs shall successfully complete a basic course of instruction in the deployment and use of the rifle prior to being authorized to carry and/or deploy the patrol rifle during their shift.
2. Training and qualification with the rifle will occur after the initial training class. Employees who deploy the rifle will have qualified within the last twelve months with the rifle. Employees who have not qualified with the rifle in the last twelve months will not deploy the weapon.
   a. Recertification training with the rifle will occur within a twenty- four month cycle, and will consist of four hours of instruction on the rifle. Recertification training will also include qualification with the rifle.
   b. Copies of completed training rosters will be maintained in the Deputy's division training file.
   c. The original training roster will be forwarded to the Sheriff's Training Unit.
3. The Assistant Division Commander of a Division authorized to deploy rifles is responsible for the maintenance of a roster identifying the date each deputy completed the Basic Rifle Course and their current qualification date. The roster will be reviewed by division managers on a monthly basis.
4. Deputy Sheriffs will train annually with the shotgun. The training will consist of range instruction by a certified range instructor.
   a. The training will include a demonstration and practical application on the range.

C. USE AND DEPLOYMENT.

1. When properly deployed, the rifle and shotgun provide an enhanced tactical resource, with each of them filling a different tactical role.

2. The rifle and shotgun can be more effective than a sidearm when dealing with certain critical and life threatening situations, to include overcoming heavily armed resistance, achieving containment and saving lives. Such situations include, but are not limited to:

   a. Violent and armed suspects who are wearing body armor.

   b. Subjects armed with high capacity automatic or semi-automatic weapons.

   c. Multiple armed suspects.

3. All usages of the rifle and shotgun shall be in accordance with the Department "Use of Force" Policy 1.06.61, and the "Firearms Safety and Qualification" Policy 1.07.31.

   a. When not in use, the rifle and shotgun shall be secured in the designated armory. Weapons shall not be stored in vehicles for extended periods (typically overnight).

D. DOCUMENTATION.

1. Any incident involving the use of the rifle or shotgun will be fully documented in a Department report, and will include the following specific information:

   a. The name of the employee deploying the weapon.

   b. Circumstances surrounding the deployment of the weapon.

   c. Number of rounds fired.

   d. Distance between the suspect and the employee deploying the weapon.

   e. Area of suspect's body struck by the fired rounds.

   f. Injuries sustained by the suspect and subsequent medical treatment.

   g. Any collateral damage (unintended injured person, property damage, etc.)

E. MAINTENANCE AND CARE OF THE RIFLE AND SHOTGUN.

1. Rifles will be maintained according to the guidelines of the manufacturer and common firearm maintenance procedures.

   a. In the event a rifle becomes wet or soiled, the operator shall ensure that rifle is cleaned and lubricated.

   b. Managers are responsible for ensuring that assigned rifles are cleaned and lubricated minimally at least at each shift change.

   c. Managers are responsible for reporting completed maintenance to the Division's designee.

   d. Each Division will maintain a roster of routine maintenance that is

reported as having been completed by all Division Managers.

e. Annually, all rifles will be inspected, fired, and serviced by the designated armorer.

f. Rifles that require service beyond the capabilities of Department Armorers will be returned to the manufacturer or their designee for services.

2. Rifles or shotguns found to be defective shall be immediately forwarded to the Training Division armory for repair and replacement.

3. Rifles will be maintained in their original factory assembled condition and will not be modified, except for department purchased and installed sighting systems.

F. SAFE AND SECURE FIREARMS STORAGE FOR REQUIRED TRAINING.

1. All agency rifles shall be handled, maintained, and stored in a safe and secure manner whether on-duty or off-duty. It is incumbent upon each employee to exercise good judgment, common sense and compliance with training when handling and storing any firearm.

a. Deputies who are attending required rifle training classes may, with their supervisor's permission, take the rifle home on their last workday prior to scheduled training.

b. In the event employees choose to transport their rifle to their residence for storage before training, personnel shall transport and store their weapons in a department issued locking case. Rifles shall be transported unloaded and a department issued cable gun lock shall be used to render the firearm inoperable.

c. Rifles shall not be left unattended in a vehicle.

d. Employees are reminded that Penal Code section 25100(c) states, in part, that a person commits the crime of criminal storage of a firearm if he/she keeps any loaded firearm with any premises that are under his/her custody or control and he/she knows or reasonably should know that a child (under 18 years of age) is likely to gain access to the firearm.

e. Rifles will be returned to the deputy's work location no later than their first day back to work or within 72 hours of the training date.

f. Each station house commander will designate a supervisor to maintain a current inventory of patrol rifles to include those rifles being temporarily stored at a deputy's residence for required training.

III. PERSONNALY OWNED PATROL RIFLES

A. PROGRAM PARTICIPATION CRITERIA.

1. To participate in this program the employee must be a full-time sworn member, in good standing, with the Sheriff's Office.

2. The employee must have successfully completed the basic patrol rifle course of instruction and be currently qualified to deploy a patrol rifle.

3. The employee must have successfully completed the Patrol Division Field Training Program.

B. PURCHASE AUTHORIZATION / APPROVAL PROCESS.

1. The employee will complete and submit a "Request to Purchase Patrol Rifle for Official Use" memorandum requesting to purchase an authorized rifle for duty use. The memorandum shall be addressed to the Sheriff and sent via the chain of command to the employees Division Commander. The memorandum will include the following information:

   a. The employee meets the program criteria listed in section A.

   b. Make, model, and general specifications for the rifle they wish to purchase, which must coincide with department policy stated in A.1. of this policy.

   c. The name, address, and telephone number of the firearms dealer the employee is using to complete the sales transaction.

   d. Completed and signed Purchase Agreement and Waiver of Liability Regarding Personally Owned Patrol Rifles. By signing this agreement, employees agree to comply with all sections contained in it. When completing this waiver, employees shall provide the brand name and model number of the rifle they wish to use while on duty. The information will be recorded on the Purchase Agreement Form and updated as necessary. The serial number of the firearm will be recorded on the Purchase Agreement Form when the purchasing employee takes delivery of the firearm.

2. The employees Division Commander will forward a copy of the memorandum to the Training Division Commander who will verify the rifle in question meets the departmental specifications for duty use. The Training Division Commander will also verify that the employee has completed the basic patrol rifle course and is currently qualified to deploy with a patrol rifle.

3. If the Training Division Commander finds that this request meets all the requirement outlined in this policy, he/she will forward the request to the Sheriff for approval. If the request does not meet policy, it will be returned to the requesting employee for correction.

4. The employee shall comply with all assault rifle registration requirements from the State of California and provide proof of compliance by submitting a copy of the Peace Officer Assault Weapon Registration Application and a copy of the registration verification letter from the State.

5. After the employee takes possession of the rifle they will arrange to have it inspected and certified by the Range Master. This inspection will take place within 2 weeks of date of delivery unless circumstances beyond the control of the employee delay inspection. A file will be maintained by the Training Division regarding each personally owned rifle. The file will contain a copy of the Purchase Agreement, a copy of the Assault Weapon Registration letter, and a copy of the inspection report detailing the rifles compliance with departmental specifications. Only rifles that have been inspected and approved by the Range Master are allowed to be deployed for duty use.

6. The employee will qualify with the rifle as outlined in Sheriff's Office General Policy and Procedure section 1.07.31 – Firearms Safety and Qualification, prior to deploying the rifle for duty use.

7. The Training Division Commander will forward the Purchase Agreement, proof of registration, and inspection report to the Chief of Management Services. The Chief of Management Services will ensure that hardcopies of these documents are placed into the employee's personnel file.

8. The steps for requesting authorization for deployment of a rifle the employee already legally possesses are the same as above except the original requesting memorandum should reflect the employee already legally possesses the rifle they wish to use in the performance of their official duties.

9. In the event a member separates from the Sheriff's Office, he/she will abide by one of the following options regarding the possession of the patrol rifle.

    a. Upon mutual agreement between the employee and the Sheriff's Office, the employee can sell the rifle to the Sheriff's Office for fair market value, not to exceed the original purchase price, provided it is still in good working order and condition. If the rifle is in need of repair, the cost of these repairs will be deducted from the purchase price.

    b. The employee can arrange for the rifle to be transferred to another eligible member of the Sheriff's Office. He/she will allow the agency to select a Licensed Dealer for this transaction. The agency will deliver the rifle to the Licensed Dealer in order to verify all applicable State and Federal regulations are complied with.

    c. Upon separation from the Sheriff's Office, it is the employee's obligation and responsibility to modify the rifle to ensure that it is compliant with current California law at the time of separation.

    d. Three (3) rifle magazines will be issued to the employee by the department. The magazines will be returned to the department upon separation or once the employee is no longer an active law enforcement officer.

C. AUTHORIZED PATROL RIFLES FOR PURCHASE

1. In the interest of ensuring that patrol rifles are reliable, functional, and dependable, employees are only allowed to purchase rifles that are approved for use by the department as specified in section A.1. of this policy. This includes all equipment affixed to the patrol rifle (sighting system, sling, etc.)

2. Magazines for the patrol rifle must have the capacity to hold no more, or less, than 30 rounds of ammunition, and each rifle will have a complement of 3 magazines. Magazines will be inspected at the time the patrol rifle is inspected by Range Master.

3. The trigger must function in semi-automatic mode of fire only and be of a single stage variety. The trigger pull weight shall not be less than five pounds. Two stage or "Match" triggers are specifically not authorized.

4. The finish of the patrol rifle must be black.

5. Although an uncommon occurrence, if the Sheriff's Office makes a

technological upgrade to the departmental weapons systems, the owners of authorized rifles are responsible for the upgrade of their rifles to the same specifications. Compliance must be met within 30 days, with certain exceptions based on availability. Any employee unwilling to do this may choose to surrender the rifle to the Sheriff's Office for compensation, based upon fair market value.

6. All rifles will have a lockable soft sided, padded case, or lockable hard sided case. These cases will be used to protect the rifle and equipment during transportation and storage.

7. The rifle must be assembled by the manufacturer. "Kit" rifles are specifically prohibited.

8. Any modifications or accessories not addressed above require the approval of the department Range Master prior to being installed on the rifle. Whatever approved modifications are made, the rifle must still lock properly in the patrol vehicle locking system.

9. The rifle shall be inspected annually by the department Range Master and at each qualification date.

10. All ammunition for duty use will be provided by the Training Division. Personal ammunition will not be permitted for duty use.

D. AGENCY LIABILITY

1. The Office of the Sheriff and the County will not accept liability for the loss, theft, damage, or total destruction of personally owned patrol rifles that are the personal property of employees who have been allowed to use them while on-duty. By signing the Purchase Agreement and Waiver of Liability, employees agree to all provisions of this statement.

2. In the event damage to a personally owned patrol rifle occurs, that is entirely beyond the control of the employee resulting from a law enforcement function, employees may request reimbursement/repair. In these cases, members shall submit a memorandum to the Sheriff, via chain of command, explaining the circumstances of the damage and request consideration for reimbursement. The final decision regarding reimbursement remains with the Sheriff or his designee.

3. The employee is responsible for the proper maintenance and repair of his/her personally owned patrol rifle. If repair is needed and it is within the scope of the departmental armorer's capabilities, the armorer may repair the rifle with the employee being responsible for the cost of the required parts. If the repairs needed are beyond the scope of the departmental armorer's capabilities, the employee is responsible for sending the rifle to the original manufacturer for the repairs.

4. In case of an Officer Involved Shooting with the personally owned patrol rifle, the employee will surrender the rifle to the proper authority for placement into evidence as part of the investigation. The employee will be provided with a department issued patrol rifle, until such time the personally owned rifle can be returned. The Sheriff's Office is under no obligation to replace any rifles

placed into evidence.

5. If an employee has his/her police powers suspended and the employee is on administrative leave, he/she will surrender their rifle and magazines at the same time as their issued firearm, badge, and identification card. When the employee is returned to duty, the rifle and magazines will be returned to him/her along with the remainder of their issued equipment.

E. SAFE AND SECURE FIREARMS STORAGE

1. All agency authorized rifles shall be handled, maintained, and stored in a safe and secure manner, whether on-duty or off-duty. Employees assume a tremendous level of responsibility when exercising their authority to carry a firearm. This responsibility extends and applies to the safe storage or firearms, when they are not being used. It is incumbent upon each employee to exercise good judgement, common sense and compliance with training when handling and storing any firearm.

   a. Employees are recommended to store their rifles at their duty station. Secure lockers will be available at each duty station to facilitate this storage. Employees will be able to ensure their rifle is stored in compliance with all State and Federal laws by utilizing this option. This will also reduce the exposure to theft by not having to transport the rifle during the daily commute.

   b. In the event employees choose to transport their rifle to their residence, personnel shall utilize a storage method that will prevent theft or unauthorized access such as a safe or lockable cabinet. Employees shall notify their supervisor that they are keeping their rifle at their residence.

   c. Employees are reminded that Penal Code section 25100(b) states in part that a person commits the crime of criminal storage of a firearm if her/she keeps any loaded firearm within any premises that are under his/her custody or control and he/she knows or reasonably should know that a child (under 18 years of age) is likely to gain access to the firearm. It is of paramount importance to assure that firearms stored in the home are stored safely and made inaccessible to children.

   d. Off-duty, personally owned patrol rifles are prohibited from being stored in an unattended personal or Sheriff's Office vehicles. If exigent circumstances exist that requires an employee to leave the firearm in an unattended vehicle, it should be placed in a locked trunk or a locked storage compartment, and never left in plain view.

   e. While on-duty, the patrol rifle should be stored in a secure locking system in the employees assigned vehicle or in a secure location at the employees work location.

   f. When storing firearms, employees shall exercise care and caution to assure that the weapon is not unnecessarily handled or exhibited and that the storing of the firearm is achieved as expeditiously and safely as possible.

PURCHASE AGREEMENT AND WAIVER OF LIABILITY REGARDING PERSONALLY OWNED PATROL RIFLES

I,_____, certify that I am a sworn member of the Contra Costa County Office of the Sheriff and that I desire to purchase a personally owned patrol rifle for usage in the course of my official duties. I have read and fully understand the Contra Costa County Office of the Sheriff's Policy *(1.07.37 Shotguns and Patrol Rifles)* pertaining to the use of personally owned patrol rifles by members of the Sheriff's Office. I understand the restrictions placed on the purchase, storage, and use of personally owned patrol rifles outlined in the Policy and I will comply with all the provisions of the Policy.

By affixing my signature to this agreement/waiver, I acknowledge and accept the fact that the County of Contra Costa and/or the Contra Costa County Office of the Sheriff will not accept responsibility for the loss, theft, damage or complete destruction of my personally owned patrol rifle as a result of any circumstance or incident which occurs, either during on-duty or off-duty hours, except as otherwise provided by policy, at any place where I am authorized by the Sheriff's Office to use my personally owned patrol rifle. I understand the provisions of this waiver also apply in regard to instances of damage to my personally owned patrol rifle resulting from its use by another Agency member with my permission.

I further agree that I will hold the County of Contra Costa and the Contra Costa County Office of the Sheriff harmless for the loss, theft, damage or complete destruction of my personally owned patrol rifle.

I further understand that a procedure exists which may allow compensation for the repair or replacement of my personally owned patrol rifle in the event the damage is caused by a situation which is entirely beyond my control, resulting from a law enforcement function.

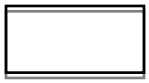
I agree to properly store my personally owned patrol rifle in accordance with all aspects of California Penal Code Sections 25100-25135, regarding the safe storage of firearms. I understand and agree that, when off-duty, I am to store this rifle in a locked gun safe or locked gun cabinet in my home or in a locked armory at the station. I further agree to advise my supervisor if I intend to transport and store my personally owned rifle at my home.

I agree to comply with all of the purchase restrictions of the Policy pertaining to the use of personally owned patrol rifles. I understand that the rifle can be placed into evidence, without compensation or replacement, as a result of its use in an incident.

I agree that if I am placed on administrative leave and have my police powers suspended, I will surrender the rifle, without compensation or replacement, to competent authority until such time as my police powers are restored.

I further agree that if I separate from the Contra Costa County Office of the Sheriff, I will abide by one of the following options regarding the possession of my personally owned patrol rifle:

1. If I desire to sell the rifle upon separation to the Contra Costa County Office of the Sheriff, and if the Office of the Sheriff desires to buy the rifle, the sale will be priced at fair market value, not to exceed the original purchase price. Fair market value shall include factors such as age, use, working order and condition. I understand that if the rifle is in need of repair, the cost of these repairs will be considered in setting the fair purchase price. The decision whether to purchase a rifle that is offered for sale to the Sheriff's Office shall be at the Sheriff's Office's discretion.



2. I can arrange for the rifle to be transferred to another eligible member of the Sheriff's Office. I agree to allow the agency to select the Licensed Dealer for this transaction. I understand the Agency will deliver the rifle to the Licensed Dealer in order to verify all applicable State and Federal regulations are complied with.

3. Upon separation from the Sheriff's Office, it is the employee's obligation and responsibility to modify the rifle to ensure that it is compliant with current California law at the time of separation.

RIFLE SPECIFICATIONS

Brand of Rifle: _____ Model Designation: _____

Serial Number: _____ Purchase Price: _____
(Including Accessories)

Authorized Accessories: _____

_____

_____

I certify the above rifle complies with all the specifications of the Contra Costa County Office of the Sheriff regarding personally owned patrol rifles. I hereby certify that I have read and understand all the information on the previous page and agree to everything contained within this agreement.

_____ _____
Signature of Employee Date

_____
Printed Name of Employee

_____ _____
Signature of Sheriff or Designee Date

_____
Printed Name of Sheriff or Designee

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.38
	RELATED ORDERS: None.	
ISSUE DATE: 7-12-2012 **REVISION DATE:** 05-06-2016	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Automated License Plate Reader (ALPR) Devices**	

I. POLICY.

A. It is the policy of the Sheriff to enhance patrol and investigatory capabilities by utilizing the latest technologies for crime prevention and the apprehension of criminals, while being cognizant of legitimate privacy concerns of law abiding citizens. By deploying Automated License Plate Readers (ALPRs), members of the Sheriff's Office can utilize this technology to scan, detect, and identify license plate numbers which appear on various "Hot Lists."

II. GENERAL.

A. The use of ALPR devices enhances productivity, effectiveness, and officer safety by alerting officers to the presence of vehicles that appear on the "Hot List." ALPR Devices are typically used to identify stolen vehicles, wanted vehicles, stolen license plates, missing persons, and persons of interest. ALPR devices can also be used to gather information related to active warrants, homeland security, electronic surveillance, suspect interdiction, and the recovery of stolen property. Authorized ALPR devices may be deployed as mobile units, as fixed units, or as hand-held devices. ALPR equipment may be operated by employees and qualified volunteers, who have been trained in its operation. ALPR data will be safeguarded and used for official business only.

III. DEFINITIONS

A. ALERT. A visual and/or auditory notice that is triggered when the ALPR system receives a potential "Hit" on a license plate.

B. AUTOMATED LICENSE PLATE READER (ALPR). A device that uses cameras and computer technology to compare digital images to lists of known plates of interest.

C. HOT LIST. License plates associated with vehicles of interest from an associated database, including but not limited to NCIC, CLETS, JAWS, BOLOs, etc. These lists serve an officer safety and investigatory purpose. The list provides a source for creating an alert when a specific license plate number is "read" by the ALPR device.

D. HIT. A read matched to a plate that has previously been registered to an agency "Hot List" of vehicle plates related to stolen vehicles, wanted vehicles, or other

factors supporting investigation, or which has been manually registered by a user for further investigation.

IV. PROCEDURE

A. ALPR PROGRAM MANAGEMENT.

1. Management of the serviceability and deployment of ALPR equipment is the responsibility of the Patrol Division Commander. The Patrol Division Commander is responsible for:

    a. Identifying and training personnel in the operation of ALPR equipment.

    b. Identifying and training personnel in the function and proper alignment of ALPR equipment.

    c. Assist Fleet Services with coordinating necessary system repairs, hardware, or software, with authorized sources.

2. Management of ALPR data and the publishing of a daily "Hot List" to the ALPR devices are the responsibility of the Technical Services Division Commander. The Technical Services Division Commander is responsible for:

    a. Establishing protocols for access, collection, storage and retention of ALPR data and associated media files.

    b. Establishing protocols to preserve ALPR reads and data for conducting criminal prosecutions.

    c. Establishing protocols and procedures to ensure the safety and security of the ALPR data that is collected and retained.

    d. Establishing a procedure for documenting the successful use of ALPR devices in supporting law enforcement operations.

3. Management of ALPR training and record keeping from this training is the responsibility of the Training Division Commander. The Training Division Commander is responsible for:

    a. Developing a course of instruction on the operation and functions of ALPR devices. This course will include a review of this policy, the operation of the ALPR devices, the legal concerns regarding the operation of ALPR devices.

B. ALPR DEPLOYMENT.

1. Only trained employees and volunteers will deploy ALPR devices.

2. Only ALPR devices authorized by the Technical Services Division will be used by employees and volunteers to collect ALPR data.

3. ALPR devices will only be used to scan license plates of vehicles that are in places that are within public view.

4. ALPR devices may be used during normal patrol operations or while conducting criminal investigations. Reasonable suspicion or probable cause is not required to utilize the equipment.

5. ALPR devices should be considered to canvass the surrounding area of a serious incident or a terrorist incident to collect the license plate numbers of vehicles in the area.

6. ALPR devices may be deployed as part of a mutual aid request when approved by the Station Commander or the Watch Commander.

C. ALPR DEVICE INSPECTION / MAINTENANCE.

1. Prior to deployment, ALPR cameras will be inspected by the operator for damage and serviceability. Damage to cameras or other ALPR equipment will immediately be reported to a supervisor.

2. Prior to deployment, operators will ensure that the ALPR device is uploaded with the current "Hot List."

3. Vehicles equipped with ALPR devices will only be washed using brushless or hand-washing techniques. Taking the vehicle through a standard brush-equipped car wash may damage the ALPR cameras.

4. Only personnel who have been properly trained will perform adjustments to the alignment of ALPR devices.

5. Maintenance of ALPR devices will be coordinated through the Patrol Division Commander or his/her designee.

D. ALPR ALERTS / HITS

1. Once an Alert is received, the operator should confirm that the observed license plate matches the license plate of the observed vehicle.

2. **Before any law enforcement action is taken as a result of an ALPR Alert, the Alert will be verified through a CLETS inquiry via MDC or through Dispatch. Employees will not take any police action that restricts the freedom of any individual based solely on an ALPR Alert, unless it is validated.**

3. Because the ALPR Alert may relate to a vehicle and may not relate to the person operating the vehicle, officers are reminded that they need to have probable cause to make an enforcement stop of any vehicle. (For example, if a vehicle is entered into the system because of its association with a wanted individual, Officers should attempt to visually match the driver to the description of the wanted subject prior to making the stop, or should have another legal basis for making the stop.)

E. ALPR DATA MANAGEMENT / STORAGE.

1. All personnel are responsible for the security of ALPR data and may only access, use, release, and/or disseminate Hot List and file data for official and legitimate law enforcement purposes. Employees will safeguard ALPR data obtained from other law enforcement agencies and sources in the same manner.

2. ALPR data, when combined with Personal Identifying Information (PII) becomes intelligence data that must be provided additional safeguards. ALPR data will be stored separately from PII Data. These data sources may be combined when conducting analysis, but will not be stored on the

same drive as raw ALPR data. When ALPR and PII data are combined, they will be treated in accordance with current law.

3. ALPR data may be shared with other law enforcement agencies through the ARIES program, which is responsible for establishing safeguards regarding the contributed data.

4. ALPR data will be consolidated to a central storage device from field units. ALPR data will not be stored in field units nor on mobile collection devices for more than twenty-four hours. ALPR data will be shared with allied law enforcement agencies through the ARIES program.

5. ALPR data will be stored by the Office of the Sheriff for a period of one year. ALPR data that is stored will include photos and all data elements transmitted by the ALPR device. Data retention time periods may be shortened to meet data storage capabilities upon the direction of the Commander of the Technical Services Division.

6. Audits for the access of ALPR data will be conducted by the Technical Services Division. Employees who utilize ALPR data for non-official business will be subject to discipline under the County's Personnel Management Regulations.

7. In addition to administrative discipline, employees who misuse or unlawfully release ALPR data may be subject to civil, criminal and disciplinary action.

F. ALPR TRAINING.

1. ALPR operator training will be offered to both employees and volunteers.

2. ALPR training will follow the recommended training outline of the equipment vendor and will include:

   a. Training on current ALPR case law.

   b. This policy.

   c. Understanding the privacy concerns surrounding ALPR.

   d. Setup and maintenance procedures.

   e. Proper use guidelines.

3. Training courses and scheduling will be implemented by the Patrol Division in consultation with Technical Services.

4. Annual ALPR system training will be conducted via Six Minute Line Up training.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.41
	RELATED ORDERS: California Accounting Standards & Procedures for Counties.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 8-26-2013	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Purchase of Vehicles and Equipment**	

I. POLICY.

A. The Sheriff specifies policy for the acquisition of fleet equipment by Division Commanders for replacement of or supplement to fleet equipment.

II. GENERAL.

A. The General Services Department (G.S.D.) has the responsibility of maintaining and ordering fleet equipment for the County.

B. To help maintain the County fleet, each vehicle has an Internal Service Fund (ISF) depreciation fund. Divisions pay this monthly ISF depreciation charge set by G.S.D. on each vehicle in its fleet. These monies accumulate over a period of time and are available for replacement of vehicles.

C. Vehicles being replaced also have a salvage value. This is determined by the resale value of the vehicle and is also credited toward the purchase of a new vehicle.

D. G.S.D. receives a fleet budget. The amount is determined during the County budget process based partially on input from County departments as to how the money is allocated to the different departments.

E. G.S.D. provides each County department with a list of vehicles to be replaced. This list is devised using vehicle mileage, vehicle age and ongoing maintenance costs in relation to the fleet budget for each department. Through Division input, this list can be revised, possibly changing the priority of vehicles to be replaced.

III. PROCEDURE 1.

A. REPLACEMENT VEHICLES. A vehicle must meet the county mileage requirement (regardless of age) in order to be considered for replacement. Required mileages for replacement are as follows:

1. Cars and Vans @ 90,000 miles
2. Trucks and SUVs @ 100,000 miles
3. Medium and Heavy-Duty Trucks @ 120,000 miles
4. Transport Buses @ 180,000 miles

B. ADDITION or UPGRADE OF VEHICLES: Division Commanders may request the addition or upgrade of a vehicle that is not on the GSD replacement list.

1. Division Commander. The Division Commander or designee completes the first section of the Fleet Equipment Acquisition/Replacement Request Form and forwards it to the Technical Services Division Commander.

    a. State which vehicle is to be added/upgraded and the type of vehicle being requested.

    b. Provide a letter of justification for replacement and justification of sole-source if only one vendor/manufacturer is to be used.

2. Technical Services Division.

    a. The Assistant Division Commander and Fleet Coordinator will estimate the cost of the replacement vehicle and any related equipment.

    b. The Assistant Division Commander and Fleet Coordinator will obtain the depreciation and salvage value of the vehicle being replaced from G.S.D.

    c. The Communications Specialist and Fleet Coordinator will determine if the electronic equipment is to be transferred and/or if new equipment is to be purchased.

    d. The Communications Specialist will estimate the cost of communications equipment purchase and installation or transfer.

    e. The Form is then forwarded to Administrative Services for a financial report. The Sheriff's Fiscal Officer will determine if monies are available and will forward the Form to the Undersheriff with recommendations.

    f. The Form is then returned to the Technical Services Division, who will notify the requesting Division Commander and initiate appropriate action. Route copy to the Administrative Services Fiscal Officer.

C. ADDITIONAL PURCHASES. The preceding procedures also apply for the purchase of additional vehicles or additional equipment.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.42
	RELATED ORDERS: County Administrative Bulletin 407.5, 407.6, 407.7; CVC 165, 27315, 27315.3, 27315.5; D.S.A. Memorandum of Understanding, Section 10.4; CCCSO1.06.27.	
ISSUE DATE: 2-1-2006 **REVISION DATE: 8-3-2021**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Assignment, Use and Parking of Vehicles**	

I. POLICY.

A. The Office of the Sheriff maintains a fleet of County vehicles. Assignment and use of those vehicles is restricted to official Office of the Sheriff business.

II. DEFINITIONS.

A. OFFICIAL COUNTY BUSINESS. Authorized activities by proper authority to conduct one's occupation or work.

B. DESIGNATED FIELD STAFF. Deputies or Sergeants whose assignments require them to conduct fieldwork as part of their duties (i.e. follow-up interviews/investigations, filing cases, obtaining and serving search warrants, serving eviction notices.) Such assignments include: Civil Unit, Deputies and Sergeant; Investigation Division Detectives, Deputies and Sergeants assigned to the Homicide Unit, Special Victims Unit, General Investigation Team and the Violence Suppression Unit; Administrative Services, Internal Affairs Sergeants.

III. GENERAL.

A. GENERAL OPERATIONS.

1. Employees whose duties include the driving of Office of the Sheriff vehicles shall possess a valid driver's license issued by the State of California, of a class applicable to the type of vehicle being driven. The license shall be carried at all times when operating a motor vehicle.

2. Employees shall observe courtesies of the road and practice defensive driving procedures and fuel conservation measures.

3. Drivers of Office of the Sheriff vehicles, under normal circumstances, shall observe all State and local laws governing the use of motor vehicles. Emergency Vehicle Operations is addressed in this Manual.

4. All personnel driving or riding in County vehicles shall wear safety lap/shoulder seat belts. Cars with broken seat belts will not be used. The driver shall ensure that a work order for repair of the seat belt is submitted.

a. Prisoners, upon request, may be restrained in the rear of the vehicle using lap belts provided. Exception: Should the prisoner behave in such a manner as to create a potential injury to the Deputy or prisoner, the belt need not be used until the prisoner can be restrained safely.

b. Exception: Passengers of transportation vans and buses shall be exempt from the wearing of safety lap and shoulder seat belts.

B. VEHICLE PARKING. The intent of this information is to reduce the chance of a runaway vehicle and the corresponding injuries which often occur as the result of negligence.

1. Every parked and unattended vehicle shall be in a safe position and in compliance with California Vehicle Code regulations.

2. Vehicles with automatic transmissions shall have the shift selector in the "Park" position. Vehicles with manual transmissions shall have the shift selector in "Reverse".

3. The front wheels shall be turned against the curb, when a curb exists. When chock blocks are furnished, they shall be placed as needed.

4. The vehicle's engine shall be stopped, the parking brake set and the ignition keys removed.

5. Vehicles shall be secured by locking doors and closing windows. The driver is responsible for safeguarding the vehicle and property therein.

6. All parked and unattended vehicles will be locked, including those parked in the County lots. Emergency situations are exempt.

7. All Office of the Sheriff trucks and recreational vehicles, upon parking in a non-emergency response situation, shall have one 18" orange traffic cone at the front and back of the parked vehicle. Prior to moving the parked vehicle, check for obstructions and secure doors, gates and transported items.

C. ASSIGNMENT OF OFFICE OF THE SHERIFF VEHICLES.

1. Office of the Sheriff vehicles shall not be assigned for regular 24 hour use except as authorized by the Sheriff or, in his absence, by the Undersheriff. All 24 hour vehicles assigned will be used in accordance with direction of or as required by the Sheriff. See “Home Garaging of County Vehicles by Sheriff’s Managers” and “Home Garaging of County Vehicles by Designated Field Staff” below.

2. Employees to whom vehicles are not regularly assigned shall use vehicles only when and as directed by a Supervisor.

3. Vehicles shall be used for official County business only.

4. Employees shall not use vehicles outside Contra Costa County except when in pursuit of suspects or while performing official County duties, or unless specifically directed by a Supervisor, or home garaging as described in Section B.

5. Marked patrol cars shall not be used by employees not assigned to the Patrol Division, nor by employees in the Patrol Division for other than

Patrol functions, except with the permission of a Station House Commander or above. Personnel needing a vehicle shall exhaust all other possibilities before requesting a marked patrol car for routine business. An "Out-of-Service" sign will be prominently displayed in both rear door windows whenever it becomes necessary to use a marked patrol vehicle for other than patrol. This includes parking enforcement employees.

6. An employee operating an Office of the Sheriff vehicle shall not permit persons other than authorized County employees to ride in the vehicle, except those persons required to be conveyed in the performance of duty, or as authorized by a Supervisor. Refer to Office of the Sheriff Policy Section 1.06.27, Ride-Along Program.

7. Office of the Sheriff employees shall not use County pool vehicles unless authorized by their Division Commander.

8. When using County pool vehicles, employees must sign in and out with the pool garage attendant.

    a. Employees must notify the pool garage attendant if they will be significantly delayed in returning cars.

    b. If vehicles are not returned within a reasonable time of scheduled check-in, and no delay has been reported, an inquiry to locate the vehicles shall be initiated by pool garage personnel. Local law enforcement officials will be notified if the vehicle cannot be located.

D. HOME GARAGING OF COUNTY VEHICLES BY SHERIFF'S MANAGERS. The Sheriff, in order to achieve optimum economy, will limit and control home garaging of Sheriff's vehicles for Managers of the Office of the Sheriff.

1. The home garaging policy is at the sole discretion of the Sheriff and will not be modified without approval of the Sheriff. Division Commanders may authorize a single overnight garaging of a vehicle in the case of an emergency. Bureau Assistant Sheriffs may authorize up to a week of home garaging of a vehicle in special or otherwise unusual circumstances. This Policy is separate from and shall not effect the home garaging policy as contained in Section 10.4 of the Deputy Sheriffs' Association's Memorandum of Understanding.

2. The Fleet Services Unit shall maintain a list of Managers that are approved for home garaging by the Sheriff. Approved Managers shall be listed by assigned position. Only those Managers on the then-current list may home garage their assigned vehicles. The list will be updated at least once a year as per section D3, but may be changed from time to time as needed at the discretion of the Sheriff. Fleet Services shall advise Managers, via the chain of command, of their addition to, or deletion from, the list.

3. Fleet Services Unit shall maintain a list of Managers that are recommended for home garaging by their respective commanders. This list will be forwarded to the Sheriff during the third quarter of each calendar year.

4. The Sheriff or his/her designee will issue an approved list by January 1st of each calendar year of those Managers authorized to home garage vehicles.

E. HOME GARAGING OF COUNTY VEHICLES BY DESIGNATED FIELD STAFF. The sole discretion for Field Staff home garaging a county vehicle rests with the Sheriff. The home garaging shall not be allowed for purpose of employee compensation.

1. Designated Field Staff may be allowed to home garage their county vehicles to achieve the most efficient level of service, consistent with the mission of the Office of the Sheriff.

IV. PROCEDURE 1.

A. DIVISION COMMANDERS' RESPONSIBILITIES.

1. Home garaging by designated field staff requires specific written authorization by the Division Commander, and shall be reviewed annually. Each authorization will be valid for no longer than one year at a time.

2. The Division Commander will ensure that Office of the Sheriff vehicles will be driven directly from the employee's residence to the employee's duty station or area of responsibility.

B. BUREAU ASSISTANT SHERIFFS' RESPONSIBILITIES.

1. Bureau Assistant Sheriffs will review and approve each authorization granted by the Division Commander for home garaging by field staff. The Professional Standards Unit will compile a report annually, listing those approved for home garaging by the Bureau Assistant Sheriffs.

a. Information in this report will be included on the list of those approved for home garaging (Managers and designated field staff), issued by the Sheriff or his/her designee.

C. EMPLOYEE RESPONSIBILITIES.

1. The employee will use the Office of the Sheriff vehicle for official business only, driving the vehicle directly from the employee's residence to the employee's duty station or area of responsibility.

2. An employee operating an Office of the Sheriff vehicle shall not permit persons other than authorized employees of the Office of the Sheriff to ride in the vehicle, except those persons required to be conveyed in the performance of duty or as authorized by the order of a Supervisor.

3. The employee will ensure that the Office of the Sheriff vehicle is parked in a safe place while at the employee's residence.

4. The employee will be familiar with all County and Office of the Sheriff regulations pertaining to the operation and use of County vehicles.

5. When utilizing electronic payment systems to pay tolls, the owner of the transponder will be responsible for listing his or her e-plate with FasTrak or the service used to detect transponder passage.

6. A County Vehicle with an e-plate is not exempt from paying toll, and the driver of a County Vehicle will be responsible for paying any or all tolls and/or Notice of Toll Evasion penalties.

V. PROCEDURE 2.

A. GENERAL OPERATIONS.

1. The vehicle will be fueled at a County fuel station. A non-County fuel station will be used only in an emergency.

2. In the event of an emergency breakdown after normal working hours, the Communication Center will be notified to call the "on-call" tow service.

3. In the event of an emergency breakdown during normal working hours, the employee will call the County pool garage at 313-7074, or have the Communication Center, 646-2441, call the pool garage for directions. Flat tires are not considered emergency service.

4. When the employee is on leave for a period of a week or longer, the County vehicle will be parked at the office and the keys placed on the vehicle keyboard.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.43
	RELATED ORDERS: County Administrative Bulletin 407.5.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Maintenance and Care of Vehicles**	

I. POLICY.

A. Office of the Sheriff vehicles will be regularly serviced and maintained to ensure maximum performance and safety.

II. GENERAL.

A. VEHICLE SERVICING.

1. The County General Services Department (G.S.D.) is responsible for the regular maintenance and servicing of all County owned vehicles.
2. Office of the Sheriff vehicles based in Martinez will receive normal servicing and fueling at the General Services Waterbird Maintenance Facility located at 2467 Waterbird Way, Martinez.
3. In the event of an emergency breakdown situation occurring during normal working hours, employees shall call the Waterbird Maintenance Facility directly or have the Communication Center call the Waterbird Maintenance Facility to receive instructions.
4. Should an emergency breakdown occur after normal working hours, the Communication Center will call the contract towing company to respond to the breakdown location.
5. In the event of a flat tire, contact G.S.D. to request an approved tow service for assistance.
6. Patrol Division Vehicle Fueling and Servicing.
   a. Patrol Division vehicles that are assigned to specific Station Houses will be fueled at the private stations which have contracted with the County to provide that service.
   b. Minor repairs, such as fan belt replacement or tire repair, may be done at the contract station.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.51
	RELATED ORDERS: Contra Costa County Sheriff's Radio Code Card; DOJ Confidentiality of Information from CLETS Information Bulletin #20-19-CJIS	
ISSUE DATE: 2-1-2006 REVISION DATE: 3-3-2022	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Communications Equipment and Radio Procedures	

I. POLICY.

A. Office of the Sheriff communications equipment is varied in design and operation. Employees shall be responsible for the reasonable care and correct operation of communications equipment, as well as the proper procedure when using the equipment.

II. GENERAL.

A. OFFICE OF THE SHERIFF'S DISPATCHING FACILITIES. The Office of the Sheriff operates a Communications Center in Martinez.

1. Communications Center.

   a. Cars equipped with conventional two-way voice radio equipment operating in Contra Costa County are dispatched through the Communications Center, using the following channels.

      - CCSOWEST: West County
      - CCSOCENT: South County, Orinda, Lafayette, and Danville
      - CCSOEAST: Central and East County
      - CCSOPIT: Pittsburg
      - COCOLAW4: Administrative channel used for car-to-car radio traffic
        - *During critical incidents, these channels may be "patched" together.

2. Patrol cars may also be equipped with Mobile Data Computers (M.D.C.s) that are tied in with the computer at the Communications Center. Patrol cars with M.D.C.s may be dispatched by computer in lieu of voice.

3. Employees shall not use any Office of the Sheriff or County communications facilities for personal, social, or unofficial purposes.

B. ROUTINE RADIO OPERATIONS.

1. The Hand Microphone. The radio will not transmit instantly when the hand microphone is activated.

    a. Pause momentarily after activation to ensure peak performance.

    b. Speak directly into the microphone in a normal, even tone of voice at a moderate speed.

    c. Do not shout or whisper.

2. Channel Selection. Select the channel according to the purpose of the transmission and your destination or assignment.

3. Unauthorized Electronic Repairs.

    a. The Fleet Service Coordinator will be notified of any electronic repairs needed to Sheriff's units via the Communications Equipment Trouble Report Form.

    b. Unauthorized persons will not tamper with, modify, repair or willfully damage any electronic equipment maintained or owned by the County.

C. TRANSMITTING RADIO MESSAGES.

1. Message should be brief, concise and to the point.

2. Listen to confirm the channel is clear before activating the transmitter.

3. Know what to say before transmitting. Except during the transmission of Personally Identifiable Information (PII), avoid pauses and repetition of words and ideas. If the message is lengthy, use the telephone.

4. Select distinct words that convey a definite message with little room for doubt. When using proper names or spelling words, use the phonetic alphabet.

5. Use radio “10” codes whenever possible.

6. Be impersonal. Do not express emotions, irritation or humor over the radio.

7. Do not talk faster than can be written or comprehended.

D. CAR-TO-CAR RADIO TRAFFIC.

1. Car-to-car traffic should be confined to official business only.

2. COCOLAW4 should be used under normal circumstances.

3. Radio operators must identify themselves according to official call signs.

4. Extended communications should be handled through telephone contact.

E. M.D.C. TRAFFIC.

1. M.D.C. traffic should be confined to official business only.

2. Messages should be kept brief and code should be used whenever possible.

3. M.D.C. traffic is not private. It is subject to administrative review or subpoena at any time.

F. REQUESTS TO DISPATCHERS. Dispatchers will not place telephone calls for Office of the Sheriff employees (Sheriff, Undersheriff, and Bureau Assistant Sheriffs are exempt) when such employee is capable of placing the call themselves, except in the following cases:

1. In an emergency.

2. When the conversation must be retained on tape.

3. Any situation provided for within the Office of the Sheriff Manual.

G. TRANSMISSION OF PERSONALLY IDENTIFIABLE INFORMATION (PII).

1. Radio traffic where the personal identifying information of a subject is used (i.e., running a person for a driver's license, probation or parole status, criminal history, or warrants) should utilize an alternative method of secure communication such as a secondary channel, M.D.C., or telephone for all or part of the transmission.
2. In the event an alternative method cannot be used due to an extenuating or critical situation, the following procedure shall be utilized:
    a. The radio transmission shall be broken up into multiple transmissions to minimally separate the individual's last name and first name from any additional information regarding the individual.
    b. Any additional information regarding the individual, including the date of birth, home address, or physical descriptors shall be relayed in a separate transmission.
    c. Example: "Last of XXX, First of XXX, break. DOB XX/XX/XXXX, M/F out of XXX."

Former Policy Deleted

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.53
	RELATED ORDERS: PC 502; CLETS Policies, Practices and Procedures; CCCSO 1.07.11, 1.07.54, 1.07.55.	
ISSUE DATE: 2-1-2006 REVISION DATE: 8-27-2013	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Use of Office of the Sheriff Personal Computers	

I. POLICY.

A. Control of employee access to Office of the Sheriff personal computers is required to safeguard equipment, program applications and data.

II. DEFINITIONS.

A. APPLICATION SOFTWARE. Programs used to perform tasks such as Microsoft Word and Excel.

B. DATA. Technically, raw facts and figures, such as orders and payments, which are processed into information such as balance due and quality on hand. However, in common usage, the terms data and information are used synonymously.

C. HARDWARE DRIVERS. Software used by the operating system to allow it to control, or "drive", a hardware device such as a printer, scanner, mouse, or keyboard.

D. OPERATING SYSTEM. The software used to boot the PC and then serve as a platform for launching other software. Desktop computer operating systems currently include Windows 95/98, Windows NT, Windows 2000, Windows XP, Windows 7, Windows 8, various versions of Mac software, and Linux.

E. SOFTWARE. Instructions for the computer, a series of instructions that perform a particular task is called a program. The two major categories are system software and application software.

III. GENERAL.

A. The Sheriff's Network has connections to the State of California, Department of Justice's (DOJ) CLETS network so that authorized Office of the Sheriff personnel can access criminal history and other information. Because of this connection, the Sheriff's Network and all Office of the Sheriff computer users are subject to the CLETS Policies and Procedures.

B. The following rules are necessary to prevent the introduction of computer viruses, improper damage to the PC, installation of incompatible components,

installation of unlicensed or unauthorized software, and unauthorized use of licensed software or data:

1. No employee is to install any operating system upgrade, application or application upgrade to any PC or peripheral equipment owned by the Office of the Sheriff except when directed to do so by the Technical Services Division Commander or designee.

2. No employee is to move any PC to a different building or office without prior notification of Technical Services Division's Network and PC Support Group. Technical Services staff will make all necessary changes in the infrastructure to accommodate network access at the new location.

3. No employee is to change any system configuration files or Windows Registry settings without approval from the Technical Services Division Commander or designee.

4. No employee is authorized to copy and remove any software from Office of the Sheriff computers without approval from the Division Commander or designee.

5. No employee is authorized to copy or remove any data from Sheriff's Office computers or computer systems, or other computer systems attached to the Office of the Sheriff network, including State of California DOJ, Contra Costa County Law and Justice Systems etc. without specific business purpose or approval from the employee's Division Commander.

6. No employee is to remove, install, or modify any internal or external hardware components or the PC system including circuit boards, drivers, printers, mice, scanners, modems etc. without approval from the Technical Services Division Commander or designee.

7. Specific exceptions to these rules may be authorized in writing by the Technical Services Division Commander or designee.

C. The following rules are necessary to conserve server hard drive space and communications bandwidth, preserving these shared resources for business purposes, and to mitigate the potential violation of copyright laws:

1. No employee is to place or store personal audio, video, or image files on any Sheriff's Office owned computer or server drive. This includes downloaded music or copies of personally owned commercial CD's or DVD's; output from a personal digital camera; files received from others; animated or recorded clips from web sites such as YouTube; or other similar files.

    a. This rule does not apply to audio and/or video recordings of interviews conducted in the normal course of Sheriff's Office business; inmate phone conversations; surveillance footage; training materials; or other business-necessary audio, video, or image files.

2. No employee is to place or store personal computer games or other video games or game files on any Sheriff's Office owned computer or server.

3. No employee is to place or store any other personal files on Sheriff's Office owned computer equipment.

D. PERSONAL LAPTOPS.

1. When an Office of the Sheriff report writing application is used, the following procedures will apply:

   a. The employee must call the Technical Services help line and schedule a time Technical Services staff can evaluate the laptop computer to be used.

   b. The Network Manager will ensure a log is kept of all personal laptop computers on which the application is installed to include the make, model, and serial number.

   c. Once approved, the Technical Services Staff will be responsible for loading an authorized virus protection program on the laptop along with the authorized report writing software.

   d. The employee will ensure the laptop has the most current virus protection update.

   e. The Network Manager will ensure that the laptops be checked every 6 months for current virus protection updates.

2. The Office of the Sheriff assumes no responsibility for any damage to, or loss of any personally owned laptops.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.54
	RELATED ORDERS: County Administrative Bulletin 505.8; Sheriff's Office Information Technology Unit – Information Security Program/Policies; CCCSO 1.06.13, 1.06.39, 1.07.24, 1.07.57; Ontario v. Quon (2010).	
ISSUE DATE: 11-26-2007 **REVISION DATE:** **5-6-2016**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **E-Mail, Texting, Internet, and Intranet Access**	

I. POLICY.

A. Access to the Internet, e-mail, text messaging, or other electronic means of communication via Office of the Sheriff computers, handheld personal data assistants (PDA's), smart phones, and/or any other Office of the Sheriff controlled medium are intended for official use as defined in this policy.

The use of e-mail, texting, and the Internet will be restricted and audited as necessary to ensure the integrity of Office of the Sheriff systems, as well as those of other law enforcement agencies. The Sheriff's Intranet is for internal use by employees and volunteers only. There is no expectation of privacy in any form of electronic communication using equipment owned by the Office of the Sheriff.

II. II. DEFINITIONS.

A. CONTRA COSTA COUNTY INTERNET AND ELECTRONIC MAIL USE AGREEMENT FORM. Refers to Administrative Bulletin 505.8 "Telecommunications Procedures" dated 6/24/04.

B. E-MAIL, TEXT MESSAGING AND INTERNET. These terms shall have their common meaning, as understood by the public at large. The terms include communications over Mobile Data Computers (MDCs) or other such vehicle-mounted systems. The term "text messaging" includes instant messaging, either using the internal messaging system or Internet instant messaging. The term "Internet access" includes the use of the Internet (either to receive or to send) for any purpose, including Web usage, e-mail, text messaging, social networking, file downloading, etc.

C. INTRANET. An in-house website that serves the employees of the Office of the Sheriff from within the Sheriff's Network.

D. CELL PHONES, SMART PHONES. See Policy 1.07.57, which relates to usage of these devices as cell phones. To the extent that such devices provide Internet access, such usage is governed by this policy.

III. GENERAL.

A. While the Internet provides a wealth of valuable information and facilitates communications, it also opens the potential for others to access the Office of the Sheriff confidential information as well as to disrupt operations. Irresponsible use reduces the availability of Office of the Sheriff data and systems for critical operations, compromises security and network integrity, and leaves the Office of the Sheriff open to potentially damaging litigation. In addition, access to other Federal, State and local information databases and systems could be restricted or terminated for misuse.

Employees may access the Internet for personal use during their break times to visit news, weather, financial, reference, and appropriate e-commerce sites. Social networking sites are not authorized for access. Sexually-oriented sites are strictly prohibited. The purposeful viewing of sexually-related items on e-commerce sites is strictly prohibited.

Employees are responsible for exercising good judgment regarding the reasonableness of their personal use. Employees should consult their supervisor or manager if they have any question as to the appropriateness of a particular web site prior to visiting the site.

1. Office of the Sheriff e-mail systems, text messaging, and/or Internet access shall be used only for purposes directly related to work being performed by that employee in furtherance of the Office of the Sheriff mission and shall not be used for personal matters, the except as stated above and for short and infrequent messages to arrange or confirm appointments, inform family of overtime work, etc.

2. There shall be no expectation of privacy in any communication utilizing Office of the Sheriff Internet access or e-mail, which is subject to audits to ensure that electronic devices and Internet access are being appropriately used.

3. Office of the Sheriff employees are responsible for the security of their computer workstations, laptops, and other devices providing Internet access. Extreme care must be taken at all times to safeguard passwords. Employees are responsible for protecting their passwords and shall not leave their workstations unattended while they are actively logged in to the Internet or to County-, State- and Federal-controlled information systems. An exception would be Mobile Data Computers (MDCs) in locked vehicles while the operator is out of the car during their duty shift.

4. Employees are responsible for all data or material downloaded, received or sent from that employee’s e-mail account and/or computer during their logged-in sessions. Employees shall immediately advise their Supervisor in writing of any unwanted or unsolicited data or material received on or downloaded to the employee’s computer. Failure to advise one’s immediate Supervisor may result in a presumption that the member intentionally downloaded, retained or sent the material in question.

5. Deputies will check their department e-mail at least once per business day or while on any active duty shift.

6. Employees shall not send "ALLCCCSO" email messages without prior approval from a Captain or higher.

B. The Sheriff's Intranet is intended to be used by members of the Sheriff's Office to disseminate authorized information among employees and volunteers. It is not intended to be used or viewed by members of the public or non-Sheriff's Office employees. The content on the Sheriff's Intranet should always be professional and relevant to the goals of this Office. The only exception would be items posted in the Classified section, which is intended for personal use.

1. All content added to the Intranet, with the exception of the Classified section, must be approved by the Division Commander or his/her designee.

2. The classified section is a place for employees to post advertisements for the sale/rental of personal items and or property, or the exchange of overtime/shift trades. All content must be professional, include contact information and be current. It is the responsibility of the person posting the item to remove items that have been sold or expired. Items posted to the Classified section are transactions agreed upon between the involved parties. By using the Classified section, users agree the Office of the Sheriff will not be held responsible for damages (lack of payment, damaged merchandise, etc.) as a result of using the Classified section.

IV. PROCEDURE 1.

A. No Office of the Sheriff computer, or other device capable of Internet access, shall be provided Internet access except by authorized individuals in the Technical Services Division. This applies to all connections to the Internet through the Sheriff's network or by use of a modem. In addition, Contract City agencies must comply with CLETS and ACCJIN policies to provide proper firewall protection if utilizing municipal Internet connections on the same work stations as are utilized to access the Sheriff's network. Contract City agencies must collaborate with the Office of the Sheriff Technical Services Division to insure the security of the Sheriff's network and its critical links.

1. Requests for new Internet access will be made to the Technical Services Division via e-mail addressed to pchelp via Groupwise.

2. All current Office of the Sheriff employees granted access to the Internet and/or e-mail will sign a Contra Costa County Internet and E-Mail Use Agreement Form provided by their Division or Facility administration. It will be the responsibility of the employee's Division or Bureau Commander to ensure that a copy of this agreement is sent to Administrative Services Bureau, Personnel Services Unit, to be entered in the employee's personnel file (one copy is sent to the Technical Services Division and one copy is given to the employee).

3. All new employees will sign this form provided by the Director of Personnel Services during orientation. One copy will be entered in the employee's personnel file, one will be sent to the Technical Services Division, and one will be given to the employee.

4. The copyrights of Internet materials belong to the copyright owners, not the County employee who acquires a copy of the copyrighted material.

Violation of the copyright laws can result in costly fines and other penalties. The copyrighted material can be used to complete a County business project, but its use must be within the agreement as posted by the author or current copyright law. Violation of copyrights is prohibited.

5. Technical Services will retain a copy of the approved Internet and E-Mail Use Agreement Forms in a current file. Technical Services staff will immediately notify the Support Services Bureau Commander of any violation of this policy.

B. To post information on the Intranet, users must have a user name and password assigned to them.

1. Each Division shall designate at least one person as the Content Manager of their assigned page. That person(s) will be responsible for keeping the information on their page current.

2. User names and passwords for Content Managers can be obtained from Technical Services, with the approval of the requesting Division Commander or his/her designee.

3. Users wishing to post items to the Classified section will be required to register on the Intranet site using the legal name that belongs to the registrant, and provide a valid Department e-mail address for confirmation.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.55
	RELATED ORDERS: CCCSO 1.07.54.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Computer Viruses	

I. POLICY.

A. Employees shall take reasonable precautions to prevent computer viruses from infecting Office of the Sheriff computers.

II. DEFINITIONS.

A. COMPUTER VIRUSES. A computer program which is intended to replicate, distribute, damage, or destroy files on a disk; to replicate itself to other systems; to compromise security of a PC, segment, or network; and/or to prevent network services from being available to other users.

III. GENERAL.

A. REASONABLE PRECAUTIONS. The following steps are considered reasonable precautions for the prevention of damage caused by computer viruses:

1. Make frequent backups. One set is not enough. Use several copies in rotation. Viruses can infect backups as well. Using several backups in rotation increases the likelihood that a safe backup exists.
2. Do not open any files attached to an e-mail from an unknown, suspicious or untrustworthy source.
3. Do not open any files attached to an e-mail unless you know what it is, even if it appears to come from someone you know. Some viruses can replicate themselves and spread through e-mail.
4. Do not open any files attached to an e-mail if the subject line is questionable or unexpected.
5. Delete chain and junk e-mail. Do not forward or reply to any of them.
6. Do not download any files from strangers.
7. Exercise caution when downloading files from the Internet. Ensure that the source is a legitimate and reputable one. Verify that an anti-virus program check the files on the download site.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.56
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Purchase of Computers and Peripherals	

I. POLICY.

A. In order to maintain both the quality and compatibility of computer equipment, the Office of the Sheriff must strive to use standardized computer equipment throughout the Office, whenever possible and practical.

II. GENERAL.

A. All purchases of computers and peripherals, except disposable items such as toner, cartridges, diskettes, etc., must be completed by the Technical Services Division. Requisitions and orders for computer related purchases will be forwarded to Technical Services by the requesting Bureau/Division for evaluation and processing.

III. PROCEDURE 1.

A. PURCHASING COMPUTERS AND PERIPHERALS.

1. The requesting Bureau/Division will submit an Equipment/Software Order Request Form to Technical Services.

   a. [redacted]

2. Technical Services will evaluate the request for compatibility and appropriateness to the stated purpose and return a price quote.

   a. On the face of the price quote will be a signature line and a request for your organization and account code.

3. The requesting Bureau/Division will return the price quote to Technical Services Division by fax or interoffice mail with an authorizing signature (Division Commander or Acting Division Commander), the appropriate organization number and the account code.

4. Technical Services will create the requisition and obtain a purchase order.

5. The equipment will be delivered to Technical Services. If needed, the equipment will be configured prior to delivery to the end user. Final

delivery and installation will be scheduled with the requesting Bureau/Division.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.57
	RELATED ORDERS: Contra Costa County Administrative Bulletin 505.6; CCCSO 1.05.72.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Equipment and Property Management**	**SUBJECT:** **Mandatory Cellular Telephones**	

I. POLICY.

A. The ability to easily reach and communicate with and among certain Command staff within the Office of the Sheriff is imperative to Office of the Sheriff business. Possession of a cellular telephone by each Command staff member increases the ability to achieve this communication. In order to achieve optimum fiscal economy, the Sheriff will limit and control reimbursement for cellular telephone charges.

II. DEFINITIONS.

A. OFFICIAL COUNTY BUSINESS. Authorized activities by proper authority to conduct one's occupation or work.

III. GENERAL.

A. MANDATORY CELLULAR TELEPHONES. The mandatory cellular telephone policy is at the sole discretion of the Sheriff and will not be modified without approval of the Sheriff.

1. Personal Cellular Telephones Authorized for Reimbursement.

a. The following Managers are mandated to carry a personal cellular telephone and are authorized for reimbursement for said mandated expenses:

- Sheriff;
- Undersheriff;
- Bureau Assistant Sheriffs;
- Chief of Management Services;
- Captains, including Chief Criminalist (except those issued County cellular telephones); and
- Other management employees as approved by the Undersheriff/Sheriff.

b. Reimbursement to the above designated staff shall be limited to the following:

- Actual cost of monthly base service charge not to exceed $39.95 plus applicable taxes and other legally required charges.
- Actual cost of airtime charges for official business calls above 300 minutes of business calls per month. The employee must present documentation verifying that the first 300 minutes were used for official business.
- The Sheriff's Fiscal Services Unit shall compile and keep current a list of Managers, by name and employee number, who are mandated to have a personal cellular telephone and forward said list to the Auditor-Controller's Office.

2. County Owned Cellular Telephones.

a. Positions below the rank of Captain may be issued and required to carry a County cellular telephone.

b. Positions authorized to carry County owned cellular telephones must be approved by the Undersheriff.

c. County issued cellular telephones shall be used to place or receive personal calls only for an emergency or during break periods where usage does not result in any charges to the County or interfere with business.

d. Personal business conducted on County owned cellular telephones shall be limited in duration and not interfere with normal work duties and/or disturb the work environment. Such use should not result in any charges to the County.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	NUMBER: 1.07.58
	RELATED ORDERS: CCCSO 1.07.54.	
ISSUE DATE: 12-30-11 REVISION DATE: 4-11-2018	CLEARANCE: Office of the Sheriff	
CHAPTER: Equipment and Property Management	SUBJECT: Social Media/Social Networking Policy	

I. POLICY.

A. This policy addresses issues associated with employee use of social networking sites and provides guidelines for the regulation and balancing of employee speech and expression with the legitimate needs of the Sheriff's Office. The secure use of social media enhances communication, collaboration, and information exchange.

Social Media provides a new and potentially valuable means of assisting the Office of the Sheriff and its personnel in meeting community outreach, problem-solving, investigative, crime prevention, and related objectives. This policy provides guidelines to employees regarding appropriate speech and expression for personal, social networking websites, web pages, and other electronically transmitted or hard copied material. Nothing in this policy is intended to prohibit or infringe upon any communication, speech or expression that is protected or privileged under law.

II. DEFINITIONS.

A. BLOG: A Self-published diary or commentary on a particular topic that may allow visitors to post responses, reactions, or comments. The term is short for "Web log."

B. FORUM: An on-line discussion site.

C. AVATAR: A computer user's representation of himself/herself, or an alter ego.

D. PAGE: The specific portion of a social media website where content is displayed, and managed by an individual or individuals with administrator rights.

E. POST: Content an individual shares on a social media site. This includes text, photographs, audio, video or any other multimedia file.

F. PROFILE: Information that a user provides about himself or herself on a social networking site.

G. SOCIAL MEDIA: A category of Internet-based resources that integrate user-generated content and user participation. This includes, but is not limited to,

social networking sites (Facebook, MySpace, LinkedIn), microblogging sites (Twitter, Nixle), photo and video-sharing sites (Flickr, YouTube), wikis (Wikipedia), blogs, and news sites (Digg, Reddit).

H. SOCIAL NETWORKS: On-line platforms where users can create profiles, share information, and socialize with others using a range of technologies.

I. SPEECH: Expression or communication of thoughts or opinions in spoken works, in writing, by expressive conduct, symbolism, photographs, videotape, or related forms of communication.

J. WEB 2.0: The second generation of the World Wide Web focused on shareable, user-generated content, rather than static web pages. Some use this term interchangeably with social media.

K. WIKI: Web page(s) that can be edited collaboratively.

III. ON-THE-JOB USE.

A. OFFICE OF THE SHERIFF SOCIAL MEDIA PAGES.

1. All department social media sites or pages shall be approved by the Sheriff or his designee and shall be administered by personnel appointed by the Sheriff or as otherwise determined by the Executive Team. Day-to-day administration of this policy is the responsibility of the Administrative Services Bureau.

2. Each social media page shall clearly indicate that it is maintained by the Contra Costa County Sheriff's Office and shall have department contact information prominently displayed.

3. Where possible, the social media page(s) should link to the Contra Costa County Sheriff's Office official website and shall include an introductory statement that clearly specifies the purpose and scope of the agency's presence on the website (i.e. recruiting deputies).

4. Social media page content shall adhere to applicable laws, regulations, and current CCCSO policies. It is important to note that social media content on Office of the Sheriff social media pages is subject to public records laws.

5. Where possible, social media pages should state that the opinions expressed by visitors to the page(s) do not reflect the opinions of the Sheriff's Office.

   a. Pages shall clearly indicate that posted comments will be monitored and that the Sheriff's Office reserves the right to remove obscenities, off-topic and inappropriate comments, and personal attacks.

   b. Pages shall clearly indicate that any content posted or submitted for posting is for public disclosure.

B. EMPLOYEE PROCEDURES.

1. Sheriff's Office employees authorized to post and maintain content on the Sheriff's Office social media pages shall adhere to the following guidelines:

a. Conduct themselves at all times as representatives of the Sheriff's Office, adhere to all CCCSO standards of conduct, and observe conventionally accepted social media protocols and proper decorum.

b. Clearly identify themselves as a member of the Sheriff's Office.

c. Shall not make statements about the guilt or innocence of any suspect, arrestee, or comments concerning pending prosecutions, nor post, transmit, or otherwise disseminate confidential information, including photographs, videos, etc., related to Sheriff's Office assignments/training unless the transmitted information is necessary to aid in the investigation of criminal activity, or given express permission by the Sheriff or the Sheriff's designee in order to accommodate the purposes set forth in section C.1. below.

d. Shall not conduct political activities, express political views nor engage in private business activities on the Sheriff's Office social media pages.

e. Shall not use personally owned electronic devices to manage the Sheriff's Office social media activities or in the course of official duties unless given express written permission by the Sheriff, the Sheriff's designee, or a Bureau Assistant Sheriff.

f. Shall observe and abide by all copyright, trademark, and service mark restrictions in posting materials to electronic media.

C. OTHER POTENTIAL DEPARTMENT USES.

1. Social media provides a wealth of valuable information and facilitates communications. Social media can prove to be a valuable investigative tool when seeking evidence or information about:

   a. Wanted persons;

   b. Missing persons;

   c. Gang participation;

   d. Crimes perpetrated on line (i.e., cyber-bullying, cyber-stalking, identity theft); and

   e. Photos, videos, or other evidence of a crime posted by a participant or observer.

   f. Viewing other publicly available information of reasonable and legitimate interest to the Sheriff's Office.

2. Social media can also be used for community outreach and engagement as follows:

   a. Providing crime maps and statistics;

   b. Providing crime prevention tips;

   c. Offering on-line-reporting opportunities;

   d. Soliciting tips about unsolved crimes;

e. Making time-sensitive notifications related to road closures, weather emergencies, missing or endangered persons, etc.

f. Notifying persons seeking employment or volunteer positions at the Sheriff's Office of openings.

3. The Sheriff's Office may utilize Internet-based content when conducting background investigations of job candidates or Professional Standards investigations of current employees. Search methods shall not involve procedures that are in violation of existing local, state or federal law.

a. No employee or job candidate shall be requested to disclose a username or password for the purpose of accessing personal social media content; no manger, supervisor, or investigator shall require employees or job candidates to access personal social media content in their presence.

b. Nothing in 3.a. prohibits the Sheriff's Office from requesting an employee to divulge personal social media information that is reasonably believed to be relevant to an investigation of employee misconduct or violation of applicable laws and regulations, provided that the social media information is used solely for the purposes of that investigation or a related proceeding.

IV. PERSONAL USE.

A. GENERAL PRECAUTIONS AND PROHIBITIONS.

1. The public has placed its trust in the Office of the Sheriff to administer an honest effective law enforcement agency. The Office of the Sheriff embraces the public trust and recognizes that effective law enforcement would be severely hampered if such trust were lost.

   By accepting employment with the Office of the Sheriff, safety and general employees are subject to a higher standard of conduct than is found in other government service. Therefore, employees must be aware that their actions, whether on or off duty, are subject to public scrutiny and reflect on the entire Office of the Sheriff.

2. Barring state and federal law, or binding employment contracts to the contrary, Sheriff's Office employees who choose to maintain or participate as private citizens in social media or social networking platforms shall abide by the following:

a. Employees shall not post content on social media sites that will tend to discredit or bring the County or the Office of the Sheriff into disrepute.

b. Employees are prohibited from using department computers or cell phones/devices for personal participation in social media or social networking, unless permission is granted from the Sheriff, his designee or a Bureau Assistant Sheriff.

c. Employees are prohibited from using privately-owned personal computers or cell phones/devices for personal participation in

social media or social networking while on duty, except in the following circumstances:

- When brief personal communication may be warranted by the circumstances (e.g., inform family of extended hours).
- During authorized breaks; however, such usage should be limited and not be disruptive to the work environment.

d. Employees shall not post, transmit, or otherwise disseminate any information to which they have access as a result of their employment without express written permission from the Sheriff, his designee or a Bureau Assistant Sheriff.

e. Employees shall not post, transmit, or otherwise disseminate any text, photograph, audio, video, or any other multimedia file related to any investigation, either current and past, of the Sheriff's Office.

f. Employees shall not post, transmit, or otherwise disseminate any text, photograph, audio, video, or any other multimedia file related to any past or current action of the Sheriff's Office, if it may tend to bring the Sheriff's Office into disrepute.

g. Employees shall refrain from speech or expression that could reasonably be foreseen as creating a negative impact on the credibility of the employee as a witness.

h. Employees shall refrain from posting content of any form that could reasonably be foreseen as creating a negative impact on the safety of the employees of the Sheriff's Office, or the security of the Sheriff's Office operations.

i. Employees shall refrain from posting content that violates the Policies and Procedures of the Sheriff's Office.

j. Employees shall refrain from posting, transmitting or disseminating any photographs, video or audio recordings, likenesses or images of department logos, emblems, uniforms, badges, patches, marked vehicles, equipment or other material that specifically identifies the Contra Costa County Office of the Sheriff on any personal or social networking or other website or web page if doing so would tend to bring the Sheriff's Office into disrepute.

k. Employees shall take reasonable and prompt action to remove any content that is in violation of this policy and/or posted by others from any web page or website maintained by the employee (e.g., social or personal website).

3. Sheriff's Office employees are cautioned that postings on or off duty, relating to the Office of the Sheriff may form the basis for discipline if deemed detrimental to the Sheriff's Office mission, function, reputation,

or professionalism. Employees are advised that their postings and related activity on social media sites will reflect upon the Sheriff's Office.

4. Employees shall be cognizant of the fact that attorneys and courts scrutinize the credibility of a witness by using statements and activities from internet sources for impeachment purposes. Therefore, employees shall refrain from any form of speech or expression that contains obscene or sexually explicit language, images, or acts and statements, or that glorifies illegal acts, excessive alcohol consumption, illegal drug usage and reckless or irresponsible behavior. Additionally, employees shall refrain from other forms of speech or expression that ridicule, malign, disparage, or otherwise express bias against any race, religion, or any other protected class of individuals.

5. Sheriff's Office employees should be aware that they may be subject to civil litigation for:

    a. Publishing or posting false information that harms the reputation of another person, group, or organization (defamation);

    b. Publishing or posting private facts and personal information about someone without their permission that has not been previously revealed to the public, is not of legitimate public concern, and would be offensive to a reasonable person;

    c. Using someone else's name, likeness, or other personal attributes without that person's permission for an exploitative purpose; or

    d. Publishing the creative work of another, infringing trademarks, or revealing certain confidential business information without the permission of the owner.

6. Sheriff's Office personnel should be aware that privacy settings and social media sites are constantly in flux, and they should never assume that personal information posted on such sites is protected. Additionally, postings made under the claim of restricted settings may still constitute a violation of policy.

7. Sheriff's Office personnel should expect that any information created, transmitted, downloaded, exchanged, or discussed in a public online forum may be accessed by the Sheriff's Office at any time without prior notice. Employees are advised that there can be no expectation of privacy with regard to anything they post on social networking sites. The Sheriff's Office has the right to view all postings made on public social media sites.

8. Reporting violations. Any employee becoming aware of, or having knowledge of a posting or of any website or web page in violation of any provision of this policy shall notify his or her supervisor immediately for follow-up action.

Former Policy Deleted

Contra Costa County

OFFICE OF THE SHERIFF

Policies and Procedures Manual

SECTION 4 - Appendices



Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 1
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 REVISION DATE:	CLEARANCE: Office of the Sheriff	
CHAPTER: APPENDICES	SUBJECT: Law Enforcement Code of Ethics	

As a Law Enforcement Officer, my fundamental duty is to serve mankind; to safeguard lives and property; to protect the innocent against deception, the weak against oppression or intimidation, and the peaceful against violence or disorder; and to respect the Constitutional rights of all people to liberty, equality and justice.

I will keep my private life unsullied as an example to all; maintain courageous calm in the face of danger, scorn or ridicule; develop self-restraint; and be constantly mindful of the welfare of others. Honest in thought and deed in both my personal and official life, I will be exemplary in obeying the laws of the land and the regulations of my department. Whatever I see or hear of a confidential nature or that is confided to me in my official capacity will be kept ever secret unless revelation is necessary in the performance of my duty.

I will never act officiously or permit personal feelings, prejudices, animosities, or friendships to influence my decisions. With no compromise for crime and with relentless prosecution of criminals, I will enforce the law courteously and appropriately without fear or favor, malice or ill will, never employing unnecessary force or violence and never accepting gratuities.

I recognize the badge of my office as a symbol of public faith, and I accept it as a public trust to be held so long as I am true to the ethics of the police service. I will constantly strive to achieve these objectives and ideals, dedicating myself before God to my chosen profession law enforcement.

Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	APPENDIX 2.1
	RELATED ORDERS: None.	
ISSUE DATE: **REVISION DATE: 2014**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** Law Enforcement Involved Fatal Incidents	

THE POLICE CHIEFS' ASSOCIATION

CONTRA COSTA COUNTY, CALIFORNIA

LAW ENFORCEMENT INVOLVED FATAL INCIDENTS

2014

THE POLICE CHIEFS' ASSOCIATION

CONTRA COSTA COUNTY, CALIFORNIA

PROTOCOL FOR

LAW ENFORCEMENT INVOLVED FATAL INCIDENTS

2014

Dedication

The Contra Costa County Police Chiefs' Association dedicates this manual to the memory of Contra Costa County Deputy District Attorney Robert Hole who passed away in August of 2012. For over 30 years, Bob held the unique position of "investigative prosecutor" (a term he coined, and which aptly fit).

In the early 1980's Bob recognized that one of the most important functions for the county's law enforcement agencies was the investigation of Officer-Involved Shootings, and other law enforcement actions which resulted in death or serious injuries to either officers or civilians. Working in conjunction with the Police Chiefs Association, Bob was instrumental in establishing a county-wide policy to investigate these cases which to this day are known as "Protocols." For the next three decades, Bob directed hundreds of such investigations at all hours of the day and night, in all parts of the county, and in all types of weather. He was a meticulous taskmaster, and he ensured that every possible investigative avenue was explored.

Every year there is an average of 20 or so "Protocols," the majority of which are Officer-Involved shootings. Bob was always the first to respond to protocol investigations, and he was always the last to leave. Bob literally "Wrote the Book" on the investigation of such cases, and he had more experience in this unique area than virtually any other person in the entire state. Bob's mentoring of law enforcement on probes of this nature will ensure that our county will benefit for decades to come.

Bob's systems approach to such investigations proved to be extremely effective and it ensures that many of the county's most sensitive cases are thoroughly investigated by very experienced investigators working with a deputy district attorney. The "Protocol" concept has since been copied nationwide.

Bob also taught classes on Search Warrants, Search and Seizure, and on Officer-Involved Shooting investigations. Thousands of investigators, officers, and deputies attended his courses. Literally hundreds of investigators throughout California had Bob's cell phone number, and he made it clear that he was available to offer advice at any hour of the day or night, and he did so on hundreds of occasions.

Bob was cantankerous, opinionated, and never at a loss for words. With Bob you always knew where you stood, and he was never afraid to ask the tough questions, or point out the deficiencies in the investigative efforts. Bob was the ultimate mentor who was totally committed to his profession, and his personal quest for justice. His contributions to the county cannot be overstated.

Paul Mulligan
District Attorney's Office
Chief of Inspectors

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HISTORY OF THE PROTOCOL

Ref 1

In the 1970's and early 1980's, the number of law enforcement related civilian fatalities increased around the country and in Contra Costa County during arrests, vehicle pursuits, and other types of law enforcement activity. At the same time, more law enforcement officers were killed while on duty as the result of both attacks on them, and as the result of auto accidents. Not only were the numbers of civilian and officer fatalities rising; but the incidents drew greater scrutiny from both inside and outside of law enforcement. The impact of such incidents was widespread, both in terms of legal and societal consequences. As a result, the investigation of such cases became considerably more complicated, and challenging.

In early 1982 the members of the Contra Costa County Police Chiefs' Association recognized these trends, and collectively concluded that the interests of everyone would best be served by a standardized system to investigate law enforcement involved fatal incidents throughout Contra Costa County. The members wanted a fair and thorough investigative process which would promptly gather all the relevant facts of each incident while simultaneously recognizing the legal rights and responsibilities of the involved individuals and agencies. In addition, for the first time the process was designed to address the emotional needs of those involved.

It was very important to the Chiefs that these investigations were viewed as being highly credible and impartial. From the beginning, the Chiefs favored using a multi-agency system for the Criminal Investigation of such incidents and they soon decided that all agencies investigating each fatal incident would have equal standing and authority within the investigative process. They believed this would produce the best and most credible investigative product, would maximize the use of investigative resources and skills, and would provide the impartiality that was critical to the integrity of the process.

To establish the new investigative system, a collaborative effort by officials representing all the County's law enforcement agencies began in 1982. The first step was a lengthy and intense meeting with the county's chiefs which helped identify and define many of the issues and expectations for the new system. In the beginning of the process, there was often heated debate among the chiefs on various issues and approaches, as many held very strong opinions as to how the Protocol process should work.

The first draft of the proposed new Protocol was then distributed countywide to be reviewed by a wide variety of personnel in various ranks and assignments in all the County's law enforcement agencies. These reviews resulted in many suggestions, criticisms, and comments. At a subsequent Chiefs' meeting the collective input was considered, after which the second draft was created and again distributed to all agencies. This evolutionary process continued through several more drafts, ending two years after it began when the ninth draft was unanimously approved and implemented in March of 1984. That document, which became commonly known as "The Protocol," was formally titled the "Officer-Involved Fatal Incident Protocol."

That first version of the Protocol contained some revolutionary provisions which drew

skepticism from outsiders. One was the broad range of fatal incidents to which the Protocol process applied, and another was the clear delineation of the three investigative formats. The most radical was the provision that an *ad hoc* multi-agency task force would conduct the Criminal Investigation of each incident, and that all involved agencies would have equal standing in the management of the investigations. The past three decades, and hundreds of investigations later, have shown the skeptics were wrong; those provisions (among others) are the principal reasons for the Protocol's well-acknowledged and lasting success.

The original 1984 Protocol edition was superseded in November 1989 and March 1991 by two slightly revised editions which contained a few substantive changes that clarified and strengthened previous editions. The Protocol's title remained unchanged.

This 2007 version was created through the same collaborative and evolutionary process that was used to create the original Protocol. It contained significant changes, and included a number of enhancements to various previous provisions to clarify, strengthen and build upon the 1984 Protocol's solid and enduring foundation. That version was formatted and reorganized to make its content more accessible and readable. The Table of Contents had considerably more detail (its Section D also serves as a substitute for an Index) and it referred readers to both a page number and a Reference Number (abbreviated "**Ref**") indicating where each topic can be located. For cross-referencing purposes, Reference Numbers were added throughout the Protocol's text to guide readers to other relevant provisions. The Protocol's title has been changed from "Officer-Involved Fatal Incident Protocol" to "Law Enforcement Involved Fatal Incident Protocol" because:

1. not all peace officers are referred to as "officers"

2. the Protocol also applies to non-sworn employees of law enforcement agencies in some situations

3. some fatalities occur in connection with law enforcement activities and operations rather than from the conduct of any specific law enforcement individual(s).

Substantively, the fourth edition of the Protocol:

1. extended the application of the Protocol to a broader range of law enforcement involved fatalities, and provided for investigative participation by out-of-county law enforcement agencies.
2. created investigative manpower resource pools of Crime Scene Investigators (CSIs), Vehicle Collision Investigators, and Protocol Investigators.
3. enhanced the structure of the Protocol's multi-agency criminal investigative system
4. contained six very useful Attachments:
    - an expanded *Patrol Supervisors' LEIF Checklist for Shootings and Generic Incidents*
    - a *Patrol Supervisors' LEIF Checklist for Fatal Vehicle Collisions*

- a *Supervisors' LEIF Checklist for Custodial Institutional Deaths*
- a *CSI Checklist - Before The Crime Lab Arrives*
- an *Autopsy Evidence Collection Checklist*
- a Sheriff/Coroner's Office document entitled *Death Investigation Roles of the Coroner and Law Enforcement Agencies*

Very significantly, the fundamental elements of the original Protocol were retained, and some were enhanced, through the revisions. Among them:

1. the need for high quality investigations
2. the establishment of three investigative formats (Criminal, Administrative and Civil Litigation), each having its own specified goals and investigative procedural rules and each its own staffing;
3. the recognition and explanation of the rights and authorities of the Criminal and Administrative formats and of the law enforcement personnel with whom they have investigative contact;
4. the designation of the Sheriff's Crime Lab to process, collect, document and examine physical evidence; and
5. the use of public Coroner's Inquests following fatal incidents to inform the public, the media, and the decedent's family of the facts of each incident.

Since 1984, approximately 350 cases have been investigated under the Protocol format. While the majority of those cases involved fatalities and were therefore investigated under the Protocol's mandatory invocation provision, a significant number of investigations were performed under a provision that allows agencies to request that a Protocol investigation be initiated on a variety of non-fatal law enforcement involved incidents - even in some incidents where no injuries at all were involved.

Deputy District Attorney Bob Hole was the author of the original 1984 Protocol, the revised versions in 1989 and 1991, and the 2005-2007 fourth edition. Five members of the Police Chiefs' Association constituted a Protocol Revision Committee that collaborated with Bob Hole on the fourth edition. Those members were then **Chief Ron Ace** of Concord (who was also the Chairman of the Chiefs' Association until his retirement from the Concord Police Department in May 2005); then **Chief Dave Cutaia** of Martinez (Chairman of the Chief's Association from May 2005 to May 2006); then **District Attorney Robert Kochly**; then **Chief Doug Krathwohl** of San Pablo; and then **Sheriff Warren Rupf**. Gratitude is extended to Lana Fisher of the Information Technology Office of the City of Concord who formatted the Protocol's fourth edition, and to Debbie Peña, Executive Secretary to then Concord Police Chief David Livingston, who did the proofreading.

In adopting the 2007 edition, the Chiefs' Association recognized and expressed its appreciation to the members of the 1984 Chiefs' Association, all of whom were responsible for the creation of this very successful system. The "1984 Chiefs" created a model with high standards, and they provided clear guidelines as to when the process should be initiated by an agency. Some set aside personal or institutional egos and territorialism for the ultimate benefit of everyone. They had the foresight to create and adopt Protocol provisions which

would still be valid and in use more than three decades later, and would still be fully supported by the county's law enforcement executives. The beneficiaries of their efforts have been the residents and the law enforcement personnel and agencies of Contra Costa County, and many other jurisdictions inside and outside of California which adopted various forms of the Protocol format.

In August of 2014, the manual was revised. The key addition was the adoption of a policy by the Police Chiefs' Association concerning when an officer involved in a critical incident was allowed to view a recording of the event. The chiefs also formally recognized Deputy District Attorney Robert Hole's by dedicating the manual to him.

MEMBERS OF THE CONTRA COSTA COUNTY POLICE CHIEFS' ASSOCIATION

Ref 2

The substantive changes in this fifth edition of the Protocol manual were approved by the members of the Chiefs' Association in August of 2014. The years "2005" and "2007" following the Chiefs' names below indicate when the various Chiefs approved the fourth edition of the Protocol. The year "1984" identifies the "founding father" Chiefs who were responsible for the creation and implementation of the first Protocol.

Antioch Police Department

Chief Allan Cantando 2014
Chief Jim Hyde 2007
Chief Mark Moczulski 2005
Chief Len Herendeen 1984

Bay Area Rapid Transit District Police Department

Chief Kenton Rainey 2014
Chief Gary Gee 2005, 2007
Chief Harold Taylor 1984

Brentwood Police Department

Chief Mark Evenson 2007 and 2014
Chief Mike Davies 2005
Chief James Frank 1984

California Highway Patrol, Contra Costa (Martinez) Office

Captain Chris Costigan 2014
Captain Jim Cahoon 2005, 2007
Captain Ron Oliver 1984

Clayton Police Department

Chief Chris Thorsen 2014
Chief Dan Lawrence 2007
Chief Gary Knox 1984

Concord Police Department

Chief Guy Swanger 2014
Chief David Livingston 2005, 2007
Chief George Straka 1984

Contra Costa Community College District Police Services

Chief Charles Gibson 2007, 2014
Chief Joseph McKeown 1984

Contra Costa County District Attorney

District Attorney Mark A. Peterson 2014
District Attorney Robert Kochly 2005, 2007
District Attorney William A. O'Malley 1984

Contra Costa County Sheriff

Sheriff David Livingston 2014
Sheriff Warren Rupf 2005, 2007
Sheriff Richard Rainey 1984

East Bay Regional Park District Department of Public Safety

Chief Tim Anderson 2005, 2007, 2014
Chief Larry Olson 1984

El Cerrito Police Department

Chief Sylvia Moir 2014
Chief Scott Kirkland 2005, 2007
Chief Patrick Reeve 1984

Hercules Police Department

Chief Bill Goswick 2014
Chief Fred Deltorchio 2005, 2007
Chief Russell Quinn 1984

Kensington Police Department

Chief Greg Harman 2014
Interim Chief Brown Taylor 2007
Chief Barry Garfield 2005
Chief Jack Christian 1984

Martinez Police Department

Interim Chief Eric Ghisletta 2014
Chief Dave Cutaia 2005, 2007
Chief Jack Garner 1984

Moraga Police Department

Chief Robert Priebe 2014

Chief Mark Ruppenthal 2005, 2007
Chief Larry Olson 1984

Pinole Police Department

Chief Neil Gang 2014
Chief Jim Rose 2005, 2007
Chief Theodore Barnes 1984

Pittsburg Police Department

Chief Brian Addington 2014
Chief Aaron Baker 2005, 2007
Chief Leonard Castiglioni 1984

Pleasant Hill Police Department

Chief John Moore 2014
Chief Peter Dunbar 2007
Acting Chief John Moore 2005
Chief James Nunes 1984

Richmond Police Department

Chief Chris Magnus 2007, 2014
Acting Chief Terry Hudson 2005
Chief Earnest Clements 1984

San Pablo Police Department

Chief Lisa Rosales 2014
Chief Joseph P. Aita 2007
Chief Douglas Krathwohl 2005
Chief David Sylstra 1984

San Ramon Police Department

(This department began operations on July 1, 2007)
Chief Joe Gorton 2014
Chief Scott Holder 2007

Walnut Creek Police Department

Chief Thomas Chaplin 2014
Chief Tom Soberanes 2005, 2007
Chief Karel Swanson 1984

A. PROLOGUE

Ref 3

Fatal incidents involving law enforcement personnel and law enforcement operations place extraordinary demands upon law enforcement agencies and their personnel. In addition to the knowledge, skill and resources required to investigate civilian homicide cases, Law Enforcement-Involved Fatal (LEIF) incidents present unique and often difficult

complexities and challenges.

Many LEIF cases attract considerable attention and scrutiny from family members, segments of the public, the news media, and from various civilian and governmental organizations, institutions and agencies. Occasionally, such incidents will spark riots or other disturbances resulting in significant injuries or deaths to civilians or law enforcement, looting, and extensive property damage.

The right of the public to know what occurred often requires a meticulous balancing of such rights against investigative necessities, and also a consideration of the privacy rights of the individuals involved in such cases.

Often, some members of the public are skeptical or distrustful of the ability of Law Enforcement Agencies (LEAs) to investigate incidents involving employees of their own departments. This is one of the key reasons why such investigations must be impartial, and viewed as true "fact finding missions" regardless of where the facts take the inquiries.

Some of our country's persistent and profound social problems often are significant factors in encounters between law enforcement and civilians. These factors include mental health issues and the availability of treatment; poverty; language difficulties; actual and presumed biases; scarcity of governmental resources; use of intoxicants; the proliferation of deadly weapons, illegal drugs and criminal street gangs; and the increasing propensity of people to resort to violence to address problems.

LEIF incidents may result in negative social, civil, administrative and/or criminal law consequences for law enforcement agencies and officers, but the possibility of such consequences cannot be allowed to inappropriately affect the pursuit of the truth that is the ultimate goal of the investigation of all LEIF incidents.

During the Criminal, Administrative and Civil Litigation investigations of LEIF incidents, the rights and obligations of Law Enforcement Personnel (as the result of statutes, case law and employment agreements) must be reconciled with the law enforcement officers' personal rights and obligations under the federal and state constitutions, statutes and case law. This can be a significant investigative complication not encountered during law enforcement's investigations of purely civilian conduct.

Unless resolved in advance, confusion and even conflict can occur among the involved officers and agencies due to a variety of factors including unfamiliarity with the Protocol process; unawareness of the LEIF guidelines and the three separate investigative functions; individual and/or institutional personalities; training; prior experience; and limited resources. Issues involving the management of the investigation can delay and compromise in-progress investigations and may have long-term detrimental effects upon both the instant and future LEIF incidents.

Because these and other demands and complications exist, the Protocol was developed and has been periodically updated by the Contra Costa County Police Chiefs' Association to serve as a guide for the investigation of law enforcement involved fatal

incidents in Contra Costa County.

B. SUMMARY OF THE PROTOCOL'S MAJOR PROVISIONS

Ref 4

This Protocol applies to incidents within Contra Costa County in which:

1-fatalities of civilians occur "actually or conceivably as a result of" (defined in REF 8) conduct of law enforcement personnel, or "actually or conceivably as a result of" law enforcement operations or activities;

2-fatalities of law enforcement personnel which occur "actually or conceivably as a result of" conduct of another person or which occur while on-duty (with some specific exceptions). When incidents fit within any of those categories, use of this Protocol is mandatory. For other incidents involving law enforcement personnel or activities that do not meet the mandatory criteria, involved Member Agencies can optionally invoke the Protocol. Affiliate Protocol Members and Participating *ad hoc* Agencies (i.e. law enforcement agencies which are not members of the Chiefs' Association) may request that Member Agencies invoke the Protocol process for incident(s) which occurred in their respective jurisdiction(s).

Three investigative formats (designated the Criminal Investigation, the Administrative Investigation, and the Civil Litigation Investigation) are defined and differentiated by their goals, staffing and procedural authorities. The latter two investigations are performed by the Employer Law Enforcement Agency, that is, the agency whose operation, activity or employee is involved in the fatality. The Criminal Investigation is performed by an *ad hoc* Multi-Agency Task Force (MATF) (**Ref 157**) staffed by investigators from the (1) Employer Agency, (2) the Venue agency within whose territorial jurisdiction the incident occurred, (3) the District Attorney's Office, (4) the Sheriff's Criminalistics Laboratory, (5) involved out-of county Employer LEAs in the capacity of Affiliate Protocol Members (**Ref 57**) or Participating *ad hoc* Agencies (**Ref 58**), and (6) other agencies as needed. Within each *ad hoc* MATF, the Venue Agency(ies), Employer Agency(ies) and the District Attorney, and their investigators, have equal investigative authority and standing.

Due to the nature of Criminal Investigation and its possible consequences, it is required to adhere to the most stringent standards for acquiring its investigative products (such as physical evidence, statements and observations). As a result, the Criminal Investigation has investigative priority over the other two formats. The other two formats have full and timely access to the Criminal Investigation's products and are free to investigate for their own purposes as long as it does not conflict with the Criminal Investigation.

The Protocol provides many procedural guidelines for the conduct of the Criminal Investigation and some for the Administrative Investigation.

Law Enforcement Personnel have the right to be represented and/or supported by an attorney or someone else during Protocol investigations. They may choose to provide statements, physical evidence and other relevant material and information to Criminal

Investigators and/or Administrative Investigators consensually, or they may choose to provide such material and information to Administrative Investigators only when compelled to do so under the authority of the *Lybarger/Garrity/Kalkines* cases (**Ref 52**).

After each LEIF, a public Coroner's Inquest will normally be held to present the facts of the incident to the public, the news media, the decedent's family and other interested parties.

C. POLICY

Ref 5

The Chief Executive Officers [1] of the law enforcement agencies of Contra Costa County, acting together as the Contra Costa County Police Chiefs' Association, continue to strongly believe that justice for everyone is best served by ensuring that Law Enforcement Involved Fatal Incidents occurring within Contra Costa County are investigated under the provisions of this Protocol system. It is the policy of the Contra Costa County Police Chiefs' Association, and of its individual Chief Executive Officer members, that such incidents shall be investigated under the provisions of this Protocol with professionalism, objectivity, fairness, thoroughness, compassion, and adherence to legal rights.

While this Protocol represents the understanding and agreement among Member Agencies and Affiliate Protocol Members about how Law Enforcement Involved Fatal Incidents are to be investigated, this Protocol is neither a statute, ordinance nor regulation and it is not intended to increase the civil or criminal liability of Members, Affiliate Protocol Members and Participating *ad hoc* Agencies or their employees, and it shall not be construed as creating any mandatory obligations to, or on behalf of, third parties. Members, Affiliate Protocol Members and Participating *ad hoc* Agencies expect that its provisions will be followed when Protocol incidents occur but it is anticipated that agencies may make minor modifications, which will not affect the Protocol's basic principles, to meet agency requirements.

D. DEFINITIONS AND ABBREVIATIONS

Ref 6

1. **"Actors".** See **"LEA Actors"** at **Ref 48.**

Ref 7

2. **"Actually or conceivably a factor"**
   "Actually or conceivably a result"

Ref 8

b

These phrases define the nexus that is required for mandatory Protocol invocation purposes between

- civilian deaths **and** either the conduct of a "Law Enforcement Person" **or** the operations or activities of a Law Enforcement Agency. **REF 69-81**

[1] The term "Chief Executive Officers" refers to the Chiefs of Police of Contra Costa County's various cities, towns, and districts; the elected Sheriff; the elected District Attorney; and the Captain of the California Highway Patrol's Contra Costa Office.

- deaths of anyone from vehicle collisions **and** either the conduct of a "Law Enforcement Person" **or** the operations or activities of a Law Enforcement Agency. **REF 82-93**
- deaths of LEOs **and** the conduct of a person or law enforcement operations or activities. **REF 94-103**
- specified on-duty and off-duty deaths of Non Sworn Personnel **and** the conduct of another person **or** the operations or activities of a Law Enforcement Agency. **REF 104-113**
- Deaths of anyone from the crash or operation of aircraft or watercraft under control of a Law Enforcement Person. **Ref 114**

As used in these phrases, the word "**conceivably**" means "possibly, believably, credibly, plausibly or feasibly" and the word "**factor**" means an "element, fact or circumstance".

3. ***"ad hoc"***. As used in the Protocol, this Latin term means "for the specific purpose, case, or situation at hand and for no other". In the Protocol it does not have its alternative meaning which is "improvised and often impromptu". **Ref 9**

4. **"Administrative Investigation."** This type of investigation is performed by Employer Agencies for administrative (i.e. non-criminal) purposes. See **Refs 150, 301-315** for specifics. **Ref 10**

5. "**Administrative Investigators".** These investigators are assigned by the Employer LEA(s) to conduct Administrative Investigations. **Ref 11**

6. "**Affiliate Protocol Members**". These are out-of-county LEAs which have accepted an invitation to participate in Protocol investigations of future LEIF incidents involving those LEAs which occur in Contra Costa County. See **Ref 118** for details. **Ref 12**

7. "**Case Managers Team".** The Criminal Investigation of each Protocol incident is led by an *ad hoc* Case Managers Team composed of one lieutenant level official from each of the MATF agencies involved in the investigation. See details at **Ref 169.** **Ref 13**

8 "**Civil Litigation Investigation**". This type of investigation is performed by or for LEAs in anticipation of possible civil law suits. See details at **Ref 316.** **Ref 14**

9. "**Civil Litigation Investigators".** These investigators are employed by, or function on behalf of, involved LEAs for the purpose of conducting Civil Litigation Investigations. **Ref 15**

10. "**Criminal Investigation".** These investigations, performed by MATFs, are conducted to determine whether or not anyone committed a crime during Protocol incidents. See details at **Refs 149, 154-300.** **Ref 16**

11. "**Criminal Investigators".** These investigators are assigned to the *ad hoc* MATFs by the Venue LEA(s), the Employer LEA(s), involved out-of county LEAs in the capacity of Affiliate Protocol Members or Participating *ad hoc* Agencies, the District Attorney's Office and assisting LEAs, to conduct the Criminal Investigations of each incident. Ref 17

12. "**Detention".** A detention occurs during a person's contact with law enforcement personnel whenever a reasonable and innocent person would believe he/she is not free to either leave or to otherwise disregard the police authority and go about his/her business. Detention is accomplished by exertion of police authority that is less than an arrest but is more substantial than a simple contact or consensual encounter. For further definition, see *The Peace Officers Legal Sourcebook* [2], *Section 2, Search And Seizure, Persons, III. Detentions and Stops, A. Definition and Purpose.* Ref 18

13. "**Duty Status"**. See definitons at **Refs 42-46.** Ref 19

14. "**Employer Agency"**. This is the LEA by whom the involved Law Enforcement Personnel (Actors and Witnesses) are employed or affiliated. In many cases, the Venue Agency is also the Employer Agency. Ref 20

15. "**Fatality"** is synonymous with "death" and means Ref 21

    a. death has been pronounced or is obvious beyond doubt, or Ref 22

    b. there is probable cause to believe **(Ref 61)** the person will die. Ref 23

16. "**Law Enforcement-Involved Fatal Incidents" ("LEIF"s) summarized definition:** This term refers to incidents occurring within Contra Costa County which involve law enforcement operations or personnel in which "fatalities" (**Refs 21-23**) occur to civilians or law enforcement personnel under specified circumstances. A summary of those circumstances follows immediately below; see **Refs 68-115** for details. Ref 24

    a. **Fatalities of civilians** which are "actually or conceivably a result of" **(Ref 8)** either : Ref 25

        1) conduct of LEOs (either on-duty or off-duty), or of on-duty Non Sworn Personnel, **or** Ref 26

        2) law enforcement operations or activities of any type, and specifically including fatalities while under detention, arrest, custody; attempts to detain, control or arrest; and fatalities occuring within 48 hours of a person's release from arrest or custody. See **Ref 79** for an exception. Ref 27

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[2] This excellent publication, written and regularly updated by the California Attorney General's Office, is distributed to all California law enforcement agencies and is also available for purchase by agencies and individuals. For more information refer to the Attorney General's website: http://ag.ca.gov/publications/index.php#lawenforcement.

b. **Fatalities of LEOs, civilians and on-duty Non Sworn Personnel** which are "actually or conceivably a result of" (**Ref 8**) vehicle collisions which are "actually or conceivably the result of" conduct of LEOs or on-duty Non Sworn Personnel or of law enforcement operations or activities. **Ref 28**

c. **Fatalities of LEOs,** whether "on-duty" or "off-duty", and "on-duty" Reserve LEOs, which are "actually or conceivably a result of" (**Ref 8**) conduct of another person or which occur while on-duty or during law enforcment operations or activities (with exceptions listed at **Refs 98-101**). **Ref 29**

d. **Fatalities of Non Sworn Personnel** which occur or are caused while "on-duty" and which are "actually or conceivably as a result of" conduct of any other person, or from other circumstances while on-duty, and during law enforcment operations or activities (with exceptions). **Ref 30**

e. **Fatalities of anyone** caused by the crash or operation of aircraft or water-craft which is under operational control of Law Enforcement Personnel. **Ref 31**

17. "**Law Enforcement Person**" and "**Law Enforcement Personnel**". These terms encompass the people in the categories below. **Ref 32**

a. **"Law Enforcement Officers"** (the plural is **"LEOs"** and the singular is "**LEO**"). These are sworn peace officers including those who work part-time or on per diem, and those on sick, disability or disciplinary leaves or on vacation at the time of their involvement in a Protocol incident. **Ref 33**

Reserve LEOs are in this category when they are "on-duty" (**Refs 102, 112**) but are categorized as "Non Sworn Personnel" when "off-duty". **Ref 34**

b. "**Non Sworn Personnel**". This term refers to non-peace officer LEA personnel and others who are so closely associated with LEAs in other roles that some Protocol incidents involving them warrant application of the Protocol. **Ref 35**

1) Examples of people in this category: **Ref 36**

a) non-peace officer personnel who are employed full time, part time, or temporarily by LEAs, in the following illustrative positions: (1) civilian jailers and other civilian custodial staff such as cooks, teachers, maintenance; (2) medical personnel; (3) security personnel; (4) civilian crime lab, evidence and property room personnel; (5) dispatchers; (6) civilian pilots and crew members of law enforcement owned or operated aircraft or watercraft; (7) civilian technicians, mechanics and fleet staff; (8) civilian managers, analysts and planners; (9) traffic and parking control personnel; (10) non-peace officer Community Service Officers; (11) LEA animal control personnel; (12) clerks, secretaries and receptionists; (13) facility and **Ref 37**

equipment personnel; (14) civilian Public Information Officers; (15) non-peace officer employees of the District Attorney's Office including prosecutors and support staff; (16) non-peace officer staff of the Coroner's Division; (17) non-peace officer trainers and their staff; (18) paid cadets and interns; (19) members of the clergy . This category does not include outside vendors and their employees who are performing work for LEAs or within LEA facilities, or employees of the LEA's parent governmental entity (e.g. town, city, county, state or federal).

b) volunteers performing non-paid service to LEAs under the supervison of a LEA, such as civilians, auxiliary officers, former peace officers or other former LEA employees volunteering their services, Volunteers In Police Service (VIPS), Explorer Scouts, non-paid interns and cadets, and Search and Rescue personnel who are neither sworn peace officers or Reserve LEOs. Also included are people serving as volunteers performing job functions listed in **Ref 37**. **Ref 38**

c) informants. For Protocol purposes, informants are categorized as "Non Sworn Personnel" who are "on-duty" only when they are working under the supervison and control of a LEO. At other times they are "off-duty" and are therefore categorized as civilians. **Ref 39**

d) visitors in LEA facilities and passengers of LEOs or "on-duty" Non Sworn Personnel. **Ref 40**

e) Reserve LEOs are in this category when they are "off-duty" (**Ref 34**) but are classified as LEOs when they are "on-duty". (**Ref 102,112**) **Ref 41**

c. Duty status **Ref 42**

1) "On-duty" for Protocol purposes, includes **Ref 43**

a) the usual and common definitions used in law enforcement for "on-duty", and **Ref 44**

b) occasions when the Law Enforcement Person is actually, purportedly or apparently acting for a law enforcement purpose at the time of the incident, when he/she would otherwise normally be considered to be "off-duty". (See **Ref 39** for a specific provision regarding informants.) **Ref 45**

2) "Off-duty" for Protocol purposes are those times when neither 1-a (**Ref 44**) nor 1-b (**Ref 45**) apply. **Ref 46**

18. **"LEA".** This acronym means "Law Enforcement Agency". **Ref 47**

19. **"LEA Actors".** These are Law Enforcement Personnel whose conduct was "actually or conceivably a factor" (**Ref 8**) in a fatality. **Ref 48**

20. **"LEA Witnesses".** These are Law Enforcement Personnel who have knowledge of the circumstances of a Protocol incident but whose conduct was not "actually or conceivably a factor" (**Ref 8**) in the fatality. **Ref 49**

21. **"LEIF".** This acronym means **"Law Enforcement-Involved Fatal Incident" ("LEIFs"** is the plural). (See **Refs 24-31** for summary definition and **Refs 68-115** for details.) **Ref 50**

22. **"LEO"**and **"LEOs".** These acronyms mean "Law Enforcement Officer" and "Law Enforcement Officers" respectively. **Ref 33** **Ref 51**

23. ***Lybarger*** [3]**/** ***Garrity*** [4]**/** ***Kalkines*** [5]. These appellate court cases (hereafter referred to collectively as ***Lybarger***) address and resolve the legal and investigative conflicts that are created when public employees (including Law Enforcement Personnel) invoke their Constitutional rights (such as "taking the 5th" Amendment) during investigations conducted by their public agency employers. The courts recognize that these employers have legitimate and sometimes very urgent need to obtain information from their employees concerning work-related matters, so they allow public agency employers to legally compel their employees to answer employment-related questions by threatening to take significant disciplinary action against them (which usually involves job termination) if they do not comply. In such situations, the cases hold, employees' Constitutional rights are sufficiently respected and protected by court decisions that prohibit compelled evidence of any type from being used in criminal proceedings against the person from whom it was compelled. California law allows employers to discipline employees who refuse to answer when compelled to do so, but only if (1) they have been ordered to answer; and (2) they have been told that the resulting compelled information cannot be used against them in criminal proceedings; and (3) the questions are sufficiently related to employee job performance or fitness for duty. Statements made under administrative compulsion can be used administratively against the employee if the statements are false or incomplete or if they contain admissions of wrongdoing. Further, compelled statements can usually be used against the employee in civil law suits. **Ref 52**

    In January 2007, a California Court of Appeal decision (*Spielbauer vs. County of Santa Clara*, 146 Cal. App. 4th 914) ruled that the *Lybarger* procedure does not provide legally sufficient assurance to employees that their administratively compelled incriminating statements will not be used against them in any subsequent criminal case in which they are defendants, and therefore employees who refuse to give such statements cannot be terminated for insubordination. The decision said that, without new legislation, only the grant or offer of formal "use immunity" granted by the courts is legally sufficient. However, that decision was vacated on May 9, 2007 by the California Supreme Court when that Court granted a petition to review the DCA's decision, leaving the *Spielbauer* decision

[3] *Lybarger v. City Of Los Angeles*, 40 C3d 1822 (California Supreme Court, 1985)

[4] *Garrity v. New Jersey*, 385 US 493 (United States Supreme Court, 1967)

[5] *Kalkines v. United States*, 473 F2d 1391 (United States Court of Claims, 1973)

without any legal effect. Thus, the *Lybarger* case remains the controlling authority on this issue until and unless the California Supreme Court and/or the Legislature decide otherwise.

24. **"Major Case Page Numbering System"**. This is the method used in Protocol investigations for numbering the pages of police reports and their attachments. See details at **Ref 299**. **Ref 53**

25. **"MATF".** This acronym refers to the *ad hoc* **Multi Agency Task Forces** which perform the Criminal Investigations of LEIFs. Each MATF is composed of Criminal Investigators from the involved Venue Agency(ies), the Employer Agency(ies), involved out-of county Employer LEAs in the capacity of Affiliate Protocol Members or Participating *ad hoc* Agencies, the District Attorney's Office, and assisting agencies. For incidents involving traffic collisions, the assigned Protocol Collision Investigators are also members of the MATFs. See **Ref 157.** **Ref 54**

26. **"Members", "Affiliates"** and "**Participating *ad hoc*" LEAs"** **Ref 55**

    a. **"Members"**, also referred to as "Member Agencies", are the Law Enforcement Agencies whose chief officers are members of the Contra Costa County Police Chiefs' Association, all of which have chosen to join this Protocol agreement. **Ref 56**

    b. **"Affiliate Protocol Members"** are LEAs which are not Contra Costa LEAs (and whose Chiefs therefore are not "Members" of the Contra Costa County Police Chiefs' Association) which have chosen in advance, upon invitation, to join this Protocol agreement so they will have Employer Agency status in Protocol investigations of future incidents in which those LEAs or their Law Enforcement Personnel are involved. **Ref 118** **Ref 57**

    c. **"Participating a*d hoc* Agencies"** are LEAs which are neither "Members" nor "Affiliate Protocol Members" but, when they or their Law Enforcement Personnel are involved in Protocol incidents in Contra Costa County, they choose at that time upon invitation on a case-by-case basis to participate as Employer Agencies in Protocol investigations of such incidents. **Ref 119** **Ref 58**

27. **"Non Sworn Personnel".** See definition at **Refs 35-41.** **Ref 59**

28. **"Participating *ad hoc* Agencies".** See definition at **Ref 58.** **Ref 60**

29. **"Probable Cause".** The Protocol definition of this standard of proof is the equivalent of that used so commonly in criminal law i.e., the totality of facts and circumstances, of a reasonably trustworthy nature, known to the decision maker, which are sufficient to warrant a person of reasonable caution or prudence to believe whatever point is at issue. This standard is found in Protocol provisions which define "fatality" **(Ref 21-23)**, which pertain to murder and non-vehicular manslaughter cases involving "off-duty" Law Enforcement Personnel (**Refs 72, 96, 180**), which apply to certain deaths in custody **(Ref 79)** and to deaths of Law Enforcement Personnel in solo traffic collisions **(Ref 93).** **Ref 61**

30. **"Protocol Case"** and "**Protocol incident".** These terms refer to an incident that is or was investigated, or will be investigated, or should be investigated, under the provisions of this Protocol, whether by mandatory or optional invocation. **Ref 62**

31. **"Protocol Collision Investigators".** These are investigators from law enforcement agencies and from the private sector who are qualified to investigate vehicle collisions (and vehicle movement in non-collision incidents) as members of the MATF investigations of Protocol cases. See **Refs 189-192** for details. **Ref 63**

32. **"Protocol Collision Investigators Group".** This is a manpower pool of pre-selected Protocol Collision Investigators from various Member LEAs who are potentially available to join MATF investigations of Protocol cases involving LEAs other than their own when their assistance is needed by the MATF or by an LEA participating in the MATF investigation. See details at **Refs 193-202.** **Ref 64**

33. **"Protocol CSI Group".** This is a manpower pool of pre-selected Crime Scene Investigators from various Member LEAs who are potentially available to join the MATF investigations of Protocol cases involving LEAs other than their own when their assistance is needed by the Crime Lab. See **Ref 212** for more details. **Ref 65**

34. **"Protocol Investigators' Group".** This is a manpower pool of pre-selected investigators from various Member LEAs who are potentially available to join MATF investigations of Protocol cases which involve LEAs other than their own when their assistance is needed by the MATF or by a LEA participating in the MATF investigation. See **Ref 167** for details. **Ref 66**

35. "**Venue Agency".** The Venue LEA is/are the one(s) within whose geographical jurisdiction the Protocol incident occurs. Only Members of the Contra Costa Police Chiefs' Association can be Venue Agencies. See **Refs 170-179** for Venue Agency Determination In Particular Situations. **Ref 67**

E. "LAW ENFORCEMENT-INVOLVED FATAL INCIDENTS" "(LEIFIs)" - MANDATORY **Ref 68**

Law Enforcement-Involved Fatal incidents (LEIFIs) are "fatalities" (**Refs 21-23**) of civilians and of Law Enforcement Personnel which occur in Contra Costa County under any of the circumstances listed below. Fatalities which met the criteria listed below shall be investigated under this Protocol, i.e. they are **mandatory Protocol cases,** the criteria for which are:

1. **Incidents fatal to civilians** in which (a) the conduct of a "Law Enforcement Person" or (b) the operations or activities of an LEA, is/are "actually or conceivably a factor" **(Ref 8)** in the fatality. **Ref 69**

   a. Conduct of Law Enforcement Personnel: **Ref 70**

      1) LEOs (**Ref 51**) who are either "on-duty" (**Refs 42-45**) or "off-duty" (**Ref 46**). **Ref 71**

a) Special rule for some murder or non-vehicular manslaughter cases: When there is probable cause to believe (**Ref 61**) that a "Law Enforcement Person" (**Ref 32+**) is either a murder or non-vehicular manslaughter victim or suspect, and when it appears that the fatality was not during an "on-duty" (**Refs 42-45**) event for either involved person, the Venue Agency, if it is not also the Employer Agency, has the option, after consultation with the District Attorney's Office, of investigating the incident itself without utilizing the Protocol. Determining the Venue Agency shall be on the same basis as in any civilian homicide case. The same provision is at **Refs 96, 180.** **Ref 72**

2) Reserve LEOs only when "on-duty" (**Ref 34**). **Ref 73**

3) "Non Sworn Personnel" (**Refs 35-41**) only when "on-duty" (**Refs 43-45**). **Ref 74**

b. Law enforcement operations or activities of any type in which a fatality occurs, such as these examples: **Ref 75**

1) during attempts by LEOs, "on-duty" Reserve LEOs or by "on-duty" Non Sworn Personnel to detain, arrest or gain physical control of a person. **Ref 76**

2) while the person is under "detention" (**Ref 18**), arrest or physical control by LEOs, "on-duty" Reserve LEOs or by "on-duty" Non Sworn Personnel. **Ref 77**

3) while the person is in custody including, for example, in the field, in vehicles, sally ports, holding cells, jails, interview rooms, court facilities, or medical facilities. **Ref 78**

a) Exception: Excluded from mandatory Protocol investigations are post-booking deaths of prisoners which occur in jails, hospitals or other facilities while prisoners are under the care of LEA-provided medical personnel for diagnosed diseases or conditions which have been known and monitored and/or treated by the LEA's medical care provider prior to death, but only when the deaths were medically expected and when there is probable cause to believe (**Ref 61**) that custodial suicide, trauma, accident, or use of intoxicants was not involved. **Ref 79**

4) fatalities occurring within 48 hours after the decedent's release from detention, arrest or custody. **Ref 80**

a) Qualification: Such fatalities are mandatory Protocol cases only if any LEA categorized in **Refs 175 to 179** conclude(s), based upon evaluation of the circumstances after law enforcement's awareness of the fatality, that the fatality is "actually or conceivably a result" (**Ref 8**) of something that occurred during the decedent's recently-ended detention, arrest or custody. In each specific case, any or all the LEAs within the listed **Ref 81**

categories may elect to participate in these Protocol investigations.

2. **Vehicle collisions: Incidents fatal to anyone from vehicle collisions** which are "actually or conceivably a result of" **(Ref 8)** collisions of one or more vehicles with something or someone, when (a) the conduct of on-duty or off-duty LEOs, on-duty Reserve LEOs or on-duty Non Sworn Personnel, or (b) the operations or activities of law enforcement, are "actually or conceivably a factor" **(Ref 8)** in the result. For incidents to be within this category it is not necessary that vehicles operated by Law Enforcement Personnel collide with anything or anyone, nor is it necessary for a vehicle pursuit to be involved. Examples of included situations are: **Ref 82**

   a. routine or normal driving **Ref 83**

   b. emergency response driving **Ref 84**

   c. training **Ref 85**

   d. pursuits **Ref 86**

   e. driving with intent to catch up to another vehicle for the purpose of identifying it or its occupants, or for surveillance purposes. **Ref 87**

   f. fatalities which occur very soon after Law Enforcement terminates pursuits before stopping the target vehicles when it appears from the manner of driving and the close time and distance proximity of the collision to law enforcement vehicle(s) that the drivers of the pursued vehicles who directly or indirectly caused the fatalities (including to himself/herself) were still driving in apparent attempt to evade the LEOs or to avoid being stopped or identified. **Ref 88**

   g. fatalities caused by vehicle collisions "actually or conceivably the result of" **(Ref 8)** utilization of law enforcement attempts, techniques or equipment to stop or alter the course of vehicles. Examples include pursuits, stationary or rolling road blocks, check-points, barricades, ramming, precision immobilization technique (PIT maneuver), in-line active vehicle containment, tire deflation devices, etc. **Ref 89**

   h. attempts by Law Enforcement Personnel, with or without use of vehicles driven by them, to slow, redirect or stop vehicles for purposes of traffic control. **Ref 90**

   i. fatalities of passengers of LEOs or of "on-duty" Reserve LEOs or "on-duty" Non Sworn Personnel, such as ride-alongs, victims, witnesses, injured people, stranded motorists, etc. **Ref 91**

   j. fatalities in which law enforcement gunfire directed at a person or at a vehicle is "actually or conceivably a factor" **(Ref 8)** in the collision's occurrence. **Ref 92**

   k. excluded: solo traffic collisions in which driver LEOs, "on-duty" Reserve LEOs **Ref 93**

or "on-duty" Non Sworn Personnel are the decedents and only occupants of the involved vehicles and when there is probable cause to believe **(Ref 61)** that no other people or occupied vehicles were involved in the collisions or in their causation.

3. **Incidents fatal to LEOs** **Ref 94**

a. in which the conduct of another person is "actually or conceivably a factor" **(Ref 8)** in the fatality, whether the victim LEO is "on-duty" or "off-duty" at the time of the incident, and whether or not there was a law enforcement purpose for the conduct of either party. (This category includes the fatality of one LEO caused by another LEO). **Ref 95**

1) Special rule for some murder or non-vehicular manslaughter cases: When there is probable cause to believe **(Ref 61)** that a "Law Enforcement Person" **(Ref 32+)** is either a murder or non-vehicular manslaughter victim or suspect, and when it appears that the fatality was not during an "on-duty" **(Ref 43-45)** event for either involved person, the Venue Agency, if it is not also the Employer Agency, has the option, after consultation with the District Attorney's Office, of investigating the incident itself without utilizing the Protocol. Determining the Venue Agency shall be on the same basis as in any civilian homicide case. The same provision is at **Refs 72, 180.** **Ref 96**

b. which occur "on-duty", or when law enforcement operations or activities (including training) are "actually or conceivably a factor" **(Ref 8)** in the result, even when there is no indication that the conduct of another person is "actually or conceivably a factor". **Ref 97**

1) Exception: LEO fatalities from the causes and circumstances listed below are not mandatory Protocol cases unless criminal conduct (including the LEO's) is "actually or conceivably a factor" **(Ref 8)** in the fatality: **Ref 98**

a) deaths from apparent natural physiological causes such as heart attacks. **Ref 99**

b) accidental deaths caused by weather and other natural events such as floods, mud or land or rock slides, earthquakes, tornadoes, tsunamis, lightening, high winds, falling trees, etc. **Ref 100**

c) accidental deaths caused by falling, drowning, fire, smoke, hyperthermia (heat stroke), electrocution, exposure to the toxins including those from insects, structure collapse, being struck by falling objects, and animals. **Ref 101**

c. which occur to "on-duty" Reserve LEOs **(Ref 34)** with exceptions listed in **Refs 98-101.** **Ref 102**

d. "off-duty" suicides of LEOs are mandatory Protocol cases only when the conduct of another person is "actually or conceivably a factor" (**Ref 8**) in the death. **Ref 103**

4. **Incidents fatal to Non Sworn Personnel:** **Ref 104**

a. "On-duty" (**Ref 43-45**) when the fatality is "actually or conceivably the result of" (**Ref 8**) the following: **Ref 105**

1) conduct of another person. **Ref 106**

2) other circumstances while "on-duty", or during law enforcement operations or activities, including training. **Ref 107**

a) exception: "on-duty" fatalities to Non Sworn Personnel from the causes and circumstances listed below are not mandatory Protocol cases unless criminal conduct is "actually or conceivably a factor" (**Ref 8**) in the fatality: **Ref 108**

1. deaths from apparent natural physiological causes such as heart attacks. **Ref 109**

2. deaths apparently caused by weather and other natural events such as floods, mud or land slides, earthquakes, tsunamis, lightening, tornadoes, falling trees, high winds, etc **Ref 110**

3. accidental fatalities apparently caused by falling, drowning, fire, smoke, electrocution, exposure to toxins, being struck by falling objects, including during search and rescue attempts. **Ref 111**

b. Fatalities of "on-duty" Reserve LEOs are considered to be the same as fatalities of regular LEOs (**Ref 34**). **Ref 112**

c. "Off-duty" fatalities of Non Sworn Personnel are not mandatory Protocol cases. **Ref 113**

5. **Aircraft and watercraft deaths: Incidents fatal to anyone** which are "actually or conceivably a result of" (**Ref 8**) the **crash or operation of an aircraft** (whether in the air or on the ground) or **watercraft**, which at the time of the incident is under the operational control of Law Enforcement Personnel. **Ref 114**

6. See **Chart** entitled **"Duty Status Criteria For Mandatory Protocol Invocation"** on the following page: **Ref 115**

Duty Status Criteria for
Mandatory Protocol Invocation

when "***conduct of a law enforcement employee***" (**Refs 69-74, 82, 95, 105-106**) is the required nexus between a fatality and law enforcement's possible causal relationship to it. This chart is not applicable when the required nexus is "***the operations or activities of a Law Enforcement Agency***" (**Refs 69, 75-81, 82-93, 97-103**).

Actor

the individual whose conduct was "actually or conceivably a factor" (Ref 8) in the fatality

Decedent	**Civilian**	**LEO on duty**	**LEO off duty**	**NSP on duty**	**NSP off duty**
Civilian	This is a civilian homicide, not an LEIF	Mandatory	Mandatory but exception	Mandatory	Optional
LEO on duty	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
LEO off duty	Mandatory but exception	Mandatory	Mandatory but exception	Mandatory	Mandatory but exception
NSP on duty	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
NSP off duty	Optional	Mandatory	Mandatory but exception	Mandatory	Optional

"LEO" means a Law Enforcement Officer, i.e., a sworn peace officer. **Ref 33.**

"NSP" means Non Sworn Personnel of a Law Enforcement Agency. **Refs 35-41.** Reserve officers are categorized as LEOs when they are "on-duty" but are considered Non Sworn Personnel when "off-duty". See duty definitions below.

"On-duty" means (1) when actually "on-duty", or (2) when acting actually, apparently or purportedly for a law enforcement purpose when otherwise off-duty (**Refs 43-45**). "Off-duty" means at other times (**Ref 46**).

"Mandatory but exception" means these are mandatory Protocol cases except when there is "probable cause" **(Ref 61)** to believe that the LEO or NSP is either the victim or suspect in a murder or non-vehicular manslaughter and when it appears that the fatality was not during an "on-duty" (see definition above) event for either involved party. In such cases the Venue Agency, if it is not also the Employer Agency, has the option, after consultation with the District Attorney's Office, of investigating the Incident itself without utilizing the Protocol. **Refs 72, 96,180.**

F. LEIF INCIDENTS INVOLVING NON-MEMBER (OUT-OF-COUNTY) LEAS

Ref 116

1. The activities or operations of out-of-county LEAs, or the conduct of their Law Enforcement Personnel, may result in LEIF incidents that occur within Contra Costa County. For Protocol purposes non-Member Agencies fall within one of the classifications below: Ref 117

   a. **Affiliate Protocol Member:** The Chiefs' Association may invite selected out-of-county LEAs to become Affiliate Protocol Members. LEAs that accept will have full participation as Employer Agencies in future Protocol investigations of LEIF incidents involving their personnel or their activities and operations that occur in Contra Costa County. Ref 118

   b. **Participating *ad hoc* Agency**: Out-of-county LEAs which are not Affiliate Protocol Members may be invited by the Case Managers Team (**Ref 169**) to be a Participating *ad hoc* Agency when involved in an LEIF incident in the County. If it agrees, it will have full participation as an Employer Agency in that Protocol investigation. Ref 119

   c. Out-of-county LEAs that are neither Affiliate Protocol Members nor Participating *ad hoc* Agencies will not have a full participatory role in Protocol investigations of incidents involving their personnel or their operations or activities in the County, although some accommodation may be made by the Case Managers Team regarding their involvement in the Protocol investigations of each incident. Ref 120

2. LEAs, including out-of-county LEAs in any capacity, may conduct their own Administrative and Civil Litigation investigations of Protocol incidents as they wish but those investigations shall not be conducted in conflict or competition with the Criminal Investigation (**Refs 308, 316**). Ref 121

3. See **Refs 125-146** for the optional invocation provisions applicable to Affiliate Protocol Members and Participating *ad hoc* Agencies. Ref 122

G. INVOKING THE PROTOCOL

Ref 123

1. Automatic and Immediate ("mandatory") Invocation: Ref 124

   Upon the occurrence of each "Law Enforcement Involved Fatal Incident" (defined in summary at **Ref 24-31** and in detail at **Refs 68-115**) this Protocol is automatically and immediately effective. Prompt notification to appropriate LEAs and officials is the responsibility of the Venue Agency(ies).

2. Optional Invocation: Ref 125

   This Protocol may be optionally invoked for incidents involving law enforcement personnel or LEA activities and operations which are not included within the

definition of "Law Enforcement Involved Fatal Incidents" (**Refs 68-115**) if possible criminal conduct of anyone involved in the incident is an issue that should reasonably be determined. Neither death nor bodily injury is a pre-requisite to optional invocation under this category, thus the Protocol may be invoked for incidents involving any type of potential crime, including but not limited to: property and person crimes; integrity crimes; crimes against the government or the justice system; contraband crimes; crimes against public health, safety or peace; threat crimes; and state civil rights crimes.

a. **Member Agencies**: each Member Agency of this Protocol, when in the capacity of a Venue Agency or Employer Agency, may optionally invoke this Protocol for incidents of the type described above **(Ref 125)**. Upon these optional invocations, incidents will be investigated under the provisions of this Protocol. **Ref 126**

b. **Affiliate Protocol Members** (**Ref 118**) and **Participating *ad hoc* Agencies** (**Ref 119**) may request that the optional invocation provision of this Protocol be utilized for incidents involving their personnel or their law enforcement operations or activities occurring within the County, but the decision to optionally invoke the Protocol must be made by a Member Agency who has Venue or Employer Agency status concerning the incident. Upon these optional invocations, the incidents will be investigated under the provisions of the Protocol with the Affiliate Protocol Members and Participating *ad hoc* Agencies having investigative roles in the Protocol investigation, as would be the case with a mandatory invocation. **Ref 127**

c. Examples of optional invocation situations: (Also see decision-making factors at **Refs 133-143.**) **Ref 128**

   1) Fatalities to civilians or to Law Enforcement Personnel which are outside the definition of "Law Enforcement Involved Fatal Incidents" (**Refs 68-115**). **Ref 129**

   2) Incidents involving physical injuries which are not "fatal". **Refs 21-23** **Ref 130**

   3) Other sensitive events involving LEAs operations or activities or their personnel where the issue of anyone's possible criminal conduct should reasonably be determined. **Ref 131**

d. The District Attorney may decline to participate in optional invocations. Declination would most likely occur when it appears to the District Attorney that the possibility of criminal conduct is either absent or not sufficiently high to warrant the District Attorney's participation in the Protocol investigation, or when it lacks the necessary resources to participate. The District Attorney will not investigate, nor participate in another LEA's investigation of, matters which are purely of an Administrative or Civil Litigation nature. **Ref 132**

e. These factors may be relevant to those considering optional invocations: **Ref 133**

1) Injuries to an involved person have not resulted in death, and imminent death is not then medically expected, but the LEA wants a Protocol investigation to begin immediately despite the medical prognosis. **Ref 134**

2) The LEA lacks the resources, experience and/or manpower to conduct a proper and timely Criminal Investigation by itself. **Ref 135**

3) Circumstances concerning the incident cause the LEA to have a special need to utilize the Protocol to ensure a thorough, impartial and credible Criminal Investigation. **Ref 136**

4) The personnel, or the operations and activites, of multiple LEAs are involved in the incident. **Ref 137**

5) One or more other LEAs may be affected by the results of the investigation. **Ref 138**

6) The LEA may be concerned about an actual or perceived conflict of interest which a Protocol investigation could minimize. **Ref 139**

7) The involvement of a notable person in the incident may actually or perceivably have a negative impact upon the ability of the LEA to properly conduct a credible investigation by itself. **Ref 140**

8) The incident is connected to another matter which is being or was investigated as a Protocol case. **Ref 141**

9) The incident is factually and/or legally complicated, or involves many people. **Ref 142**

10) For other articulated reasons the LEA believes that the interests of justice would be best served by utilizing the Protocol. **Ref 143**

f. When in doubt about optionally invoking on a specific case, it is usually advisable to promptly invoke so a Protocol investigation can start immediately. Subsequently, if the facts or the perceptions of the incident change after the investigation begins, the Protocol investigation can be terminated by mutual agreement and the involved agency(ies) may complete the investigation as they consider appropriate. **Ref 144**

g. In lieu of invoking the Protocol in optional situations, the involved LEA(s) may, of course, unilaterally investigate the incident or may seek investigative services from other LEAs as they choose. **Ref 145**

h. If the Employer Agency could use the optional invocation provision for a specific incident but has declined to do so, a displeased Law Enforcement **Ref 146**

Person who is an Actor (**Ref 48**) in the incident or who is otherwise involved in it in a substantial way may ask his/her Employer Agency, directly or through his/her attorney or other representative, to reconsider the decision and take into account the person's desire for optional invocation. If the LEA is still not convinced that optional invocation is appropriate, it is suggested that the LEA, the involved person (directly or through his/her legal or other representative) and the District Attorney's Office promptly hold a three-way discussion to resolve the matter.

H. INVESTIGATIVE AGENCIES, FORMATS AND RESPONSIBILITIES

Ref 147

1. Three types or formats of investigations are available for LEAs to use for Protocol incidents. Each of the three has a distinct purpose: **Ref 148**

   a. A **Criminal Investigation** is performed to determine whether or not any of the involved individuals did or did not commit a crime. (See **Ref 154-300** for specifics about this format.) This format is always utilized but the other two are at the discretion of the involved LEAs. **Ref 149**

   b. An **Administrative Investigation** may be performed to (1) determine if involved Law Enforcement Personnel acted within the LEA's policies, procedures, training and orders; (2) determine if and how the LEA can improve any aspect of its operations (i.e. a quality control analysis); and (3) provide information about the incident to the LEA's leadership for other management purposes. See **Refs 301-315** for specifics about this format. **Ref 150**

   c. A **Civil Litigation Investigation** may be performed to prepare the LEA, its parent government, and usually its employees, to defend against civil claims or civil law suits that may arise from Protocol incidents. See **Ref 316** for specifics about this format. **Ref 151**

2. To ensure that each of these three different investigations have the best opportunity to achieve their respective purposes, to conform to and benefit from the different legal procedural rules applicable to each, and to avoid problems that result from investigators crossing back and forth between investigative formats in the same case, **separate investigations** must be performed for each of these investigative purposes. Each investigation must use its own investigators, each investigates for its own purposes, and each follows the investigative procedural legal rules applicable to it. **Ref 152**

   a. The Criminal Investigation can and will share its information freely with the other two investigative formats (**Ref 164**) but the converse is not true. The Administrative Investigation generally cannot share any information with the Criminal Investigation that was obtained directly or indirectly as a result of a *Lybarger* (**Ref 52**) admonition, however exceptions may occasionally apply, so consult a knowledgeable prosecutor or legal advisor if this issue arises. To preserve a primary advantage of using the Civil Litigation Investigation, the **Ref 153**

sharing of its investigative product with the other two formats may need to be significantly restrained; confer with the LEA's civil litigation attorney or risk manager.

3. **The Criminal Investigation** **Ref 154**

a. The Criminal Investigation has investigative priority over both the Administrative Investigation and the Civil Litigation Investigation. The latter two formats may take whatever investigative action they wish when the Case Managers Team (**Ref 169**) determines that the Criminal Investigation would not be compromised by such actions. Regarding interviews with anyone, in most cases this means that once the Criminal Investigation has finished its interview with a person, or the person declines to be interviewed by the MATF investigators, the other investigative formats are free to interview that person as they wish. **Ref 155**

b. It begins immediately after an LEIF has occurred. **Ref 156**

c. It is performed by Criminal Investigators supplied by the Venue LEA(s), the Employer LEA(s) (including involved out-of county LEAs in the capacity of Affiliate Protocol Members or Participating *ad hoc* Agencies), and the District Attorney's Office. The Protocol Investigators Group (**Ref 167**), the Protocol Collision Investigators Group (**Ref 193**) and other LEAs and personnel may be utilized as needed. These investigators are formed into an *ad hoc* **Multi-Agency Task Force** (**"MATF"**) for each LEIF investigation. **Ref 157**

d. The Sheriff's Crime Lab (**Ref 211**) is responsible for physical evidence. See **Ref 203** concerning use of the Crime Lab for vehicle collision cases. **Ref 158**

e. Venue and Employer LEAs (including Affiliate Protocol Members and Participating *ad hoc* Agencies) and the District Attorney's Office are co-equal within MATF investigations. **Ref 159**

f. The goal of the Criminal Investigation is to develop all available relevant information about the Protocol incident so a subsequent determination about the presence or absence of criminal liability on the part of anyone involved in the incident can be properly made. Specifically it investigates: **Ref 160**

1) whether or not conduct of anyone involved in the incident is prohibited by California criminal law, and if criminal conduct did occur: **Ref 161**

a) determine who is responsible for that conduct; and **Ref 162**

b) determine the degree of the crime(s); the existence of any factual or legal defenses; and the presence or absence of any factors which would mitigate or aggravate punishment for such crime(s). **Ref 163**

g. Its entire investigative product will be promptly shared with all LEA(s) participating in the MATF and with other LEAs as appropriate for their uses, including use in any Administrative or Civil Litigation Investigations they may conduct. While the Criminal Investigation does not directly address Administrative or Civil Litigation concerns, its investigative product is often very relevant to issues those other investigative formats may address. **Ref 164**

h. The Criminal Investigation is required to follow the rules of law that apply to all criminal investigations, i.e., those established and defined by the federal and state constitutions, federal and state statutes, and case law. **Ref 165**

i. It is performed in a manner that provides both the appearance and the reality of a thorough, fair, complete and professional investigation that is free of conflicts of interest. **Ref 166**

j. **Protocol Investigators' Group**: **Ref 167**

Investigators from Member Agencies and Affiliate Member Agencies who are experienced and skilled in Protocol investigations may be invited to join the Protocol Investigators Group. Thereafter, when their investigative expertise and experience is needed, members of this Group may be called upon to join MATF investigations of incidents in which their LEAs are neither a Venue nor Employer Agency. (Of course investigators may participate in MATF investigations of incidents in which their LEA is a Venue or Employer Agency whether they are members of this Group or not.) To be eligible for membership in this Group, there must be an adequate indication from the investigator, as well from his/her LEA, that the investigator is potentially willing and available to assist in such investigations. The District Attorney's Office selects the members for this Group and maintains the list of its members. Decisions to call upon Group members for assistance on specific Protocol incidents, and selection of specific investigators to be used, shall be made by the Case Managers Team (**Ref 169**).

k. For each incident, the MATF investigators will be assigned as appropriate to investigative teams by the Case Managers Team. The number of teams utilized will depend upon the specific circumstances of each incident, the number and complexity of investigative tasks to be performed, how rapidly various tasks must be performed, and upon manpower availability. Normally each team will consist of one criminal investigator from each of the MATF agencies. The MATF agencies may elect to participate or not participate on various teams and in various aspects of the MATF's investigation as they consider appropriate. **Ref 168**

l. **Case Managers Team:** **Ref 169**

Each MATF investigation is led by an *ad hoc* Case Managers Team. Each of the MATF agencies will contribute one person to this team. Generally the

officials assigned to this Team should hold the approximate rank of lieutenant, or if holding lesser rank, should be given lieutenant-level authority by their agencies for their participation on this Team.

These individuals should be experienced and knowledgeable in LEIF investigations, should have supervisory authority over investigators from their respective agencies and should have sufficient knowledge and authority to make a variety of decisions pertaining to the MATF investigation of the incident on behalf of their agencies and to implement those decisions.

As members of the Case Managers Teams they will become aware of issues that may affect their LEAs which are collateral to or outside the realm of the Criminal Investigation. They will need both the authority and the management perspective of a lieutenant-level individual to properly address those issues.

Officials assigned to the Case Managers Team work together as a team and the members are co-equal. While their primary function is to work with each other to manage and coordinate the Criminal Investigation, occasionally one or more members may need to perform some Criminal Investigative functions. See **Refs 228-236** regarding criteria for selecting Criminal Investigators and Case Managers.

m. Venue Agency Choices in Particular Situations: **Ref 170**

1) When a Protocol incident occurs in part in two or more jurisdictions, or if it occurs on the boundary of two jurisdictions (per the definition of California Penal Code §782), or at a location where the boundary is not readily ascertainable or is in dispute, the Venue Agency(ies) shall be: **Ref 171**

   a) the Employer Agency if the LEA Actor (**Ref 48**) is employed by either boundary LEA; or **Ref 172**

   b) both boundary agencies if LEA Actors are employed by both; or **Ref 173**

   c) the LEA which has the greater interest in the case by virtue of having the predominant police involvement in the LEIF or by virtue of having had the majority of acts leading up to the fatality occur within its jurisdiction. **Ref 174**

2) For detention, arrest and institutional custodial fatalities, the following LEAs may be Venue and/or Employer Agencies and may participate in the Protocol investigations of such incidents as they decide: **Ref 175**

   a) the LEA having custody of the person at the time his/her distress was first discovered. **Ref 176**

   b) the LEA(s) having terrritorial jurisdiction to investigate the death or **Ref 177**

any event which may have caused or contributed to it.

c) the LEA which had actual custody at the time of the fatality. **Ref 178**

d) an LEA which surrendered the detainee, arrestee or prisoner into the possession of another LEA. **Ref 179**

3) Special rule for some murder or non-vehicular manslaughter cases: **Ref 180**
When there is probable cause to believe (**Ref 61**) that a "Law Enforcement Person" (**Ref 32+**) is either a murder or non-vehicular manslaughter victim or suspect, and when it appears that the fatality was not during an "on-duty" (**Refs 43-45**) event for either involved person, the Venue Agency, if it is not also the Employer Agency, has the option, after consultation with the District Attorney's Office, of investigating the incident itself without utilizing the Protocol. Determining the Venue Agency shall be on the same basis as in any civilian homicide case. The same provision is at **Refs 72, 96.**

4) When an "on-duty" LEO is an Actor (**Ref 48**) in a Protocol incident that occurs within the jurisdiction of another Member LEA, and when that LEO was apparently "on-duty" (as defined in **Refs 43-45**) at the time of the Protocol incident, the Venue Agency may elect to relinquish its Venue Agency role in the Criminal Investigation to the Employer Agency if both LEAs agree. The Employer LEA would then act as both the Venue and the Employer LEA for purposes of the Protocol investigation. The same option applies when the nexus between the fatality and the non-Venue LEA is its operations or activites. **Ref 181**

5) Protocol incidents occurring within the jurisdiction of Districts: **Ref 182**

The LEAs of the East Bay Regional Park District (EBRPD), the Bay Area Rapid Transit District (BART), and the Contra Costa Community College District shall be Venue Agencies for incidents occurring within their jurisdictions. Other LEAs, such as the Sheriff's Office and city police departments may, at their option, also be Venue Agencies for incident investigations when they have concurrent jurisdiction over such incidents, or when they are Employer Agencies, or when requested by the involved District.

n. When a Venue or Employer Agency lacks sufficient investigative resources to perform its role in a Protocol investigation, or when it believes it is more appropriate for another LEA to participate in the investigation in its place, it has these options: **Ref 183**

1) Obtain investigators from the Protocol Investigators Group to staff MATF positions which would otherwise be staffed by the LEA's own personnel. These borrowed officers would work on behalf of the requesting LEA as **Ref 184**

if they were employed by it.

2) Obtain Criminal Investigators directly from one or more other Member Agencies. These borrowed officers would work on behalf of the requesting LEA as if they were employed by it. Ref 185

3) Inform the Case Managers Team that it lacks sufficient manpower to staff its normal positions on the MATF. If the Case Managers Team believes more investigators are necessary to fill those positions, it can obtain them from the Protocol Investigators Group or elsewhere. Those investigators would then work as MATF investigators under the Case Managers Team but would not work as if they were employed by the requesting Agency. Ref 186

4) Relinquish its criminal investigative responsibility to another Member Agency which is willing to substitute itself into the position the requesting LEA would otherwise have had on the MATF. Ref 187

o. Vehicle collision fatalities: Ref 188

1) **Vehicle Collision Investigators**: Fatalities associated with vehicle operations (as defined in **Refs 82-93**) shall be investigated by one or more well qualified vehicle collision investigator(s) working as members of the MATFs investigating those incidents. The Case Managers Team will determine which of the following collision investigators shall be used: Ref 189

a) members of the **Protocol Collision Investigators Group. Refs 193-202** Ref 190

b) members of a **California Highway Patrol Multidisciplinary Accident Investigation Team** ("MAIT"). For Protocol purposes this category includes active MAIT members as well as CHP officers who are former MAIT members who have retained their qualifications and are in good standing. Ref 191

c) other qualifed vehicle collision investigators (not from **Refs 190-191**) selected by the Case Managers Team. Ref 192

2) **The Protocol Collision Investigators Group** is composed of vehicle collision investigators from law enforcement agencies and from the private sector who have been pre-selected to perform Protocol investigations of traffic collision incidents and other selected Protocol incidents which involve vehicle movement. Ref 193

a) A qualifications committee, appointed by the Chiefs' Association and meeting as necessary, will screen interested investigators and will establish the membership of the Group. The listing of qualified Ref 194

investigators in this manpower pool will be maintained by the District Attorney's Office and shall be updated as necessary.

b) The qualifications for membership in the Protocol Collision Investigators Group are: **Ref 195**

1. successful completion of a California POST (or equivalent) approved Traffic Accident Reconstruction (TAR) course or an Advanced Traffic Collision Investigation course. **Ref 196**
2. a demonstrated sufficient quantity of practical field experience, including the identification, documentation, collection and interpretation of collision physical evidence, and interviewing. **Ref 197**
3. previous qualification as an expert witness on the subject in court and/or in approximately equivalent non-courtroom proceedings, or a showing that he/she is capable of being so qualified. **Ref 198**
4. evidence that he/she keeps current with the subject. **Ref 199**
5. familiarity with, and acceptance of, this Protocol's method of conducting investigations and willingness to work within its MATF format. **Ref 200**
6. an adequate indication from the investigator, as well from his/her LEA, that the investigator is potentially willing and available to assist in such investigations. **Ref 201**

c) the Case Managers Teams will select the members of the Protocol Collision Investigators Group to be utilized for individual Protocol cases. **Ref 202**

3) The assigned vehicle collision investigators may be assisted by other vehicle collision investigators (even if not from MAIT or from the Protocol Investigators Group) working under their/his/her supervision. For scene measuring, diagramming, photography, videography and evidence collection, assistance may also be provided by Crime Lab personnel, forensic scene diagrammers or mappers, Crime Scene Investigators, or by other LEA personnel. On-scene collaboration with the Sheriff's Crime Lab regarding the identification, documentation, collection and laboratory analysis of physical evidence is encouraged. **Ref 203**

4) One or more vehicle collision investigators from the Employer Agency cannot investigate the incident alone; at least one other qualified vehicle collision investigator from another agency must jointly investigate. **Ref 204**

5) If additional experts are needed they shall be selected by the MATF's Case Managers Team after consultation with the assigned vehicle collision investigators. **Ref 205**

6) The Case Managers Team will determine the responsibility for the quality control review of investigative reports written by members of the Protocol Collision Investigators Group on a case by case basis. **Ref 206**

p. First Responders' Scene Responsibilities, Procedures and Checklists **Ref 207**

1) After Protocol incident scenes are tactically stable, each LEA is responsible for immediately securing scene(s) within their territorial jurisdiction and for effectively and appropriately managing the numerous first responder tasks that need to be performed. Before the Crime Lab arrives and before the MATF investigation begins, this responsibility may be shifted by mutual consent of the involved LEAs, and it may be modified later by the Case Managers Team. **Ref 208**

2) The scope of the first responders' scene-related tasks is shown in the content of four Checklists which are Attachments to this Protocol and are listed below. Three of them apply to the most common types of incidents (shootings, vehicle collision fatalities and institutional custodial fatalities) and the fourth is a checklist to guide CSIs (and others) before the Crime Lab arrives. While these Checklists contain many specific directions and suggestions, no Checklist can anticipate everything that needs to be done, therefore sound judgment must be exercised because some tasks will need to be performed which are not on the Checklists and some deviations from the Checklists will occasionally be appropriate. For some incidents it will be appropriate to utilize all or portions of several Checklists. **Ref 209**

- ***Patrol Supervisors' LEIF Checklist*** - **Shootings and Generic Incidents**. Attachment A on Pages 50-62.
- ***Patrol Supervisors' LEIF Checklist - Fatal Vehicle Collisions.*** Attachment B on Pages 63-69.
- ***Supervisors' LEIF Checklist - Institutional Custodial Deaths.*** Attachment C on Pages 70-76.
- ***CSI Checklist: Before The Crime Lab Arrives.*** Attachment D on Pages 77-79.

q. Physical Evidence Responsibility: **Ref 210**

1) The Contra Costa Sheriff's Criminalistics Laboratory (the **Crime Lab**) has the responsibility for processing scenes and physical evidence in most Protocol cases (**Ref 158**). This includes: documenting the scene(s) and their contents; locating, collecting, preserving and analyzing physical evidence; conferring with LEIF investigators; writing reports; and testifying as needed. See **Ref 203** for the Crime Lab's role in vehicle collision cases. **Ref 211**

2) The **Protocol CSI Group** **Ref 212**

This Group is established to assist individual Member Agencies, the MATF investigators, and/or the Crime Lab, with evidence and scene processing aspects of Protocol investigations. Members of this Group are LEA employees, either peace officers or not, for whom there is adequate indication from the CSI as well from his/her LEA that the CSI is potentially willing and available to assist with physical evidence work on Protocol cases on an as-needed basis. Qualifications for membership in this Group will be determined by the Director of the Crime Lab who shall also maintain and update the list of Group members as necessary.

3) In rare Protocol cases, very little physical evidence work may need to be performed in the field. In those cases the Crime Lab need not be utilized to process the scene(s) or to collect evidence if all the members of the Case Managers Team agree. If any member of the Case Managers Team does not agree, the Crime Lab shall be used. **Ref 213**

a) When the Crime Lab is not utilized in such cases, the MATF may utilize members of the Protocol CSI Group, but the Group member(s) who selected may not all be employed by the Employer Agency. **Ref 214**

b) If the Case Managers Team is inclined toward not using the Crime Lab to process specific scenes, it should consider that criminalists who are later asked to do forensic reconstructions may be at a disadvantage if they did not perform the scene processing themselves or were not present when it was was being done. **Ref 215**

4) The Crime Lab may request that MATF Agencies furnish personnel (whether CSIs or not) to assist it with scene and evidence work. Furnished personnel will work under the direction of the Crime Lab. MATF investigators designated by the Case Managers Team may also be assigned to scene or evidence tasks; their work may be performed under the direction of the Crime Lab or not, as the Case Managers Team and the Crime Lab jointly decide. The primary considerations in this decision are whether the Crime Lab has already completed its searching and processing before the MATF investigators begin to search, and what type of evidence the MATF investigators will be seeking. **Ref 216**

5) If an employee of the Crime Lab is involved in a Protocol incident as an "LEA Actor" (**Ref 48**) or as a victim [6], at least one physical evidence **Ref 217**

[6] Criminalists of the Contra Costa County Sheriff's Criminalistics Laboratory are Deputy Sheriffs who are sworn and armed peace officers. If the Crime Lab employs any civilian criminalists in the future this provision (**Ref 217**) will still apply.

specialist designated by the Case Managers Team and not affiliated with the Sheriff's Office will be actively involved in processing physical evidence with Crime Lab personnel. Members of the Protocol CSI Group may be used for this purpose.

6) Prior to the final relinquishment of pivotal scenes: **Ref 218**

   a) MATF investigators and scene processors should brief each other and jointly walk-through the scene(s) to further their mutual understanding of the physical evidence aspects of the incident and its relationship to testimonial information, as well as to assess the need for further scene work. **Ref 219**

   b) Management staff, Administrative Investigators and Civil Litigation Investigators of the involved MATF agencies will be given scene walk-throughs and scene briefings if they desire. **Ref 220**

7) In some cases the Crime Lab and the Case Managers Team may determine that customized procedures are necessary for tagging evidence items, documenting collected items on evidence lists, and/or storing collected evidence. Such procedures will be jointly determined by them on a case-by-case basis. **Ref 221**

r. Notifications **Ref 222**

Promptly upon identifying an event as a Protocol case, the Venue Agency/Agencies shall make notifications as promptly as possible to:

1) intra-departmental personnel as required by each agency's procedures; **Ref 223**

2) other involved and affected LEAs if not yet aware; **Ref 224**

3) the District Attorney's Office, directly or through Sheriff's Dispatch; **Ref 225**

4) the Sheriff's Crime Lab; **Ref 226**

5) the Coroner's Office upon confirmation of a fatality. This notification must be made promptly but removal of the remains will not occur until authorized by the Crime Lab and the Case Managers Team. Refer to Attachment F, ***Death Investigation Roles of the Coroner and Law Enforcement Agencies*** on Page 97+ for more details. **Ref 227**

s. Selection of MATF investigators and Case Managers **Ref 228**

The complexities and challenges of LEIF investigations demand that well qualified investigators be assigned to the MATFs by their LEAs. It is most important that members of the Case Managers Team, as well as the primary

investigator from each LEA, be well qualified and carefully selected. The best available people should be selected for those assignments. The following qualifications are important:

1) Experience in Protocol investigations, homicide investigations, non-homicidal crimes against persons, (or vehicular collisions, when applicable) is especially helpful. **Ref 229**

2) Ability to effectively interview people of various backgrounds. **Ref 230**

3) Good working knowledge of physical evidence collection and preservation techniques, an appreciation of the abilities and limitations of physical evidence and scientific analysis of it, and an understanding of the inter-relationship between physical evidence and other types of evidence, especially testimonial accounts of participants and witnesses. **Ref 231**

4) Good knowledge of police operational procedures and the criminal justice system. **Ref 232**

5) Good understanding and personal acceptance of this Protocol. **Ref 233**

6) Excellent report writing and communication skills. **Ref 234**

7) For Case Managers, good organizational and supervisory skills. **Ref 235**

8) Possess deserved professional respect of those with whom he/she works for being competent, thorough, objective, fair and honest. **Ref 236**

t. Interviewing Law Enforcement Personnel **Ref 237**

1) Law Enforcement Personnel have the same rights and privileges regarding Criminal Investigation interviews that other citizens have. **Ref 238**

2) Criminal Investigations of Protocol incidents must adhere to legal rules that apply to all criminal investigations (**Ref 165**). One of the most basic of these rules is that statements (as well as physical evidence) cannot be used in criminal proceedings against people from whom they have been unconstitutionally coerced. Because Criminal Investigations must acquire testimonial and physical evidence through methods that ensure admissibility in potential criminal prosecutions, MATF interviewers must usually not even attempt to obtain statements or physical evidence from Law Enforcement Personnel by using direct or indirect coercion; specifically, in most situations, they must not utilize the authority of the *Lybarger* cases (**Ref 52**) to obtain non-consensual (i.e. involuntary) statements (or physical evidence) from LEA Actors (**Ref 48**). Any exception in individual cases to this very significant limitation must be jointly approved in advance by the District Attorney's Office and by the **Ref 239**

LEA(s) which employ(s) the involved Law Enforcement Person prior to a *Lybarger* admonition being given [7].

3) To ensure the voluntariness of interviews, MATF interviewers may advise Law Enforcement Personnel interviewees of the following: **Ref 240**

   a) The interviewee is not in custody and is free to leave at any time (if true). **Ref 241**

   b) The interviewee is not required to participate in the MATF interview and is not obligated to answer any questions asked by MATF investigators. Further, no punitive action can be taken by the Employer Agency against the interviewee if he/she exercises the right against self-incrimination when speaking to MATF investigators. **Ref 242**

4) *Miranda* is applicable if and when the interview becomes a custodial interrogation, as *Miranda* case law prescribes. **Ref 243**

5) Law Enforcement Personnel have the right to consult with representatives and/or support people prior to interviews and to have them present during Criminal Investigation interviews. Representatives are usually lawyers or officials of peace officers' associations or labor unions, while supporters are usually spouses, co-workers, friends, or members of the clergy. **Ref 244**

   a) Privileged communications: **Ref 245**

      Under California statutes, "private communications" (as defined in the statues) between individuals (including Law Enforcement Personnel) and the categories of representatives and supporters listed below can be kept confidential (i.e. privileged against compelled disclosure) only when the applicable statutory criteria are met.

      - Lawyer [8] **Ref 246**

        The California Evidence Code provides that the content of "**confidential communications**" between people and their lawyers can be kept confidential if the communication meets several other statutory criteria. Among them: the communication must have been made within the lawyer/client

[7] The policy of the United States Justice Department does not allow federal LEAs to grant *Lybarger*-type "use immunity" to employees in return for administratively compelled statements or other evidence without the prior consent of the Justice Department. U.S. Attorney's Manual Chapter 9-23.140; 28 C.F.R. § 0.175; 18 USC § 6004; and Attorney General's memorandum of June 4, 1980.

[8] **Lawyer:** California Evidence Code §§950-962. See §952 for the criteria for confidential communications.

relationship and it must have been made in confidence, meaning that no third parties were present except those present as a legitimate agent of the lawyer.

- Physician [9], Psychotherapist [10], Member of the Clergy [11] **Ref 247**

  These professionals infrequently act as representatives for Law Enforcement Personnel during interviews but often support them later in other ways. Confidential communications between individuals and these professionals may also be protected from disclosure. The statutory criteria for confidentiality differs slightly for each category so refer to the statutes for details.

- Spouse [12] **Ref 248**

  Confidential communications between husband and wife are privileged when the communication was made in confidence between the spouses while they were husband and wife but some exceptions apply. Refer to the statutes for details.

b) Non-privileged communications: **Ref 249**

Communications made to others who are not within the categories above, such as to peace officer association representatives, non-lawyer labor union representatives, co-workers, girl friends or boy friends, other friends, companion officers, sequestering officers and peer support officers are not privileged under California law except when such people are present and acting as legitimate agents of the person's lawyer, physician, psychotherapist or member of the clergy.

c) Representatives should be allowed to consult privately about the facts of the incident with only one Law Enforcement Person at a time. **Ref 250**

6) The Peace Officers' Bill Of Rights (California Government Code §3300 et seq) is formally titled the Public Safety Officers Procedural Bill of Rights. **Ref 251**

a) This statute is abbreviated in the Protocol as POBR. **Ref 252**

b) POBR has virtually no restrictive effect upon most interviews con- **Ref 253**

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[9] **Physician**: California Evidence Code §§990-1007. See §992 for the criteria for confidential communications.

[10] **Psychotherapist**: California Evidence Code §§990-1007. See §1012 for the criteria for confidential communications.

[11] **Member of the Clergy**: California Evidence Code §§1030-1034. See §1032 for the criteria for confidential communications.

[12] **Marital communication:** California Evidence Code §§980-987

ducted by MATF interviewers with Law Enforcement Personnel for the following reasons:

1. POBR is applicable to "Public Safety Officers" which Government Code §3301 defines as all California peace officers (LEOs) with a few minor exceptions not relevant to this Protocol. POBR is not applicable to Law Enforcement Personnel who are not peace officers, i.e. people who are referred to in the Protocol as Non Sworn Personnel. (Some LEAs grant their Non Sworn Personnel rights and benefits that are the same as or similar to those accorded to "public safety officers" by POBR.) **Ref 254**

2. When referring to the questioning of LEOs, POBR exclusively uses the term "interrogation" instead of the word "interview". Although these terms may be synonymous to some people, they are not synonymous for Protocol purposes. MATF investigators usually conduct interviews (not interrogations) with LEOs and other Law Enforcement Personnel (and with nearly all civilians) and do not utilize many of the techniques which are typical of police interrogations [13]. **Ref 255**

3. POBR applies to "interrogations" of LEOs who are "under investigation". In most Protocol investigations, the subject of the MATF's investigation is not the Law Enforcement Personnel but the entire incident. Law Enforcement Personnel are usually interviewed as victims or witnesses to the incidents (**Ref 267**). **Ref 256**

4. POBR does not apply to interviews with LEOs who are being "interrogated" by LEAs other than their Employing Agency. **Ref 257**

   In rare situations where there is a desire to avoid any possible complication or restriction this provision might impose on MATF interviews, Employer Agencies might withdraw their interviewers from MATF interviews.

5. POBR does not apply to "interrogations" of LEOs, even when conducted by their Employing LEA, when the "investigation is concerned solely and directly with alleged criminal activities". **Ref 258**

6. POBR applies to "interrogations" of LEOs who are under investigation if the "interrogation" could lead to punitive action. **Ref 259**

[13] One explanation of the differences between interviews and interrogations is found in the training materials and literature of John E. Reid Associates.

- Since Protocol investigations are Criminal Investigations, not Administrative Investigations, the possibility that "interrogations" could lead to punitive action is usually beyond the intention, knowledge, scope and interest of the MATF investigators. In most cases the LEO/ interviewee and his/her representative know more about the possibility of punitive Administrative action than the MATF interviewers. If the LEO and his/her representative believe that punitive Administrative action could result from the LEO's participation in the MATF interview, the LEO has these options: (1) decline the MATF interview; (2) agree to be interviewed by MATF interviewers but avoid discussing aspects of the incident that might be administratively incriminating; (3) attempt to resolve possible administrative issues prior to the MATF interview; and (4) elect, with the advice of his/her attorney, to give a complete voluntary statement to MATF investigators despite the possibility of administrative punitive action, believing that doing so is in his/her best interest. **Ref 260**

7. In those few instances when the "interrogation" restrictions of paragraphs a,b,c,d,e,g,h,i of POBR §3303 might apply to MATF interviews of LEOs, those interviews are usually conducted in a manner that complies with those statutory requirements. **Ref 261**

8. Since interviews with MATF investigators are voluntary, Law Enforcement Personnel have the power to decline to be interviewed at all, and/or can attempt to negotiate acceptable conditions for interviews. **Ref 262**

9. MATF interviews of LEOs are normally preceded by a statement that informs them that the interviews are conducted on a consensual and voluntary basis and are NOT conducted under the compulsion of the *Lybarger* cases, except in rare cases when a witness Law Enforcement Person might be administratively compelled by his/her LEA to cooperate with MATF: see **Ref 239**. Interviewees are also clearly informed whether or not the interview is a custodial interrogation within the meaning of the *Miranda* cases. **Ref 263**

c) POBR §3304(a) permits heads of LEAs to order their LEOs to cooperate with Criminal Investigations being performed by other agencies and provides that an LEO's failure to comply with such orders may result in a charge of insubordination. When applicable, interviewees may be advised of this provision by their Employer. **Ref 264**

However, Law Enforcement Personnel must usually not be compelled by threats of administrative punitive action (or otherwise) to answer questions of MATF interviewers which would be criminally self-incriminating. Also see **Refs 52, 237-242, 312-313.**

7) Interviews will be conducted separately. **Ref 265**

8) Interviews will normally be fully recorded [14] by MATF investigators. Interviewees and/or their representatives may also record. **Ref 266**

9) Interviewees will be considered as witnesses or victims unless the circumstances dictate otherwise. **Ref 256**

10). At the initial stages of the investigation it is extremely important to interview witnesses when their memories of the incident are fresh, and their recollections are not impacted by any outside influences, be it other witnesses or recording(s) of the incident. This is the key reason why witnesses are sequestered between the incident and the interview.

11). The initial interview of an officer involved in a LEIFI should occur before the officer has reviewed any audio/video recordings of the incident. An involved officer will have an opportunity to review recordings after the initial statement has occurred, and he/she can be re-interviewed if either the officer or members of the investigating team believe it is necessary. Investigators should be mindful that audio/video recordings have limitations and may depict events differently than the events recalled by involved officers. If an investigator shows any audio/video recording to an Involved Officer after the initial interview, the investigator should admonish an Involved Officer about the limitations of audio/visual recordings.

12). The following is an example of an admonition that might be given in such situations:

- *In this case, there is recorded evidence that you will have an opportunity to view after you have given your initial statement. Recorded evidence has limitations and may depict the events differently than you recall, and it may not depict all of the events that you saw or heard. Recordings have a limited field of view and may not capture events normally seen by the human eye. The "frame rate" of the recording may limit the camera's ability to capture movements normally seen by the human eye. Lighting as seen on the recording may be different than that which is seen by the human eye. Recordings are two-dimensional and may not capture depth, distance, or positional orientation as well as the human eye. Remember, the video evidence is intended to assist your memory and your ability to recall and describe the incident.*

[14] Audio and/or video recordings may be made using analog and/or digital equipment but digital is preferred.

u. Intoxicant Testing of Law Enforcement Personnel **Ref 268**

1) Law Enforcement Personnel have the same rights and privileges that civilians have regarding intoxicant testing. When MATF investigators determine that a Law Enforcement Person's state of sobriety or intoxication is relevant to their investigation, they have these options: **Ref 269**

a) Obtain blood, breath and/or urine (**Ref 279**) samples through valid consent. **Ref 270**

b) Obtain blood, breath and/or urine (**Ref 279**) samples Incidental To Arrest. **Ref 271**

c) Obtain a search warrant for biological samples if they have probable cause to do so. **Ref 272**

d) In traffic incidents, utilize California Vehicle Code §23612 (implied consent) when applicable. **Ref 273**

e) When an arrestee refuses to submit to collection of samples sought Incidental To Arrest, attempts may be made to obtain blood samples for intoxicant testing in accordance with case law [15]. When the collection of blood or other biological samples is authorized by a Search Warrant, the use of reasonable force to obtain the evidence may be authorized by the Search Warrant. **Ref 274**

2) An Administrative representative of the Employer Agency will be promptly notified (usually by its representative on the Case Managers Team) if the MATF does not seek or obtain biological samples for intoxicant testing. After the MATF investigators have had the opportunity to obtain samples, the Employer Agency may then seek to obtain administrative samples for its use. **Ref 275**

a) The legal authority for the Employer Agency to obtain samples includes (1) valid consent, and (2) ordering employees to provide the samples utilizing the authority of the *Lybarger* (**Ref 52**) cases. **Ref 276**

b) Some LEAs have blanket provisions in their General Orders or Policy And Procedure Manuals requiring intoxicant testing after **Ref 277**

[15] As used here, "case law" refers to California and federal appellate cases that authorize peace officers to use *reasonable force* to obtain blood samples from non-compliant arrestees. To be reasonable, the amount of force *must not shock the conscience* and the sample *must be taken in a medically acceptable manner*. The leading case is *Schmerber v. California* (1966) 384 U.S. 757; 16 L.Ed.2d 908; 86 S.Ct. 1826.

specifed events, while others make such decisions on a case-by-case basis.

3) Toxicology test results from biological samples obtained by MATF investigators are available to Administrative and Civil Litigation Investigators. **Ref 278**

4) Blood is best for alcohol testing while urine is best for drug screening. Optimally, samples of both should be obtained for most complete results. Breath testing for alcohol yields less meaningful results. **Ref 279**

5) Samples should be collected promptly after incidents for most meaningful results. **Ref 280**

6) Whether or not the MATF or the Employer Agency have obtained samples for toxicological testing, Law Enforcement Personnel may have their own samples collected for toxicology testing by a qualified person or facility of their choice. Such requests will be promptly honored but the taking of samples, their storage and chain of custody, and their subsequent testing will be the responsibility of the individual Law Enforcement Peson and/or their agents and not the MATF or the Employer Agency. **Ref 281**

v. Autopsies **Ref 282**

1) For information about the Coroner's Office in general, and about autopsies specifically, see Attachment F, ***Death Investigation Roles of the Coroner and Law Enforcement Agencies*** on Page 97. **Ref 283**

2) The extensive ***Autopsy Evidence Collection Checklist*** (Attachment E on Page 80) will assist evidence collectors, working with the pathologist at autopsy, in discovering, documenting and processing body conditions and physical evidence, as well as in collecting and preserving autopsy evidence. **Ref 284**

3) At least one member of the Case Managers Team, a member of the MATF's primary investigative team, and a representative of the District Attorney's Office will attend the autopsies. Other MATF Investigators may also attend. **Ref 285**

4) MATF investigators and the Crime Lab will brief the autopsy pathologist prior to the autopsy, incorporating all information known by the investigators and by the physical evidence processors which may be relevant to the pathologist's examination of the decedent and to the determination of the cause, manner and means of death. It is very important that investigators and evidence processors who are very knowledgeable about relevant case facts be involved in these briefings. **Ref 286**

5) For LEIF autopsies conducted in Contra Costa, and for autopsies conducted in other counties where the pathologists agree, the Crime Lab has the responsibility for physical evidence. Ref 287

a) Exception: For vehicular collision fatalities, the Protocol Collision Investigators have that responsibility with assistance, if appropriate, from the Crime Lab or other qualified physical evidence processors. Ref 288

6) Although the Coroner's Office has authority to determine who attends autopsies, it is usually advisable to allow legitimate professionals who have been retained by or for the decedents' families to attend. Examples are licensed medical doctors, licensed private investigators, and recognized professional criminalists. Ref 289

w. The District Attorney's Office Ref 290

1) The District Attorney's Office has the following roles in Protocol cases: Ref 291

a) Participate as a coequal investigating agency in the MATFs with the Venue and Employer Agencies and with assisting LEA(s). Ref 292

b) Assist and advise MATF investigators and others on various criminal law and investigatory issues which may arise, such as: (1) search and seizure, including consensual searches; (2) interviewing including *Miranda*, voluntariness of statements and interview content; (3) detentions and releases; (4) decisions to arrest, including evaluation of probable cause; (5) elements of crimes; (6) legal defenses; (7) immunity issues; (8) sharing of information between the various investigative formats; (9) physical evidence matters; (10) investigative strategy and tactics; (11) sources for acquiring information and investigative resources; (12) methods to compell and preserve testimonial information including use of the Grand Jury; (13) crime charging matters; and (14) recognition and resolution of other criminal law issues. Ref 293

c) Upon completion of the Criminal Investigation, analyze the facts of the incident and apply the relevant law to determine whether or not criminal laws were violated. Prosecute or decline to prosecute as appropriate. For fatal incidents, the final analysis usually occurs after the Coroner's Inquest. Ref 294

2) The District Attorney's Office has its own separate investigative authority and may perform independent investigations of incidents, separate from the MATF or any other investigations, when deemed appropriate by the District Attorney or his/her designated alternate in his/her absence. Ref 295

x. MATF reports and documents. Also see **Refs 344-350.** **Ref 296**

1) All Criminal Investigators will write reports documenting their participation in MATF investigations. **Ref 297**

2) Investigators within each MATF team will allocate among themselves the responsibility for documenting the team's investigative activity. **Ref 298**

3) The **Major Case Page Numbering System** **Ref 299**

The Case Managers Team will designate an MATF investigator to assemble and disseminate all MATF reports and documents. All MATF agencies will submit one legible copy of each page of its reports and other documents to the designated investigator but will maintain possession of their originals. (Original evidentiary documents will not receive these page numbers; instead, copies of such documents will be submitted and will receive page numbers.) The investigator will collect and organize all documents from all LEAs and an alpha character identifying each reporting or source agency, followed by sequential page numbers starting at the number 1, will then be placed onto all pages in each LEA's set [16]. Copies of those page numbered sets will then be created and all numbered sets will be distributed to all MATF agencies. The LEA of the designated investigator will maintain the complete library/archival collection of all pages in all sets onto which the original page numbers were placed.

4) Prompt completion, submission and distribution of reports is essential. All MATF and assisting agencies and investigators will strive for report completion and distribution within 30 days after each Protocol incident. **Ref 300**

4. The Administrative Investigation **Ref 301**

a. In addition to its participation in the MATF's Criminal Investigation of Protocol incidents, involved LEAs may also wish to conduct investigations of Protocol incidents for their own administrative (non-criminal law) purposes. Such purposes include: **Ref 302**

1) **Internal Affairs**: to determine whether or not its employees violated LEA regulations, orders or training instructions. **Ref 303**

[16] For example, the Sheriff's Office might be designated with S, the Crime Lab with L, the District Attorney with D, the Coroner's Office with C, the Antioch Police with A, and the Richmond Police with R. Document pages from each agency would be numbered with its assigned letter followed by a sequential number starting at 1 and going upward as far as necessary.

2) **Agency Improvement / Quality Assurance**: to examine the adequacy and functioning of its policies, procedures, programs, operations, training, equipment and personnel, to confirm their efficacy or to identify needed improvements. Ref 304

3) **Accountability and Communications**: to meet LEA management's responsibility of informing and discussing the facts of incidents with people outside the LEA such as those in the LEA's parent government, other LEAs, other government agencies, risk managers, insurance carriers, the public, decedents' families, the news media, etc. Ref 305

4) **Civil Claims and Litigation**: to prepare the LEA for claims and/or civil litigation that may be filed. (Some LEAs utilize the Administrative Investigation for this task if they don't utilize the separate Civil Litigation Investigation format.) Ref 306

b. The initiation of Administrative Investigations and the extent of those investigations are at the discretion of Employer Agencies. Ref 307

c. LEAs may conduct Administrative (and Civil Litigation Investigations - **Ref 316**) as they wish but not in conflict or competition with the Criminal Investigations. Similar provisions are at **Refs 121, 316.** Ref 308

d. Employer Agencies needing investigative assistance to perform Administrative Investigations may seek advice and/or obtain investigators from other LEAs or from other sources. Those investigators would perform, or help perform, the Administrative Investigations under the authority and direction of the Employer LEA. Ref 309

1) Legal and investigative advice on conducting Administrative Investigations may be obtained from the LEAs' legal advisors (county counsel, city attorney, Chief's attorney, associations to which the Chief or the LEA's parent government belongs, etc.), from other LEAs or from elsewhere. Ref 310

2) The District Attorney's Office may be contacted for advice concerning criminal law matters (**Ref 293**) related to Administrative Investigations but it does not otherwise give legal advice on Administrative Investigations. It does not perform Administrative Investigations for other LEAs nor does it participate in them. Ref 311

e. Any evidence or information that was administratively compelled (**Refs 52, 239**) from Law Enforcement Personnel shall not be revealed in writing, orally or otherwise to Criminal Investigators or to any member of the District Attorney's Office without prior approval of the District Attorney's Office. This prohibition applies to interview statements, physical evidence (including biological samples taken from Law Enforcement Personnel and the results of their testing), police reports or witness statements, scene re-enactments, and Ref 312

other information including investigative leads. Some exceptions to this prohibition (**Ref 239**) may apply.

1) Products of the Administrative Investigation that were not acquired directly or indirectly through administrative compulsion (i.e. *Lybarger*) are subject to disclosure to Criminal Investigators and the District Attorney's Office. Confer with the District Attorney's Office prior to disclosure. **Ref 313**

f. Upon being notified of Protocol incidents, Employer Agencies should consider assigning at least one LEO to represent the Employer LEA's Administrative interests for the first 6 to 12 hours of the MATF's investigation. This investigator should "roll out" at the same time that MATF investigators do, should attend the MATF's briefings and observe the scenes and physical evidence, and be thoroughly knowledgeable about the MATF's investigative product and progress. He/she should be alert for, and brief LEA management on, matters of Administrative (and Civil Litigation if tasked) interest and should be prepared to advise upon or make acute Administrative Investigative decisions and to begin an active Administrative Investigation if and when assigned to do so. This investigator can also serve as an MATF contact with the Employer Agency for certain personnel matters. **Ref 314**

g. The MATF will promptly and periodically brief Administrative Investigator(s), as requested, about its investigative products and progress. Administrative Investigators will have access to MATF briefings, the scene(s), physical evidence, and interviewees' statements and all other material. **Ref 315**

5. **The Civil Litigation Investigation** **Ref 316**

In anticipation of possible civil claims and civil law suits, a separate Civil Litigation Investigation may be performed by involved LEA(s). These investigations are performed under the direction of, and on behalf of, lawyer(s) who would represent the LEA and its parent governmental body (and often LEA employees) in the event a civil claim or lawsuit is filed against them. Risk Management personnel are often also involved. Investigators for this format are usually supplied by the involved LEA or its parent government, or they may be from the private sector. Certain privileges, such as the Attorney/Client privilege [17] and the Attorney Work Product privilege [18] may apply to its investigative results. Civil Litigation Investigators have access to MATF briefings, the scene(s), physical evidence, and to all the MATF's investigative products.

LEAs may conduct Civil Litigation Investigations as they wish but not in conflict or competition with the Criminal Investigations. The same provision is at **Refs 121, 308.**

I. GUIDELINES FOR INFORMATION RELEASE TO THE PUBLIC AND NEWS MEDIA **Ref 317**

[17] California Evidence Code §915

[18] California Code of Civil Procedure §§2018.030 (a) and (b).

1. The public's right to know what occurred must be balanced with the investigative requirements of the three different investigative formats (Criminal, Administrative and Civil Litigation) and with the rights of involved and affected individuals and/or the public. Ref 318

2. As in all other law enforcement contexts, great care must be taken to ensure that intentionally or recklessly misleading, erroneous or false statements are not made. Ref 319

3. Agencies and individuals who are not well informed and not intimately involved with the progress and results of the MATF investigations should not make statements to the press or public about that investigation. Ref 320

4. Regarding specific agencies: Ref 321

   a. Venue Agency(ies) Ref 322

      Unless the involved LEAs otherwise agree, Venue Agencies have the responsibility for making press releases about the facts of the incident and MATF's investigation of it for the first 48 hours.

   b. Employer Agency(ies) Ref 323

      When the Employer Agency is not also the Venue Agency, fewer problems will arise, especially within the first 48 hours of the investigation, if the Employer Agency limits its comments to the following:

      1) The employer-employee relationship; Ref 324

      2) Factual material revealed by the Employer Agency's own Administrative and/or Civil Litigation Investigations of the incident; Ref 325

      3) Information that has been cleared for release by the MATF. Ref 326

   c. The Crime Lab Ref 327

      Its press releases should usually be confined to general information about the laboratory's role and functions, scientific facts and principles, and testing procedures. Specific results of searching, testing and analysis should generally not be released without clearance from the MATF's Case Managers Team unless release of information is considered necessary to publicly correct information which the Crime Lab considers to be incorrect or misleading.

   d. The Coroner's Office Ref 328

      Information generally should be limited to the following:

      1) General information about the functions of the Coroner's Office. Ref 329

2) Autopsy findings, including the condition of decedent, the cause, manner and mode of death and toxicology test results, but only after the MATF agencies have received this information. **Ref 330**

3) The identity of those present at the autopsy and the identity and affiliation of the pathologist and other experts used by the Coroner. **Ref 331**

4) The general nature of further medical testing or medical investigation to be performed. **Ref 332**

5) Information obtained directly by Coroner's investigators from medical sources, the decedent's family members, participants, witnesses or others, and the general nature of further investigation to be done by Coroner's investigators. **Ref 333**

6) Any information which was obtained by the Coroner's Office from MATF investigators or from the involved agencies should generally not be released by the Coroner's Office without clearance from the MATF's Case Managers Team. **Ref 334**

5. If the Case Managers Team determines that the release of specific information would materially jeopardize the MATF's investigation, it shall notify the agencies possessing it about the hazards of releasing it. **Ref 335**

6. Interruptions to MATF investigations and investigators will be minimized if LEAs assign individuals to be Public Information Officers who are not MATF investigators. **Ref 336**

7. Releasing the identities of LEA Actors (**Ref 48**) and LEA Witnesses (**Ref 49**) to the news media and the public is often a sensitive issue. Before making such disclosures, the involved MATF agencies should: (1) determine if there are investigative reasons or personal safety reasons for delaying release of the identities, and (2) confer with the involved employees and their representatives about the timing and content of such releases. **Ref 337**

J. CORONER'S INQUESTS **Ref 338**

1. For general information about the role of the Coroner's Office, see Attachment F, ***Death Investigation Roles of the Coroner and Law Enforcement Agencies*** on Page 97. **Ref 339**

2. A public Coroner's Inquest will normally be held after the Criminal Investigation of each fatal incident is completed. Because evidence at Inquests is received under penalty of perjury, Inquests are a valuable mechanism for informing the public, decedents' families, the news media and other interested parties of the facts of LEIF cases. They also provide another opportunity to develop further information **Ref 340**

about such Incidents.

By Protocol agreement, Coroner's juries are utilized for these Inquests. By statute[19] Inquest verdicts include findings regarding (a) the name of the decedent; (b) the time and place of death; (c) the medical cause of death; and (d) whether the death was by natural causes, suicide, accident, or death at the hands of another other than by accident.

While the Coroner's hearing officer has the discretion to determine which witnesses will testify, it is the Protocol's general intention that all Law Enforcement Personnel who were Actors (**Ref 48**) and Witnesses (**Ref 49**) to the incident be subpoenaed, as well as citizens who are believed to have relevant personal knowledge.

3. In a few cases where the facts of an LEIF incident are very clear and law enforcement's role was obviously appropriate and non-controversial, Inquests may not be necessary. In a few other cases the filing of criminal charges against someone in connection with the Protocol incident may provide an adequate opportunity for public access to the facts of the Incident. In either case, the Sheriff/Coroner, and the Police Chief(s) of all involved LEAs, and the District Attorney would have to all agree that an Inquest is not needed. **Ref 341**

4. Not less than 96 hours prior to the beginning of Inquests, Law Enforcement Personnel who are subpoenaed to testify shall be given access to a copy of any recording(s) or a transcript(s) of their own MATF investigative interviews. **Ref 342**

5. In addition to the Protocol's provisions for Inquests, California Government Code §27491.6 provides that the Coroner shall hold an Inquest if requested to do so by the Attorney General, the District Attorney, the Sheriff, City Prosecutor or City Attorney, or a Chief of Police in the county where the Coroner has jurisdiction. **Ref 343**

K. Reports and Evidence **Ref 344**

Also see **Refs 296-300** for other provisions concerning MATF reports.

1. Material created and collected by the MATF investigation, as well as by the Crime Lab, Coroner and other agencies and investigators, will be made available in a timely manner to involved LEAs and other appropriate LEAs. **Ref 345**

2. Such material includes: **Ref 346**

   a. Reports written by MATF personnel, and reports and documents collected by them from other sources. **Ref 347**

   b. Access to physical evidence. **Ref 348**

[19] California Government Code §27504

c. Photographs and diagrams. Ref 349

d. Audio and video recordings. Ref 350

3. When the Case Managers Team and the District Attorney's Office conclude that physical evidence collected by the MATF no longer needs to be retained for criminal law purposes, the involved LEAs shall be notified of that decision. At that time, responsibility for the continued custody and preservation of physical evidence may shift by mutual agreement to the Employer Agency if it believes continued retention is appropriate for potential for Administrative and/or Civil Litigation purposes. Ref 351

PATROL SUPERVISORS' LEIF CHECKLIST
SHOOTINGS AND GENERIC INCIDENTS

1. **Emergency life saving measures are the first priority.**

   A. First aid

   B. Consider need for more EMS resources: fire; additional ambulances; medical helicopter.

2. **Request** (enroute if possible) **additional personnel**, **equipment** and other **resources** as needed for Patrol Division's scene management responsibilities. Make requests promptly then periodically review situation for further needs. Consider the need for:

   A. **More Patrol Officers** for LEIF Incident and/or Patrol responsibilities not connected with the LEIF Incident:

      1. Borrowing LEOs from other jurisdictions; mutual aid.
      2. Calling in next Patrol shift early and/or delaying release of current shift.
      3. Recalling off-duty LEOs.
      4. Reserve officers, parking/traffic control officers, etc.

   B. **More Patrol Supervisor(s)** to assist with LEIF scene(s) and/or Patrol responsibilities not connected with the LEIF Incident

   C. **Traffic control**: (1) personnel; (2) flares, barricades, traffic advisory or warning signs, scene tape; (3) traffic detours; (4) notification to Public Works, other LEAs, CHP, CalTrans, etc. if major traffic disruption will occur.

   D. **Translators** for victims, witnesses and canvassing.

3. **Ensure** (enroute if possible) that **notifications are made** about the LEIF (by your Dispatcher, a designated LEO, or other) to:

   A. **Your LEA's personnel** per your LEA's procedures, including as appropriate:

      1. **Chain of command**–management and supervisors.

      2. **Criminal Investigators** (Homicide or Crimes Against Persons, and other relevant investigative specialties).

      3. **CSIs** - for immediate scene needs and/or to assist Crime Lab.

      4. **Vehicle Collision Investigators**–for immediate scene needs and/or to work with designated Protocol Collision Investigators.

      5. **I. A.** (Administrative Investigators) and/or **Civil Litigation Investigators**.

6. **Press Information Officer.**

7. **Community Relations Officers.**

8. **Representatives for involved LEOs**: POA officials (Police Officers' Association, the Deputy Sheriffs' Association (DSA) etc.

9. **Peer Support**, Trauma Team, or other supportive personnel for traumatized law enforcement personnel.

B. **Other LEA(s)** whose employees are involved in the Incident (if not already aware).

C. The **District Attorney's Office** (either directly or through the Sheriff's Office Dispatcher).

D. The **Crime Lab.**

E. The **Coroner's Office** upon a death. This is a preliminary or courtesy notification; body removal by the Coroner will be made at the direction of MATF investigators.

4. **Anticipate receiving many inquiries** via cell phone from various officials needing more information after they are notified about the LEIF. They will require phone briefing, then more details upon their arrival at the scene.

5. **Consider** the need to:

A. **Check the field(s) of gun fire** for injured people and evidence.

B. Arrange **additional lighting** for scene(s).

C. Establish a **Command Post** (mobile command vehicle or other type).

D. **Assign a scribe** to record actions taken.

E. **Designate a Press Information Officer** if LEA has no designated PIO.

F. Establish a **news media area.**

G. **Shield the public's view** of unpleasant, distracting, or investigation-hampering sights.

H. **Assign an LEO to write the police report** on the event which started the LEIF. (In many cases an investigator assigned to the MATF will write this report.)

6. Determine which LEO(s) and supervisor(s) have **responsibility for performing routine police work** in the rest of your jurisdiction while attention and resources are involved with LEIF.

7. **Assign an LEO with a tape recorder to ride in the ambulance or helicopter** when a person is transported to a hospital. Purposes:

   A. **Physical evidence tasks:** (1) recognize, locate, secure and protect it properly so its value is not diminished; (2) maintain chain of custody; (3) report its discovery to a supervisor, investigator or physical evidence processor.

   B. **Custody of the injured person** if he/she has been or might be arrested.

      1. Prevent escape.

      2. Prevent destruction of evidence.

      3. Protect that person.

      4. Adjust or remove physical restraints for medical purposes as necessary and if safe.

      5. Prevent unauthorized contacts.

      6. If the injuries are fatal, maintain the chain of custody on the body until relieved.

   C. **Safety** of EMTs/paramedics, hospital staff and other patients

   D. Provide **aid and comfort to injured Law Enforcement Personnel**; protect the person, physical evidence and property belonging to the person or LEA.

   E. **Document any statements made** by the person, especially spontaneous statements (California Evidence Code §1240), dying declarations (California Evidence Code §1242), contemporaneous statements (California Evidence Code §1241); or statements of then-existing or previous mental or physical state (California Evidence Code §§1250-1251), and those made in connection with medical attention. In most cases the LEO should **not** attempt to interview the person unless directed to do so by investigators.

   F. Provide **information to medical** personnel as relevant for medical treatment, and obtain information **from medical** personnel relevant to the investigation.

      1. **Identify medical personnel**, including EMTs, paramedics and Emergency Room staff involved.
      2. **Serve as the contact for LEIF investigators** calling for information about the injured person, physical evidence, people present, etc.

      3. **Obtain copies of EMS and medical reports** if then available to law enforcement.

   G. **Contacts with the injured person's family** and friends at the hospital, and with

witnesses.

1. **Identify** people.

2. Serve as the **contact for LEIF investigators** who may want information about the LEIF or the injured person from these people, or may want assistance to arrange personal contacts with them.

3. Collect and preserve **information they give.**

4. Occasionally there may be a need to **keep the peace** at the hospital.

8. **Protect sensitive investigative information.** Use caution on radio broadcasts and cellular phone calls. Use hard wire telephone, secure radio or in-person contact when confidentiality is needed.

   A. Be aware of the technical and investigative capabilities of the news media, including zoom lenses, long range microphones, use of concealed recording devices and transmitting microphones, night vision cameras, access to public and news media records and files, and aggressiveness in interviewing civilian witnesses.

9. **Scene(s): Immediately identify and secure.** Establish a perimeter for each a sufficient distance away to safeguard evidence, law enforcement personnel and operations. In some circumstances an inner and outer perimeter are appropriate. Adjust scene boundaries as necessary as more information becomes available. Establish and maintain <u>true control of the scene.</u>

   A. **Multiple scenes** are often involved, such as

      1. Location(s) of the body or injured person.

      2. Location(s) where injuries occurred or where force was used.

      3. Vehicles: LEO's; suspect's; struck by gunfire; involved in collision.

      4. Residences.

      5. Location of personal property.
      6. Location where crimes or incidents connected to the LEIF or the injured/ deceased person were committed prior to the fatal Incident.

         a. Location of victims and witnesses of the crimes.

         b. Location of evidence of those crimes.

7. Hospital where the injured person was taken.

8. Location of involved weapon evidence such as firearms (and bullets, casings, magazines); knives, etc.

9. Routes (vehicle or pedestrian) taken by LEIF participants.

10. **Protect scene(s) and their contents**. No alterations shall be made to scenes, and no items shall be moved inside scenes or removed from scenes, without prior approval of the MATF and the Crime Lab, unless absolutely necessary for public or officer safety, for preservation of evidence, for emergency medical reasons, or for other very compelling reason.

    If some alteration of a condition, or movement or removal of an item without prior approval is necessary, the removal must be witnessed and documented. Document the identity of the person making the change and the person who authorized it, the reason for the change, the identity of the official who witnessed the change, and the time of change of condition. When possible, these actions shall be photographed or videotaped. Extreme care must be taken to avoid compromising any physical evidence.

    A. **Evidence contamination** may occur from movement, alteration, removal or addition of items. Especially subject to contamination are fingerprints, footprints, blood, trace evidence, cigarette material, bullets and casings, firearms, lights and light switches, vehicle positions and vehicle conditions.

    B. **Medical aid debris** - leave in place.

11. **Access to the scene(s) must be strictly limited** to only those officials who must enter for an investigative, medical or other emergency purpose.

    A. A **single access point**, chosen to avoid contamination of evidence, should be used in most cases.

    B. When not necessary for patient care efforts, **entry and re-entry by EMS personnel** (fire and ambulance) should be restricted to the absolute minimum necessary to perform needed duties, especially after the patient has been removed from the scene.

    C. **Do not allow the news media to enter** crime scenes.
    D. Only MATF investigators can authorize crime scene entry for the following:

        1. Representatives of Law Enforcement Personnel including attorneys or police association representatives.

        2. Civilian review board personnel.

3. LEAs' civil attorneys.

4. LEAs' Risk Management representatives.

12. A **written scene log** must be established as quickly as possible. Use pre-printed forms when possible.

A. Promptly and very diligently **reconstruct who was inside the scene** before the scene log was started. List by name, affiliation and contact information as appropriate. Include:

1. Law enforcement personnel.

2. Ambulance and fire department personnel.

3. Civilians (witnesses, victims, bystanders, residents, passersby, suspects).

4. News media personnel.

B. Identify and list **everyone who enters the scene** after the log is started, including their names and agency affiliation, the times of their entries and exits, and the reasons for entry.

13. **Discharged firearms in possession of LEOs**

A. When an involved **LEO still has personal possession of a weapon** he/she used in the Incident, normally the supervising patrol officer at the scene should promptly and discretely (i.e., in private, out of view of the public and other LEOs) consensually obtain possession of the weapon. Exigent circumstances may justify a seizure if consent is denied. If handled indelicately, the process of collecting the weapon can have an unfair and very damaging impact on the LEO and may also create negative and false impressions on members of the public who see it.

If already holstered when the supervisor does this, side arms must not be removed from their holsters. Obtain the entire gun belt.

Only qualified LEOs should handle special weapons such as sub-machine guns, MP-5s, etc.

B. **Side arms should be replaced** as quickly as possible if the LEO so wishes, unless reasons dictate otherwise.

C. The person **collecting any weapon must document** its readily visible general description, condition and appearance, and the details of any trace evidence adhering, to the extent these observations can be made without removing a firearm from its holster or otherwise compromising physical evidence. The location where the weapon or instrument was first observed by the supervising patrol officer, and the identity of the person or location from which the weapon or instrument was received, shall also be

recorded.

1. In firearms cases, also make note of whether the firearm is cocked, has its safety on or off, has its hammer back, any apparent jamming of either fired or unfired ammunition; the location and position of the weapon's magazine(s) (e.g., fully or partially inserted, completely separate from the firearm, missing, etc.), to the extent possible without removal of the weapon from its holster.

   a. If the firearm is obviously jammed, no attempt shall be made to unload the weapon or clear the jam.

   b. If the firearm is cocked (or if a semi-automatic pistol cannot be determined to be cocked or not), the safety may be put ON but this act must be documented. If the firearm's hammer is back, it may be lowered and that fact must be noted.

2. Anyone receiving a weapon or instrument from another person, or obtaining it otherwise, shall **note its serial number** if readily visible without removing the weapon from its holster or otherwise compromising physical evidence, and shall maintain the chain of evidence.

3. Otherwise, **weapons and instruments will not be disturbed** in any way. They shall not be handled by anyone other than the official who obtains them and he/she shall handle them minimally to preserve the exact state of the weapon or instrument when received.

4. The collected weapons or instruments shall be **transferred to the Crime Lab staff** as soon as practicable, along with the information required above.

5. If the supervising patrol officer at the scene was an Actor or Victim in the Incident, the responsibility for security and/or collection of weapons and instruments shall rest with an uninvolved supervisor or the next-in-line uninvolved LEO at the scene. This may also be done by an uninvolved investigator.

6. Normally twelve rounds of the same type(s) of ammunition fired by LEOs will be collected later by the MATF investigators or physical evidence processors from each shooting LEO. When possible another source will be used if the LEO has insufficient similar rounds remaining.

7. The Crime Lab understands that prompt return of LEO's firearms is important so it endeavors to complete examinations as soon possible.

   When examinations of LEO's firearms are completed, the Crime Lab will notify the MATF which will then determine whether each firearm will be retained for criminal investigation purposes.

   When the MATF decides against long term retention of a firearm for Criminal Investigation purposes, it will notify the Employer LEA (usually via the Administrative Investigators) of that decision. From that time, the disposition of the weapon is at the discretion of the Employer Agency which has the option of keeping

it for Administrative Investigation purposes and/or for Civil Litigation purposes. When the Employer Agency no longer desires to maintain custody of the weapon, it shall decide upon its disposition.

14. **If another weapon or instrument was involved**, promptly see to the **security and/or collection** of such items as follows:

    A. If the area is secure, such items shall be left in place and undisturbed. Consider stationing a guard.

    B. If the area is not secure, decide whether the weapons can be safely left in place with a guard stationed if necessary, or whether prompt removal is necessary. If such items must be moved or removed for protection, they should be photographed or videotaped in place first and the removal witnessed.

15. **Check the firearms and ammunition of all LEOs** who were present at the time of the LEIF shooting Incidents. This will ensure that all discharged firearms are identified and collected, as well as to identify weapons which were not fired. This includes back-up firearms and those inside vehicles. Detailed documentation is essential.

16. Prior to the Crime Lab's arrival, **physical evidence at risk** of being compromised in any way must be promptly and effectively observed and documented, then collected promptly if absolutely necessary, Otherwise protect it for subsequent Crime Lab collection. Examples include evidence which is endangered by

    A. Its adherence to live participants (such as bloodstains, gun shot residue, and some other types of trace evidence).

    B. Crowds, vehicular traffic, the weather (wind, rain, snow, dew, sunshine or heat), sprinklers, evaporation or melting, fire, animals or insects.

    C. Electrical power being turned on or off (e.g. computer information).

    D. Being recorded over (e.g. contents of audio or video tapes, certain telephone call data).

    E. Being erased or deleted.

    F. Peoples' normal activities.

17. All **officers must conduct themselves with appropriate decorum**. They may be closely watched by the media, residents of the neighborhood, people associated with the decedent, members of police oversight groups, family, and others.

18. Separately ask the Involved and Witness LEOs **"What happened"?**

    A. ***Miranda*** applies only to custodial interrogations.

ATTACHMENT A
PATROL SUPERVISORS' LEIF CHECKLIST
Shootings and Generic Incidents

B. **If the LEO answers freely** and without being ordered *(Lybarger)* to do so, there are no legal restrictions on the scope of the conversation.

1. Seek information relating to (a) exigent circumstances; (b) public safety; (c) crime scene management issues (d) capture of outstanding suspects; and (e) a summary of the incident for briefing investigators and management.

2. Many LEOs want to volunteer much more information than the patrol supervisor needs for the above purposes. This may be psychologically beneficial to some LEOs and may be very informative for the LEA, but the patrol supervisor may not have time to listen to it all and it may be difficult for the supervisor to later accurately document what the LEO said.

3. Try to mark relevant positions which the LEO identifies.

C. **If an LEO** from your LEA **refuses to answer unless ordered** to so do:

1. Determine if the necessary and urgent crime scene functions (listed below under b-1) can be performed without obtaining compelled information from LEA Actors, such as by using only what you have learned or expect to learn from other sources such as non-Actor LEOs, civilian witnesses, physical evidence, dispatch recordings, other audio or video recordings, etc.

   a. If you do not absolutely need involuntary information from an LEA Actor to perform critical crime scene functions, do not compel the LEO to give a statement or answer your questions. Investigators will attempt to interview the LEO later.

   b. If the LEO's information is absolutely necessary to the performance of critical crime scene functions, give the LEO a *Lybarger* admonition.

      1. Compelled answers must be limited to critically needed information concerning **public safety**, **exigent circumstances**, and **scene management**.

         a. Examples of information to obtain:

            1. Injured **people who may need medical attention**

            2. **Suspect information**, such as identity, crimes committed, flight information, vehicle, level of hazard, probable cause for arrest, etc.

            3. **Crime scene(s)** identity, location and size.

            4. **Physical evidence** identity and location, and information relating

to preservation of evidence.

5. **Weapons**, including who fired, the number of shots, the direction(s) of fire, the current location of weapons, etc.

6. The identity of people who were involved in the Incident as **actors**, **victims** and **witnesses**.

b. Do not compel information for these purposes:

1. To determine if the LEO committed a crime.

2. To determine possible Internal Affairs violations.

3. To obtain information to brief LEA investigators or management (other than information for reasons listed in paragraph "a" (above).

D. **Treat the involved LEOs appropriately** (as well as everyone else).

1. Ask about their physical and emotional condition and any needs.

2. Isolate and protect them from the news media, the public in general, hostile people, and well-meaning but intrusive or inappropriate comments or questions by other officers.

3. It is psychologically important to have a Companion Officer remain with involved LEOs at the scene as well as at the LEA facility where they will be taken.

a. Companion Officer is a generic term used to describe an LEO who accompanies and supports another LEO. A Companion Officer may be a member of a Peer Support Team, Trauma Team, or Crisis Intervention Team, but need not be.

b. In choosing Companion Officers for LEOs, solicit the wishes of the involved LEO(s). Select individuals who are a good fit with specific LEOs, otherwise the benefits of using Companion Officers are lost and discomfort may result.

4. Suggest that involved personnel call home when appropriate.

E. **Order the LEOs not to talk to others** about the case other than their attorneys and assigned investigators.

F. **Don't give legal advice.**

G. **Prepare to document** LEOs' information accurately.

1. Methods:

a. The supervisor writes a written report.

b. MATF Investigators may interview the supervisor instead.

2. Accuracy and completeness is very important.

19. Make **radio broadcasts** on outstanding suspects, vehicles, witnesses, evidence items, etc.

20. Collect **perishable evidence** (e.g. GSR) from shooter(s) and victim(s) before they are taken from the scene if doing so does not cause a medically detrimental delay.

21. **Transporting** and "**sequestering**" the Involved and Witness **LEOs**:

"Sequester" means to remove or withdraw into protection; isolate; set apart from others; seclude.

A. LEOs who were present at the scene at the time of the Incident, whether Actors or Witnesses, will be relieved of their duties at the scene as promptly as possible and shall be sent to their own LEA facility unless other suitable and agreeable arrangements are made for them (such as another LEA facility or a hotel). Companion Officers will accompany these people either in a group or individually. LEOs who are either Actors and/or distressed Witnesses should be driven by others to their destinations and should not be permitted to drive until they are ready to do so.

B. Collect perishable evidence before transporting.

C. If circumstances prohibit simultaneous removal of all Involved and Witnessing officers from the scene, Actors and distressed individuals should be relieved first. Some Witness officers may be needed temporarily for scene security until they can be relieved.

D. Uninvolved Companion Officer(s) should remain with the sequestered LEOs (except during confidential conversations with a physician, lawyer, psychotherapist, clergyman or spouse), either in a group or individually, until they can be interviewed.

1. Functions of Companion Officers:

a. Provide companionship and emotional support.

b. Ensure the sequestered officers have privacy.

c. Accommodate LEOs' needs for food, exercise, rest, sleep, clothing change.

d. Assist with notification to close family members, attorney and/or POA representative.

e. Refresh the LEOs' knowledge about upcoming investigative procedures.

f. Ensure the integrity of each LEO's later statements to investigators.

E. Involved and Witness officers must **not discuss the case** among themselves, with Companion Officers, or with others, except their lawyers and the Investigators.

F. LEOs should be sequestered in locations which are **quiet, private, of suitable size, not emotionally negative** and which are **away from areas where Investigators are working**. Rest rooms, telephone access, non-alcoholic beverages, food or snacks should be nearby or provided. Conference rooms, meeting rooms, libraries, and break rooms often work well, but interview or interrogation rooms, the Chief's Office and the Internal Affairs Office are usually not satisfactory.

G. While awaiting interviews, Involved and Witness LEOs should be encouraged to relax and to carefully reflect upon what occurred. For their own use they **may wish to make notes** about the Incident which may be helpful during consultations with their attorneys and during interviews with MATF investigators.

22. **Locate, identify, detain, statementize** and **sequester witnesses** as well as possible.

A. Prompt, aggressive and thorough efforts are needed.

B. LEOs should interview them and then obtain statements from each which (1) detail their knowledge, or (2) clearly document their claim to have no knowledge of the Incident. This may be the only interview that will ever be possible with some witnesses. Audio recordings are best, followed by written and signed statements, followed by the officer taking notes and writing a comprehensive and accurate report of a non-recorded interview.

C. When there are many witnesses, it may be necessary to triage them to determine the order of Patrol interviews.

D. Identify witnesses thoroughly.

E. Try to sequester witnesses who give patrol officers significant information pending formal interviews with MATF investigators.

23. **CSIs** (and other qualified personnel) can perform valuable functions at LEIF scenes prior to the Crime Lab's arrival, after which they may be asked to assist Crime Lab personnel.

A. For immediate CSI duties, see the ***CSI Checklist – Before The Crime Lab Arrives***, Attachment D on Page 77.

B. OK to photograph and/or video until the Crime Lab arrives *without disturbing, contaminating, or collecting.* Photos of the crowd may be useful.

ATTACHMENT A
PATROL SUPERVISORS' LEIF CHECKLIST
Shootings and Generic Incidents

24. Plan and then start an **area canvass** to find more witnesses, relevant vehicles, weapons, evidence, routes of travel, or people.

25. Consider need to arrange for short-term **assistance for civilians** who are emotionally traumatized or displaced by the Incident.

26. Consider **needs of your personnel**: relief, food, water, shelter, restrooms.

27. **Debrief your Patrol officers** to determine what they have learned, what they have accomplished, and what remains to be done.

28. **Collect your information** and your thoughts and **prepare to present your detailed and specific information to a briefing** of investigators, crime scene processors, and LEA management and supervisors.

Reduced Size Pocket Version

Patrol Supervisors' LEIF Checklist for Shootings and Generic Incidents

1. **Emergency life saving** is first priority.
2. Enroute if possible **request needed additional resources:** ♦ more patrol cops ♦ equipment ♦ traffic control ♦ translators, etc. Make prompt decisions then review as necessary.
3. **Notifications:** ♦ to your LEA's command staff, detectives, CSIs, vehicle collision investigators, IA, PIO, POA, Peer Support ♦ other LEAs if involved or effected ♦ DA ♦ Crime Lab ♦ Coroner.
4. **Expect many inquiries** by cell phone from notified officials.
5. **Consider:** ♦ checking field of fire ♦ additional lighting ♦ Command Post ♦ record actions taken ♦ designate a PIO? ♦ news media area ♦ shielding public's view ♦ who writes original report?
6. Determine LEO and supervisor **responsibility for non-LEIF duties elsewhere.**
7. Assign **LEO with tape recorder to ride ambulance** or helicopter with injured person for: ♦ physical evidence ♦ custody of person ♦ safety of EMS & hospital people ♦ aid, comfort & protection for injured LEO ♦ document statements made by the person ♦ information to & from medical personnel ♦ contacts with person's family & witnesses.
8. **Protect sensitive information.** Caution on radio broadcasts & cell phones. Use hardwire or personal contact when confidentiality is needed.
9. **Scenes: Immediately identify and secure all scenes.** Have multiple scenes? Establish & maintain true control. Consider inner & outer perimeters. **Big perimeters.** Adjust boundaries as necessary.
10. **Protect scene & contents.** No alteration or removal of items without approval of MATF & Crime Lab unless absolutely necessary for officer or public safety, evidence preservation, emergency medical reasons, or other very compelling reason. Necessary changes must be witnessed & documented. Inspect items, vehicles and people leaving. Use extreme caution to avoid compromising evidence. Determine and document scene changes.
11. **Strict control of scene access.** ♦ single safe ingress/ egress point ♦ limit EMS entry/ exit to minimum after patient is removed ♦ no news media inside scenes ♦ MATF OK needed for LEO reps, civilian reviewers, civil attorneys, risk management.
12. **Scene log:** ♦ diligently reconstruct who was inside scene(s) before log was started ♦ all entries & exits made after log is started.
13. **LEO's discharged firearms** in possession: ♦ normally in the field promptly & discretely obtain weapon and holster with gun belt ♦ replace LEO's sidearm if appropriate ♦ minimal manipulation – OK to engage safety or lower hammer if really necessary ♦ don't open or disturb its condition ♦ document readily visible details - model and serial number, trace evidence & condition ♦ transfer to Crime Lab.
14. **Other weapons involved?** Secure in place and guard if necessary. Collect if necessary if area not secure.
15. When LEO(s) shot: **check firearms & ammunition of all LEOs present** at shooting. Collect discharged weapons. Document all accurately.
16. **Physical evidence at risk:** Promptly observe & document, then collect only if absolutely necessary.
17. All LEOs must act with **proper decorum.** Many people are watching.
18. The **"What happened?" question.** ♦ Treat everyone appropriately ♦ Ask each Actor & Witness LEO separately ♦ ***Miranda*** only if custodial interrogation ♦ voluntary statements are usually given ♦ If not, don't ***Lybarger*** unless absolutely necessary for public safety, exigent circumstances or crime scene management ♦ order LEOs not to talk except to their reps and to investigators ♦ don't give legal advice ♦ prepare to document their information accurately.
19. **Radio broadcasts** on wanted suspects, witnesses, vehicles, etc.
20. **Collect perishable evidence** from shooters and injured people before they are transported if not medically detrimental.
21. **Transporting & sequestering** involved and witness LEOs ♦ send with uninvolved Companion LEOs to their own LEA facility unless another suitable & agreeable location (e.g. other LEA, hotel) is chosen ♦ have perishable evidence collected first ♦ remove Actors and distressed witness LEOs first ♦ LEOs not to talk about case ♦ sequester appropriately ♦ encourage them to make notes to prepare for interviews.
22. **Witnesses**: locate, fully identify and "statementize", then detain & sequester if appropriate.
23. **CSIs** and others: ♦ Use CSI Checklist ♦ OK to photograph/ video and document detail without disturbing, contaminating or collecting, until Crime Lab arrives ♦ crowd photos?
24. **Area canvass** and search for more witnesses, relevant vehicles, weapons, dropped evidence or clothing, route of travel, etc.
25. Need for **short-term assistance for affected civilians?**
26. **Needs of LEA personnel**: relief, food, water, shelter, restrooms.
27. **Debrief your personnel** on their task results and progress.
28. **Prepare yourself to brief investigators** and others with specific and detailed information. Collect case information and your thoughts.

ATTACHMENT A
PATROL SUPERVISORS' LEIF CHECKLIST
Shootings and Generic Incidents

PATROL SUPERVISORS' LEIF CHECKLIST
FATAL VEHICLE COLLISIONS

This Checklist is a guide to help Patrol Supervisors manage patrol officers' response to vehicle collision Incidents where Contra Costa County's **"Law Enforcement Involved Fatal Incident Protocol"** has been or will be invoked. It also has some application to non-Protocol collisions.

1. **Enroute** to collision scene(s)

    a. **By radio, establish control of vehicular and pedestrian traffic**, then modify as needed upon arrival and throughout operation.

        - Establish **detour routes** for public travel when practical.

    b. **Anticipate manpower needs** at collision site(s) and elsewhere; request more LEA personnel promptly.

2. Approach to scene(s):

    a.) All responders to scan for various **hazards** and **criminal threats** to anyone. Avoid or eliminate/mitigate hazards.

    b. All responders to **treat collision scenes as crime scenes**.

    c. Involved vehicles: lights, siren, engine, switches/controls, interiors = see Section 8(a)

3. Emergency **medical / life saving**

    a. Ensure **adequate emergency medical response** is already present or is enroute.

    b. Ensure **first aid** is provided as appropriate.

    c. Confer with Fire Dept. on **need for additional ambulance, medical helicopter**, etc.

    d. Consider **searching area** (bushes, fields, ravines, in water, over fence, etc.) for other **involved vehicles, people**.

4. Identifying and handling **the parties**

    a. **Differentiate suspects, victims and witnesses**, then have them identified, secured, separated and sequestered as appropriate.

    b. Suspects: Check for **probable cause** and/or outstanding warrants; **search for safety**; consider blood alcohol (**B/A) testing**; other **physical evidence**; **spontaneous and/or medical statements**;

c. Witnesses: see Item #8 below.

d. **Radio broadcasts** for outstanding suspect(s), vehicle(s), witnesses, evidence.

5. Re-evaluate need for **additional LEA personnel** throughout operation.

6. Ensure appropriate **notifications are made** (per Protocol and LEA policies), including:

a. Other involved and affected LEAs.

- Investigation of the Incident will be performed by the Protocol's Multi-Agency Task Force (MATF).

b. Command duty officer.

c. Specialized investigative units or investigators per LEA policy.

The MATF's Case Managers Team will coordinate the selection and callout of Protocol Collision Investigators).

d. District Attorney's Office.

e. The LEA's own collision investigator(s) (other than Vehicle Collision Investigators selected by the Case Managers Team).

f. Crime Lab and/or/CSIs as appropriate.

g. LEA's Press Information Officer.

h. Public Works, CalTrans or others for barricades, traffic diversion, traffic signal devices, lighting, traffic advisory or warning signs, spilled material, roadway structural damage, downed signage, downed trees.

i. Public utility company for water, gas and/or electrical problems.

j. CalTrans and/or CHP if regional traffic impact is expected.

k. A representative of the Police Officers' Association (POA), the Deputy Sheriffs' Association (DSA) etc., to support involved LEOs.

7. **Prepare yourself to brief responding officials** on arrival; expect many cell phone calls.

8. **Witnesses**

a. Promptly locate and adequately identify. **Collision witnesses are very mobile and do not remain long at collision scenes.**

b. Include people who stopped to **render aid.**

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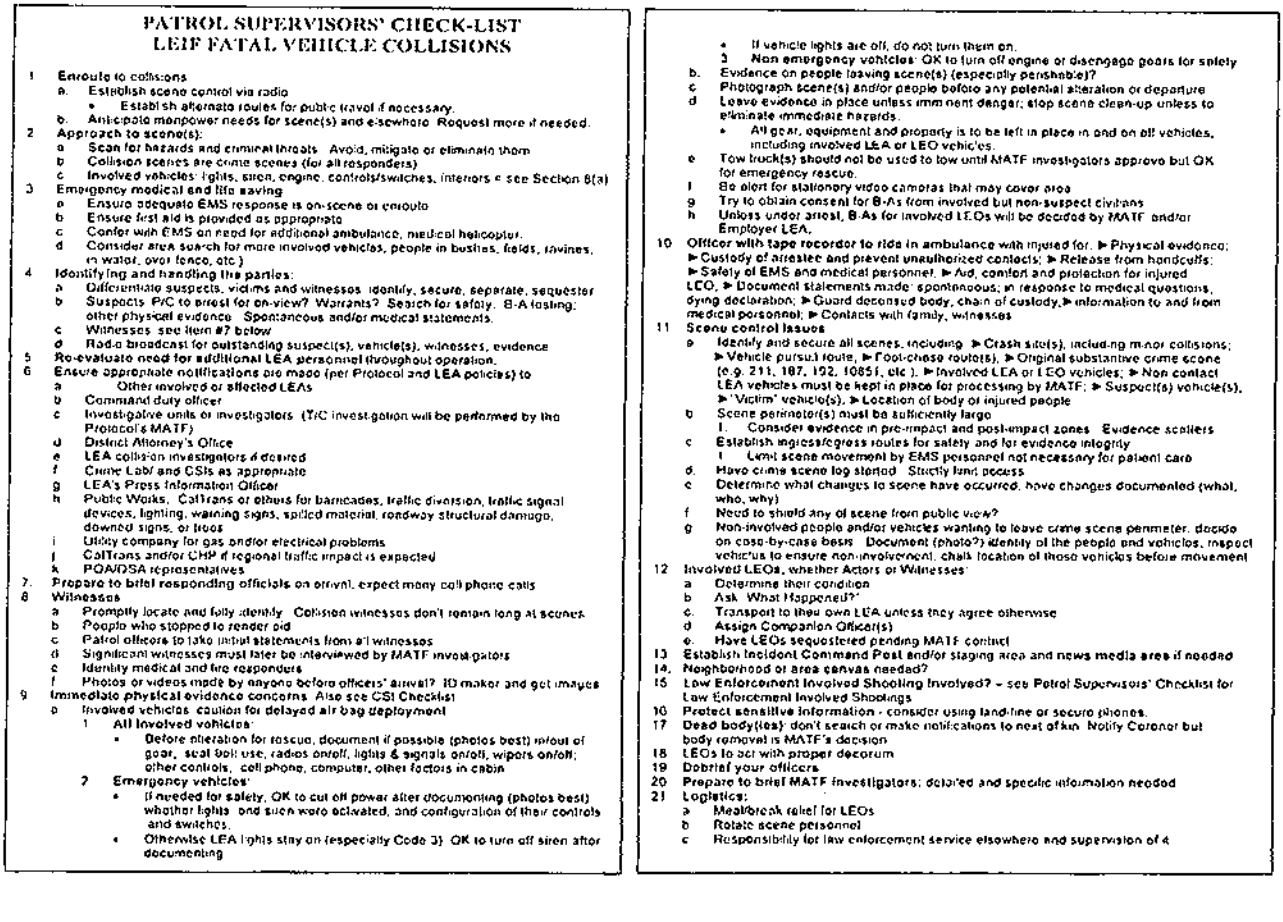


PATROL SUPERVISORS' CHECK-LIST
LEIF FATAL VEHICLE COLLISIONS

1 Enroute to collisions
a. Establish scene control via radio
• Establish alternate routes for public travel if necessary.
b. Anticipate manpower needs for scene(s) and elsewhere. Request more if needed.
2 Approach to scene(s):
a Scan for hazards and criminal threats. Avoid, mitigate or eliminate them
b Collision scenes are crime scenes (for all responders)
c Involved vehicles: lights, siren, engine, controls/switches, interiors = see Section 6(a)
3 Emergency medical and life saving
a Ensure adequate EMS response is on-scene or enroute
b Ensure first aid is provided as appropriate
c Confer with EMS on need for additional ambulance, medical helicopter.
d Consider area search for more involved vehicles, people in bushes, fields, ravines, in water, over fence, etc.)
4 Identifying and handling the parties:
a Differentiate suspects, victims and witnesses: identify, secure, separate, sequester
b Suspects: PC to arrest for on-view? Warrants? Search for safety. 8-A issuing; other physical evidence. Spontaneous and/or medical statements.
c Witnesses: see item #7 below
d Radio broadcast for outstanding suspect(s), vehicle(s), witnesses, evidence
5 Re-evaluate need for additional LEA personnel throughout operation.
6 Ensure appropriate notifications are made (per Protocol and LEA policies) to
a Other involved or affected LEAs
b Command duty officer
c Investigative units or investigators (T/C investigation will be performed by the Protocol's MATF)
d District Attorney's Office
e LEA collision investigators if desired
f Crime Lab/ and CSIs as appropriate
g LEA's Press Information Officer
h Public Works, CalTrans or others for barricades, traffic diversion, traffic signal devices, lighting, warning signs, spilled material, roadway structural damage, downed signs, or trees
i Utility company for gas and/or electrical problems
j CalTrans and/or CHP if regional traffic impacts expected
k POA/DSA representatives
7. Prepare to brief responding officials on arrival; expect many cell phone calls
8 Witnesses
a Promptly locate and fully identify. Collision witnesses don't remain long at scenes.
b People who stopped to render aid
c Patrol officers to take initial statements from all witnesses
d Significant witnesses must later be interviewed by MATF investigators
e Identify medical and fire responders
f Photos or videos made by anyone before officers' arrival? ID maker and get images
9 Immediate physical evidence concerns. Also see CSI Checklist
a Involved vehicles: caution for delayed air bag deployment
1 All involved vehicles:
• Before alteration for rescue, document if possible (photos best) w/out of gear, seat belt use, radios on/off, lights & signals on/off, wipers on/off; other controls, cell phone, computer, other factors in cabin
2 Emergency vehicles:
• If needed for safety, OK to cut off power after documenting (photos best) whether lights and siren were activated, and configuration of their controls and switches.
• Otherwise LEA lights stay on (especially Code 3). OK to turn off siren after documenting
• If vehicle lights are off, do not turn them on.
3 Non-emergency vehicles: OK to turn off engine or disengage gears for safety
b. Evidence on people leaving scene(s) (especially perishable)?
c Photograph scene(s) and/or people before any potential alteration or departure
d Leave evidence in place unless imminent danger; stop scene clean-up unless to eliminate immediate hazards.
• All gear, equipment and property is to be left in place in and on all vehicles, including involved LEA or LEO vehicles.
e Tow truck(s) should not be used to tow until MATF investigators approve but OK for emergency rescue.
f Be alert for stationary video cameras that may cover area
g Try to obtain consent for 8-As from involved but non-suspect civilians
h Unless under arrest, 8-As for involved LEOs will be decided by MATF and/or Employer LEA.
10 Officer with tape recorder to ride in ambulance with injured for: ▶ Physical evidence; ▶ Custody of arrestee and prevent unauthorized contacts; ▶ Release from handcuffs; ▶ Safety of EMS and medical personnel. ▶ Aid, comfort and protection for injured LEO. ▶ Document statements made: spontaneous; in response to medical questions, dying declaration; ▶ Guard deceased body, chain of custody.▶ Information to and from medical personnel; ▶ Contacts with family, witnesses
11 Scene control issues
a Identify and secure all scenes, including: ▶ Crash site(s), including minor collisions; ▶ Vehicle pursuit route, ▶ Foot-chase route(s), ▶ Original substantive crime scene (e.g. 211, 187, 192, 10851, etc.), ▶ Involved LEA or LEO vehicles; ▶ Non-contact LEA vehicles must be kept in place for processing by MATF; ▶ Suspect(s) vehicle(s), ▶ 'Victim' vehicle(s), ▶ Location of body or injured people
b Scene perimeter(s) must be sufficiently large
1. Consider evidence in pre-impact and post-impact zones. Evidence scatters
c Establish ingress/egress routes for safety and for evidence integrity
1 Limit scene movement by EMS personnel not necessary for patient care
d. Have crime scene log started. Strictly limit access
e Determine what changes to scene have occurred, have changes documented (what, who, why)
f Need to shield any of scene from public view?
g Non-involved people and/or vehicles wanting to leave crime scene perimeter, decide on case-by-case basis. Document (photo?) identity of the people and vehicles, inspect vehicles to ensure non-involvement, chalk location of those vehicles before movement
12 Involved LEOs, whether Actors or Witnesses:
a Determine their condition
b Ask 'What Happened?'
c. Transport to their own LEA unless they agree otherwise
d Assign Companion Officer(s)
e. Have LEOs sequestered pending MATF contact
13 Establish Incident Command Post and/or staging area and news media area if needed
14. Neighborhood or area canvas needed?
15 Law Enforcement Involved Shooting involved? – see Patrol Supervisors' Checklist for Law Enforcement Involved Shootings
16 Protect sensitive information - consider using land-line or secure phones.
17 Dead body(ies): don't search or make notifications to next of kin. Notify Coroner but body removal is MATF's decision
18 LEOs to act with proper decorum
19 Debrief your officers
20 Prepare to brief MATF investigators; detailed and specific information needed
21 Logistics:
a Meal/break relief for LEOs
b Rotate scene personnel
c Responsibility for law enforcement service elsewhere and supervision of it

This Checklist was created through the efforts and collaboration of the following individuals:

Sgt. Marty Birch, Richmond Police Department; Sgt. Chris Childs, California Highway Patrol; Lt. David Chilimidos, Concord Police Department; Officer Mark Covington, Walnut Creek Police Department; Lt. Dave Fox, California Highway Patrol; Sgt. Darrel Graham, Concord Police Department; Sgt. Lee Hendricson, Richmond Police Department; DDA Bob Hole, Contra Costa District Attorney's Office; Lt. Rob Patrick, California Highway Patrol; Sgt. Mike Perry, Pittsburg Police Department; and the California Highway Patrol's Golden Gate Division MAIT team led by Sgt. John Blencowe.

ATTACHMENT B
PATROL SUPERVISORS' LEIF CHECKLIST
Fatal Vehicle Collisions

SUPERVISORS' LEIF CHECKLIST
INSTITUTIONAL CUSTODIAL DEATHS

Contra Costa County's **"Law Enforcement Involved Fatal Incident Protocol"** applies to most institutional custody deaths.

This Checklist is to assist Custodial Institutional Supervisors manage the initial response to deaths of people in the custody of LEA custodial institutions, whether such deaths occur within county or city jails, holding rooms, court facilities, transportation vehicles, medical facilities, interview rooms, or elsewhere. The tasks listed below are typically performed in the interval between the discovery of the death (or discovery of the person's medical distress which is expected to result in death) and the time the Protocol's Multi-Agency Task Force's investigation begins.

- This Checklist is not primarily intended to apply to deaths which occur prior to the time arrestees enter a custody facility for the purpose of custodial processing, although portions of it may be useful in those situations.
- It applies to all institutional deaths occurring by accident, suicide or at the hands of another and it applies to some "natural physiological deaths".

Because nearly all deaths in custodial institutions are of inmates, this Checklist does not directly and specifically address the deaths of non-inmates (e.g. Law Enforcement Personnel or civilians) in custodial environments because these deaths occur so infrequently.

Abbreviations

- MATF = Multi- Agency Task Force.
- LEIF = Law Enforcement Involved Fatal Incident. Under Contra Costa County's LEIF Protocol, this term includes most deaths which occur in custodial institutions.
- LEA = Law Enforcement Agency
- LEO = Law Enforcement Officer

Protocol Invocation

The death, or imminent death, of a person who is in institutional custody in Contra Costa County is a mandatory Protocol case, except custodial deaths which were medically expected and were caused by previously diagnosed medical conditions (such as cancer, AIDS, a heart condition, emphysema, etc.), and which were being treated by institutional medical personnel, provided that institutional suicide, trauma, accident, or use of intoxicants was not involved. **Protocol Ref 79.**

Protocol investigations are also performed on some deaths which occur within 48 hours of the person's release from a Contra Costa custodial facility. **Protocol Refs 80-81.**

The Protocol contains an optional invocation provision allowing LEAs to initiate a Protocol investigation of Incidents which are not mandatory Protocol cases (even those in which death is

not involved). Make the optional invocation decision promptly. When invoking, quickly notify the appropriate officials within your LEA and outside your LEA.

1. **Life saving efforts** are the first priority.

   a. **Immediate life saving efforts by first responders** - first aid, CPR, etc.
      - Reminder: unless death is pronounced by competent medical authority, immediately cut down hanging inmates if it is safe to do so and not wait for photos, a supervisor, medical assistance, etc.

   b. Ensure **notification to institutional medical staff** (EMTs, paramedics, nurses, doctors, nurse practitioners and physicians' assistants).

   c. Ensure **notification to the fire department and/or ambulance.**

   d. If medical transport to an outside facility is needed, assign an **LEO to accompany the patient** in the same vehicle for these purposes: (See ***Patrol Supervisors LEIF Checklist for Shootings and Generic Incidents*** Item 7 for more details on these points.)

      1) Physical evidence protection.
      2) Custody of inmate.
      3) Aid, comfort, protection.
      4) Spontaneous statements, statements during medical treatment, dying declarations.
      5) Information to and from medical personnel.
      6) Potential contact with witnesses and family at hospital.
      7) Identification of EMTs, Paramedics and ER staff.

   e. Consider that the inmate or area may pose a health hazard such as from chemicals or a communicable disease.

2. **Security**:

   a. **Lock down** involved incident areas (not just the specific Incident scene) as appropriate for: (1) institutional security; (2) personnel safety (staff, inmates and civilians) (3) evidence protection; and (4) investigative procedures.

   b. If a completed or attempted **escape** is involved, follow LEA's procedures.

   c. Consider **need to close the facility** to new inmates and to visitors.

   d. Consider **blocking all inmates' phone calls.**

3. If **deadly force was used** by law enforcement personnel, also refer to the separate ***Patrol Supervisors LEIF Checklist for Shootings and Generic Incidents***.

ATTACHMENT C
SUPERVISORS' LEIF CHECKLIST
Institutional Custodial Deaths

4. Promptly **request additional LEA personnel** as needed, for:

   a. Security: **scene(s) protection, lockdown procedures, cell searching** for weapons or contraband (when necessary for custodial security purposes, not as part of the LEIF investigation), sequestering people.

   b. **Assisting investigators**: access and escorting, inmate movement for interviews, etc.

   c. Handling **non-LEIF duties** in the rest of the facility.

   d. Consider need for **more supervisory staff** for the LEIF and/or routine detention duties.

5. **Notifications**

   a. Chain of the LEA's Command.

   b. PIO.

   c. LEA's Civil Litigation investigators and/or Risk Manager.

   d. Notification about Protocol invocation to:
      1. District Attorney.
      2. Crime Lab.
      3. Coroner.
      4. Any other LEA(s) if recently involved in the inmate's arrest or transportation.
      5. POA/DSA representatives for involved personnel per LEA procedure.

   e. Notification of facility's closure to other potentially affected LEAs.

   f. MATF investigators will make death notifications to next of kin.

      1. Exception: When a verified family member learns that his/her inmate relative has a medical problem in the jail and then either telephones or makes a personal visit to the facility to check, notification should be made at that time by a suitable official.

   g. Anticipate receiving phone requests for more information from officials who are notified of the Incident.

6. **Incident scene(s) and physical evidence**: **Treat involved scene(s) as Crime Scenes**.

   a. **Limit access** to scenes to only those officials who must enter.

   b. Have **photos** taken of involved inmate(s), scene, medical response, etc. as promptly as possible. Be careful not to disturb evidence.

   c. **Remove and/or sequester other inmate(s)** from scene(s) and/or area(s) as necessary

for security, evidence protection, interviewing, and emotional concerns.

- This may be difficult in small jails. More officers may be needed for sequestering, and transferring to other facilities may be necessary.

d. Consider need and authority for **prompt searching of inmates** being removed from the scene or area of the Incident.

e. Initiate a **Crime Scene log**.

f. Are there **secondary scene locations** inside and outside the institution such as:

1. Cell(s) where the inmate had recently stayed.
2. Booking.
3. Sally port.
4. Holding cells or areas.
5. Interview or visiting rooms.
6. Medical treatment rooms and facilities.
7. Areas involved in escape or an attempt.
8. Recreation or eating area.
9. Law enforcement vehicle(s) which transported inmate to jail and/or medical facility.
10. Arrest scene.
11. Ambulance.
12. Court areas.
13. Other vehicles, residence, business.

g. Caution for **health hazards**, such as chemical agents (OC spray, etc.), biological materials.

h. Ensure **relevant evidence is safeguarded:** instruments, weapons, and/or evidence. Include items that may be even possibly relevant. Examples:

1. Medical paraphernalia. **DO NOT COLLECT OR DISCARD** – leave in place.
2. Intoxicants (alcohol, drugs, chemicals, etc.).
3. Medications.
4. Containers for medications and intoxicants.
5. Law enforcement restraints.
6. Law enforcement weapons including impact, electronic, chemical.
7. Inmate weapons.
8. Ligatures and their source material.
9. Documents such as notes and letters and especially suicide notes (i.e. anything that shows inmate's state of mind including inmate's reading material).
10. Biological matter such as blood, vomit, urine and fecal material, on floors, walls, furniture, clothing and bedding, etc.

11. Inmate's clothing which was removed from him/her during medical efforts.
12. Foods and beverages and their containers and wrappings, especially in inmate's housing area.
13. Trace evidence:
    a) Fingerprints.
    b) Footprints.
    c) Suspicious substances.
14. Inmate's personal property stored by the facility.
15. Other property of the inmate:
    a) If in cell = leave undisturbed.
    b) Elsewhere (such as in booking) = locate, identify the container, safeguard, and hold for investigators.
16. Any video or audio recordings or photos made of the Incident?

7. Refer **press inquiries to PIO** or other official specified by LEA procedures.

8. Determine which **people are relevant to investigation** of the Incident, then: (a) get their identities; (b) determine their roles in the Incident; (c) know the end of shift time for staff members; (d) obtain a summary of what they know about the Incident in preparation for briefing (see # 11-a below).

   a. **Sequester** involved and witnessing persons (see sections b and c immediately below for examples)

   b. **Jail staff** and involved LEOs (whether assigned to the institution or not):
      1) Separately ask involved staff "What happened?" for these purposes:
         a) Managing the Crime Scene(s) and physical evidence
         b) Identifying and handling any Exigent Circumstances
         c) Ensuring safety of people and property
         d) Briefing MATF investigators and others

         This information is usually provided consensually by staff members. Do not compel this information through *Lybarger* unless absolutely necessary. (See ***Patrol Supervisors LEIF Checklist For Shootings and Generic Incidents*** for more details.)
      2) Anticipate holding some involved staff members past shift end for interviews (especially custody staff and medical personnel).
      3) Have staff listen for comments from inmates about the Incident.
      4) Have staff try to collect intelligence material from inmate sources about the Incident and the decedent.

   c. **Inmates**

      1) Have relevant inmates screened for injuries, involvement and any knowledge of

Incident.

a) Medical or mental health attention as appropriate.

b) Consider moving inmates to other areas pending MATF interviews.

c) Special consideration to inmates who may have had recent contact with involved inmate.

d) OK to take brief patrol-type statements from inmates with significant information. (MATF investigators will re-interview those inmates later, as well as other inmates who were not interviewed by staff.) It is often important to determine where each inmate was when the Incident occurred. Audio recordings may be very useful, especially if surreptitiously done.

e) Consider delaying transfers and releases of inmates pending custodial staff's consultation with MATF investigators.

2) Sensitive areas (such as death scene, body, etc.) should not be viewable by inmates. Inmates should not view even a covered body. Cover windows, erect screening or move inmates to other locations. Try to prevent inmates from hearing official conversations about the Incident.

3) Sequester appropriate inmates for MATF interviews

d. **Medical staff /EMS/fire department.** Have all identified and their duty stations and contact information ascertained.

e. **Civilians**, such as janitors, trades and repair people, inmates' visitors.

9. OK to have **photos** taken but don't compromise any physical evidence. MATF and Crime Lab will do scene and evidence processing.

10. Assign an **LEO to write reports** (criminal and/or administrative) required by LEA procedures. Usually an MATF investigator from the custodial LEA will write any crime report that is necessary.

11. **Preparation for the MATF investigation**: A Supervisor will have a major role in briefing the investigators.

a. For **briefing MATF investigators** and others:

1) Collect detailed information about the Incident and about the inmate from staff and documents including:

a) Chronology of Incident.

b) Information on inmate's condition (alive? prognosis? presence or absence of trauma?).

c) Observations and actions of staff members.

d) What staff members have learned from inmates and from other interviews.

e) Inmate's history in the institution.

f) Language difficulties requiring interpreter(s).

g) Actions taken pursuant to this Checklist.

2) Collect, review and have copies made of relevant documents, including:
   a) Inmate's complete booking file, including arrest records. Records of the inmate's prior incarceration in the facility may also be needed. (Note: copies must be made for investigators of ALL documents in the file.)
   b) History of the inmate's movement and housing inside the institution.
   c) List of who has visited inmate, and of who is authorized to visit.
   d) Disciplinary or other Incident records on the inmate.
   e) Any history of telephone calls made by inmate.
   f) Inmate's institutional medical records (if obtainable). If not obtainable, try to ensure their integrity until they can be obtained by legal process (such as consent, coroner's subpoena, search warrant, court order, etc.).
   g) Inmate's classification documents.
   h) Separation logs.
   i) Observation checklist or log.
   j) Computerized Incident history (if any).
   k) Copy of Dispatcher recordings of relevant radio and telephone traffic.
   l) Roster of inmates in relevant housing areas and room/bunk assignments.
   m) Listing of LEA staff (sworn, non-sworn, medical, etc.) involved in Incident and the response to it.
   n) Housing unit's event log or note book (computerized or handwritten).
   o) Logs or printouts showing relevant entries into controlled areas (whether handwritten, computerized, or by card readers).

b. **Notify front counter/lobby** personnel to expect arriving investigators.

c. Arrange **adequate rooms for MATF** briefing and operations.
   1) Chart paper, broad tip marking pens, tape to attach paper to walls.
   2) Telephone access (if possible).

12. Consider **emotional impact** of Incident on staff and inmates. Take appropriate action.

13. **Meals** for staff, investigators and inmates may be needed during the investigation.

This Checklist was created by a committee consisting of:

Sergeant Dimitri Barakos, Antioch Police Department; Commander Scott Daly, Contra Costa Sheriff's Office; Captain Greg Gilbert, Contra Costa Sheriff's Office DDA Bob Hole, Contra Costa District Attorney's Office; Sergeant Garrett Voerge, Concord Police Department; Lt. Pat Welch, Antioch Police Department

ATTACHMENT C
SUPERVISORS' LEIF CHECKLIST
Institutional Custodial Deaths

CSI CHECKLIST

BEFORE THE CRIME LAB ARRIVES

Pending arrival of the Crime Lab, certain physical evidence tasks should be performed by early responding officers to protect the evidentiary value of physical evidence and conditions at the scene(s). Preferably these officers have had CSI or evidence technician training. The quality of the physical evidence that will ultimately be collected by the Crime Lab often depends upon prompt and effective action by LEA personnel who are at the scenes shortly after LEIF Incidents occur.

- **Extreme caution must be used by all personnel (including CSIs and Evidence Technicians) to avoid contaminating, altering or removing evidence at the scene, and to avoid creating artifacts.**

- **Crime Lab personnel are usually available to consult with on-scene personnel via cellular phone while they are enroute to the scene. Obtain their phone numbers through the Sheriff's Dispatch Center or from District Attorney personnel investigating the Incident.**

1. Take immediate steps to **secure the scene(s)** and to **control scene access** and routes. (This must be done in conjunction with the Venue Agency's patrol supervisor who is in charge at the scene.)

2. **Record transient detail** through photographs, videos, note taking, and/or sketches to document items, conditions, actions and observations which are likely to change before the Crime Lab arrives. Examples:

   a. General appearance of the scene and surrounding area prior to darkness falling, the arrival of a storm, start of heavy commute traffic, etc.
   b. Location and condition of weapons.
   c. Location of bullet casings.
   d. Condition of relevant people (injuries, clothing, actions, appearance, etc).
   e. Blood drops, flow or spatter patterns.
   f. Location/condition of other biological evidence.
   g. Location and condition of involved vehicles (including LEA vehicles).
   h. Operation of lighting and other features of relevant vehicles, including patrol car emergency equipment (Code 3 equipment), hazard warning lights, loud radio.
   i. Other vehicles in the area (possibly involved, belonging to witnesses or victims, etc.).
   j. Doors (open, opened partially, closed).
   k. Lighting (man-made and natural).
   l. Windows, blinds, curtains and shutters (open or closed).

ATTACHMENT D
CSI CHECKLIST
Before The Crime Lab Arrives

m. Weather conditions.

n. Traffic conditions (if relevant).

o. Skid marks, collision debris and the extent of debris scatter field, impact and gouge marks, vehicle fluids on ground.

p. "**Artifacts**." As used here, these are artificial changes of an item or condition caused by something that is extraneous to the Incident, i.e., something that was not present when the Incident occurred and had no direct bearing upon the Incident's occurrence. Examples:

1. Results of emergency medical efforts, including the movement of an injured person, movement of furniture, cutting or total removal of clothing, creating or obliterating foot tracks, dropping or smearing of blood, removal of doors or gates, abandonment of medical debris, turning lights on or off.
2. Weather.
3. Water from sprinkler systems, dew, river or stream flow.
4. Arrest, struggle, and/or removal of suspect.
5. Animal (especially dog) or insect activity.
6. Clean up efforts.
7. Vehicle movement or change in the vehicle's condition (such as turning off emergency equipment).
8. People walking inside scene.
9. Evaporation.
10. Items dropped, such as gum, cigarette butts, matches, food wrappers and containers, scrap paper, hair.
11. Shoe prints, tire prints.
12. Evidence items changed by being picked up, stepped on, kicked.

q. People present at the scene, including crowds (if relevant).

3. If possible, **collect Gunshot Residue** samples from gunshot victim(s) and shooters who are being transported from the scene. Use Gunshot Residue collection kits. Other types of trace evidence may also need to be collected, as stated in #4.

4. When necessary, **protect** if possible (and **collect <u>if absolutely necessary</u>**) any **evidence which is <u>in imminent danger</u>** of being lost, destroyed or contaminated. Examples include footprints, blood drops, expended bullets or shell casings, vehicles, vehicle tire tracks, items which will be blown away by wind or washed away by rain, firearms or valuables which are subject to theft, trace evidence on people leaving the scene, etc. Consider the ambulance and Emergency Room as locations of evidence which may need protection.

5. **Scene log**: Help **ensure that a written log is started** to adequately record every entry and exit at the scene. Information must include identity of each person, their agency or other affiliation to the case or scene, the time(s) of entry and exit, and the reason for entry. (Refer to ***Patrol Supervisors LEIF Checklist for Shootings and Generic Incidents*** for more details.)

ATTACHMENT D
CSI CHECKLIST
Before The Crime Lab Arrives

a. The log must include the names and identifying information of everyone (police, fire and ambulance personnel; civilian passersby, victims, witnesses; etc.) who entered the scene prior to the log being started, whether they are still present or have already left the area. (Contact may later be needed with those people to obtain elimination shoe prints or fingerprints, or to ask about certain observations and actions.)

6. Take full length (stand-up, head-to-toe, and of all sides) color **photographs of involved people** (officers and civilians). Pay particular attention to wounds, damaged clothing, trace evidence, etc. and document them with close-up photographs.

7. Assist the scene supervisor or investigators in the documentation and/or collection of **LEOs' firearms**, duty belts, and/or clothing, if these items are being collected at that time and place.

8. As needed, assist in the collection of **blood or urine** from LEOs or others.

9. Document the **position of participants and witnesses** at the scene as revealed by them during initial scene explanations.

10. Make a **preliminary sketch** of easily visible aspects of the scene without entering the scene (unless OK'd by MATF investigators or by the Protocol-designated evidence collectors). Do not take measurements or do anything else that might contaminate the scene. Use a straight edge and make the sketch in correct proportion but not necessarily to scale.

    a. MATF investigators will probably ask for another sketch which shows scene landmarks but which does not show evidentiary detail at the scene (such as the location of a body, blood, gun(s), bullets, etc.). Copies of these sketches will be used primarily by investigators during interviews.

11. When the Crime Lab arrives, they will assume responsibility for processing the scene.

    a. **Brief them** in detail on what you have observed and done and on any evidence processing you believe should receive priority attention.

    b. Confer with them on the immediate **disposition of evidence** you collected.

    c. Qualified officers may be asked to **assist the Crime Lab** with preparation of diagrams, processing of latent and patent prints, photography, logging of measurements and photographs and evidence, scene lighting, transportation of evidence and other duties. They will be working under the direction of the Protocol-designated evidence collectors.

This Checklist was originally created in 1984 by John Patty of the Contra Costa Sheriff's Criminalistics Laboratory. This 2007 revision was written by Crime Lab Director Paul Holes and Deputy District Attorney Bob Hole.

ATTACHMENT D
CSI CHECKLIST
Before The Crime Lab Arrives

AUTOPSY EVIDENCE COLLECTION CHECKLIST

CONTRA COSTA COUNTY

Decedent's Name _____ Coroner Case No. _____

LEA and Case No. _____ CSI/Criminalist(s) _____

Autopsy Date _____ Pathologist _____ Lab No. _____

Use notes:

A. This guide corresponds with the procedures followed in Contra Costa County, and it is organized to follow those procedures sequentially. Modifications may be necessary for use in other jurisdictions. In many jurisdictions the pathologist and his/her staff collect and document all evidence at autopsy, while in other jurisdictions the police investigators and/or CSIs or criminalists do much of that work.

B. Use a separate fresh copy of this guide for each autopsy.

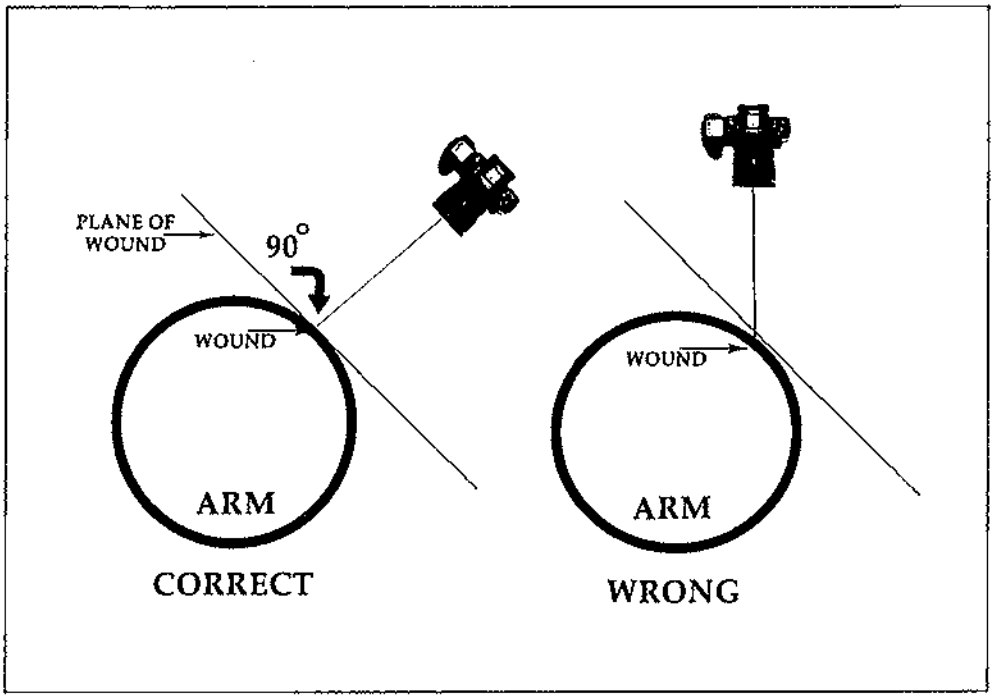
C. Prior to each autopsy, review this guide to determine which steps will be relevant to that specific case. Place a Checkmark (√) in the "To Do" column beside each step that is applicable. When each step has been completed, place a checkmark in the "Done" column.

D. You may make notations on this document.

To do	Done		
			A. PREPARATORY TO AUTOPSY
√	___	1	
___	___	2	1. Bring to autopsy: Decedent's clothing; OTC and RX medications; weapons or objects which may have marked the body; relevant photos. Also see the Contra Costa County Sheriff/Coroner's document entitled ***Death Investigation Roles Of The Coroner And Law Enforcement Agencies.***
___	___	3	2. Arrive at morgue at least ½ hour before scheduled autopsy time.
√	___	4	**B. PRE-AUTOPSY PROCESSING OF BODY**
___	___	5	Many of these procedures may be performed prior to the pathologist's arrival but they must be done without disturbing the body or clothing.
___	___	6	1. Ensure that trace evidence is not compromised when x-rays are taken.
___	___	7	2. Without moving or undressing body, conduct a visual examination, and do head to toe photography before subsequent undressing, washing, evidence removal or removal of medical therapy devices. Ensure complete body coverage. Use good lighting. Use magnifying glass and/or stereo microscope if appropriate. See Item #12 regarding trace evidence.
___	___	8	a. Use normal and close-up lenses as appropriate.

___ ___ 9 b. To confirm or determine the decedent's identity, or for other immediate investigative needs, take digital or other instant photos of face and/or identifiable body features. Delay this until Item #146 if cleaning is needed before presentable ID photos are taken.

___ ___ 10 c. **Note regarding photography**: When photographing wounds and marks on any body surface (but especially on curved surfaces) at any stage of the autopsy, it is essential to position the camera perpendicular (i.e. at 90 degrees) to the plane of the wound or mark, and to aim the lens directly into the center of the wound or mark.



___ ___ 11 3. Examine the body and clothing using good lighting and magnification if necessary. Make written notes and/or sketches of the condition of the body and clothing, relevant positions, location of observable evidence, body or clothing defects which appear significant, and possible "artifacts" (see Item #123 for artifacts).

___ ___ 12 4. Examine carefully for trace evidence which undressing or body clean-up will disturb.

___ ___ 13 a. Use good lighting and magnifying glass.

___ ___ 14 b. Trace evidence types (examples):

___ ___ 15 1. Soil

___ ___ 16 2. Vegetable/vegetation matter.

___ ___ 17 3. Blood. Remember that blood on the decedent may be from the decedent or from someone else (such as the suspect).

___ ___ 18 4. Hair (human, animal)

___ ___ 19 a. Loose hairs: collect with new comb and/or clear tape lift and/or tweezers. Package into a paper bindle and then place into a paper envelope.

___ ___ 20 b. Hair standards from the body will be collected later at Item #183+.

___ ___ 21 5. Fibers

___ ___ 22 6. Glass

___ ___ 23 7. Grease, oil

___ ___ 24 8. Gunshot residue. Collection of GSR will be done later at Item # 70+.

___ ___ 25 9. Face powder, lipstick (decedent's or from another person)

___ ___ 26 10. Semen

___ ___ 27 11. Visible prints (finger, shoe, tire, etc). See Items # 46-56 for collection

___ ___ 28 12. Paint

___ ___ 29 c. Document trace evidence by photography and sketching prior to collecting. (Collection is immediately below at Item #30.) Consider macro photography.

___ ___ 30 d. Collection methods. If removal of clothing may disrupt important trace evidence, ask that clothing be cut off carefully, avoiding wounds, defects, GSR patterns, blood on clothing, or other evidence.

___ ___ 31 1. Collect by gloved hand or clean/new fine tip forceps.

___ ___ 32 2. Tape lifts. Use clean tape. To store, suspend tape pieces inside closed containers made of clear glass or plastic, or to inside of clean plastic bags.

___ ___ 33 3. Swabs

___ ___ 34 a. If only a small quantity of material exists, concentrate stain by collecting it on tip of cotton swab using small amount of water. Distilled water is preferable.

___ ___ 35 b. If stains are at multiple sites on body, collect from many areas using separate swabs for each stain.

___ ___ 36 c. Label each swab or their individual containers, showing case number and collection site of each swab.

___ ___ 37 d. Air dry swabs if possible before packaging. Must not contaminate one swab with another.

___ ___ 38 e. Control swabs are necessary – collect one from each area where a

stain sample is collected. (Controls are swabs of unstained surfaces adjacent to each stain site.)

___ ___ 39 e. Hands, fingernails

___ ___ 40 1. Examine with good lighting and a magnifying glass or stereo microscope. ONLY IF no trauma is present, collect and package trace evidence from hands and nails. If trauma is present, delay collection until pathologist's approval.

___ ___ 41 2. Fingernail cuttings: delay collection if trauma present. Cut nails with clean instrument.

- Clean the cutter with bleach before and after using.
- Collect and package clippings from the right hand separately from clipping from the left hand.

___ ___ 42 3. Examine for, photograph, and consider subsequent collection of broken nails if possibly relevant to case.

___ ___ 43 4. Fingernail scrapings (only if nails are too short to clip): use clean/new wood-tipped device such as toothpick. Package the scrapings in clean paper with pharmaceutical folds. Use a separate device for each hand.

___ ___ 44 5. Remember to look between all fingers.

___ ___ 45 f. On clothing: Collect loosely adhering trace evidence which may be dislodged.

___ ___ 46 g. Prints on cadaver's body surface (e.g. fingerprints, shoe prints, tire prints, etc.)

___ ___ 47 1. Bloody: After you are certain that good close-up (macro) photos have been taken of prints one-to-one, both with and without scale, consider use of a blood reagent to develop or enhance bloody prints, smears or stains. CONTACT LAB for advice or assistance.

___ ___ 48 2. Other visible prints (e.g. grease): contact Lab for advice.

___ ___ 49 3. Latent fingerprints on the body: if latent fingerprints are a possibility the body <u>should not be refrigerated</u>.

___ ___ 50 a. Photography: (See Item #10 regarding photos of curved surfaces.) Take good close-up (macro) photos of prints, one-to-one, with and without scale.

___ ___ 51 b. Methods of developing, lifting and/or photographing: CONTACT LAB.

___ ___ 52 1. Electrostatic lifting of dust prints.

___ ___ 53 2. Iodine fuming with silver plate lifting. Photograph the silver plate lifts.

___ ___ 54 3. Super glue fuming.

___ ___ 55 4. Magna brush with metal powder.

___ ___ 56 5. Sampson Lift Method. (Contact Lab for details.)

___ ___ 57 h. Alternative light sources (ALS):

Use ALS and/or black light (ultra-violet) exam of body and clothing before wash-up and clothing removal.

___ ___ 58 1. View in dark using protective lenses to protect your eyes.

___ ___ 59 2. Be sure the pathologist is shown anything you find, prior to further processing.

Photograph (see Item #10 regarding curved surfaces) significant findings such as healing wounds, trauma, stains, trace evidence, etc., under the ultraviolet light. Contact Lab for photography method.

___ ___ 60 3. Sketch.

___ ___ 61 4. Outline any luminescent stains with a permanent ink marker for exam under normal light. Photograph marked areas under room light or with flash.

___ ___ 62 5. Swab luminescent stains as described in Items #33-38.

___ ___ 63 6. Obtain control swabs as described in Item #38.

___ ___ 64 i. Gunshot cases

___ ___ 65 1. Gunshot residue (GSR) may help determine:

___ ___ 66 a. Proximity of decedent's body or clothing to the muzzle or to the side of a discharged firearm.

___ ___ 67 b. Orientation (positioning) of various body parts to the firearm at the time of discharge.

___ ___ 68 c. If the decedent fired a gun.

___ ___ 69 d. Type of ammunition fired.

___ ___ 70 2. GSR on body surfaces:

___ ___ 71 a. If GSR was not previously collected from the body at the scene prior to removal of the body to the hospital or morgue (as is preferable), the body should not be refrigerated prior to GSR collection at the morgue.

___ ___ 72 b. Photograph (see Item #10) regarding photography of curved surfaces) any visible GSR with and without scale. Some of your photos must show 100% of the GSR pattern.

___ ___ 73 c. Consider tracing visible gun powder particle pattern on clear acetate sheets.

___ ___ 74 d. Collect visible and invisible GSR.

___ ___ 75 1. Use magnifying glass or stereo microscope (one is located at the Morgue) to look for non-obvious GSR.

___ ___ 76 2. Consider tape lifting but do not do tape lifting on areas that might be processed for latent prints.

___ ___ 77 3. Use adhesive SEM disks for back of hands, palms and other surfaces as appropriate.

___ ___ 78 3. GSR on clothing:

___ ___ 79 a. Photograph with and without scale.

___ ___ 80 b. Remove garment later (at Item #124+) and package it without disturbing GSR.

___ ___ 81 4. Photograph wounds and the immediately surrounding GSR pattern(s) with scale. Describe in notes. Have area around wound shaved if necessary.

___ ___ 82 5. Collect dry residue from wound site(s). Look for tattooing.

___ ___ 83 6. With pathologist's approval, swab interior of wound for GSR. Consider swab of wound track.

___ ___ 84 7. Have hair shaved from wound site. Look for tattooing.

___ ___ 85 8. Collect shaved hair for later Lab exam for GSR and shattering.

___ ___ 86 9. Photograph wound after shaving and cleaning, with and without scale. Consider one-to-one photography to show specific detail.

___ ___ 87 10. Take additional photographs of all wounds after cleanup.

___ ___ 88 j. Explosives cases:

___ ___ 89 1. Dynamite is often tagged with small multi-layer chips. Use a magnet placed inside a new plastic bag to collect these.

___ ___ 90 2. Using swabs with wooden or paper shafts, moisten swab with acetone and swab relevant areas. Air-dry the swabs and place in plastic or glass containers. Wear rubber gloves.

___ ___ 91 3. Collect control swabs from body areas which are not contaminated by the explosive.

___ ___ 92 4. Bite marks:

___ ___ 93 a. Examine suspected bite areas with ultraviolet light. Wear protective lenses to avoid damaging your eyes. Photograph positive areas using the black light for illumination. Call Lab for advice about this photography.

___ ___ 94

b. Swab the bite mark area for possible saliva using a swab moistened with a small amount of distilled water. To concentrate the saliva on the swab, use only the tip of the swab.

___ ___ 95

c. Obtain control swab(s) in same manner as evidence swabs. See Item #38.

___ ___ 96

d. Label swab(s) and air-dry. See Item #s 36-38.

___ ___ 97

e. Photograph suspected bite marks, with and without scale, in color (and in black and white if using film). (Color digital photos can later be converted to black and white using Photoshop.) Take macro (one to one) photos in addition to standard photos at normal range.

___ ___ 98

f. Photograph suspected bite marks in color, with and without scale. Take macro (one to one) photos in addition to standard photos at normal range. If using a digital camera, ensure the camera settings are at a high enough resolution to allow for adequate enlargement and image enhancement without loss of image quality.

___ ___ 99

g. Cast bite marks with Mikrosil casting putty.

___ ___ 100

h. Have the pathologist excise the bite mark at autopsy. It should then be frozen and retained. Store in formalin to preserve tissue shape (Formalin is OK because DNA is not needed from the tissue).

___ ___ 101

5. X-rays. If x-rays will be taken at autopsy, use care not to disturb trace evidence. With the pathologist, examine any autopsy or hospital x-rays, MRIs or CT scans for:

___ ___ 102

a. Bullets, knife tips, wound paths, bone and metal fragments. (Keep in mind that some people have old bullets in their bodies from previous Incidents.)

___ ___ 103

b. Broken bones.

___ ___ 104

c. Old fractures which have healed (especially relevant in child abuse, spousal and elder abuse cases).

___ ___ 105

d. Photograph significant x-rays while they are on the x-ray viewer using the viewer's light but no flash. Be sure x-rays are retained (usually by the Coroner's Office).

___ ___ 106

6. Ligatures/hangings

___ ___ 107

a. Photograph ligature in place on the body if it has not already been removed.

___ ___ 108

b. Pathologist should determine tightness and exact orientation.

___ ___ 109

c. Pathologist should cut the ligature a distance away from the knot,

then tie those newly cut ends together with string or wire to clearly identify ends which were cut at autopsy. Be careful not to contaminate ligature with sources of DNA, especially blood or other body fluids/tissue from the decedent, as someone else's DNA may be present on ligature.

___ ___ 110 d. Preserve ligature for non-victim DNA, prints and trace evidence.

___ ___ 111 e. With ligature on an absolutely clean surface, photograph ligature after removal from body. Be sure to include the knot.

___ ___ 112 f. Photograph the skin surface previously beneath the ligature, especially any furrows, marks, fingernail scrapings, etc., with and without scale.

___ ___ 113 g. If decedent apparently tried to loosen the ligature, check fingernails for tissue from neck. If found, photograph, then follow Item # 39+ for collection.

___ ___ 114 h. Tape-lift the area previously beneath the ligature for trace evidence.

115 i. Consider tape-lifting hands for hairs and fibers (especially fibers from the ligature).

___ ___ 116 7. Photography of other markings, trauma, and conditions, with and without scale. Consider use of various lighting techniques, filters, and different films. Examples:

___ ___ 117 a. Writing on skin, including faint tattoos.

___ ___ 118 b. Stains and smears.

___ ___ 119 c. Footwear impressions.

___ ___ 120 d. Blood flows, patterns or spatter: photograph blood patterns with and without a scale. If removal of clothing may disrupt important bloodstain evidence, ask that clothing be cut off carefully to avoid any wound defects, GSR patterns, blood stains on clothing, or other evidence. Avoid contaminating the clothing with additional blood from the victim as clothing is removed.

___ ___ 121 e. Lividity. This photography is especially relevant if the fixed lividity is inconsistent with the position of the body when found. Show scene photos of body's position to the pathologist.

___ ___ 122 8. Decomposing body: Collect representative samples of all the ***various types*** of insects on the body, and for each type, collect samples of each of their ***stages of life*** (e.g. eggs, larvae, pupae, and adults). An entomologist may be able to use this evidence to help determine time of death.

√ ___ 123 9. CAUTION FOR ARTIFACTS: At all stages of the autopsy, be alert for

post-mortem artifacts. These are conditions, marks, items, and substances which are present on the body or clothing but which were made, left or deposited during medical procedures, transportation or handling of the cadaver, during morgue procedures or evidence processing, or even during the autopsy itself. They have nothing to do with the cause and circumstances of the person's death, but because they are in fact present, they cannot be ignored and must be documented. Their origin must be accounted for if possible to avoid possible subsequent misinterpretation. Confer with the pathologist about identifying them and their sources and about how to best document them.

Some examples of artifacts: the presence on the body of fingerprint ink or powder caused by fingerprinting the cadaver; impressions on the torso caused by EKG pads; medical incisions (such as cut-downs for catheters or drainage tubes) or needle marks made during life saving efforts; blood or hair transferred onto the body from the autopsy table, from dirty equipment or supplies, or from someone attending the autopsy; glove impressions on the skin left when handling the body; impressions on the body made by the autopsy table, the gurney or backboard or by tie downs; incisions made in the skin during the autopsy; and blood on a previously clean body surface which flowed from an autopsy incision.

___ ___ 124 **C. REMOVAL OF CLOTHING AND CLEAN UP OF BODY – done only at the pathologist's direction**

___ ___ 125 1. Photograph the layer by layer undressing of the body.

___ ___ 126 2. Clothing is to be removed intact if possible, without cutting or tearing. If cutting is necessary, cut to avoid any wounds, defects, GSR patterns, blood on clothing, or other evidence. Record what cutting was done.

___ ___ 127 3. Collect all clothing and footwear. Collect clothing in a manner to avoid losing, disturbing, contaminating or cross-contaminating evidence.

___ ___ 128 4. Air-dry wet items before packaging if possible.

___ ___ 129 5. Clothing with important blood patterns, biological stains or other significant evidence should be separately sandwiched between sheets of clean butcher paper before each item is folded and separately packaged.

___ ___ 130 6. Package each item separately in paper bags (not plastic).

___ ___ 131 7. The clothing should be cautiously and thoroughly searched for evidence and personal items.

___ ___ 132 8. Determine which items of decedent's personal property at the morgue should be collected and retained as evidence. Remember that items not collected for evidence will be released to the next-of-kin or disposed of by the Coroner's Office.

___ ___ 133 a. Examples: clothing, jewelry, wallet or purse, address books, money, notes, cell phones.

___ ___ 134 b. Consider photographing or photocopying items you elect not to collect as

evidence as they might later have value as evidence or investigative leads.

___ 135 9. Possible sexual assault:

___ ___ 136 a. The pathologist will examine body orifices for trauma and for evidence.

___ ___ 137 b. Swabs and smears: Vaginal, rectal and oral. The pathologist will do the swabbing of body orifices, then will transfer collected material to glass microscope slides. Multiple swabs are required. Label the slides and swabs. Air-dry the slides and swabs before packaging. If pertinent, request esophageal,
vaginal, cervical, and uterine swabs.

___ ___ 138 c. Examine the body for seminal stains, especially on external genitalia and thighs. Also look for foreign material or encrustation. Use ultraviolet light to aid. Photograph first, then collect possible stains with swabs or otherwise.

___ ___ 139 d. Swab breasts/penis for saliva.

Perform blind swabs of areas the offender may have mouthed or licked, such as neck, lower abdomen, fingers, external genitalia, external anal, inner thighs, and toes. (Blind swabs are swabs that are collected from areas even though one does not see any foreign material present.) These swabs are collected from areas in case there is foreign material present that cannot be seen, such as saliva stains.

___ ___ 140 e. Obtain control swabs from areas adjacent to areas from which evidence was collected on swabs.

___ ___ 141 f. Tape-lift pubic area, followed by combing of pubic hair with clean combs. Wrap the comb or brush into a clean paper towel and place into a paper envelope.

___ ___ 142 g. Obtain hair standards from decedent later in autopsy at Item #183+.

___ ___ 143 10. Ensure that only new sponges and scrub pads are used to clean body.

___ ___ 144 11. Collect debris washed from body if appropriate for the case.

___ ___ 145 12. Before continuing the photography, dry body surfaces to avoid reflections on the photos from photo flash and room light. Be sure clean towels are used.

___ ___ 146 13. Be sure the height and weight of the body is taken and is accurate and is not simply taken from driver's license or other ID.

___ 147 **D. PROCESSING OF UNCLAD AND CLEANED BODY**

___ ___ 148 1. Complete photographic coverage of the body, head to toe, front and back.

___ ___ 149 a. Use normal and close-up lenses as appropriate.

___ ___ 150 2. Take portrait of face for identification and courtroom purposes.

___ ___ 151 a. In these identification photos, minimize wounds, distortions, instruments, other bodies, and unpleasant background. Make the facial pose as natural and life-like as possible. Fill the frame with the face. Take front and profile views.

___ ___ 152 b. Take digital or other instant photos for immediate identification if needed, if not already done at Item #9.

___ ___ 153 3. Wounds (including defense wounds):

___ ___ 154 a. Photographs – See Item #10 regarding curved surfaces.

___ ___ 155 1. If gunshot or stab wounds are numerous, consider numbering the wounds on the skin, with pathologist's concurrence. When photographing wounds, be sure to include the wound number marked on the skin in each wound photograph. Alternatively the pathologist may only number the wounds on his/her diagram of the body; you should use these for photo referencing and/or to correlate wounds to collected evidence such as projectiles.

___ ___ 156 2. Photograph wounds in relation to other wounds and in relation to body landmarks.

___ ___ 157 3. Photograph wounds one-to-one if possible, with and without scale. Close-up photographs are especially important: (a) when there may be an issue about entry or exit wound determination; (b) when the wound is or may be a shored exit; (c) to show trace evidence in a wound, (d) to show tissue bridging or its absence; (e) to show directionality of the force causing the wounds; (f) to show any pattern to the wound(s); (g) to show characteristics of the weapon or object that caused the wound.

___ ___ 158 4. When photographing bruises, use a Kodak color scale (or similar) to ensure accuracy of bruise colors on color photos.

___ ___ 159 5. For admissibility of photos in court, exclude unnecessary blood, incisions, surgical instruments, internal organs, genitalia, and other bodies. However **do not** limit your photos to only those that will be admissible in court. Ensure full photographic documentation of the body.

___ ___ 160 6. Photograph penetrating wounds with probes placed by the pathologist. Photos of in-place probes will also be taken at the completion of the autopsy, after the body is sewn up at Item # 225.

___ ___ 161 a. Trace evidence must be collected from wounds before probing.

___ ___ 162 b. Probes will be used only when the pathologist believes they are useful in establishing wound trajectory. The pathologist, not a Criminalist or CSI, will place probes.

___ ___ 163 c. Photograph each probe in place, as follows:

___ ___ 164 1. Place a large protractor at the base of the probe to show the angle.

___ ___ 165 2. Use a normal lens, not a wide angle. Set focal length to 50mm.

___ ___ 166 3. Use the smallest possible lens aperture to obtain the greatest depth of field.

___ ___ 167

4. The entire visible length of the probe must show in each photograph, along with the skin surface it penetrates.

___ ___ 168

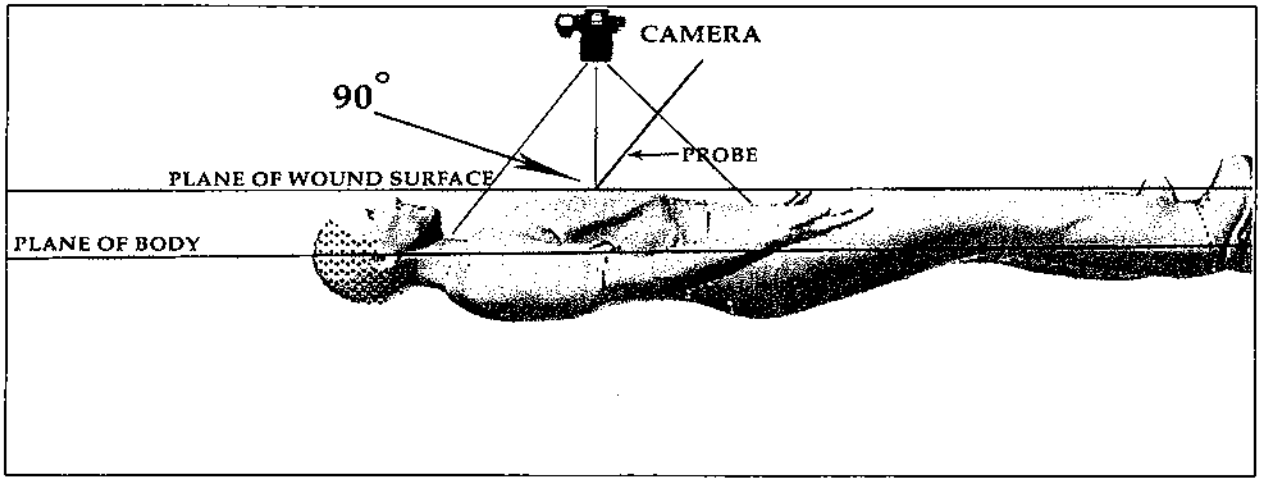
5. Probes may be more visible when photographed against a clean solid background, such as a sheet, blanket, towel or even clean surgical scrubs. Light-colored backgrounds may reflect too much light – consider using light blue or green colored fabric.

___ ___ 169

6. Photograph <u>each probe</u> from at least three angles which are 90 degrees apart, as follows:

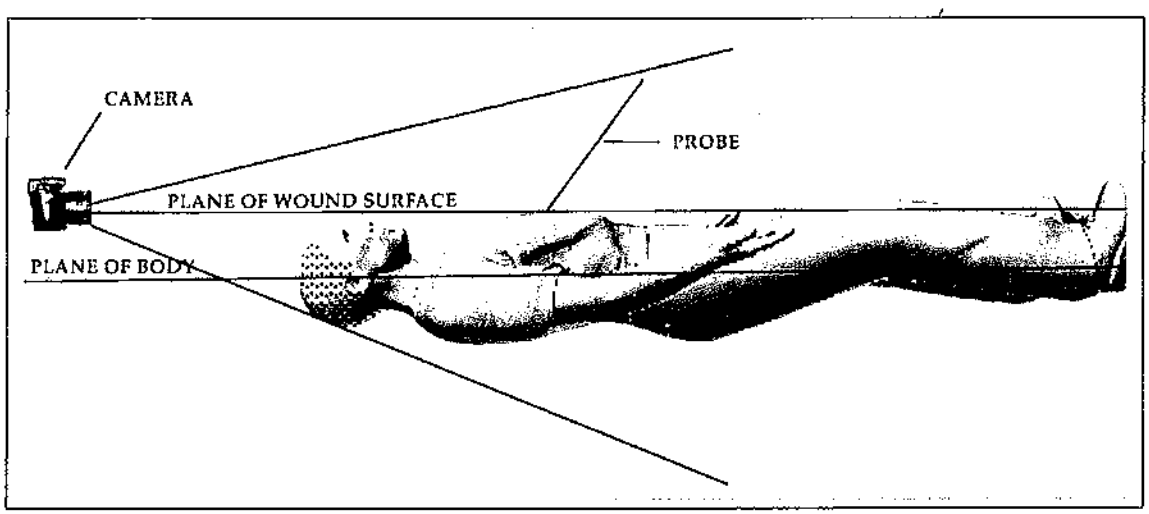
___ ___ 170

a. Perpendicular to the wound surface, that is, 90 degrees to the wound surface. For example, for an anterior chest wound (graphic below), the perpendicular view would be from directly and straight above the wound, with the camera pointing straight downward to the center of the wound, showing the wound and the visible full length of the probe. A photograph looking <u>straight down the probe</u> towards the body should also be taken.



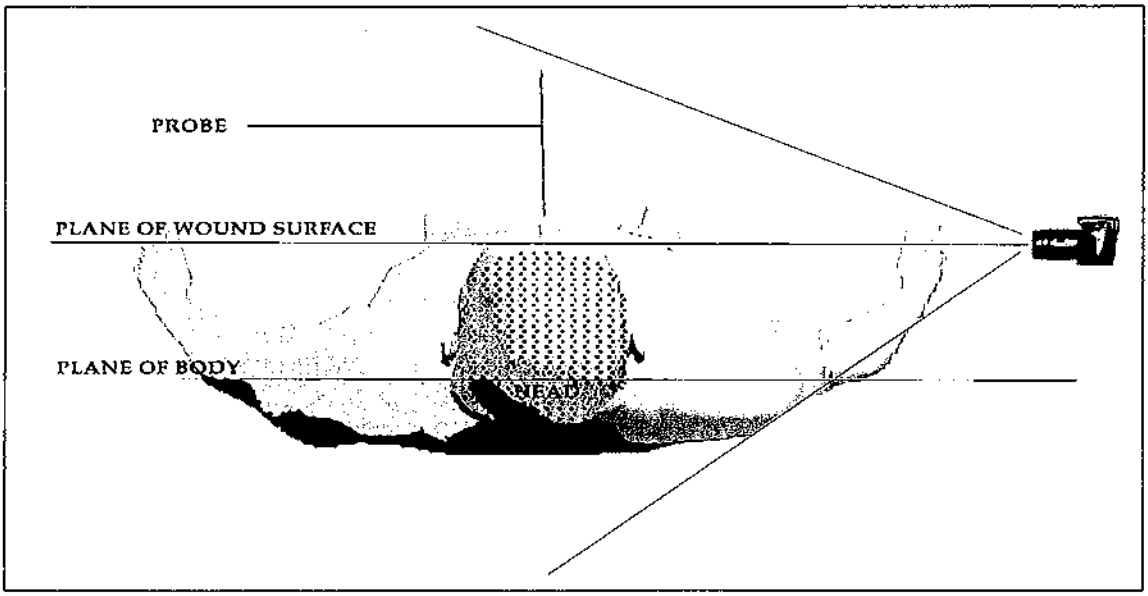
___ ___ 171

b. From the body's head or feet, with the camera at the level of the visible wound surface, shoot toward the body's opposite end, showing the full length of the visible portion of the probe.



___ ___ 172

c. From the body's right or left side, with camera at the level of the visible wound surface, shooting toward the body's opposite side, showing the full length of the visible portion of the probe.



___ ___ 173

d. For entry-exit-reentry situations: If a bullet passed through one part of the body (e.g. a forearm) and then passed into or through another (e.g. the chest), or if that is a possibility, have the pathologist position the body parts as they would have been when hit by the bullet, then photograph from the different angles described above.

___ ___ 174

7. Photograph gunpowder stippling (tattooing) with and without scale. Consider using a plastic overlay.

___ ___ 175

8. Photograph each shotgun pellet pattern in its entirety, with and without scale. Consider using a plastic overlay.

___ ___ 176

b. Diagramming:

___ ___ 177

1. Obtain a copy of the pathologist's diagram of the body for your use. If not available, use standard pre-printed body diagrams to locate wounds. Strictly adhere to the pathologist's wound numbering.

___ ___ 178

2. Make written notes of wound(s), including appearance, color, pattern, location, size, and assigned numbers if any.

___ ___ 179

c. Measurements:

___ ___ 180

1. For wounds, whether from gunshot, knife, blunt force, vehicle impact, etc:

- Obtain a copy of the pathologist's diagram, and/or
- Make notes of the pathologist's measurements of all wounds, using distance from heels or top of head, as well as from the body's mid-line.

___ ___ 181

2. In cases of questioned suicides where long guns are used, obtain the pathologist's measurements of the length of decedent's arms.

___ ___ 182

3. In cases of hot water bathtub burns, obtain height of water marks on the body.

___ ___ 183

4. Hair standards

___ ___ 184

a. Body hair: obtain 10-20 hairs from following areas, depending upon facts of the case: pubic, facial, chest.

___ ___ 185

b. Head hair: collect at least 20 hairs from each of the following areas: right and left sides, front, back, top. If facial hair is present perform the same collection procedure trying to obtain at least 20 hairs from the moustache, chin, side of face, and neck.

___ ___ 186

5. Teeth impressions. If the decedent may have left teeth marks on another person or on an object, a forensic odontologist should photograph the decedent's teeth and take dental impressions. The intact jaws may be collected and retained by the pathologist or odontologist.

___ ___ 187

6. Photograph any identifying marks on the body, such as tattoos, unique scars, and any unique body features. This is especially important if the decedent has not yet been identified. Consider photographic filters to make some tattoos more legible. After photographing tattoos on decomposed or burned bodies, have the pathologist rub off the outer layer of the skin as this will often reveal much more detail.

___ ___ 188 **E. DURING THE AUTOPSY**

___ ___ 189 1. Photograph evidence items as they are found.

___ ___ 190 2. Photograph specific injuries and relevant body features and conditions.

___ ___ 191 3. Photograph specific findings that the pathologist says are medically significant.

___ ___ 192 a. Keep in mind that absence of a specific condition or a specific type or location of trauma may be very significant. (E.g. the decedent had not been struck in the head as someone may have claimed.)

___ ___ 193 b. In cases involving strangulation or neck holds, photograph the presence or absence of hemorrhaging, bone fractures and other signs of neck trauma.

___ ___ 194 c. If the decedent was dismembered, be alert for tool marks on the cut ends of bones. Photograph the cut ends with direct as well as oblique lighting, then obtain the cut ends of the bones. If not possible, make casts of them.

___ ___ 195 4. Blood samples: The pathologist will collect blood samples from the heart or from an uncontaminated blood vessel.

Depending upon the types of testing that is desired for collected blood, different blood preservatives must be used. Vacutainer tubes for blood collection have different colored caps to show what type of preservative is inside: PURPLE capped tubes are used for blood which will be tested for genetic markers, and GREY capped tubes are used for drug and alcohol testing.

___ ___ 196 a. For DNA or typing:

√ ___ 197 1. Obtain blood in all cases for this purpose.

___ ___ 198 2. In decomposition cases, collect bone samples and/or teeth for DNA reference samples. Avoid bones that have been on the downside of the body during decomposition, or which have been exposed to a moist external environment.

___ ___ 199 3. Refrigerate ASAP in an evidence locker.

___ ___ 200 4. Submit to the Laboratory ASAP.

___ ___ 201 b. For toxicology:

√ ___ 202 1. Blood should be collected in all cases for toxicology testing.

___ ___ 203 2. The Coroner's Office will submit this sample for toxicology testing, along with other appropriate body fluids and tissue.

___ ___ 204 5. Gunshot evidence

___ ___ 205 a. Carefully collect, and separately package, bullets, bullet jacketing, shotgun pellets and wadding. Collect as many shotgun pellets as possible. Do not handle projectiles with forceps and do not place any markings directly onto any of these items.

___ ___ 206 b. If the bullet has no visible adhering trace evidence (such as glass, fabric, wood, vegetation, etc.), wash body fluids from bullets with a very gentle stream of cold water, being very careful to catch and preserve any trace evidence that might be present. Don't let the bullet go down the drain!

___ ___ 207 c. Consider having the entry and exit wounds excised and retained by the pathologist. This is important in cases where there may be a question about differentiation of entry and exit wounds.

___ ___ 208 6. Teeth and dentures - if relevant to the case

___ ___ 209 a. Retain broken portions of teeth or dentures, and/or make castings of fractured tooth surfaces.

___ ___ 210 b. If teeth are broken, note direction of the fracture and the angle of the broken teeth.

___ ___ 211 c. Collect broken dentures for matching with pieces that may be found elsewhere.

___ ___ 212 7. Drug overdoses:

___ ___ 213 a. Ask that non-medical needle puncture sites be excised and retained.

___ ___ 214 b. Consider having the nose swabbed.

___ ___ 215 8. Patterned impressions in bone (such as by a hammer with a checkered striking surface, a hatchet, a pipe, etc): have the pathologist excise and retain the bone.

___ ___ 216 9. Ask the pathologist to check stomach contents, as appropriate, for:

___ ___ 217 a. Swallowed items, such as gum, jewelry, controlled substances and/or their packaging, broken teeth, paper.

___ ___ 218 b. What type of food was ingested before death. (In some cases there may also be a limited possibility of determining how long before death the food had been eaten.)

___ ___ 219 **F. AFTER AUTOPSY**

√ ___ 220 1. Note regarding taking of the decedent's fingerprints:

Criminalists, CSIs and police evidence technicians must obtain their own set of fingerprints and palm prints from the decedent in every criminal case. Fingerprints taken by the Coroner's Office are for a different purpose and may not be suitable for all Laboratory comparisons.

___ ___ 221 a. Fingerprints: Take full set including fingertips and edges on all criminal cases.

___ ___ 222 b. Palm prints: take in all cases. Always include the heel of the hand and the wrist.

___ ___ 223 c. Desiccated or decomposed fingers: Contact the Laboratory.

___ ___ 224 d. Take footprints if appropriate to the case.

___ ___ 225 e. Take photographs of probes placed by the pathologist into penetrating or perforating wounds AFTER the body is sewn back up. (These photos are in addition to photos of the probes taken previously at Item #s160-172.)

___ ___ 226 f. Consider having body held (e.g. for at least 24 hours) for reasons such as:

- further development of bruises
- further crime scene work that may be needed due to some autopsy finding
- information from expected interviews or interrogations
- evaluation of decedent's rolled fingerprints (especially on decomposing bodies)
- need for (further) dental examination
- need for a forensic anthropologist

___ ___ 227 2. All evidence items must be properly marked and packaged according to local Laboratory requirements and accepted practices.

___ ___ 228 3. If you retain personal property items of the decedent which you collected at the morgue, you must sign for them on a Coroner's form.

Written by:

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- Members of the Contra Costa County Sheriff's Criminalistics Laboratory
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ATTACHMENT E
Autopsy Evidence Collection Checklist

CONTRA COSTA COUNTY
SHERIFF- CORONER

DEATH INVESTIGATION ROLES
OF THE
CORONER AND LAW ENFORCEMENT AGENCIES

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A. INTRODUCTION

The Coroner is an administrative officer within County government whose position was created by California statutes to determine the cause and circumstances of certain statutorily defined deaths which occur within the County. In Contra Costa, as in 42 of California's other 58 counties, the Coroner is also the county Sheriff. By state statute, the Coroner is not required to be a medical doctor, and in fact, none of the 43 Sheriff/Coroners in California are medical doctors. Coroners perform the investigative and administrative aspects of death investigations by using civilians and/or peace officers staff members but they employ licensed physicians, most of whom are board-certified forensic pathologists, to perform post-mortem medical examinations (autopsies) and to provide the medical expertise and testimony as necessary. The Coroner also has some ancillary duties.

Law enforcement agencies are often involved with the discovery of deaths. They perform criminal investigations on many deaths, especially homicides and other cases where crimes have been, or may have been, committed. This means that for many death cases, the Coroner's Office and law enforcement agencies have complementary but potentially intersecting investigative roles which can cause needless confusion and conflict. The information below is provided to avoid that.

B. PRIMARY ROLE OF THE CORONER

The Coroner's primary duty is to **determine the cause, manner and means** of certain deaths which are specified by California Government Code §27491. Generally those deaths are by homicide, suicide, accident, and deaths which are unexplained or medically unattended. When a death falls within one of those categories, it is "**reportable**" and is "a **Coroner's case**".

Only **"reportable deaths"** are within the Coroner's jurisdiction. The categories of reportable deaths (from California Government Code §27491) are summarized below:

1. **violent**, **sudden** or **unusual** deaths.

2. **unattended** deaths which occur in the continued absence of a physician for twenty days or more. The decedent has no recent medical history which documents medical problems that could have caused death.

3. deaths related to (or following) known or suspected **self-induced or criminal abortion.**

4. deaths known or suspected to be from:
   a. **homicide**
   b. **suicide**
   c. **accidental poisoning**

5. deaths known or suspected as resulting, in whole or in part, from or related to, **accident** or **injury**, either old or recent.

6. deaths due to:
   a. **drowning**
   b. **fire**

c. **hanging**
d. **gunshot**
e. **stabbing**
f. **cutting**
g. **exposure**
h. **starvation**
i. **acute alcoholism**
j. **drug addiction**
k. **strangulation**
l. **aspiration**
m. **suspected Sudden Infant Death Syndrome**

7. deaths caused by **criminal means**, in whole or in part.

8. deaths associated with known or alleged **rape**, or **crime against nature**.

9. deaths occurring **in prison** or while **under sentence**.

10. deaths known or suspected due to **contagious disease** and constituting a public hazard.

11. deaths from **occupational diseases or hazards**.

12. deaths of **patients in mental hospitals** operated by State Department of Mental Health and serving the mentally disabled.

13. deaths of **developmentally disabled patients** in state hospitals operated by the State Department of Developmental Services.

14. deaths occurring under circumstances affording **reasonable grounds to suspect death was caused by the criminal act of another**.

15. deaths **reported by physicians or other persons** with knowledge of death for inquiry by the Coroner.

C. ADDITIONAL CORONER'S DUTIES

The decedent's identity

Another duty of the Coroner is to establish and confirm the decedent's identity for legal and other purposes. This may be done by visual identification, photographic comparison, fingerprint comparison, unique body markings or conditions, dental comparison, DNA, x-ray comparison, or by personal effects.

Notifications

The Coroner is required to make reasonable attempts to locate the family of the decedent after taking custody of the dead body. Government Code §27471.

The Coroner's Office takes this responsibility very seriously and strives to ensure that death notifications are promptly, compassionately and supportively made to the legal next-of-kin, whether notification is made

by a member of the Coroner's staff, by a law enforcement officer or another official, or by someone at the request of an official.

Notifications can be difficult following any type of death but they are often especially difficult following sud den and unexpected deaths.

When possible, the Coroner's Office will have its investigators make local death notifications. Law enforcement agencies may wish to make death notifications in selected death cases they investigate because they can also provide the family with some explanation of the case circumstances and can attempt to obtain needed information. Law enforcement agencies must promptly notify the Coroner's Office if they wish to do this so the Coroner's Office won't attempt to make notification. After the law enforcement agency has made the death notification, the person who made it shall immediately notify a Coroner's investigator that the notification has been made and shall provide: (1) the name of the person receiving the notification, as well as his/her address, age, phone number and relationship to the decedent; (2) the identity and affiliation of the person making the notification; and (3) the time, date and place of notification.

Safeguard Property

The Coroner is responsible for safeguarding the property of the decedent. In some cases this involves taking actual possession of property and safekeeping it pending other disposition, and in other cases the property may be left in place with a Coroner's seal affixed to safeguard it. In many cases a legal next-of-kin simply takes responsibility for the property.

Uniform Anatomical Gift Act

The Coroner assists with the implementation of the Uniform Anatomical Gift Act (Health and Safety Code §7150) and with lawful utilization of organ and tissue transplantation procedures. Government Code §7491.44. et al.

Training

The Coroner's Office participates in scientific and medical research, training and education. Government Code §27491.45.

Death Review Boards

The Coroner's Office participates in mandated and other Medical Reviews such as Child Death Review and Domestic Violence Death Review.

Coroner's Inquests

The Coroner has discretion to conduct Coroner's Inquests, and must hold Inquests if requested to do so by the Attorney General, the District Attorney, the city prosecutor or city attorney, or a chief of police of a city in the county. Inquests may be with or without a jury, at the Coroner's discretion. Government Code §27491.6.

- **Inquests on Law Enforcement Involved Fatal Incidents**

The vast majority of Inquests in the County are held following deaths which involve law enforcement personnel or law enforcement operations or activities.

By its own policy, and pursuant to the county-wide Contra Costa Law Enforcement Involved Fatal Incident Protocol (which has been in effect since 1984), the Contra Costa County Sheriff/Coroner's Office holds Inquests following most deaths which involve law enforcement personnel or law enforcement operations or activities. These Inquests are open to the public, are conducted by a private attorney acting as the hearing officer for the Coroner's Office, and are held in front of a jury of citizens randomly selected from the Superior Court jury pool.

In addition to the statutory purposes for holding Inquests, Inquests are held on these cases to provide the public, the news media, and various interested parties with information about such incidents through sworn testimony of participants, witnesses and investigators. Inquest testimony also provides another opportunity for investigators and decision-makers to acquire more information about the incidents.

- **Other Inquests**

  The Coroner occasionally holds Inquests on other types of cases when considered appropriate or when requested under Government Code §27491.6. These Inquests are usually conducted by the Coroner's Office Commander or his/her designee and are held without a jury. Government Code §27491.7

- **Inquest Verdicts**

  Government Code §27504 requires the Inquest jury, or the hearing officer if no jury is used, to render a verdict on the following matters:

  - the name of the deceased
  - the time and place of death
  - the medical cause of death
  - whether the death was by (1) natural physiological causes, (2) suicide, (3) accident, or (4) the hands of another person other than by accident (i.e. homicide).

Government Code §27504 provides that Inquest findings shall not include, nor shall they make any reference to, civil or criminal responsibility on the part of the deceased or any other person.

D. LEVELS OF CORONER'S INVESTIGATIONS

Depending upon the type of each death and the circumstances of it, the Coroner's Office performs its role using one of five standardized levels of investigation. In Contra Costa County, these levels are known as:

1. Full Coroner's Case
2. Inspection
3. Not Brought In
4. Co-Sign
5. Brief Case

Levels 2 through 5 are used primarily for natural physiological deaths which occur following treatment by physicians, and are occasionally used in traumatic deaths. Homicides, suicides, and most other traumatic deaths are handled as Full Coroner's Cases, as are all Law Enforcement Involved Fatal Incidents (as that term is defined in the Contra Costa Law Enforcement Involved Fatal Incident Protocol).

For Full Coroner's Cases, the Coroner's Office **determines the cause, manner and means** of deaths using information obtained from multiple sources:

- Reports by Coroner Investigators and/or law enforcement officers.
- Reports by emergency medical responders.
- The decedent's previous medical history.
- Photographs, clothing, and objects associated with the death.
- A forensic medical autopsy performed by a forensic pathologist. In addition to the autopsy examination, autopsies may include x-rays, toxicology and other laboratory testing, and microscopic examination of tissue. Experts in relevant medical sub-specialties, or in forensic fields such as odontology, entomology and anthropology, are sometimes utilized.

E. LAW ENFORCEMENT'S REPORTING OF DEATHS

1. The initial report:

   Law Enforcement agencies who have charge of a deceased person's body must immediately notify the Coroner's Office. (This requirement also applies to others, such as funeral directors and physicians.) Violation of this requirement is a misdemeanor. Government Code §27491, Health and Safety Code §102850.

   The Coroner's 24 hour phone number is **925-313-2850. If no answer, call Sheriff's Dispatch at 925-646-2441**

   - **Initial Telephone Summary (I.T.S.)**

     Law enforcement's initial notification to the Coroner's Office should include a summary of the information which is then available, including the identity of the law enforcement agency and, if known, the decedent's name, location of the body, circumstances of the death, special problems anticipated in body removal, etc. (See sample of the I.T.S. form on Page 111.)

2. Continuing obligation to provide information:

   To properly perform its statutory responsibilities, the Coroner's Office must be promptly and fully informed in each case of all the facts and physical evidence that relate to (1) the cause, manner and means of death; (2) the identity of the decedent; (3) identity of next-of-kin; and (4) information concerning any notification of the death to next-of-kin that has already been made. Law enforcement agencies have an on-going obligation to provide this information to the

Coroner's Office. This obligation starts with the initial notification of the death and continues even after the autopsy is completed. Most of the needed information is collected by the assigned Coroner's investigator(s) from law enforcement officers, but often the forensic pathologist needs specific and updated information directly from law enforcement officers, as well as access to some physical evidence, at the time of autopsy.

F. CORONER'S RESPONSE AFTER NOTIFICATION

After being notified of a reportable case by a law enforcement agency which is conducting a criminal investigation of the death, the law enforcement agency may request the Coroner to delay removal of the body until sufficient investigation and evidence processing can be performed. A Coroner's investigator may elect to come to the scene for a brief inspection or for photography and to collect preliminary information. (Government Code §27491.2) The Coroner's Office then will usually not make removal until after it receives a follow-up notification that the law enforcement agency is ready for body removal.

When the reportable death is one for which a criminal investigation will not be performed by the law enforcement agency, a Coroner's deputy will usually respond promptly following the initial notification to investigate and make body removal without a follow-up call requesting removal.

Whether the law enforcement agency handles the death as a criminal case or not, the Coroner's Office requests that a law enforcement officer maintain the **chain of custody** on the body (and the scene of death if the body hasn't been removed from it) until a Coroner's deputy arrives to make removal.

G. CORONER'S DUTY TO NOTIFY LAW ENFORCEMENT

When the Coroner's Office determines that reasonable grounds exist to suspect that a death has been caused by a criminal act of another person, it is required to immediately notify the law enforcement agency having jurisdiction over the matter (if that agency is not already aware). Notification shall be made by the most direct communication available. The notification shall include the name of the deceased person (if known), the location of the remains, and other information received by the coroner relating to the death including any medical information of the decedent that is directly related to the death. Information from the Coroner cannot include any information contained in the decedent's medical records which relates to another person unless that information is relevant and directly related to the decedent's death. Government Code §27491.1.

H. LEGAL RESTRICTIONS REGARDING THE BODY, ITEMS ON IT AND ITEMS WITHIN THE DECEDENT'S ESTATE

1. THE STATUTES AND THEIR EFFECT:

- **Misdemeanor crime:** the body shall not be disturbed or moved from the position or place of death without permission of the coroner or the coroner's appointed deputy. (This applies whether or not notification to the Coroner has been made, and it applies to everyone including law enforcement officers, firefighters and emergency medical personnel.) Violation of this provision is a misdemeanor. (Government Code §27491/2(b)).

Exception for Exigent Circumstances: If, prior to the Coroner's arrival, it is urgently and clearly necessary (i.e. exigent circumstances exist) for a peace officer to move or disturb a body (e.g. to prevent if from being consumed by fire, lost in a body of water, damaged by traffic, etc.) permission must first be sought from the Coroner's Office either by telephone or by radio. If contact cannot be made quickly, the Coroner's Office hereby grants permission to move the body only as minimally necessary to avoid the immediate harm. See Section 2 below regarding searching for or removing any items from the body.

- **Misdemeanor crime:** any person who searches for or removes any papers, moneys, valuable property or weapons constituting the estate of the deceased from the person of the deceased or from the premises, prior to arrival of the coroner or without the permission of the coroner, is guilty of a misdemeanor. 27491.3(c).

- **Statutory Exception:** Peace officers may search the person or property on or about the person of the deceased, whose death is due to a traffic accident, for a driver's license or identification card to determine if an anatomical donor card is attached. If a peace officer locates such an anatomical donor card which indicates that the deceased is an anatomical donor, the peace officer shall immediately furnish such information to the coroner having jurisdiction. Government Code §27491.3(d). "Peace officer," as used in this subdivision, means only those officers who are designated in Penal Code §§830.1 and 830.2. (27492.3(d).

- **Law enforcement's right in criminal cases to process the body and collect evidence:** At the scene of any death, when a police investigation or criminal prosecution may ensue, the Coroner shall not further disturb the body or any related evidence until the law enforcement agency has had reasonable opportunity to respond to the scene, if their purposes so require and they so request. Custody and control of the body shall remain with the Coroner at all times. Reasonable time at the scene shall be allowed by the Coroner for criminal investigation by other law enforcement agencies, with the time and location of removal of the remains to a convenient place to be determined at the discretion of the coroner. Government Code §27491(3) (c).

2. PROCEDURES FOR LAW ENFORCEMENT IN CRIMINAL CASES

- **Evidence from the body prior to body removal**

When necessary for immediate investigative needs, law enforcement officers may search for and remove weapons, wallets, papers, money and valuables from the body (see the paragraph immediately below regarding removal of other types of evidence from the body), but **must seek permission of the Coroner's Office before doing so.** Permission may be sought in person, by telephone, or by radio. Examples of necessity include: (A) urgent need to identify the decedent; (B) protection of evidence from loss or contamination (such as from the weather, from movement and/or removal of the body, or from crowds); and (C) obtaining probable cause information. When permission is obtained, or if contact with the Coroner's Office cannot be reasonably made, such items may be removed from the body to satisfy the immediate need. Great care must be taken to preserve the condition of the body, the evidentiary value of removed items, to prevent contamination, and to maintain the chain of custody. Items removed from the body shall not be removed from the immediate location of the body without the express permission

of the Coroner's Office.

Exigent Circumstances: Evidence on the body, such as loose hairs, fibers, vegetation, blood, gunshot residue, etc., may only be removed from the body **without the prior permission of the Coroner's Office** when necessary to protect it from loss or contamination which could be caused by the removal and transportation process, by the weather, or otherwise. Evidence which can safely be left on the body for later observation and collection at the autopsy shall be left in place for the pathologist's inspection.

Fingerprint exemplars may be taken from the body's fingers by law enforcement agencies without the Coroner's approval when there is an immediate and urgent need to identify the decedent which cannot be satisfied by postponing fingerprinting until the after removal of the body. These conditions must be met:

1. There can be no trauma to the areas of the fingers or to portions of the hands which will have to be manipulated.

2. The fingers and hands must be adequately photographed before being disturbed.

3. The hands and fingers must first be examined for trace evidence, such as gunshot residue. If trace evidence is found, it must be photographed and collected prior to fingerprinting.

- **Evidence not on the body** which is within the decedent's estate or is at the decedent's premises:

  Searching for and removing items present at the place of death but which are (1) not on the body and (2) not within the decedent's estate, is **not controlled by statutes applicable to the Coroner's function**. Officers are responsible for assuring the lawfulness of all searches and seizures they perform as determined by standard search and seizure rules.

  Items such as weapons, wallets, papers, money and valuables, at decedent's premises which are not on the body which have evidentiary value to the investigating agency may be inspected and collected by the investigating agency without the prior approval of the Coroner's Office. However, these items shall not be removed from the scene without the Coroner's express approval.

  Statutory exception: The search for and the removal of evidence from a decedent's estate which is conducted under authority of a search warrant is not subject to Government Code §§27491.3(c) and (d) and does not require approval of the Coroner.

3. PROCEDURES IN SUICIDE CASES

- **Suicide notes and related writings**

  If the death is believed to be suicidal and the law enforcement agency will not conduct a criminal investigation of it, any note, letter or document apparently written by the

deceased which may tend to indicate the decedent's intention to take his own life, including directions for disposition of his property or the disposal of his remains shall be delivered to the Coroner's Office (Government Code §27464). By long-standing policy in Contra Costa County, the seizure of these documents shall be done by the Coroner's Office. Copies will be then made available to any interested law enforcement agency upon request. Originals will be available for Criminalistics examination. If the law enforcement agency conducts a criminal investigation of the death in the belief that it involved criminal conduct, the note evidence may be collected by that agency, with a copy provided to the Coroner's Office.

- **Suicide implements**

  If the death is believed to be suicidal and the law enforcement agency will not conduct a criminal investigation of it, implements used in the suicide shall be collected by the Coroner's Office. If the law enforcement agency conducts a criminal investigation of the death in the belief that it involved criminal conduct, implements may be collected by that agency.

I. SAFEGUARDING THE DECEDENT'S PROPERTY

- The Coroner may take charge of any and all personal effects, valuables, and property of the deceased at the scene of death or related to the inquiry and hold or safeguard them until lawful disposition thereof can be made. The coroner may lock the premises and apply a seal to the door or doors prohibiting entrance to the premises, pending arrival of a legally authorized representative of the deceased.

  However, this shall not be done in such a manner as to interfere with the investigation being conducted by other law enforcement agencies. Government Code §27491.3(a).

- Any property or evidence related to the investigation or prosecution of any known or suspected criminal death may, with knowledge of the coroner, be delivered to a law enforcement agency or district attorney, receipt for which shall be acknowledged. Government Code §27491.3(b)

J. AUTOPSIES

1. **Rules for attendees**

   a. Attendance at an autopsy by persons other than Coroner's Division personnel is subject to the approval of the Coroner (Government Code §27491.4.) The number of people attending an autopsy must be kept to a minimum due to space limitation, evidentiary considerations, and the need to eliminate distractions.

   b. People attending are required to sign a Coroner's Office Autopsy Permission Form.

   c. No audio or video recordings of an autopsy are allowed without the express prior permission of the Coroner's Division Commander and the pathologist.

   d. Photographs may be taken of remains at the morgue only for official use by the

Coroner's Office or a law enforcement agency, or for purposes of forensic pathology, or for use in medical or scientific education or research. They may not be taken for personal purposes. All photographs taken at the morgue are subject to discovery by the Coroner's Office and by involved law enforcement agencies, and are subject to discovery in administrative, civil and criminal proceedings.

e. Law enforcement personnel attending an autopsy are present to give information to the pathologist, to observe and understand the findings, to collect and record evidence, and/or for training purposes. The extent of their participation will be governed by the pathologist.

f. Those attending must adhere to the Coroner's safety rules in order to minimize exposure to biohazards. These rules include wearing protective clothing. Different standards may apply to those who will be in contact with the body verses those who will only be viewing the autopsy.

g. Autopsy attendees are strongly urged to use great diligence to ensure that any notes and diagrams they make of the pathologist's findings and opinions are accurate and are not in conflict with the pathologist's findings, report and diagram(s). Attendees usually need not create their own diagrams as the pathologist will usually give investigators a copy of any diagram(s) he/she makes at the completion of the autopsy.

2. ***Autopsy Evidence Collection Checklist***

An *Autopsy Evidence Collection Checklist* is available at the morgue and as an Attachment to the Law Enforcement Involved Fatal Incident Protocol to help guide CSIs and investigators through autopsy evidence collection procedures. Its use is encouraged, especially for those who are not well experienced in such procedures.

3. **Before the pathologist's arrival**

a. Until the pathologist has inspected the body and given approval, the body at the morgue shall not be disturbed nor its condition altered in any of the following illustrative ways:

- Movement or removal of clothing.
- Movement or removal of any weapon or object.
- Fingerprinting.
- Collection of hair standards.
- Collection of gunshot residue associated with wound sites.
- Clipping or scraping of fingernails.
- Washing or cleaning.
- Removal of medical devices from the body.

b. Without the pathologist's approval, trace evidence may be collected from areas of the body that are not directly involved with trauma and which are easily accessible without moving or turning the body. Exception: do not collect gunshot evidence without the pathologist's approval.

c. Photography of the body, without disturbing it, is encouraged.

4. Informing the forensic pathologist

a. **Investigative information**:

When the law enforcement agency is aware of information that may be relevant to the Coroner's determination of the cause, manner and means of a person's death that has not previously been adequately communicated to a Coroner's investigator, that information must be promptly transmitted to a Coroner's investigator prior to autopsy or during it, or it must be provided directly to the pathologist by a knowledgeable officer at autopsy.

b. **Items for the pathologist's inspection**:
Below is a list of types of items that should be present at the Coroner's Office for inspection by the pathologist at the time of autopsy. These may be brought by an investigating law enforcement agency, by evidence collectors or by Coroner's investigators. In unusual cases, where bringing items to the morgue is not practical, arrangements must be made with the pathologist for other timely inspection.

Extreme care must be taken to prevent the contamination of any evidence that is brought to the morgue for the pathologist's inspection. Items must be absolutely protected from contamination at the autopsy, especially transfers of biological material from the autopsy process to evidence items. Latent fingerprints and trace evidence on displayed items may also be at risk. Proper pre-packaging of items will help avoid problems, as will physical separation of items from the autopsy process. Clean paper is available at the morgue for use in displaying items.

1. **Weapons and objects** which may have come into contact with the body of the decedent, such as:

a. Firearms

b. Cutting and stabbing instruments

c. Blunt force objects, such as rocks, clubs, furniture, footwear

d. Tools

e. Adequate photographs of items and their surfaces which may have contacted the decedent's body but which cannot be displayed to the pathologist at autopsy, such as the portion(s) of a vehicle which struck the decedent, a fence or tree trunk the decedent fell against, etc.

e. Ligatures, bindings and other restraint devices.

2. **Clothing**.

a. Articles of clothing which are known or suspected to have been worn by the

decedent at the time of death and/or at the time of injury. This includes inner and outer clothing, footwear and jewelry. The pathologist's examination of clothing worn by gunshot victims is often relevant to the determination of muzzle-to-body distances and to the body's possible positions when it was struck.

b. If the decedent was hospitalized prior to death, be sure to include decedent's clothing that came with him/her to the hospital.

3. **Medications, poisons and intoxicants.**

Law enforcement and Coroner's investigators must make diligent efforts to locate and collect any medications, poisons and/or intoxicants (and their containers) which could relate to the cause of death and/or to autopsy toxicology testing. These items may be found in the decedent's clothing, vehicle(s), residence, or elsewhere. When medication or poison containers are found, they shall be brought to the autopsy. Exception: This does not apply to medications directly administrated by medical professionals. Neither these medicines nor their containers need be brought to autopsy.

4. **Hospital and other medical evidence**:

Blood and urine samples collected from the decedent by medical personnel during medical treatment prior to blood transfusions and the administration of medications are important in some cases. Law enforcement personnel who are aware that such samples were collected can help assure their later availability by asking medical personnel to retain those samples for the Coroner to pick up.

Medical records and body scans from medical providers can also be very important.

Coroner's personnel will collect these items from medical providers, using a Coroner's subpoena when necessary.

During their investigation of death cases, law enforcement personnel should be alert for information about the decedent's prior medical history and the identities of medical service providers. This information should be provided to a Coroner's investigator for appropriate follow-up.

If an item would normally be displayed to the pathologist, but cannot be brought to the morgue, photographs, sketches, diagrams or a detailed description must be available at the time of autopsy.

K. ATTACHMENT – Initial Telephone Survey - see next page

This document was prepared by Sergeant Chris Forsyth
of the Contra Costa Sheriff/Coroner's Office

ATTACHMENT – The INITIAL TELEPHONE SUMMARY form

INITIAL TELEPHONE SUMMARY **CORONER** case No:_____

NATURAL ACCIDENTAL SUICIDE HOMICIDE FETAL BRIEF

DATE & TIME REPORTED: _____DATE & TIME OF DEATH: _____

PERSON REPORTING: _____DEPT: _____PHONE: _____

INVEST. AGENCY & OFFICER: _____AGENCY CASE # _____

****

NAME OF DECEASED:_____

ADDRESS:_____**PHONE:**_____

SEX: ____RACE:_____DATE OF BIRTH:_____AGE: _____SSN: _____

PLACE OF DEATH: _____LOCATION OF BODY: _____

PLACE OF DEATH ADDRESS: _____

****

NEXT OF KIN: _____ RELATIONSHIP:_____

ADDRESS:_____ PHONE: _____

NOTIFIED: _____ BY WHOM: _____ HOW: _____

****

PRONOUNCED BY: _____DEPT: _____ PHONE: _____

REGULAR PHYSICIAN: _____DATE LAST SEEN:_____

ADDRESS: _____ PHONE: _____

MEDICAL RECORD NUMBER: _____MEDICAL HISTORY:_____

_____

_____

_____

MEDICATIONS:_____

_____

DC TO BE SIGNED BY: _____ CORONER'S HOLD: _____

CAUSE OF DEATH: _____

CONTRIBUTING CAUSES: _____

OPERATIONS/DATES: _____

****

SYNOPSIS:_____

_____

_____F.D.O.C: _____

DEPUTY ASSIGNED: _____ COURTESY PICKUP: _____

Contra Costa Law Enforcement County Protocols

Child Abduction

Revised July 2013

ADDENDUM I-RESOURCES: Law Enforcement

When activated, the Child Abduction Protocol Team should include an individual assigned as the Logistics Section Leader for the Incident. The Logistics Section Leader is responsible for requesting and managing the resources that are needed by the affected law enforcement agency and the Child Abduction Protocol Team.

When activated, the Logistics Section Leader should follow the basic guidelines identified in the Child Abduction Protocol Logistics Section Leader Checklist.

1. **Command Post Resources.** When an agency activates the CAP protocol, it is suggested that a robust command structure be established to support the conduct of the investigation. The site for the command post would be best suited in a furnished office space with dedicated equipment to support investigators and resource personnel. The following resources should be considered in establishing a command post.

RESOURCE	TIME ACTIVATED	INITIALS
Resource: Portable Emergency Operations Center Trailer		
Agencies: CCCSO	**925-646-2441 On Call OES Manager**	
Description: The Contra Costa County Operational Area has a portable Emergency Operations Center (EOC) Trailer. The trailer is equipped with ten portable computers, five high capacity laser printers. televisions, projectors, portable screens, incident command vests, tables, canopies, chairs, lights, generators and basic office supplies. The trailer is designed for a command post to be established in facility that may not have the infrastructure for office style work.		
Costs: There is no cost for this resource.		
Resource: Mobile Command Post		
Agencies: Antioch Police (1); Clayton Police (1); Concord Police (2); Martinez Police (1); Moraga Police (1); Pittsburg Police (1); Richmond Police (2); Walnut Creek Police (1), CCCSO (2); Richmond Fire (1).	**See Agency Contact Listing**	
Description: Mobile Command Posts provide radio and incident command resources to support the Incident Command System. Each agencies command post is configured differently and contains different resources.		
Costs: There is no cost for the use of these command posts.		
Resource: Operations Section Trailer		

Agencies: CCCSO (1) Antioch Police (1); Brentwood Police Department (1); Hercules Police (1); Martinez Police (1); San Pablo Police (1)	**See Agency Contact Listing**	
Description: The Contra Costa County Operational Area purchased a trailer to support the coroner's office in time of disaster. This trailer doubles as a support trailer for the conduct of incident operations activities. The trailer is equipped with desks, chairs, generator, air conditioner, write-on boards and ample wall space for the placement of maps. The trailer features a large work area for operations activities. The trailer is equipped with a UHF Radio. Other trailers provide office space and equipment to support the operations section.		
Costs: There is no cost for the use of these trailers.		
Resource: Tables and Chairs		
Agencies: CCCSO	**925-646-2441 On Call SAR Manager**	
Description: The Sheriff's Emergency Services Support Unit maintains a supply of tables and chairs for critical incident support. Requests for support should indicate the number of tables and chairs that are needed. Materials will be delivered to the location identified by the Incident Commander.		
Costs: There is no cost for the use of this resource.		
Resource: External Portable Generator and Light Units		
Agencies: CCCSO (4); Danville Police Department (2); Antioch Police Department (1)	**See Agency Contact Listing**	
Description: Portable generator and light units provide large amounts of scene lighting to support law enforcement and search operations. The generator provides 4k of power without the lights, but requires all the generator power to support the lights themselves. Light units are powered with a diesel generator and provide 24 hours of continuous power without refueling.		
Costs: There is no cost for the use of this resource.		
Resource: Generators, Light Units and Power Cords		
Agencies: CCCSO (12)	**925-646-2441 On Call SAR Manager**	

Description: Generators provide electrical power for various items of electric equipment. Portable light units provide lighting in both interior and exterior areas. Materials will be delivered to the location upon request by the Incident Commander.		
Costs: There is no cost for the use of this resource.		
Resource: Maps / GIS Printouts		
Agencies: Contra Costa County Office of Emergency Services; Contra Costa Public Works; San Ramon Valley Fire Communications Support Unit	**See Agency Contact Listing**	
Description: The agencies are able to deliver large-scale maps and photographs to the Incident Commander. Common map programs include Thomas Brothers, Aerial Orthophoto (Satellite), USGS 7.5 minute quadrangle, assessor, and base map. Maps can be produced up to 36x48 size. Smaller maps in color can be produced as well.		
Costs: There is no cost for the use of this resource.		
Resource: Pictometry		
Agencies: Contra Costa County Office of Emergency Services; Contra Costa Public Works; San Ramon Valley Fire Communications Unit	**See Agency Contact Listing**	
Description: The agencies are able to produce high quality photos of structures and neighborhoods. The pictometry system allows investigators to obtain three hundred sixty degree photos of structure and areas. For interactive use, the investigator must be present at a terminal (SRVFD 131 has a mobile system).		
Costs: There is no cost for the use of this resource.		
Resource: ICS Staging / Personnel Management Resources		
Agencies: Contra Costa County Fire Department; Sheriff's Emergency Services Division	**See Agency Contact Listing**	
Description: Several agencies within the Contra Costa County Operational Area have been charged with the mission of maintaining trained personnel and the equipment to conduct staging operations at an incident. These resources are available using personnel who have received training in managing personnel in a large-scale event / incident. Through the use of this resource, the Incident Commander can maintain accountability of the personnel associated with the operation.		

Costs: There is no cost for the use of the Portable EOC Trailer.		
Resource: Tents / Heaters / Coolers		
Agencies: Sheriff's Emergency Services Division, Contra Costa County Fire Department; Moraga-Orinda Fire; San Ramon Valley Fire	**See Agency Contact Listing**	
Description: Several agencies within the Contra Costa County Operational Area have been charged with the mission of maintaining trained personnel and the equipment to conduct sheltering operations. Through the use of this resource, the Incident Commander can increase the safety / efficiency of the Incident Command Post.		
Costs: There is no cost for the use of this equipment.		
Resource: Portable Toilets		
Agencies: Sheriff's Emergency Services Division (2), CALTRANS (4), Contra Costa County Public Works (1)	**See Agency Contact Listing**	
Description: Several agencies within the Contra Costa County Operational Area have portable toilet units that can be deployed to support the Incident Commander. .		
Costs: There is no cost for the use of this equipment.		
Resource: Food Service Support		
Agencies: Salvation Army (1); Sheriff's Emergency Services Division (1)	**See Agency Contact Listing**	
Description: Food Service Support is available for both short and long term operations. The Food Service Units provide various items of containment for both breakfast, lunch and dinner meals. The Sheriff's Food Service Unit can feed up to 250 personnel per meal without any additional support. Meals can be prepared for consumption at the command post or in field locations. Units are designed to operate in the field without additional support (tents, tables, chairs, etc.)		
Costs: There may be costs for the basic food items to support the service (Incident length dependant). .		
Resource: Potable Water Support		
Agencies: Sheriff's Emergency Services Division (1); Sheriff's Custody Services (1)	**925-646-2441 On Call SAR Manager**	
Description: Potable water support can be obtained in the form of four hundred gallon water trailers. The trailers are stored and maintained in a filled status, allowing for the delivery of water in times of disaster. The trailers require		

industrial vehicles to move. Cups and containers can also be requested to support the deployment. One trailer will always accompany the Sheriff's Food Service Unit when it is deployed. Trailers will be deployed to locations identified by the Incident Commander .		
Costs: There are no costs for the use of this resource. .		
Resource: Shelter and Lodging Support (Field)		
Agencies: Sheriff's Emergency Services Support Unit (100); American Red Cross;	**See Agency Contact Listing**	
Description: The County maintains a series of caches of sleeping bags, cots, blankets and personal care items. The intent of these items is to provide services to responders in the field. Shelters are provided in the same request.		
Costs: There are no costs for the use of this resource. .		
Resource: Shelter and Lodging Support (Victim / Family)		
Agencies:	**See Agency Contact Listing**	
Description:		
Costs: There are no costs for the use of this resource. .		
Resource: Interview / Interrogation Rooms (Audio/Video Equipped)		
Agencies: CCCSO (2); Concord (3); San Pablo Police (2)	**See Agency Contact Listing**	
Description: Rooms for interview of victims, suspects and witnesses. Room provides for both audio and video recording of statements.		
Costs: There are no costs for the use of this resource.		

2. **Communications Resources**. When an agency activates the CAP protocol, it is suggested that the Contra Costa County Fire Department Communications Section Chief be contacted to coordinate communications resources and devices. The communications technician will develop a communications support plan and manage the resources within this section. Fire Service Communications support can be obtained by contacting the CONFIRE Dispatch Center.

RESOURCE	TIME ACTIVATED	INITIALS
Resource: San Ramon Communications Support Unit (COMM 131)		
Agencies: San Ramon Valley Fire Department	**SRVFD Dispatch**	
Description: The San Ramon Valley Fire Department Communications Support Unit is the primary communications support unit within Contra Costa County. The vehicle features three complete dispatch stations, satellite television, satellite internet, satellite telephone, an interoperability box with mobile radios for all public service agencies, a plotter, radio cache, radio repeaters, video downlink, video camera with extension pole and cellular services. The vehicle also contains incident command vests and signs to establish a field command post. The vehicle is staffed by full-time and volunteer personnel. The vehicle provides a meeting room, kitchenette and a restroom.		
Costs: There is no cost for the use of the Communications Support Unit.		
Resource: AMBER Alert		
Agencies: California Highway Patrol	**925-646-2441 CCCSO Dispatch**	
Description: The California Highway Patrol is the organizing agency for the AMBER Alert System. The system requires that local agencies contact the Sheriff's Dispatch center requesting that the system be activated. An activation of the system requires the following items of information: 1. A confirmed abduction has occurred. 2. The victim is a person under the age of 18 years or who has a mental or physical disability. 3. There is reason to believe the victim is in imminent danger of serious bodily injury or death. 4. 4. There is sufficient information available that, if disseminated to the public, could assist in the recovery of the victim.		
Once activated, there is an expectation that an enormous amount of telephone calls will be routed to the police agency. When the AMBER Alert System is activated, it is suggested that the Call Center be activated as well.		
Costs: There is no cost for the use of the AMBER Alert System.		
Resource: Emergency Alert System (TV - Radio)		

Agencies: Contra Costa County Community Warning System	**925-646-2441 On Call CWS Manager**	
Description: The Emergency Alert System is an efficient method to quickly distribute information to members of the public in large areas. Through the use of the system, broadcasting partners within the affected area are asked to broadcast information regarding the missing person. Broadcasts require a specific message and a specific area where the message is to be transmitted. Activation of the Emergency Broadcast System requires the same guidelines as an AMBER Alert.		
Once activated, there is an expectation that a large number of telephone calls will be routed to the police agency. When the National Broadcasting System is activated, it is suggested that the Call Center be activated as well.		
Costs: There is no cost for the use of the National Broadcasting System.		
Resource: Phone Services (Wired - Satellite)		
Agencies: Office of Emergency Services, State of California (CALOES) (3)	**925-646-2441 On Call OES Manager**	
Description: The California Office of Emergency Services has a series of portable communications trailers. Each of these trailers provide both telephone and digital internet access. The trailers provide up to 150 telephone lines and 30 digital data lines for use by investigators. When requested, the trailer is delivered with a technician to operate the trailer and manage the service.		
Costs: No cost for the use of the trailer or the telephone lines that are supported by the request.		
Resource: Phone Services (Wireless - Cellular)		
Agencies: Contra Costa County Fire Department (36)	**CONFIRE Dispatch**	
Description: The Contra Costa County Fire Department maintains a cache of cellular telephones for use in emergencies. These telephones can be activated and distributed upon request to the communications section of the Fire Department. The phones provide both telephone and direct-connect features.		
Costs: No cost for the use of the telephones that are supported by the request.		

Resource: Phone Services (Wireless - Satellite)		
Agencies: Contra Costa County Fire Department (4); Contra Costa Sheriff (3), CHP (3), San Pablo Police (1); Lafayette Police (1)	**See Agency Contact Listing**	
Description: The Contra Costa County Fire and Sheriff's Departments maintain caches of satellite telephones for use in emergencies. These telephones are currently activated and can be distributed upon request to the communications section of the Fire Department. Other agencies within the county maintain mobile satellite telephones for emergency use.		
Costs: No cost for the use of the telephones that are supported by the request.		
Resource: Internet Services (Wired - Microwave)		
Agencies: Office of Emergency Services, State of California (CALOES) (3)	**925-646-2441 On Call OES Manager**	
Description: The California Office of Emergency Services has a series of portable communications trailers. Each of these trailers provide both telephone and digital internet access. The trailers provide up to 150 telephone lines and 30 digital data lines for use by investigators.		
Costs: No cost for the use of the trailer or the telephone lines that are supported by the request.		
Resource: Portable Message Signs		
Agencies: Antioch Police (2); Oakley Police (1); CCCSO (1); Danville PD (1); San Ramon PD (1); CALTRANS (4); San Pablo PD (1)	**See Agency Contact Listing**	
Description: Portable message signs allow for the display of descriptive information and details about the missing persons to be displayed within a specific geographical area. The message signs are programmable and are typically able to transmit three lines of text per display. Message signs must be programmed prior to deployment and may require specialized passwords. Request the signs be programmed prior to pick-up. Sample message: Child Abduction / Sally Smith 9yrs. Red Shirt, Blue Pants / Information Call 911.		
Costs: No cost for the use of these signs. Signs commonly use solar power panels to recharge.		
Resource: Portable Radios / Frequencies / Repeaters / Interoperability Boxes		
Agencies: Contra Costa County Fire (300); Contra Costa County Sheriff (100)	**See Agency Contact Listing**	

Description: The Contra Costa County Homeland Security Approving Authority has purchased a series of radio caches, repeaters, and interoperability boxes for use during critical incidents within Contra Costa County. The radio caches are distributed throughout the county and can be dispatched to various locations quickly. Through the use of interoperability boxes, communications of all the law enforcement agencies within the county can be "patched" to create a common frequency.		
Costs: There are no costs for the use of the communications cache.		
Resource: Helicopter Video Downlinks (Contra Costa SO and East Bay Parks Police)		
Agencies: Contra Costa County Fire (1); Contra Costa County Sheriff (6), Brentwood Police (1), Antioch Police (1), Pittsburg Police (1), Martinez Police (1), Walnut Creek Police (1), Richmond Police Department (1)	**See Agency Contact Listing**	
Description: The Helicopters of the Contra Costa County Sheriff's Office and the East Bay Regional Parks Police Department are equipped with video downlink capabilities. This capability allows for personnel in command posts and using hand-held devices to view images from the video cameras of the various helicopters. This provides the incident commander with the ability to view remote sites from afar and coordinate command and control operations. Viewers can be obtained from any of the listed agencies.		
Costs: There are no costs for the use of these resources.		
Resource: EDIS System (California Office of Emergency Services)		
Agencies: California Office of Emergency Services	**925-646-2441 On Call CWS Manager**	
Description: California OES maintains an electronic notification program entitled EDIS (Electronic Digital Information Service). The service allows for subscribers to obtain email and pager announcements of emergencies and disasters within the State of California. The system provides information to many citizens, governmental agencies, and news services within California. Messages may be limited in their scope to areas within only Northern California. The system is used to transmit messages from the AMBER ALERT System as well.		
Costs: There are no costs for the use of this resource.		
Resource: Amateur Radio Communications Support (RACES)		

Agencies: Contra Costa County Office of Emergency Services	**925-646-2441 On Call OES Manager**	
Description: Within Contra Costa County, the County Office of Emergency Services is charged with maintaining a group of trained and ready radio operators (RACES). These operators have been assigned to various emergency operations centers throughout the county but can be assigned to assist any communications operation. RACES operators can maintain both HAM radio and other radio networks. Many RACES members have been trained in radio cache and staging operations. .		
Costs: There are no costs for the use of this resource.		
Resource: Critical Reach / TRAK		
Agencies: Most Contra Costa County Law Enforcement Agencies; Contra Costa County Sheriff (1 mobile system)	**See Agency Contact Listing**	
Description: The Critical Reach notification program was founded in 1995 using the program name TRAK. Today, the network connects more than 1700 law enforcement agencies in 32 states. Through the use of the system, users can create, modify and distribute flyers to law enforcement agencies and media outlets throughout the area. The service provides a flyer creation program that allows for the design and printing of flyers. The system also allows for the receipt of drivers license photos from California DMV.		
Costs: There is a minimal cost for the transmission of flyers to allied agencies.		
Resource: Automated Regional Information Exchange System (ARIES)		
Agencies: All Contra Costa County Law Enforcement Agencies.	**See Agency Contact Listing**	
Description: ARIES allows law enforcement personnel to author BOLO's and alerts and post them on the regional information system. The system can be accessed on-line by Alameda County, Solano County, San Joaquin County, San Mateo County, and Santa Clara County Law Enforcement personnel. Alerts can be authored and posted within minutes of a child abduction.		
Resource: FAX Support		
Agencies: Most Contra Costa County Law Enforcement Agencies; Contra Costa County Sheriff (1 mobile system); San Ramon Valley Fire (1 mobile system); Contra Costa OES (1 high speed); OES SANDS System	**See Agency Contact Listing**	

Description: The OES SANDS system allows rapid notification of local law enforcement agencies with FAX data. The system allows for simultaneous distribution of FAX to up to 70 recipients. Contra Costa OES has a high speed FAX that is preprogrammed with the FAX numbers of all police, fire, and emergency operations centers within the County.		
Costs: There are no costs for the use of these resources.		
Resource: Mobile Data Computers		
Agencies: Most Contra Costa County Law Enforcement Agencies; Contra Costa County Sheriff (4 portable system);	**See Agency Contact Listing**	
Description: Mobile Data Computers allow for the transmission of law enforcement information within law enforcement agencies. Many of these systems provide access to law enforcement databases such as ARIES, JAWS and the jail booking systems.		
Costs: There are no costs for the use of these resources.		
Resource: TENS / SAND Notification Systems		
Agencies: Contra Costa County Community Warning System (CWS)	**925-646-2441 On Call CWS Manager**	
Description: The Telephone Emergency Notification System (TENS) allows for the distribution of telephone messages to targeted areas quickly and efficiently. The system allows for the delivery of a pre-programmed message to identified areas using both local and national phone lines. The system allows for up to one thousand telephone lines to be used to make notifications to the public. At the conclusion of the broadcast, reports can be generated that provide data as to locations called and messages delivered. The program can be activated using the internet and a series of scripted notification messages are available. The system is programmed to contact all businesses and residences within Contra Costa County.		
Costs: There are minimal costs for the use of these resources.		
Resource: REDDINET Notification Systems		
Agencies: Contra Costa County Sheriff's Office; Contra Costa County Fire Agencies; Contra Costa County Health Service Agencies; Contra Costa County Ambulance Providers and the same agencies in Alameda and Solano Counties.	**See Agency Contact Listing**	

Description: The REDDINET system allows for the rapid exchange of information between local law enforcement agencies and medical service providers. Through the use of email messages, announcements and requests for information are quickly transmitted to all of the health service providers within the County. By using the system, queries about missing persons can be delivered to medical service providers. The system also has contact with health service providers within Alameda and Solano Counties as well. Access to the system is gained through the dispatch supervisor at the Sheriff's Dispatch Center.		
Costs: There are no costs for the use of this system.		
Resource: Call Center		
Agencies: Contra Costa County Sheriff's Office of Emergency Services [redacted]	**925-646-2441 On Call SAR Manager**	
Description: The Contra Costa County Call Center provides 24 operator terminals and trained volunteers to staff the center. During a critical incident law enforcement should provide the public with an agency telephone number that allows for call forwarding. Once the call center is activated, the original phone is placed in the call forward mode - forwarding calls to the call center phone line.		
Incoming calls to the call center can be screened with a computer-aided answering system. The system allows for choices where information can be provided to repetitive calls (for example, "Press1 for suspect description"). The use of computer assisted system allows for the elimination of repetitive telephone calls to the call center. Calls to the center are screened using the DOJ call form, all calls are screened by a supervisor, with all calls screened by an assigned investigator. Clue logs and investigator updates are provided to the requesting agency. The Call Center can be staffed by paid members of the County Health Services Department and the volunteers of the Office of the Sheriff.		
Costs: Incoming calls are charged at .25 per call by the telephone company, no cost from the county for personnel or equipment		

3. **Incident Support Resources**. When an agency activates the CAP protocol, the following resources may be beneficial in addressing the initial scene and the initial stages of the search / investigation.

RESOURCE	TIME ACTIVATED	INITIALS
Resource: Mutual Aid Law Enforcement		
Agencies: All Contra Costa County Law Enforcement Agencies; County Mutual Aid Coordinator	**See Agency Contact Listing**	
Description: Additional officers can be requested to support short term search and containment assignments. To request non-emergency mutual aid, the County Mutual Aid Coordinator should be contacted through Sheriff's Dispatch.		
Costs: There is no cost for the use of these personnel.		
Resource: Contra Costa County Sheriff's Search and Rescue		
Agencies: Sheriff's Emergency Services Support Unit	**925-646-2441 On Call SAR Manager**	
Description: The Search and Rescue (SAR) Program provides law enforcement agencies with 200 personnel who have been trained in conducting search operations. All SAR members have been trained in evidence recognition and handling, first aid, and search operations. The SAR program is managed by state-certified members and supervised by full-time Sheriff's personnel. The SAR Program has protocols regarding child abduction investigations and the Incident Command System. The SAR Program will coordinate and conduct the search activity under the operational control of the local law enforcement agency. The SAR Program is capable of conducting continuous operations over multiple day periods.		
Costs: There is no cost for the use of these personnel.		
Resource: California OES Search and Rescue Mutual Aid		
Agencies: Office of Emergency Services. State of California	**925-646-2441 On Call SAR Manager**	
Description: Search and Rescue (SAR) resources from throughout California can be requested to assist through California OES. Additional searchers, incident support teams and support personnel can be requested for multiple operational periods. Dozens of additional searchers can be summoned to assist in the conduct of the search. These resources can be requested by the Sheriff's SAR Program.		
Costs: There is no cost for the use of these personnel.		
Resource: Sheriff's Dive Team		
Agencies: CCCSO	**925-646-2441**	

	On Call SAR Manager	
Description: Members of the Sheriff's Dive Team conduct evidence search and recovery operations in the waterways of Contra Costa County. All divers are at a minimum rescue certified personnel and have conducted extensive dive operations within the waterways of the county. Dive team personnel have equipment and boats to conduct sustained dive operations in support of the Incident Commander		
Costs: There is no cost for the use of these personnel.		
Resource: Police Canine (Air Scent)		
Agencies: BART (7); Pinole Police (1); Pleasant Hill Police (2); Pittsburg Police (1); CCCSO (3); San Pablo PD (4); El Cerrito PD (1); Richmond PD (6)	**See Agency Contact Listing**	
Description: Police Air Scent Canines can be used to conduct tracking operations using a known scent. Commonly, air scent canines are most effective for the first three hours following the placement of the scent at the scene. Air scent canines can also be used to follow the last scent left in the area by the victim/offender. Canine tracks require additional police officers to support the canine handler. Requestors should be specific in the type of canine that they are requesting before individual agencies are contacted.		
Costs: There is no cost for the use of this resource.		
Resource: Police Canine (Trailing)		
Agencies: CCCSO (2); San Pablo PD (4); El Cerrito PD (1); Richmond PD (6); Pleasant Hill (2) additional through mutual aid.	**See Agency Contact Listing**	
Description: Trailing canines are used to conduct trailing operations during the first 96 hours that scent has been laid by the offender / victim. A known scent sample for the subject being sought needs to be identified and collected by the canine handler. Common scent articles can be obtained from blood samples, items of clothing, areas where the subject or victim are known to have touched. Trailing canines can be used when the subject being sought has entered a vehicle (vehicle track). Trailing canines can be used to define the search area and to later identify / confirm suspects		
Costs: There is no cost for the use of this resource.		
Resource: Police Canine (Cadaver)		
Agencies: CCCSO (3) additional through mutual aid.	**925-646-2441 On Call SAR Manager**	

Description: Cadaver canines help to identify areas where human fluids and remains may have rested or may be secreted. Cadaver canines are useful in identifying / searching possible disposal locations. Cadaver canines work in conjunction with members of the crime scene processing unit.		
Costs: There is no cost for the use of this resource.		
Resource: Fixed Wing Aircraft		
Agencies: CHP (1); CCCSO (7).	**See Agency Contact Listing**	
Description: Fixed wing aircraft provide an observation platform for investigators and law enforcement professionals. The aircraft can be used to transport investigators, transport victims, transport evidence and to conduct surveillance. Fixed wing aircraft provide four to six hours of operational flight time before refueling. Sheriff's ESSU aircraft come in propeller, turbo prop and jet engine models with passenger capacities to 26 persons.		
Costs: Fuel costs are usually requested of the police agency.		
Resource: Rotary Wing Aircraft		
Agencies: CHP (1); CCCSO (2); EBRPD (2)	**See Agency Contact Listing**	
Description: Helicopters provide the Incident Commander with a reliable and convenient observation platform. CCCSO and EBRPD aircraft are equipped with video downlink capabilities allowing the incident commander to view images from the helicopter's video camera. All agency helicopters are equipped for medical evacuation. CHP helicopters are equipped to do extraction operations with a lifting cable.		
Costs: There is no cost for the use of this resource.		
Resource: Boats		
Agencies: CCCSO (8); EBRPD (2); Richmond (2); CONFIRE (1); Moraga-Orinda Fire (1); East County Fire (1)	**See Agency Contact Listing**	
Description: Boats provide a platform for the support of search operations on the water. Requestors should identify the requirements of vessels prior to requesting to ensure the vessel is able to accomplish the necessary task.		
Costs: There is no cost for the use of this resource.		
Resource: Side-Scan Sonar		

Agencies: Mutual Aid	**925-646-2441 On Call SAR Manager**	
Description: Side-scan sonar allows for the search of underwater areas using sonar imaging to locate objects of interest. Side-scan sonar requires a certified operator and a trained boar operator. Side-scan is a very efficient technology to locate items below the surface of the water.		
Costs: There is no cost for the use of this resource.		
Resource: Submersible Remote Operated Vehicle (ROV)		
Agencies: Mutual Aid	**925-646-2441 On Call SAR Manager**	
Description: ROV's allow for the transmission of video images from extended depths. ROV's also allow for the recovery of evidence from extreme depths with the use of a grappling arm. ROV's require a specialized vessel for deployment which will be provided with the initial request.		
Costs: There is no cost for the use of this resource.		
Resource: All Terrain Vehicles (ATV)		
Agencies: CCCSO (8); Clayton (1); Concord (8); EBRPD (4);	**See Agency Contact Listing**	
Description: Efficient equipment for conducting search of off-road and remote areas. ATV can be modified for transport, resupply, and recovery operations.		
Costs: There is no cost for the use of this resource.		
Resource: Off-Road Motorcycles		
Agencies: CCCSO (3); Brentwood (2); Clayton (2); Concord (1); EBRPD (8); Martinez (4); Moraga (2); Pittsburg (2); Richmond (6); Walnut Creek (2)	**See Agency Contact Listing**	
Description: Efficient equipment for conducting search of off-road and remote areas.		
Costs: There is no cost for the use of this resource.		
Resource: Equestrians		
Agencies: CCCSO; EBRPD	**See Agency Contact Listing**	
Description: Efficient equipment for conducting search of off-road and remote areas.		
Costs: There is no cost for the use of this resource.		

Resource: Metal Detector Team		
Agencies: CCCSO (12)	**925-646-2441 On Call SAR Manager**	
Description: Trained and equipped members of the search and rescue program for locating evidence at crime scenes.		
Costs: There is no cost for the use of this resource.		
Resource: Chaplains		
Agencies: Antioch (1), Brentwood (4); CCCSO (36); Pittsburg (1); San Ramon (2)	**See Agency Contact Listing**	
Description: Members of the Chaplains program can provide a variety of family support services at the scene of an incident / event.		
Costs: There is no cost for the use of this resource.		
Resource: Reserve Officers		
Agencies: CCCSO (70); Antioch (5); Brentwood (1); Clayton (1); Concord (13); EBRPD (5); El Cerrito (5); Hercules (6); Kensington (3); Martinez (9); Moraga (6); Pittsburg (2); Pleasant Hill (8); Richmond (5); San Pablo (1); Walnut Creek (9)	**See Agency Contact Listing**	
Description: Auxiliary police officers for critical incidents.		
Costs: There is no cost for the use of this resource.		
Resource: Volunteers		
Agencies: CCCSO (850); Concord (20);	**See Agency Contact Listing**	
Description: Volunteers who can assist in various aspects of the incident.		
Costs: There is no cost for the use of this resource.		
Resource: Bilingual Operations		
Agencies: See attached listing	**See Agency Contact Listing**	
Description: Members who can assist with translation services.		
Costs: There is no cost for the use of this resource.		
Resource: Bilingual Operations (ATT&T Language Line)		

Agencies: AT&T		
Description: Through the use of the AT&T phone system, contact can be made with an operator who will assist in conducting an interview in the native language.		
Costs: There is a cost for the use of this program.		
Resource: Family Counseling / Support		
Agencies: New Directions Counseling Center		
Description: Volunteers will handle calls coming into the family's home in a manner that has been agreed to by the family. To assist the family in coordinating the response and request from other family members. Information will be forwarded to investigators that is gathered during the counseling services. members will also provide direct services to the family members of the affected family to include liaison services with law enforcement.		
Costs: There is no cost for the use of this resource		
Resource: Family Investigations Support		
Agencies: Contra Costa County Children and Family Services	**925-646-2790**	
Description: a. Will provide access to information from child welfare database (24hr/7days). b. Placement support for children with no parents/family in local area via receiving center and foster care. c. Children's Interview Center - Interview space, SART exam access. d. d. Access to data from CalWorks and Medi-Cal database M-F 8-5.		
Costs: There is no cost for the use of this resource		

4. **Incident Site Resources**. When an agency activates the CAP protocol, the following items of equipment may be requested to support the conduct of the investigation. The following resources should be considered in supporting the investigation.

RESOURCE	TIME ACTIVATED	INITIALS
Resource: Portable Barricades and Cones		
Agencies: Agency Public Works Department, County Public Works Department, Sheriff's Emergency Services Support Unit; CALTRANS	**See Agency Contact Listing**	
Description: Traffic control devices and perimeter control devices.		
Costs: There is no cost for the use of these items.		

Resource: Portable Public Address System		
Agencies: CCCSO; San Ramon Valley Fire Department	**See Agency Contact Listing**	
Description: Allows for announcement of messages to members of the public and incident staff.		
Costs: There is no cost for the use of these items.		
Resource: Night Vision		
Agencies: CCCSO (12), Antioch (3); BART (2); Brentwood (1); CHP (1); Clayton (1) Concord (2); CCC College (1); EBRPPD (6); El Cerrito (1); Hercules (2); Kensington (1); Martinez (1); Moraga (1); Pinole (4); Pittsburg (1); Pleasant Hill (3); Richmond (2); Walnut Creek (1); Danville (1); Lafayette (1); Orinda (1); San Ramon (2)	**See Agency Contact Listing**	
Description: Allows for vision enhancement during hours of darkness.		
Costs: There is no cost for the use of these items.		
Resource: FLIR (Handheld)		
Agencies: CCCSO (5), CHP (1); Pittsburg (1); Lafayette (1)	**See Agency Contact Listing**	
Description: Allows for vision enhancement.		
Costs: There is no cost for the use of these items.		
Resource: Field Refueling Services		
Agencies: CCCSO (Diesel Only), EBRPPD (Multi-fuel)	**See Agency Contact Listing**	
Description: Allows for fuel delivery to field sites.		
Costs: There may be a charge for this service.		
Resource: Flashlights (Cache)		
Agencies: CCCSO (30), All agencies	**925-646-2441 On Call SAR Manager**	
Description: Allows for vision enhancement during hours of darkness.		
Costs: There is no cost for the use of these items.		
Resource: GPS Devices (Cache)		
Agencies: CCCSO (16)	**925-646-2441 On Call SAR**	

	Manager	
Description: Allows for recording of locations and trails of search personnel. .		
Costs: There is no cost for the use of these items.		

Contra Costa Law Enforcement County Protocols

County Intersection Observation Plan, Code 666 and Be On The Lookout (BOLO) Broadcast

Revised July 2013

County Intersection Observation Plan, Code 666, and BOLO Broadcast

Objective

To provide a coordinated effort in the county toward the apprehension of suspects fleeing by vehicle from felony crimes.

Policy

A. Means

Designated road and intersection observation points throughout the county will be manned by participating agencies to cover probable escape routes.

The exact location of these observation points and the responsible agencies are indicated on the Code 666 map and listings attached to this policy.

B. Procedures

1. Requisite

The necessary elements for initiating the implementation of this plan are:

a. A felony crime.
b. Reason to believe the suspect fled in a vehicle and there is an identifiable vehicle description.
c. Good judgment by the initiating agency's watch commander.

2. Implementation

In order to implement the 666 plan or to provide BOLO type information, the same procedure will be used.

The initiating agency, with the approval of their watch commander, will broadcast the required information on the CLERS radio. The encoder green light should always be on to allow receipt of such messages. The information would then be broadcast. In cases where acknowledgement is necessary, the initiating agency will include "Please acknowledge" at the end of their broadcast.

When the crime is of a serious nature, the watch commander of the initiating agency may request implementation of a Code 666 pending further information. On such an occasion, participating agencies would immediately man their check points. Should sufficient information not be forthcoming to satisfy the needs of a Code 666, the plan can then be canceled by the initiating agency.

This immediate response technique will enhance the probability of apprehension by having the involved units in position at the time pertinent information is obtained rather than waiting to respond until the information is available. The decision to employ this option will be based upon the seriousness of the crime involved and the judgment of the watch commander of the initiating agency.

The attached "Information Format" should be used to insure that all available information is obtained.

Information on vehicles should include whether everybody in the suspect vehicle is a suspect. This could help avoid injury to a hostage.

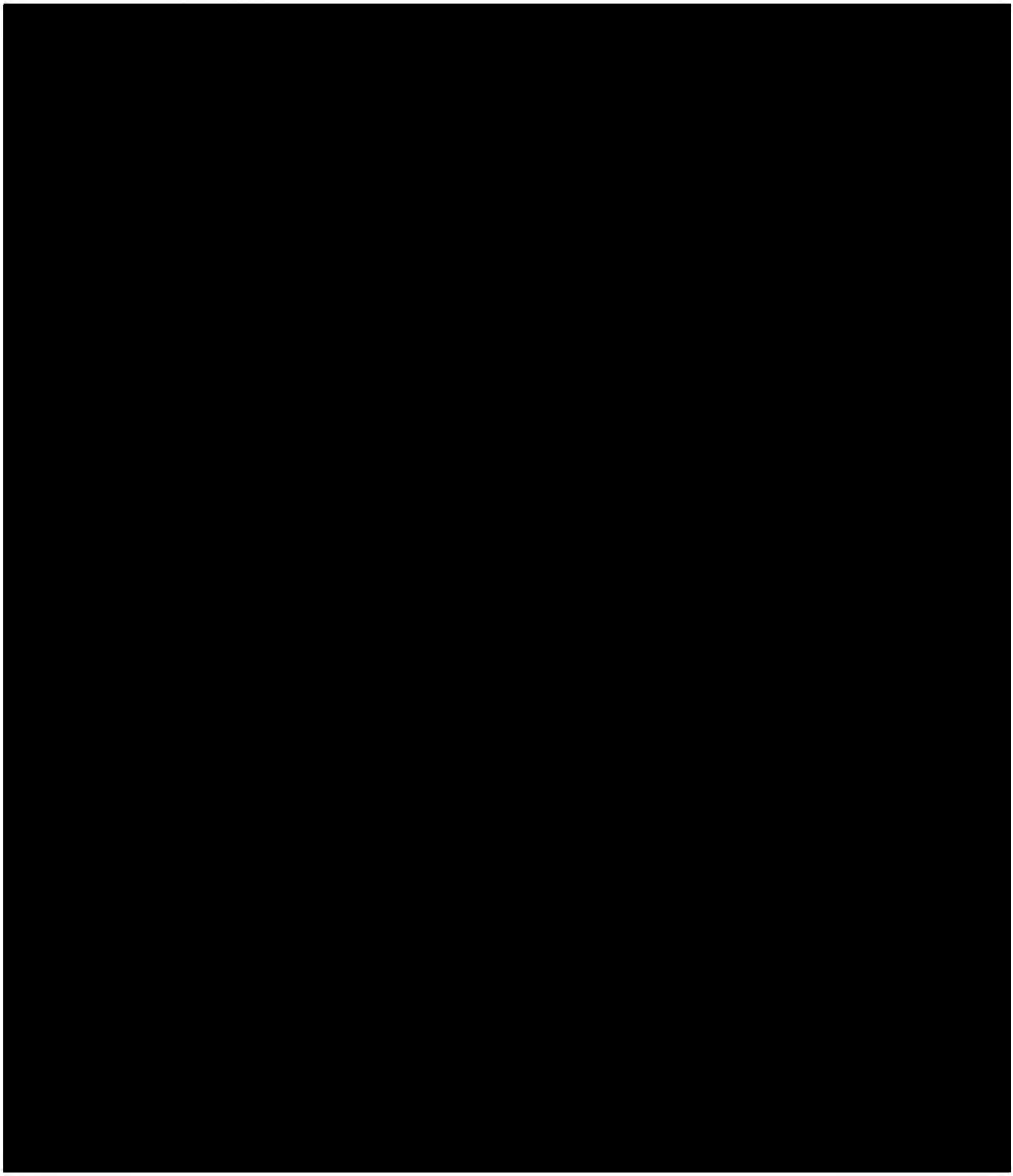
3. **Coverage responsibility**
   Units assigned should remain at their designated locations until the suspect is apprehended, activation of the plan is canceled, or the 20-minute automatic cancellation time expires.

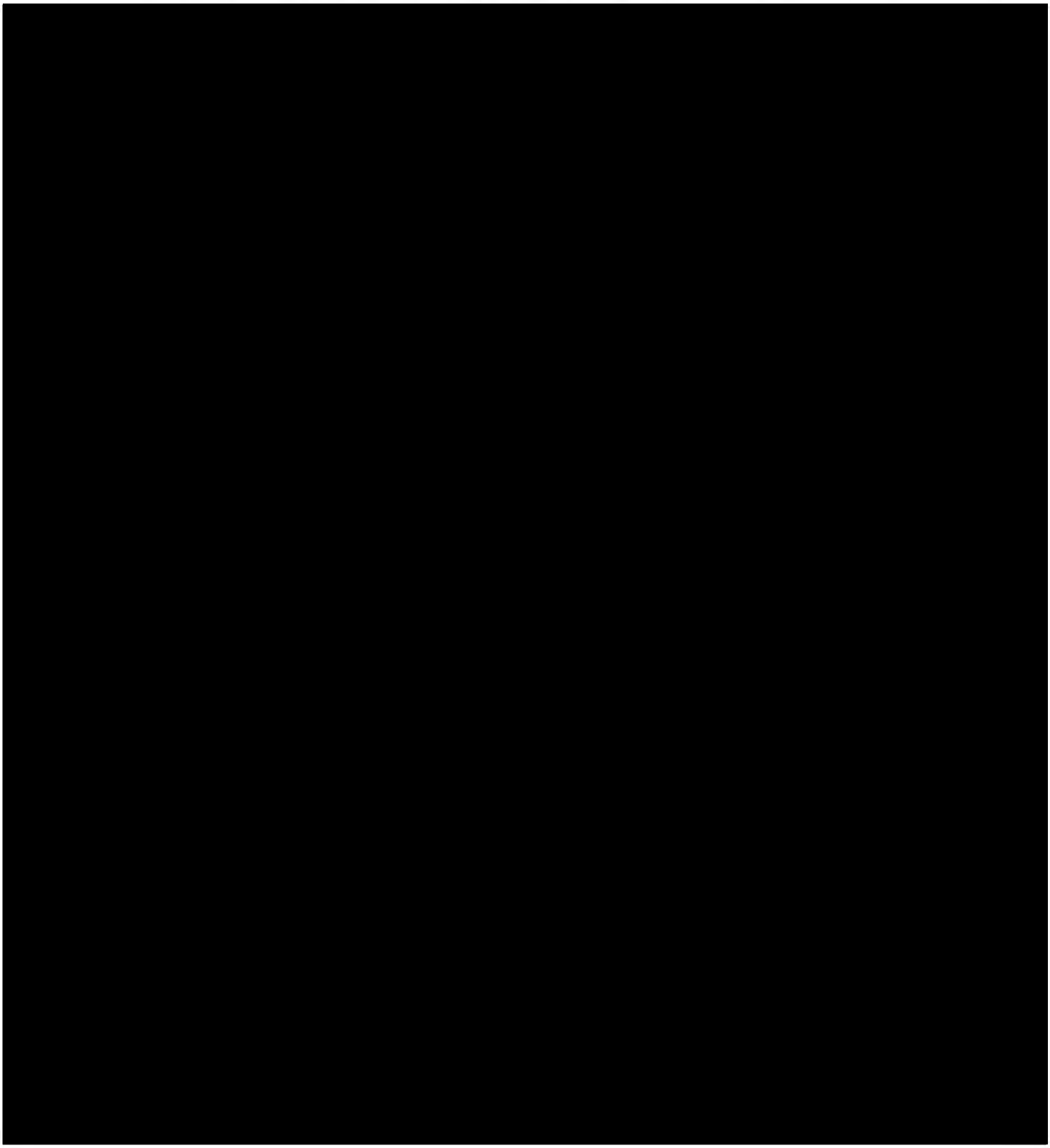
4. **Apprehension Of Suspect**
   When a suspect has been apprehended as a result of this plan, the agency which initiated the plan shall immediately respond to the scene of the apprehension. Under normal circumstances, the initiating agency shall take custody of the suspect and all property and evidence. This provision will hold true even though the apprehending agency may hold a want or warrants for the suspect.

   In an instance where the apprehending agency holds a want or warrant for a more serious crime involving the same suspect or the apprehending agency suffered an injury to an officer, such as a gunshot wound, etc., custody of the suspect should be negotiated.

5. **Cancellation**
   Once a Code 666 has been implemented, it will be the responsibility of the initiating agency to determine when it should be canceled. This decision will be based upon the judgment of the watch commander of that agency as to the diminishing probability of apprehension.

   The Code 666 will remain in effect as long as the watch commander of the initiating agency believes that the probability of apprehension has not diminished beyond the point of credibility. If the initiating agency does not request an extension of time, however, units at designated locations may resume their normal duties after twenty (20) minutes from the Code 666 call.





Contra Costa Law Enforcement County Protocols

Inter-Agency Execution of Search and Felony Arrest Warrants

Revised July 2013

I. Policy Statement:

A. This guideline represents the understanding and agreement among the member agencies of how warrants should be served.
B. This guideline shall be in effect when members of any department conduct a planned operation within the jurisdiction of another agency.
C. This guideline is not a statute, ordinance or regulation. This guideline is not intended to increase the civil or criminal liability of the member agencies or their employees and shall not be construed as creating any mandatory obligations to, or on behalf of, third parties.

II. Definition of Terms:

A. **Venue Agency** – The agency or agencies within whose geographical jurisdiction the warrant is to be served.
B. **Service Agency** – The law enforcement agency that has accepted the responsibility for service of the arrest or search warrant.
C. **Hazardous Materials** – Any substance or material in any form or quantity that poses a physical or health hazard to life, property or the environment.
D. **Briefing** – A structured meeting involving the communication of information, instructions, and guidelines.

III. General:

A. The service of search and felony arrest warrants frequently involves multiple jurisdictions and/or is accomplished in geographical areas where the agency serving the warrant does not have the primary responsibility for the delivery of general police services.
B. The establishment of a formalized guideline among the law enforcement agencies in Contra Costa County for the service of warrants, will tend to maximize the probability that they will be executed in a safe, orderly and effective manner.
C. The service of felony arrest and/or search warrants will normally be the responsibility of the agency, which has prepared the affidavit or is investigating the crime. An agency may, however, defer the service of a warrant to another agency as they agree.
D. This guideline does not require that the venue agency participate in all warrants served in its jurisdiction as individual priorities, needs and circumstances may dictate otherwise. However, each agency will make every effort to provide reasonable levels of assistance and should not obstruct, impair or delay the execution of a warrant lawfully held by another agency.
E. This guideline is not intended to address the service of non-felony arrest warrants which will be handled on a case-by-case basis as the involved agencies agree.

IV. Warrant Service Procedure:

The service of a warrant may be a relatively routine task or, in varying degrees, one which requires a great deal of planning and coordination to reduce the associated risks.

A. Command Structure:

1. The service agency is responsible for the execution of the warrant.
2. The service of a warrant shall include the designation of one of the involved officers as the "officer in charge." Such an officer may or may not be a supervisor, but he or she shall be responsible for the proper execution of a warrant.

B. Notification:

1. Prior to the service of a warrant, the service agency shall notify, in a timely manner, the venue agency of the proposed execution. Where appropriate, notification will normally be made to the watch commander and to units assigned to similar functions. Such notification shall include, but not necessarily be limited to:
    a. The location where the warrant(s) will be served and the name of the person involved.
    b. The general circumstances surrounding the obtaining of the warrant(s) and the charge(s) upon which the warrant is based.
    c. Any potentially dangerous circumstances which are known to exist.
    d. What assistance, if any, is required of the venue agency.
    e. The name of the officer in charge.
    f. The proposed time of the execution.
    g. The location and time of the warrant briefing.

2. Once received, the venue agency is responsible for:
    a. Maintaining the confidentiality of the information.
    b. Any intra-department communications, which are appropriate given the nature of the warrant service.

C. Risk Analysis:

The officer in charge shall evaluate the risk(s) to the public and/or to the officers involved in the service of the warrant and shall incorporate tactical planning steps to reduce the associated dangers.

1. The service of warrants which offer a high degree of potential danger should include, where feasible, the following:
    a. Involvement of a representative from the venue agency in the development of a tactical plan.
        1. Tactical plan should include:
            a. Type of operation
            b. Background
            c. Objectives
            d. Location to be searched
            e. Suspect/Vehicles
            f. Time of search
            g. Personnel involved

1. Name
2. Vehicle
3. Hours
4. Radio # and Call Sign
5. Cell #
6. Assignment

h. Tactical Entry Plan
   1. Key
   2. Other Emergency entry equipment
i. Actions if shots fired prior to entry
j. Actions if shots are fired after entry or barricaded suspect.
k. Actions if officer is down, either interior or exterior
l. Actions if hostage situation
m. UC information
n. Arrest signals
o. Special Problems
   1. Violence potential
   2. Weapons
   3. Children
p. Radio frequency
q. Equipment issued
r. Scene assignments
s. Hospital, Fire Department and Ambulance locations and telephone numbers
   1. Landing zones
t. Law Enforcement jurisdiction
   1. Notified by
   2. Person contacted
   3. Watch Commander name and telephone number for tactical support
   4. Venue agency emergency telephone number

2. Where circumstances are such that the inclusion of the venue agency in the tactical plan is not feasible, the venue agency should be notified in advance.

b. A briefing that includes:
   1. Attendance by all of the officers involved in the search warrant. In instances where patrol officers cannot attend because of other duties, they should be briefed in the field.
   2. A review of the tactical plan.

c. The identification and description of the suspect(s), premises, and all of the officers involved in the warrant service.

d. Except where circumstances dictate otherwise, non-uniformed participants should wear distinctive clothing such as armbands, hats or raid jackets, which clearly identifies them as law enforcement personnel.

e. All weapons and ammunition must be approved and authorized by the respective Service or Venue Agency that employs the officer(s) using those weapons and ammunition.

2. Where circumstances are such that the inclusion of the pre-service steps outlined in 3.a.1 through 4 of this guideline are not feasible, the venue agency must be notified in advance.

3. The service of warrants which do not offer a high degree of potential danger will be handled on a case-by-case basis as the involved agencies agree.

4. Concurrence.
   a. Where possible, the officer in charge shall strive to obtain concurrence from the venue agency as to the manner and means by which a warrant will be served.
   b. In the event the venue agency does not concur with the tactics and/or the manner in which a warrant is to be served, the officer in charge shall provide a representative of the venue agency the opportunity to discuss his/her concerns with a superior officer from the service agency prior to the execution of the warrant.

D. Personnel and Resources:

1. The venue agency will normally provide, given adequate notice, one uniformed officer to assist in the service of a warrant. Personnel commitments beyond one officer must be arranged well in advance of the execution of the warrant.
2. Unless otherwise agreed, officers from the service agency shall be responsible for providing any equipment and/or other resources necessary to accomplish the warrant service.

E. Investigative Responsibility:

1. Unless otherwise agreed, officers from the service agency shall be responsible for the writing of any reports and/or the identification, collection and storing of evidence associated with the execution of the warrant.
   a. The service agency will include in its reports the names of all the personnel involved in the execution of the warrant.
   b. In instances where personnel from the venue agency have witnessed events essential to the prosecution of the case, they shall provide, upon request, a written report to the service agency.

2. Unless otherwise agreed, officers from the venue agency shall be responsible for criminal events which are unrelated to the service of the warrant and/or which

occur during the service of the warrant. This shall include the writing of reports of the incident and the collection of evidence pertaining to the new criminal event.

F. Hazardous Materials

The venue agency shall, as provided for in Contra Costa County's Hazardous Material Incident Contingency Plan, be responsible for the disposal of any hazardous materials discovered in the service of a warrant.

G. Clandestine Laboratories:

1. Where the service of a warrant directly relates to the investigation of clandestine laboratory, the collection of evidence shall, unless otherwise provided for, be the responsibility of the service agency. CCCNET, State BNE Lab Team, and DEA resources may be used to facilitate the removal or collection of evidence.
2. Any agency may, at their option, seek civil recovery as provided for in Section 11470.1 of the Uniform Controlled Substance Act.

H. Transportation of Prisoners:

1. Unless otherwise agreed, the transportation of prisoners will be the responsibility of the service agency.
2. Where the service agency is comprised of a multi-agency task force such as the Contra Costa County Narcotics Enforcement Team, the venue agency will provide, given prior notification and sufficient resources, for the transportation of prisoners.
3. Where the venue agency accepts responsibility for the transportation of prisoners, the officer who affected the arrest should provide a completed booking sheet to the transporting officer.
4. During transportation of prisoners, a properly equipped patrol unit, transportation van or bus will be the preferred means of transportation.

I. Booking/Housing of Prisoners:

1. Unless otherwise agreed, the service agency shall be responsible for the booking and housing of prisoners.
2. In instances where the venue agency agrees to book and house the arrestee(s), it shall be the responsibility of the arresting officer to convey any special and/or procedural instructions to the transporting officer. Once received, the transporting officer should make a reasonable effort to ensure that the requests of the arresting officer, where proper, are complied with.
3. When the service agency is comprised of a multi-agency task force such as the Contra Costa County Narcotics Team, the venue agency will provide, given prior notification and sufficient resources, for the booking and housing of the prisoners.

J. Press Releases:

All press releases that directly relate to the service of the warrant will be handled by the service agency. Exceptions will be handled on a case-by-case basis as the involved agencies agree.

DISCLAIMER

The intent of this guideline is to provide for the effective service of search and arrest warrants. It is recognized, however, that on occasion circumstances may arise where the public's interest and/or welfare may necessitate that the guideline not be followed. An exception to these provisions shall be resolved by the involved agencies on a case-by-case basis.

Contra Costa Law Enforcement County Protocols

Law Enforcement Funeral

Revised July 2013

Policy Statement

It is the stated purpose of the Contra Costa County Law Enforcement Funeral ***AD HOC*** Committee to establish a standard for the planning, facilitation, and maintenance of a law enforcement funeral protocol and resource guide through the formation of a standing Law Enforcement Funeral Committee for Contra Costa County Law Enforcement agencies; developed in such a way as to be suitable, and therefore adoptable, by all law enforcement agencies in the County.

In all aspects of this endeavor the concept: "at the discretion of the Agency Head" is understood. Law enforcement executives are, as always, at liberty to make whatever decisions are in the best interest of their agency. It is also assumed that any decedent subject to the provisions of this protocol was ***not*** involved in criminal conduct at the time of death.

This protocol is intended to provide guidance and direction for departments that may experience the death of an employee, dignitary or family members within their organization. The primary focus of this protocol is to provide guidance and direction for the planning and facilitation of a line of duty death law enforcement funeral (Category I) due to the significant resources and planning required to conduct such a ceremony.

The Committee

This document references two separate entities, the Contra Costa County Law Enforcement Funeral ***AD HOC*** Committee, comprised of members of the Contra Costa County Operations' Working Group (OWG) whose mission is the development of this protocol as well as the formation of a standing Contra Costa County Law Enforcement Funeral Committee (hereafter referred to as the Committee) which will be comprised of recognized subject matter experts.

The Committee will be comprised of between four to eight individuals selected from CC County agencies, preferably with experience or expertise including but not limited to, the Incident Command System (ICS), large event planning, and or police funeral/memorial planning. In addition to being responsible for the creation and maintenance of a Resource Manual intended to contain police funeral related resources (for example buglers, pipers, police chaplains, trauma support, honor guards, vocalists, equestrian units, helicopters, explosive detection canine teams, security teams, etc.) the Committee will meet on a predetermined basis as necessary to facilitate desired training, presentations on available or proposed shared resources, as well as, the continued maintenance of the Resource Guide, etc.

Most importantly, the Committee will come together to assist an impacted agency, as needed, in the planning and facilitation of any line of duty funeral, subject to the provisions of this protocol, occurring within the county. Nothing in this protocol is intended to restrict the Committees' ability to call upon other identified subject matter experts to assist them in their efforts.

Shared Resources

It is the recommendation of the Contra Costa County Law Enforcement ***AD HOC*** Committee and the OWG that all Law Enforcement agencies within Contra Costa County adopt a "Mutual Aid" position in response to a law enforcement line of duty death subject to the provisions of this protocol; and furthermore commit to provide, as needed, specialized personnel resources to the impacted agency, for example law enforcement funeral experts, buglers, pipers, horses, helicopters, honor guard, chaplains, etc.

Debriefing

It is recommended that following any line of duty law enforcement funeral that the Committee meet with the impacted agency representatives involved in the planning and facilitation of the funeral to debrief the event for evaluation purposes to determine if any changes to policy or practice are appropriate.

Mourning Ribbon (Bands) / Flag Protocol

It is recommended that a standard protocol be established for the display of mourning ribbons and flags and that a uniform time period be established for the resumption of normal operations, to wit: ribbons to be worn and flags placed at half-staff upon the "official notification" of a death, and ribbons off, with flags at the norm, midnight after the funeral.

Critical Injury / Death And Funeral Notice

It is recommended that a standard form "Critical Injury/Death and Funeral Notice" be established for release relative to the critical injury or death of an officer. The "critical injury" aspect of the form is reserved for those injuries that are so grave that there is little or no expectation of recovery.

Classification Of Decedents

It is recommended that five classifications of law enforcement employees be adopted for the purpose of identification and discharge of the appropriate level of funeral ceremonies.

1. **Sworn**: Those sworn to enforce laws, including Reserve Officers killed in the line of duty;
2. **Civilian**: All other employees, including volunteers;
3. **Retired**: Those honorably retired on service or disability pensions;
4. **Separated**: Those who have left the employ of an agency and whose welfare and whereabouts are of general interest to the agency or other government employees;
5. **Immediate Family Members**: Spouse, children, parents, siblings of all employee classifications.

Classification Of Events

It is recommended that five classifications of law enforcement related deaths be adopted:

1. **CATEGORY I**: Death of a sworn employee at the hands of a criminal adversary or that is the proximate result of traumatic injury sustained in the line of duty.
2. **CATEGORY II**: Death of a sworn employee in any other manner.
3. **CATEGORY III:** Death of a civilian employee.
4. **CATEGORY IV**: Death of a retired or separated employee.
5. **CATEGORY V**: Death of an immediate family member of any employee.

Agency Recommended Notification Protocol

Upon confirming the facts and circumstances of the critical injury or death of an employee the Watch Commander should cause *appropriate* agency-specific notifications to be made. Interest in law enforcement matters is often high, and information will become public that there is a seriously injured or deceased law enforcement employee from a certain jurisdiction. Given that the identity of the involved employee will be withheld pending notification of next of kin, it is highly recommended that on-duty personnel be advised to interrupt their duties and contact their own families to notify them that they are not the involved party. Employees should be admonished not to release the names of any parties actually involved in an incident.

Recommended Order Of Notification

1. Agency Head
2. Police Chaplain/Trauma Support/Psychologist (to assist in further notifications as deemed appropriate)
3. Next of Kin
    a. The notification to the next of kin should, whenever possible, be made in person, by one of equal or greater rank than the decedent who is accompanied by a Chaplain.
    b. The notifier should be well informed regarding the circumstances surrounding the death and should freely impart that information to the decedent's family.
    c. The notifier, or other suitable person, shall remain with the decedent's family until arrival of a suitable assisting person so as not to leave the family unattended during this critical period.
    d. The notifier should obtain the name of the employee preferred by the family to act in their behalf as Family Liaison Officer.
    e. The employee identified as the Family Liaison Officer should act in that capacity at the behest of the Incident Commander, in consultation with a member of the Committee, and should carry that designation as a primary duty assignment until completion of the post-funeral reception.
4. The "Officer's Association" Executive.
5. On-duty personnel.
6. Government executives and elected officials.

Once all appropriate notifications have been made, the "Critical Injury/Death and Funeral Notice" should be completed. This form is an official, public notification of the death of a law enforcement employee. It should be completed as soon as practical, and as completely as possible. It is the document from which all information will be taken for press releases, teletype and fax notifications, etc. Having all recipients receive the same information at the same time from the same official source is crucial to an efficient evolution of events. If there are aspects of the initial release that are unanswered, (usually viewing and funeral arrangements) they can be addressed as "pending" and an updated notice resent when the family makes its wishes known.

Funeral Protocols

1. **CATEGORY I** (Sworn employee - Traumatic Death in the Line of Duty): A Category I funeral is generally a public event that denotes full, military style, ceremonial honors. This category is reserved for sworn employees (including reserve officers) killed in the line of duty.

   The Agency Head is the final arbiter of what ceremonial elements will be included in a Category I funeral however a Category I funeral generally involves a **Full Honors** ceremony as discussed below.

2. **CATEGORY II** (Sworn employee - Non-Traumatic Death): A Category II funeral is generally reserved for sworn personnel whose death is not the result of a traumatic, duty-related event. A Category II funeral may be a public event depending on its circumstances. It denotes a reduced level of military-style honors to be determined by the Agency Head in consultation with the County Law Enforcement Funeral Committee and may involve an **Honors** ceremony as discussed below.

3. **CATEGORY III** (Death of a Civilian Employee): A Category III funeral is generally a non-public event with limited Department involvement. At the discretion of the Agency Head, in accordance with the wishes of the decedent's family, an **Honor Guard** ceremony may be deemed appropriate

4. **CATEGORY IV** (Death of a Retired or Separated Employee): A Category IV death is an informational matter addressed through publication of a Death and Funeral Notice. At the discretion of the Agency Head, in accordance with the wishes of the decedent's family, an **Honor Guard** ceremony may be deemed appropriate.

5. **CATEGORY V** (Death of an Employee's Family Member): A Category V death is an informational matter addressed through publication of a Death and Funeral Notice.

Ceremonial Funeral Honors

There are three levels of **Ceremonial Honors,** for the purposes of this protocol, reserved for the death of a law enforcement employee:

1. **Full Honors** Ceremony (Sworn) – A ceremony generally reserved for a Category I funeral, comprised of:
   a. An Honor Guard conducting a Rifle Salute,
   b. Ceremonial Flag Folding and Presentation,
   c. TAPS,
   d. Aircraft Flyovers,
   e. Equestrian elements,
   f. K-9 elements if the officer was associated with a K-9 Program.

   Note: Bagpipers and the release of birds are non-official funeral elements and are included at the behest of the decedent's family in all cases.

   Note: Additionally, depending upon the place of worship, the American flag may not be permitted to be draped upon a casket while the body is at rest within the facility. Special consideration or optional planning may be required in those cases.

2. **Honors** Ceremony (Sworn) - A ceremony reserved for a Category One funeral and in some cases a Category Two funeral depending on the wishes of the decedent's family, comprised of:
   a. An Honor Guard conducting a Rifle Salute,
   b. Ceremonial Flag Folding and Presentation,
   c. TAPS.

3. **Honor Guard** Ceremony (Retired/Non-Sworn) – For purposes of this protocol a ceremony that may be performed for Category III-IV funerals at the discretion of the agency head. Honor Guard ceremonies may also be made available for funerals of dignitaries from the affected jurisdiction at the discretion of the agency head.
   a. Static Honor Guard
   b. Pre-folded flag presented to family.

Full Honor Ceremony (Considerations)

In the event the impacted agency does not have the specialized resources needed for the planning and implementation of a Category I funeral members of the Committee can be contacted for advice and assistance.

Family members should be advised that a funeral with "Full Honors" will take considerable time to properly conduct. It usually consists of a religious ceremony in accordance with the family's faith group, and a graveside ceremony that will require an extended wait for all elements, dignitaries and attendees to be in place before it can begin. It potentially involves the movement of thousands of persons and hundreds of vehicles from the house of worship

to the graveside. In almost all cases the family will be in place at the graveside before the last vehicle in the motorcade has left the house of worship. It is not uncommon for there to be a two-hour delay from the time the family arrives at the graveside and the last attendees are in place).

Planners should arrange for logistical necessities including but not limited to portable toilets, aid stations, water/shade stations, etc, to be in place at the cemetery to meet the needs of attendees. Acquisition of an RV, for the family's comfort during the waiting period, should also be considered. If the family and their designated clergy are unwilling to invest the time required for a properly conducted Category I funeral they should consider a funeral with a reduced level of honors.

Recommendations For Planning And Conducting A Category I Funeral

Based on need of the affected agency, the agency head should consider activating the Committee to assist in the development and implementation of the funeral plan.

Generally, the development and implementation of a Category I funeral will include the following:

1. Employing the Incident Command System to manage the event.
2. Designating an Incident Commander (preferably one of high rank with decision-making authority).
3. The Incident Commander should announce a planning meeting and activate the following positions:
    a. Command Liaison Officer
    b. Public Information Officer
    c. Operations Section Chief
    d. Planning and Intelligence Section Chief
    e. Logistics Section Chief
    f. Traffic Group Leader
    g. Ceremonies Group Leader
    h. Officers Association Liaison

Position Descriptions And Responsibilities

A. Command Liaison Officer

The Command Liaison Officer is assigned directly to the Incident Commander and is the initial point of contact for all outside agencies, dignitaries and VIPs. The Command Liaison Officer should:

1. Facilitate the attendance of such persons;
2. Advise such persons to make direct contact with the Command Liaison Officer upon arrival at the jurisdiction;
3. Document the attendance of such persons and the size of their delegations;
4. Ensure that the level of participation and visibility of such delegations is commensurate with the office represented;
5. With prior clearance from the Family Liaison Officer, allow VIPs to personally express their condolences to the decedent's family on the day of the funeral;

6. Maintain a journal of all activities;
7. Submit all records of the attendance of such persons and delegations to the Planning and Intelligence Section prior to the incident debriefing. (Such records are critical to inter-agency relations. Follow-up letters of thanks are expected).

B. Public Information Officer

The Public Information Officer (assigned to the Incident Commander) is the point of contact for all media outlets and should:

1. Confer with the Family Liaison Officer regarding completion of the Critical Injury / Death and Funeral Notice;
2. Prepare a press release regarding the death of the employee and the subsequent ceremonial arrangements. (Critical Injury / Death and Funeral Notice is sufficient for this purpose);
3. Compose a brief biographical history of the deceased employee;
4. Maintain a journal of all activities;
5. Submit all documents to the Planning and Intelligence Section prior to the debriefing.

C. Family Liaison Officer

The Family Liaison Officer is the person chosen by the decedent's next of kin as the primary point of contact for the family on all matters relating to the death and funeral of the employee. This is the most critical role in the Incident Command structure. It requires one of strong character who has a close bond with the family. Ideally, all contact with the family should be through this person. It is calming for the family to interact with one of their choosing rather than a flood of callers. The Family Liaison Officer should:

1. Be with the decedent's family as much as possible during the funeral period;
2. Maintain routine contact with the Incident Commander;
3. Ensure that the family's wishes relating to the funeral are communicated to the Incident Commander on all matters;
4. Be a conduit for all incoming or outgoing family communication;
5. Attend all planning meetings;
6. Maintain a journal of all activities;
7. Communicate the family's wishes on all matters directly to the mortuary, through the Funeral Director;
8. If circumstances permit, arrange a visit, before the funeral, between the family and the command staff of the Department;
9. Submit the journal and any related documents to the Planning and Intelligence Section prior to the incident debriefing;
10. Attend the incident debriefing.

D. Operations Section Chief

It is the duty of the Operations Section Chief to oversee the various facets of the funeral preparation and execution in behalf of the Incident Commander. As such, the Operations Section Chief should:

1. Schedule and maintain contact with all activated segments of the Incident Command structure;
2. Attend all planning meetings;
3. Appoint a Mortuary Liaison to discharge the duties listed on the Mortuary Liaison Checklist;
4. Appoint a House of Worship Liaison to discharge the duties listed on the House of Worship Checklist;
5. Appoint a Cemetery Liaison to discharge the duties listed on the Cemetery Liaison Checklist;
6. Exercise functional supervision over the progression of all funeral related events;
7. Ensure that bomb sweeps are conducted at all venues prior to the arrival of personnel;
8. Change and re-direct the Incident Action Plan as necessary;
9. Maintain a journal of all activities;
10. Submit all documentation to the Planning and Intelligence Section prior to the incident debriefing;
11. Attend the incident debriefing.
12. ***Security for the service. Participating agencies will assist.***

E. Planning and Intelligence Section

It is the duty of the Planning and Intelligence Section Chief to oversee the conduct of all planning meetings, maintain all records and documentation and coordinate the participation of elements from within and without the Department who will be contributing technical expertise to the proceedings. The Planning and Intelligence Section Chief should:

1. Announce and conduct an initial planning meeting;
2. In conjunction with the Operations Section, identify an Operational Period;
3. Compose a written Action Plan that allows sufficient time for all organizational components to complete assigned duties;
4. Conduct a site survey at the house of worship and produce a security plan;
5. Conduct a site survey at the cemetery and produce a security plan;
6. Establish and maintain contact with;
    a. The religious leader identified by the Family Liaison Officer;
    b. The Funeral Director;
    c. The Benefits Counselor;
    d. The Department Psychologist;
    e. A Piper;
    f. A Bugler;

    g. A photographer for both venues the day of the funeral;
    h. An audio expert for the church and grave side ceremonies;

7. Maintain a journal of all activities;
8. Maintain copies of all written plans, diagrams, maps, etc.;
9. Handle all correspondence;
10. Monitor the weather;
11. Collect and archive all journals, notes and documents;
12. Conduct the incident debriefing;
13. Prepare an After-Action report.

F. Traffic Group Supervisor

Under the direction of the Operations Section it is the responsibility of the Traffic Group to plan and coordinate all traffic related elements the day of the funeral. The Traffic Group Supervisor should:

1. Attend all planning meetings;
2. Diagram the parking facilities at the mortuary and the cemetery;
3. Contact (through the Command Liaison Officer) the California Highway Patrol and other jurisdictions that may be impacted during the funeral procession;
4. Formulate a motorcade and parking plan for all venues;
5. Maintain a journal of all activities;
6. Submit all plans and related documentation to the Planning and Intelligence Section prior to the second planning meeting;
7. Notify the Logistics Section of all items necessary to accomplish the Traffic Group mission (cones, delineators, flares, barricades, etc.);
8. Submit all journals and other documentation to the Planning and Intelligence Section prior to the incident debriefing;
9. Return all unused or re-useable items to the Logistics Section;
10. Attend the incident debriefing.

G. Ceremonies Group Supervisor

Under the direction of the Operations Section it is the responsibility of the Ceremonies Group to research, plan and execute all funeral related ceremonies. The Ceremonies Group Leader should:

1. Establish a Church Ceremonies Team and designate a Team Leader;
2. Establish a Cemetery Ceremonies Team and designate a Team Leader;
3. Ensure that the position of Master of Ceremonies is staffed by one well versed in military drill and ceremonies who possesses a commanding voice;
4. Meet the Funeral Director, the Cemetery Curator , the Family Liaison Officer and the religious leader at the cemetery well in advance of the interment and choreograph the grave side ceremonies.
5. Conduct dress rehearsals with all involved parties at both venues. Ensure that the following issues are addressed:
    a. That the ceremony as planned, is in accordance with the wishes of the next of kin;
    b. That the location of the grave is satisfactory to the next of kin;

c. That a diagram of the cemetery has been obtained;
d. That the location of the Rifle Squad has been identified;
e. That the location of the uniform formation has been identified;
f. That the location of the family delegation has been identified, and that a canopy and sufficient chairs will be in place;
g. That the arrival route of the hearse, and its eventual parking space, have been identified;
h. That the location of the Piper and Bugler have been plotted;
i. That the location of the Honor Guard has been identified.
j. After addressing the necessary issues, mark the locations of the components of the ceremonial groups with wire flags, spray chalk or other suitable substance and conduct a walk-through of the grave side ceremony. (When mapping out the ceremonial elements, [especially the uniform formation] remember that it is easier to constrict a plan that is too large than to expand one that is too small).

6. Contact all members of each component of the ceremonial groups and direct them to report to their respective duty stations well in advance on the day of the funeral in order to dress rehearse their roles;
7. Confer with the **Parking Team Leader** to ensure that all vehicles belonging to the members of the ceremonial groups are positioned for rapid departure from the house of worship, to the cemetery, well in advance of the funeral motorcade.
8. Position arriving personnel in accordance with the parking plan;
9. Oversee the conduct of the grave side ceremonies.

H. Logistics Section Chief

The Logistics Section Chief is responsible for site security at all venues, provision of all necessary supplies, procurement of certain key personnel and apparatus, operating a transportation detail to assist arriving and departing personnel, and assisting the family with the post-funeral reception. The Logistics Section Chief should:

1. Arrange for the deployment of a tow truck at both venues the day of the funeral;
2. Arrange for the deployment of a rescue ambulance at both venues the day of the funeral;
3. Arrange for the deployment of portable toilets at a suitable location in the cemetery;
4. Arrange for the deployment of a catering truck at a suitable location , in the cemetery proper, on the day of the funeral;
5. Arrange and supervise a transportation detail to assist persons attending from distant locales;
6. Obtain a casket flag and white gloves;
7. Obtain a sufficient supply of cones, barricades, flares, delineators and other equipment to supply the **Traffic Group**;
8. With the concurrence of the Family Liaison Officer, offer to assist the family with the post-funeral reception;

9. Ensure that all equipment and supplies are returned or accounted for prior to the incident debriefing;

10. Maintain a journal of all activities;
11. Submit all documentation to the Planning and Intelligence Section prior to the incident debriefing;
12. Attend the incident debriefing.

I. Officers Association Liaison (or other identified Specialist)

1. Assist the decedent's family with matters related to the death such as benefits, insurance policies, personal documentation, costs, etc.
2. Attend all planning meetings;
3. Assist with funeral planning and arrangements.

Graveside Ceremonies - Category I Funeral (Full Honor Ceremony)

A Category I funeral consists of some or all of the following ceremonial elements:

1. Master of Ceremonies;
2. Pallbearers;
3. Honor Guard;
4. Rifle Squad;
5. Ceremonial Flag Folding;
6. Piper;
7. Bugler;
8. Flyover Squadron;
9. Riderless Horse;

A. Choreography

A Category I funeral is choreographed as follows:

1. Ensure that the family's wishes are met;
2. Ensure that the family can see and hear all elements of all ceremonies;
3. Ensure that the Master of Ceremonies has drill and ceremonies expertise and a commanding voice. (The position of Master of Ceremonies is not a function of rank but of competence, assertiveness and expertise. The Funeral Committee may have a referral for a Master of Ceremonies).
4. Ensure there is a clear path for all ceremonial elements, paying particular attention to the pallbearers;
5. Ensure the elements of the formation can hear the proceedings at the grave side. (This issue is best addressed by procurement of a sound system by the Logistics Section).

B. Flag and Coffin Protocol

1. When the United States flag is draped on a coffin the field of stars is positioned at the head and over the left shoulder of the deceased, as pictured in the addenda.

2. When a flag-draped coffin is on display the head is to the viewer's left. The striped area of the flag faces the viewer and is considered the "front" view.
3. When a coffin is moved, whether flag-draped or not, it is oriented feet first.

4. When outside, if a flag-draped coffin is moved from one place to another, uniformed personnel are expected to salute when it passes.
5. Nothing is to be placed on a flag-draped coffin at any time.
6. During the ceremony the United States flag is folded by the Honor Guard (see addenda). Once folded it may be passed from person to person or carried from place to place. If so, it is carried left hand on the bottom, right hand on the top. Before it changes hands the receiving person, if in uniform, salutes the presenter.

C. Special Element Roles

The grave side ceremony consists of several ceremonial elements. The Rifle Squad, Pallbearers, Honor Guard, Bugler, Piper, etc., at times act independently of the main formation in the discharge of their duties. The following are guidelines for such special element roles:

1. The Master of Ceremonies is the leader of all uniformed elements;
2. The commands of the Master of Ceremonies are given in a voice audible to all present. (Depending on the circumstances of the officer's death, sworn funerals can draw several thousand uniformed attendees. The entire formation will be receiving commands of execution from the Master of Ceremonies. A powerful voice and a strong command presence are essential to the success of the ceremonies).
3. The commands to the special elements by their individual Officers in Charge are audible only to the concerned elements.
4. When the Master of Ceremonies intends for the special elements to operate independently of his commands, the command: "SPECIAL ELEMENTS, STAND FAST!" will be given prior to the command given the main formation. On all other occasions the special elements are to function as part of the main formation.

D. Positioning of Elements

1. The Master of Ceremonies should be at the grave side well in advance of the motorcade, and should, in an expeditious manner, position arriving officers into the ranks and files of the main formation;
2. The Master of Ceremonies should also position the Honor Guard, Piper, Bugler, Rifle Squad and other special elements
3. Upon arrival of the hearse the pallbearers should stand at Parade Rest, facing one another in two ranks, at the rear of the hearse, until directed by the Master of Ceremonies to remove the casket.

Recommended Order Of Ceremonies

A. Category I – Full Honors

After the Master of Ceremonies has positioned all elements and the main formation is complete the Order of Ceremonies (with the MC giving the commands) is as follows:

1. The command **"DETAIL...ATTENTION!"** is given. This signals the Mortuary Director and the pallbearers to remove the casket from the hearse;

2. **"PRESENT ARMS"** is directed to the entire formation; "Present Arms" is held while the pallbearers move the casket to the bier. (The casket is oriented feet first when moved and when positioned for the service. If the casket needs to be turned or re-oriented it is done with a pivoting movement immediately prior to being set at rest).

3. **"DETAIL - ORDER ARMS!"** is given after the pallbearers have placed the casket on the bier, adjusted the flag to its proper position and come to attention;

4. **"DETAIL, PARADE REST!"**

The OIC of the pallbearer detail directs a facing movement followed by a marching order that positions the detail to the side (but in close proximity) to the bier, for the duration of the religious rites.

Upon completion of the religious rites the Honor Guard positions itself on either side of the casket for the folding of the flag.

"DETAIL ATTENTION!" queues the piper to begin a musical selection and the Honor Guard to begin folding the flag in accordance with the addendum to this document.

The folded flag is presented to the Agency Head who renders a hand salute, receives the flag from the presenter, turns and presents it to the primary next of kin.

It is not uncommon for Category I ceremonies to be attended by the Governor or a representative of that office. In almost all cases, uniformed officers from the California Highway Patrol will be in attendance to present a State of California flag, and condolences from the governor, to the primary next of kin. This occurs immediately after the presentation of the United States flag by the Agency Head.

After the flag presentations and condolences are complete, the command
"DETAIL, PRESENT ARMS!" is given to all personnel.

Immediately thereafter,

"PREPARE FOR THE VOLLEY!" is given as a warning that the rifle volley is about to occur and queues the rifle squad to conduct the rifle salute.

After the rifle squad completes the volley and comes to "Present Arms" the bugler begins "TAPS". (If there is a flyover it should be coordinated to pass overhead as "TAPS" is ending).

Upon completion of "TAPS" and the flyover
"DETAIL, ORDER ARMS!" is given.

This queues the pallbearers to align with the end of the casket farthest from the next of kin, remove their gloves and file past the casket, placing their gloves thereon as they do so. After having done so the pallbearers form a rank at attention and
"DETAIL... DISMISSED!" is given, ending the ceremony.

Graveside Ceremonies - Category Ii-V Funerals

A. **Category II** (Death of an employee in any other manner)
Category II graveside ceremonies are generally confined to:

1. Motor Escort,
2. Rifle Salute,
3. Ceremonial Flag Folding,
4. TAPS.

B. **Category III** (Death of a Civilian Employee)
The graveside ceremony for a Category III funeral should include an attendance policy identified by the Agency Head and is generally restricted to:

1. Motor Escort,
2. Static Honor Guard,

C. **Category IV** (Death of a Retired or Separated Employee)
The graveside ceremony for a Category IV funeral should include an attendance policy identified by the Agency Head and is generally restricted to:

1. Static Honor Guard

D. **Category V** (Death of an Immediate Family Member of an Employee)
The protocol for a Category V funeral should be limited to an attendance policy identified by the Agency Head.

Death Of Animals

It is recommended that a subordinate protocol for the death of animals in law enforcement service be established as an addendum to this policy.

It is recommended that agencies adopt an "Employee Emergency Notification Form" to be completed by employees and updated during their calendared review process. The form will contain notification wishes and special instructions by the decedent in the event of his death.

MUTUAL AID

County of Contra Costa, California

Law Enforcement Mutual Aid (LEMA) Agreement

January 1, 2022

References.

a. California Disaster and Civil Defense Master Mutual Aid Agreement, November 1950, Office of the Governor, State of California
b. California Emergency Services Act, Chapter 7 of Division 1 of Title 2 of the Government Code
c. California Law Enforcement Mutual Aid Plan, July 2019, Governor's Office of Emergency Services, State of California
d. Governor's Executive Order W-9-91, State of California, May 1991

Introduction

The authority for public agencies to enter into Mutual Aid Agreements is provided in the State of California Emergency Services Act and the Master Mutual Aid Agreement contained in the California Government Code. The purpose of this Law Enforcement Response Mutual Aid Agreement is to permit signatory agencies to make the most efficient use of their powers by enabling them to coordinate resources and maximize their response during times of disaster/emergency.

This agreement allows signatory agencies to support each other within the operational area during disasters/emergencies to protect life and property when the event is beyond the capabilities of the affected entity. This agreement supports the mechanism for an immediate response to the requesting agency provided the responding agency has the resources and expertise necessary and is ultimately available to do so.

When faced with a disaster or emergency, law enforcement agencies have a responsibility to maintain service and recover in the most expedient way. This can best be accomplished by preparation, coordination, and cooperation with other law enforcement agencies.

When the Chief of Police of a City or Special District, or his/her designee, determines that an emergency situation in his/her jurisdiction may become or is already beyond the control of his/her department's resources, it is his/her responsibility to request mutual aid from the County Sheriff, who is the Operational Area Coordinator.

This agreement is not intended to replace or supersede the utilization of day-to-day mutual aid protocols or local agency agreements.

This agreement supersedes previous law enforcement Mutual Aid agreements within Contra Costa County.

Section I. Definitions.

The following terms shall have the following meanings unless the context indicates otherwise:

Agency. Any general-purpose law enforcement agency as defined by law.

Agreement. Local agreements entered into by two or more agencies for the purpose of Law Enforcement Mutual Aid.

Day-to-Day Mutual Aid. During the course of normal law enforcement, smaller incidents may occur that could require immediate assistance, such as back-up on a traffic stop, perimeter control for a fleeing suspect, or crowd control at a barricaded suspect's location pending the arrival of additional local resources. Officers from nearby jurisdictions may respond to these emergency broadcasts on their own initiative (department policy permitting) without a formal mutual aid request.

Disaster. An expected or unexpected event, in which a community's available and pertinent resources are expended, or the need for resources exceeds availability, and in which a community undergoes severe danger, incurring losses so that the social or economic structure of the community is disrupted and the fulfillment of some or all of the community's essential functions are prevented.

Emergency. An emergency includes, but is not limited to, a human-caused or natural event or circumstance within the area of operation of any party agency causing or threatening loss of life, damage to property, injury to a person, human suffering or financial loss, such as fire, explosion, flood, severe weather, drought, earthquake, volcanic activity, spills or releases of hazardous materials, contamination, utility or transportation emergencies, disease, infestation, civil disturbance, riots, and acts of terrorism or sabotage. An emergency event is likely to be beyond the capacity of an affected party agency or party agencies in terms of personnel, equipment, and facilities, thereby requiring emergency assistance.

Emergency Assistance. Emergency Assistance means employees, services, equipment, materials, or supplies offered during an emergency by the responding agency and accepted by the requesting agency when such service has been disrupted by acts of the elements, equipment malfunctions, accidents, terrorism/sabotage, and other occurrences when emergency assistance from other party agencies is necessary or advisable as determined by the requesting agency.

Fifty Percent Guideline. No jurisdiction is required to unnecessarily deplete its own personnel, equipment, and service capabilities in order to furnish mutual aid resources. When requested to provide mutual aid, it is generally accepted that a reasonable response will consist of up to 50% of available on-duty uniformed personnel.

Mobilization. To organize or put into readiness for active law enforcement services.

Mutual Aid Region. A Mutual Aid Region is a geographic area comprised of multiple Operational Areas. A Mutual Aid Region manages and coordinates information and resources among Operational Areas within the Mutual Aid Region and between the Operational Areas and the state level. All jurisdictions in Contra Costa County are part of Region II. The Alameda County Sheriff/designee is the Region II Coordinator.

Operational Area. The area comprises Contra Costa County along with all of its political subdivisions.

Operational Area Coordinator. The County Sheriff is the Operational Area Coordinator.

Party Agency. An agency that has adopted, signed and subscribes to this Mutual Aid Agreement. Also referred to in this agreement as Signatory Agency.

Regional Law Enforcement Mutual Aid Coordinator. The Regional Law Enforcement Mutual Aid Coordinator is an Operational Area Law Enforcement Coordinator, who is elected by other Operational Area Coordinators within the Mutual Aid Region, to coordinate the collective law enforcement mutual aid response of agencies within the Region (currently Alameda County Sheriff's Office).

Requesting agency. An agency that has adopted, signed, and subscribed to this Mutual Aid Agreement, has made a request for Emergency Assistance, and has received commitments to deliver Emergency Assistance pursuant to the terms of this Mutual Aid Agreement.

Responding Agency. An agency that has adopted, signed, and subscribed to this Mutual Aid Agreement and has agreed to deliver Emergency Assistance to another Party Agency pursuant to the terms and conditions of this Mutual Aid Agreement.

State Law Enforcement Mutual Aid Coordinator. The State Law Enforcement Mutual Aid Coordinator is the Chief of the Law Enforcement Branch of the Governor's Office of Emergency Services. The State Coordinator is responsible for mutual aid response coordination and administrative interaction between state and local law enforcement agencies during emergency and non-emergency situations, where the mutual aid system is, or could be, involved.

Section II. Participation.

Participation in this Mutual Aid Agreement is voluntary and at the sole discretion of the responding agency. The responding agency shall have the primary interest of protecting its own constituency. The safety and security of the responding agency's jurisdiction is the responding agency's first concern and only staff and equipment that can be spared without leaving the jurisdiction unprotected shall be sent. No party agency shall be liable to another party agency or be considered to be in breach of or default under this Mutual Aid Agreement on account of any delay in or failure to perform any obligation under this Mutual Aid Agreement.

Section III. General Nature of Emergency Assistance.

Emergency assistance will be in the form of resources, such as equipment, supplies, and personnel or the direct provision of services. The execution of the Mutual Aid Agreement shall not create any duty to respond on the part of any party agency. A party agency shall not be held liable for failing to provide emergency assistance. A party agency has the absolute discretion to decline to provide any requested emergency assistance and to withdraw resources it has provided at any time without incurring any liability. The participating agencies recognize that time is critical during an emergency and diligent efforts will be made to respond to a request for resources as rapidly as possible, including any notifications that requested resources are not available.

Section IV. Requests for Emergency Assistance.

Requests for emergency assistance shall be directed to the designated contact person(s) on the contact list provided by the party agencies. The extent to which the responding agency provides any emergency assistance shall be at the responding agency's sole discretion. In the event the emergency impacts a large geographical area that activates either Federal or State emergency laws, this agreement shall remain in effect until or unless this agreement conflicts with such Federal and State laws.

In the event of a major emergency/disaster or other law enforcement operation, the first law enforcement resources to be used shall be those of the requesting agency. If such resources are inadequate to control the situation, or there is a need for a specialized unit, a request for mutual aid under this plan will be made directly to a party agency (requests for specific individual units) or through the Office of the Sheriff who is designated as the Mutual Aid Coordinator for the County. Such requests for assistance shall, if possible, specify the number of law enforcement officers and type of equipment required and shall further specify where and to whom such officers are to report and where and to whom the equipment should be delivered. The initial request will also include an overview of the situation and intelligence available from the requesting agency.

The County Mutual Aid Coordinator may directly coordinate with the local Commander of the California Highway Patrol.

Each party agency has agreed to contribute as much on-duty personnel as possible, still maintaining personnel to continue routine police functions in their individual jurisdictions. Each party agency has agreed to recall off-duty officers, if necessary.

The parties to this agreement shall provide the names and telephone numbers of agency staff who have the authority to commit personnel and/or equipment to any mobilization effort to the County Mutual Aid Coordinator.

If the County cannot provide resources, the Mutual Aid Coordinator may request resources from the Region to meet the requesting agency's needs.

The agency requesting mutual aid is responsible for the following:

1. Identifying numbers and types of mutual aid resources that are needed.
2. Identifying specific missions for mutual aid responder tasking.
3. Advising responders what equipment they should bring.
4. Establishing an assembly area for responding resources.
5. Identifying communications channels compatible with command and control of field resources.
6. Designating a liaison officer to facilitate a coordinated assimilation of responding mutual aid resources.
7. Preparing a situation briefing, including local maps for responders.
8. Providing logistical support such as food, lodging, rest intervals and equipment, and as appropriate for mutual aid personnel.

Section V. Command and Communications.

A. Command.

1. In the event of mobilization under this agreement, the requesting agency shall take charge of the operation, unless the requesting agency specifically requests that a different law enforcement agency fulfill this responsibility, or unless the scope of the problem is multi-jurisdictional, in which case the Operational Area Coordinator will take charge. This shall include directing the assignment of all personnel and equipment. The assignment of duties to officers of assisting agencies shall be made by the supervising officer of the requesting agency unless that responsibility is delegated to a different law enforcement agency as indicated above.

2. The Incident Commander or officer in charge of a requesting unit at the scene of an emergency is authorized to request assistance from another party agency if confronted

with an emergency situation at which the requesting agency has a need for equipment or personnel in excess of that available through the responding agency's department.

3. Upon receipt of such a request, the officer in charge of the party receiving the request shall immediately take the following action:

a. Determine if the responding agency has equipment and personnel available to respond to the requesting agency.
b. Determine what available equipment and personnel should be dispatched per the operating plans and procedures established by the parties.
c. In the event the needed equipment and personnel are available, to dispatch such equipment and personnel to the scene of the emergency with proper operating instructions.
d. In the event the needed equipment and personnel are not available, to immediately advise the requesting agency.

4. Command Responsibility at the Emergency Scene: The underlying principle of mutual aid is that other agencies and jurisdictions are serving as a resource to the primary or requesting agency. The Incident Commander of the requesting agency shall be in command of the operation under which the equipment and personnel sent by the responding agency shall serve. The responding personnel and equipment shall be under the immediate supervision of the officer in charge of the responding agency. The Incident Command however, may be relinquished to the senior officer of any department/agency rendering assistance under the terms of this agreement.

5. The requesting agency shall have the responsibility of establishing a command post and notifying all responding agencies at the earliest possible time of its location. The requesting agency shall establish a command post in such a manner as to provide an area suitable for the staging and directing of resources.

6. Termination of Service: The personnel and equipment of the responding agency shall be released from service and returned to the responding agency by the commanding officer in charge of the operation as soon as conditions warrant.

B. Communications.

1. Radios. To facilitate the utilization of mutual aid, common frequencies will be used wherever possible, including the statewide law enforcement coordination channels (i.e, CLEMARS). When deployment is within the EBRCS coverage area, Mutual Aid will generally operate on:

- Primary: XCC LAW1
- Secondary: XCC LAW2
- Tertiary: XCC LAW3

2. Frequencies. The requesting agency will specify the frequency to be used during the incident. If a common frequency cannot be established, an interoperability unit will be requested to facilitate communications. If possible, portable radios will be issued to each responder or group of responders.

3. Call Signs. Call signs may be assigned by the requesting agency or responding agencies may use their jurisdictional designations.

4. Public / Press Relations. The department head, or his/her alternate, in whose jurisdiction the incident occurs shall designate a person as a Public Information Officer. This person shall be the only one empowered to make press releases.

Section VI. Mutual Aid Mobile Field Force.
(Developed in 2003)

1. **Purpose.** The Mutual Aid Mobile Field Force (MAMFF) was developed to create an organized response by allied agencies to mutual aid requests. The term Mutual Aid Mobile Field Force will be used throughout this section to describe this mutual aid element. The MAMFF is an organized, trained, and equipped force of officers and supervisors from allied law enforcement agencies within Contra Costa County. The operational concept is to deploy a force with sufficient personnel and equipment to mitigate potential or real problems resulting from a formal request for mutual aid.

2. **Operating Guidelines**.

A. Activation. The MAMFF will be made available for response according to requests for mutual aid in the event of a disaster, civil unrest, or other major incidents following the guidelines as specified in the State of California Guidelines for Law Enforcement Mutual Aid Response and the Contra Costa County Police Chief's Association Mutual Aid Agreement. Upon receipt of a mutual aid request:

1. The County Law Enforcement Mutual Aid Coordinator will:

a. Notify the Mutual Aid Mobile Field Force Officer in Charge (MAMFF OIC)
b. Notify the Sheriff's chain of command seeking deployment approval
c. Notify the Regional Mutual Aid Coordinator
d. Notify the allied agency mutual aid coordinators

2. The Mobile Field Force Officer in Charge will:

a. Notify the Mutual Aid Mobile Field Force Assistant Officers in Charge (MAMFF Assistant OIC's)

b. Notify the individual members of the MAMFF. This will include the location of the assembly point for the MAMFF as well as event information as needed.

B. SEMS/NIMS/ICS. When activated, the MAMFF will follow the SEMS/NIMS/ICS protocol outlined in the Law Enforcement Guide for Emergency Operations.

C. Personnel. The MAMFF will be comprised of personnel from the following allied agencies. Each agency is responsible to ensure that appropriate members of the MAMFF are available for deployment in an emergency.

1. **MAMFF West Squad**

a. Kensington Police Department	1 Officer
b. Richmond Police Department	8 Officers / 1 Sergeant / 1 Lieutenant
c. El Cerrito Police Department	2 Officers
d. San Pablo Police Department	2 Officers
e. Pinole Police Department	1 Officer
f. Hercules Police Department	1 Officer
	15 Officers / 1 Sergeant 1 Lieutenant

2. **MAMFF Central Squad**

a. Concord Police Department	6 Officers / 1 Sergeant
b. Pleasant Hill Police Department	2 Officers
c. Martinez Police Department	1 Officer
d. Walnut Creek Police Department	5 Officers
e. Clayton Police Department	1 Officer
	15 Officers / 1 Sergeant

3. **MAMFF East Squad**

a. Antioch Police Department	4 Officers / 1 Sergeant
b. Pittsburg Police Department	4 Officers
c. Oakley Police Department	2 Officer
d. Brentwood Police Department	2 Officer
e. East Bay Regional Parks Police Department	2 Officers
f. Contra Costa County College District Police	1 Officer
	15 Officers / 1 Sergeant

4. **MAMFF South Squad**

a. Contra Costa County Sheriff's Office	1 Sergeant
b. BART Police Department	2 Officers
c. Orinda Police Department	1 Officer
d. Danville Police Department	1 Officer

e. San Ramon Police Department	3 Officers
f. Lafayette Police Department	1 Officer
g. Moraga Police Department	1 Officer
	9 Officers / 1 Sergeant

5. **MAMFF County Sheriff Squad**

a. Contra Costa County Sheriff's Office	13 Deputies / 1 Sergeant
b. Contra Costa County Sheriff's Office	3 Lieutenants (OIC & Assistant OIC's)
	13 Deputies / 1 Sergeant / 3 Lieutenants

D. Equipment. MAMFF members will be equipped with the following equipment by their assigned agency for response to a MAMFF activation.

1. Duty Uniform
2. Duty belt
3. Eye protection
4. Gloves
5. Soft Body Armor
6. Ballistic Helmet
7. Baton, 36" Riot
8. Department issued Patrol Baton PR24/ Straight Baton/ ASP
9. Flashlight
10. Riot Shield
11. Elbow and knee pads
12. Shin guards
13. Turtle Shell Chest Protector
14. Personal Water system
15. Respirator mask
16. Deployment bag

E. Communications. To ensure common communications capability, communications equipment will be provided to members of the MAMFF by the MAMFF OIC using the Contra Costa County cached radio system if their home agencies are not currently on the interoperable radio system and they do not have compatible radios.

F. Training. Appropriate training is crucial to the maintenance of an effective MAMFF. MAMFF training will consist of an initial twenty-four-hour training session and supplemented with a quarterly eight-hour MAMFF update training sessions. The initial twenty-four-hour training will be certified through the California Commission on Peace Officer Standards and Training (POST).

G. After Action Reports. After Action Reports will be completed by the MAMFF OIC and forwarded to the Incident Commander immediately following the event that initiated the MAMFF activation. After Action Reports will be forwarded to the Chief Executive of each agency and the County Law Enforcement Mutual Aid Coordinator. The After Action Report will include a synopsis of the event, the personnel deployed and hours worked, arrests made, expenditures and reimbursements, problems encountered and recommendations for improvements to the MAMFF Program.

4. **Fiscal Guidelines.**

A. Payroll. All officers, when assigned to the MAMFF, will be paid by their respective agencies. When an incident is organized under the Standardized Emergency Management System (SEMS), the MAMFF OIC will report and coordinate all personnel record keeping with the Logistics Representative.

B. Illness. If a MAMFF member becomes ill while assigned to the MAMFF, the MAMFF member's agency sick leave policy will be used. The MAMFF OIC will report any illness report to the MAMFF member's agency representative.

C. Overtime. All overtime for members of the MAMFF will be the responsibility of their home agency.

Section VII. Administrative Guidelines.

1. Peace Officer Authority Consent. Penal Code 830.1 (a)(2) requires the prior consent of the Sheriff or Police Chief before a peace officer from one jurisdiction will have the authority of a peace officer in another jurisdiction unless the circumstances presented in Penal Code 830.1 (a)(3) are present. Pursuant to 830.1(a)(3), any peace officer has such authority, anywhere in the state, when a crime is committed in the peace officer's presence or where probable cause exists to believe there is immediate danger to a person or property or to stop the escape of the perpetrator.

Under the authority given pursuant to 830.1(a)(2) any duly authorized deputy sheriff or police officer from any jurisdiction listed in this Mutual Aid Agreement shall have the consent of the Sheriff and Police Chiefs to extend his/her authority as a peace officer to any place which is under the jurisdiction of the Sheriff and Police Chiefs approving this agreement. PLEASE NOTE: WHEN SUCH AUTHORITY IS BEING EXERCISED IN ANOTHER JURISDICTION, THAT SHERIFF OR POLICE CHIEF SHOULD BE NOTIFIED AS A PROFESSIONAL AND LAW ENFORCMENT COURTESY.

2. Chain of Command. In a MAMFF deployment, the MAMFF will be assigned to support the Incident Commander of the mutual aid event. When operating as part of the MAMFF, assigned officers will be placed under the operational control of the MAMFF

OIC. *The MAMFF OIC is subordinate to the IC but should advise on tactics and operations based on the specialized training and experience gained as the MAMFF OIC.*

3. Use of Force. Responding officers will adhere to their agency's Use of Force policies including when deployed to Mutual Aid Mobile Field Force (MAMFF) events.

4. Officer-Involved Shootings. The investigation of officer-involved shootings shall be under the existing officer-involved protocol, or if outside of Contra Costa County, will be the primary responsibility of the jurisdiction in which the incident occurred. The responding agency will immediately be notified of any such incident. In the case of a MAMFF event, the MAMFF OIC would immediately notify the involved officer's parent agency.

5. Arrests. It shall be the primary responsibility of the police agency(ies) having immediate jurisdiction of the incident to furnish arrest teams or other arresting personnel. In instances where the requesting agency by reason of size does not have an arrest team, at least one (1) uniformed member of that agency shall participate as a member of a responding arrest team.

A. A Field Booking Team may be established to facilitate the booking process and transportation of those arrested. The size of the team depends on the nature of the incident and the number of arrests expected.

B. In all types of disturbances, in addition to arrest teams, jurisdictions should utilize special teams for photography and video recordings. Liaison should be established to obtain and/or view photographs and videotapes taken by news media, television stations, and amateur photographers.

6. Detention. The requesting agency will be responsible for all field-booking procedures, including photography, fingerprinting, and booking sheets. The Office of the Sheriff will assist as needed if requested.

7. Transportation of Prisoners. In instances where the requesting agency cannot handle the transportation of prisoners or its resources are taxed, the Office of the Sheriff will assist in transportation from the scene to the County Jail or other designated holding facilities.

8. On-Duty Motor Vehicle Accidents. Responding agency members who are involved in on-duty motor vehicle collisions will report the incident to their immediate supervisor. In the case of a MAMFF event, the MAMFF OIC will ensure the accident is reported and investigated by the jurisdictional police agency. Copies of the completed collision report will be forwarded to the MAMFF OIC, the officer's agency, and the County Mutual Aid Coordinator. The involved officer will be responsible for meeting specific requirements detailed within his/her agency's vehicle accident reporting policy.

9. On-Duty Injuries. When a responding agency officer is injured on-duty, the requesting agency OIC will ensure that immediate medical attention is administered to the officer. The injured officer's agency will be notified as soon as possible. During a MAMFF training or deployment, the MAMFF OIC will ensure those responsibilities are addressed.

10. Citizen Complaints. Complaints regarding misconduct of officers will be directed to the agency of the officer against whom the complaint is filed. Completion of any required investigation(s) will be the responsibility of the subject officer's agency. In the case of a MAMFF deployment, the MAMFF OIC, if aware of a complaint during the deployment, shall document the facts surrounding the complaint and any other relevant information and forward the complaint to the involved officer(s') agency to investigate the allegation.

11. Food, Fuel, and Lodging. The requesting agency is responsible for the provision of food, fuel, and lodging support to all officers assigned through mutual aid.

Section VIII. Indemnification and Limitation of Liability.

1. Mutual Indemnification: Requesting Agency will indemnify, save, and hold harmless Responding Agency(ies) and its/their officers and employees from any and all claims, demands, losses, costs, expenses, and liabilities for any damages, fines, sickness, death, or injury to person(s) or property, including any and all administrative fines, penalties or costs imposed as a result of an administrative or quasi-judicial proceeding, arising directly or indirectly from or connected with the services provided hereunder that are caused, or claimed or alleged to be caused, in whole or in part, by the negligence or willful misconduct of Requesting Agency, its officers, employees, agents, contractors, subcontractors, or any persons under its direction or control in the performance of this agreement.

Responding Agency(ies) will indemnify, save, and hold harmless Requesting Agency and its officers and employees from any and all claims, demands, losses, costs, expenses, and liabilities for any damages, fines, sickness, death, or injury to person(s) or property, including any and all administrative fines, penalties or costs imposed as a result of an administrative or quasi-judicial proceeding, arising directly or indirectly from or connected with the services provided hereunder that are caused, or claimed or alleged to be caused, in whole or in part, by the negligence or willful misconduct, errors or omissions of Responding Agency(ies), its/their officers, employees, agents, contractors, subcontractors, or any persons under its direction or control in the performance of this MOA.

This provision will survive the expiration or termination of this MOA.

1. Conformance with Federal and State Regulations and Laws: Should federal or state regulations or laws touching upon the subject of this agreement be adopted or revised

during the term hereof, this agreement will be deemed amended to assure conformance with such federal or state requirements.

2. Each party agrees to be adequately self-insured or maintain adequate insurance coverage for its own equipment and personnel, including liability, workers' compensation, and property damage.

3. All Parties to this agreement should have equal access to the records created by any of the agencies involved in a request for assistance so that they can have the appropriate information to defend themselves in lawsuits.

4. If a party to this agreement is served with a claim or lawsuit arising out of an emergency response operation, that party shall timely notify every other party who responded to a request for assistance arising out of or connected with the same incident or emergency.

Section IX. Loans of Personnel and Equipment.

The requesting agency will be responsible for supplying and/or replacing supplies needed and/or used by officers from responding agencies. These supplies shall include food, fuels, lodging, or any other supplies that are reasonably needed to sustain the officers in enforcing the law and maintaining order. The responding agency will be responsible for any repairs and/or damages done to its own vehicles as a result of participation in a mutual aid event.

Section X. Expenditures.
Unless otherwise agreed, or under those circumstances where the State of California or the Federal Government will reimburse, responding agencies shall be responsible for all costs associated with the equipment and personnel under their control.

Section XI. Term, Modification, Termination, and Review.

1. Term. This agreement shall be in effect until it is replaced or discontinued following the provisions contained in this section and commences when this agreement has been approved by all signatory parties.

2. Modification. No changes or modification to this agreement shall be valid or binding upon parties to this agreement unless such changes or modification are in writing and executed by the parties

3. Termination. This agreement may be terminated as to any single party, when that party gives notice to all the other participating parties in writing at least ninety (90) days prior to its intended withdrawal from this agreement.

4. Review. This agreement shall be reviewed and updated as needed annually, by the Mutual Aid Coordinator.

Section XII. Signatories:

David Livingston, Sheriff Contra Costa County	Tony Morefield, Chief Antioch Police Dept.	Ed Alvarez, Chief BART Police Dept.
Tom Hansen, Chief Brentwood Police Dept.	Ben Moser, CMDR California Highway Patrol	Elise Warren, Chief Clayton Police Dept.
Ed Carney, Chief CCC College Dist. Police	Mark Bustillos, Chief Concord Police Dept.	Anthony Ciaburro, Chief EBRP Police Dept.
Paul Keith, Chief El Cerrito Police Dept.	William Imboden, Chief Hercules Police Dept.	Mike Gancasz, Chief Kensington Police Dept.
BETH JOHNSON - ACTING CHIEF Manjit Sappal, Chief Martinez Police Dept.	Jon King, Chief Moraga Police Dept.	Paul Beard, Chief Oakley Police Dept.
Neil Gang, Chief Pinole Police Dept.	Brian Addington, Chief Pittsburg Police Dept.	Bryan Hill, Chief Pleasant Hill Police Dept.

Louie Tirona, Acting Chief Richmond Police Dept.	Ron Raman, Chief San Pablo Police Dept.	Diana Becton District Attorney
Craig Stevens, Chief San Ramon Police Dept.	Jamie Knox, Chief Walnut Creek Police Dept	

Contra Costa Law Enforcement County Protocols

Police Service Dogs

Revised July 2013

Purpose:

To establish guidelines for requesting the assistance of a Police Service Dog from an allied Law Enforcement Agency and to establish a standard operating procedure for agencies to adhere to after the deployment and use of a Police Service Dog.

Policy:

Each Law Enforcement Agency in Contra Costa County has policies and procedures which govern the behavior of their individual employees. Nothing in this protocol should be interpreted to supersede those individual agency policies. Rather, this protocol should be viewed as a policy on how agencies will perform their duties when requesting, or responding to the request of, an allied agency for the use of a Police Service Dog and the responsibilities assumed after a Police Service Dog is deployed

1. Any deployment of a Police Service Dog will conform to the policies and procedures which govern the actions of the agency having control of the Police Service Dog.

2. When deciding to deploy the Police Service Dog, consideration should be given to the age of the offender. Except in circumstances of great bodily injury, or extreme danger to Officers and/or citizens, Police Service Dogs should not typically be used when the offender is known to be under 14 years of age.

3. Police Service Dogs may be used during riot and crowd control events when they are preplanned and rules of engagement are clearly defined.

4. During non-planned crowd control events, Police Service Dogs will only be deployed on an outside assist basis when the following applies:

    a. A supervisor from the Police Service Dog agency is on scene.
    b. There is clear threat to the safety of officers or innocent bystanders.
    c. The deployment of the Police Service Dog would otherwise meet the threshold of deployment for the agency owning the Dog.
    d. The Police Service Dogs agency does not have a policy prohibiting their use in crowd control events.

Requests for Assistance:

Police Service Dogs will be requested from allied agencies through the standard communication process, typically each agencies dispatch centers. At the time of the request, the requesting agency will provide the facts and circumstances surrounding the incident they are working. The request will be reviewed by the supervisor and Police Service Dog handler to assure the use will meet the requirements of their agency.

Upon arrival, the Police Service Dog handler will meet with the Officer in charge to receive a detailed briefing. The Police Service Dog handler will again confirm the requested use falls within his/her departmental policy.

After his/her assessment, the Police Service Dog handler will advise the officer in charge of his/her planned response. The handler shall maintain the authority to stop any search or deployment at anytime during the incident.

Documentation:

Both the requesting agency and the responding agency will produce written police reports in the event the Police Service Dog is responsible for the apprehension of the suspect. The reports shall minimally include the reason for the request, actions taken when the Police Service Dog was on scene, injuries sustained (if any) resulting from the Police Service Dogs use, and all efforts to provide aide to injured parties after injuries sustained. Photos of all injuries sustained will be taken and supplied to the involved agencies.

Care and Custody:

In cases where a Police Service Dog is used to assist in an apprehension, it shall be the responsibility of the requesting agency to take custody of the arrestee and provide/arrange for any necessary medical care.

Contra Costa Law Enforcement County Protocols

SART

Revised May 2012

Contra Costa County SART
Task Force Members

Contra Costa Regional Medical Center - CCRMC
Contra Costa County Employment and Human Services Department, Child & Family Services
Community Violence Solutions / Rape Crisis Center
Contra Costa County Board of Supervisors
Contra Costa County District Attorney's Office
Contra Costa County Crime Lab
Police Departments:
- Antioch Police Department
- BART Police Department
- Brentwood Police Department
- California Highway Patrol - CHP
- Clayton Police Department
- Concord Police Department
- Contra Costa Community College District
- Contra Costa County Office of the Sheriff
- Danville Police Department
- East Bay Regional Parks
- El Cerrito Police Department
- Hercules Police Department
- Kensington Police Department
- Lafayette Police Department
- Martinez Police Department
- Moraga Police Department
- Oakley Police Department
- Orinda Police Department
- Pinole Police Department
- Pittsburg Police Department
- Pleasant Hill Police Department
- Richmond Police Department
- San Pablo Police Department
- San Ramon Police Department
- Walnut Creek Police Department

Contra Costa County

SART

Protocol

January 2012/2013
Revised 05/2012

Members of the Sexual Assault Response Team include:

Community Violence Solutions / Rape Crisis Center
Contra Costa Regional Medical Center
Contra Costa County District Attorney's Office
Contra Costa County Crime Lab
Contra Costa County Law Enforcement Agencies
Contra Costa County Department of Health Services
Contra Costa County Employment and Human Services
Contra Costa County Victim Witness Assistance Unit

SEXUAL ASSAULT RESPONSE TEAM-Contra Costa
PROTOCOL

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SART PROTOCOL DOCUMENT

DEVELOPMENT OF PROTOCOL

The Contra Costa County Executive SART Task Force Members will have the ultimate responsibility for developing, approving and implementing the protocol.

Upon approval, a representative from each member agency of the Sexual Assault Response Team shall sign the Protocol Document.

The SART Protocol Document shall be made available to members of the SART Task Force, Law Enforcement Agencies, the Sexual Assault Nurse Examiner (SANE), Sexual Assault Forensic Examiner (SAFE) team, Community Violence Solutions (CVS) Staff and Volunteer Counselors, and to any participating agency at their request. Each member of the SART Executive Task Force will keep a copy of the protocol document.

The SART Executive Task Force will conduct an annual review of the protocol document. This shall be accomplished in order to determine the needs for revision. After this review is completed, a recommendation will be presented to the entire Task Force. The Protocol Document will be reviewed annually during the month of October.

Current protocols shall remain in effect until canceled or superseded. Newly adopted protocols shall be noted as such, noting also the date of adoption.

Contra Costa County Sexual Assault Response Team Protocol for Sexual Assault Cases

STATEMENT OF PURPOSE

The mission of the Sexual Assault Response Team (SART) is to coordinate and implement services to victims of sexual assault.

SART is an innovative concept that allows for enhanced sensitivity to sexual assault victims' needs, rapid medical response, more enhanced enforcement interviews and greater prosecution ability. SART is a countywide program coordinated by Contra Costa County Executive SART Task Force, Community Violence Solutions (CVS), Contra Costa County District Attorney's Office (DA), Local Law Enforcement Agencies, Contra Costa County Department of Health Services (CFS), Contra Costa Regional Medical Center (CCRMC), Contra Costa County Crime Lab. Services offered through SART include medical evidentiary collection and examination, forensic interviews, emotional support, advocacy, court accompaniment, counseling, information and referrals, follow-up, expert witness testimony and other support services for the victim and the family. The medical evidentiary examination is provided by Sexual Assault Nurse Examiners (SANE) and/or Sexual Assault Forensic Examiners (SAFE) who are employed by the County Health Services Department and have attended and completed training sexual assault examiner training.

Many professionals may feel unclear as to what their role is in cases of sexual assault and/or have questions about the best way to proceed. We have attempted to establish protocols for all members of the SART. The protocol is intended to be used by all involved agencies as a guideline for handling sexual assault cases. It is designed to clarify the roles and responsibilities of respective agencies, procedures to be followed, and make all of us more aware of the issues that need to be considered in sexual assault cases.

This protocol can contribute to positive change on behalf of victims of sexual assault only to the extent it is issued and implemented.

PHILOSOPHY OF INTERVENTION

Intervention in sexual assault cases should be for the purpose of accomplishing the following goals:

- Protecting the victim from further assault
- Minimizing the effects of the assault on the victim and encouraging the healing process
- Arresting and prosecuting the offender
- Providing for the needs of the victim and their family through counseling, advocacy, support and accompaniment
- A sensitive, yet comprehensive medical exam and Forensic exam.
- Medical follow-up referral

While it is necessary to pursue the prosecution of the offender, it is important that the foremost concern of intervention in sexual assault cases remain the assistance and protection of the victim. Prosecution is an integral part of the intervention process. However, it is important not to lose sight of the needs of the victim throughout the process from the time the incident is reported to the time of adjudication and even following the completion of the court process.

Immediately upon receipt of a referral falling within this protocol, a support system should be put into place for the victim of sexual assault. The system should continue to operate until such time as the victim no longer needs the services. While each case is different, there are some special needs to be considered in each case:

1. We must believe victims when they state they have been sexually assaulted.

2. The victim needs to feel safe from further assault.

3. The victim needs a support system that is always available to him/her. This support system may include Child & Family Services (CFS), Law Enforcement, a CVS Victim Advocate, District Attorney, a therapist, and/or medical treatment.

4. The victim needs to feel that THEY ARE NOT TO BLAME and the offender is the wrongdoer and is to blame. If possible, the offender will be prosecuted.

5. Victims need coordination of services among agencies working on their cases.

6. The needs of the victim's family must be considered throughout the process.

BASIC PROCEDURES FOR SEXUAL ASSAULT CASES

It is understood that not all cases fall neatly within a specific category or classification. But, as a general guideline the following categories are created:

CHILD VICTIM - Under 12 years of age

1. The initial verbal report is made to a Law Enforcement and if appropriate then Child & Family Services at (925) 646-1680 (Hotline: (925) 427-8811 East, (510) 374-3324 West). In addition, reports need to be filed for all cases of in-home abuse for victims under the age of 18 years old. A written report of suspected child abuse is required within 36 hours – See Appendix A - CFS Reporting form – (Suspected Child Abuse Report).

2. Agency receiving the initial report will cross report to each other (i.e. Law Enforcement will notify CFS and vice versa).

3. If there is a question over jurisdiction, contact each law enforcement agency in question and allow them to determine appropriate jurisdiction.

4. Law Enforcement or CFS will perform the initial intake interview. Referral to the Children's Interview Center (CIC) for a forensic interview is at the Police Department's discretion, though encouraged.

5. Law Enforcement or CFS can then contact Community Violence Solutions Crisis Line at 1-800-670-7273 for a CVS Counselor to offer additional emotional support and advocacy for the entire family.

6. If a victim presents to Kaiser Permanente or other medical facility in Contra Costa County, the victim will have a medical screening exam and, if necessary, treated for emergent medical needs. The medical facility notifies Law Enforcement in the city in which the sexual assault occurred. Then request to authorize evidentiary exam if less than 120 hours. Once Law Enforcement has authorized the exam, the medical facility is to obtain a case number and call to notify CCRMC ED of a patient referral for a sexual assault forensic exam. The hospital where the victim presents or law enforcement will assist with arrangements for the victim to be transported to CCRMC ED.

7. **If the assault occurred within 120 hours of report (Acute)**, Law Enforcement will take the victim to Contra Costa Regional Medical Center Emergency Department for medical care and sexual assault evidentiary examination. Call CCRMC Emergency Department Charge Nurse 925-370-5975 and notify the ED of your arrival. If the requesting personnel is experiencing any difficulty with this process, or needs advice about how to proceed, they should ask to speak to the physician in charge at the Emergency Department. A call to CVS advocate Counselor will provide initial crisis response. Law Enforcement will sign/or phone authorize on the CalEMA 2-930 form (Appendix B) to approve the medical evidentiary exam. Referring hospitals (after medical screening exam) will discharge the patient and then refer patient for evidentiary examination. The referring hospital must have the CFS reporting form (Suspected Child Abuse Report) completed by their physician and faxed to 925-370-5266 to CCRMC ED.

7. **If the assault did not occur within 120 hours of report,** Law Enforcement will make the decision of whether or not to proceed with the forensic medical examination. (If unsure call CCRMC ED Charge Nurse 925-370-5975 or Pediatrician on call 925-346-4733 for consultation) In the case of chronic sexual abuse or non-acute cases of sexual assault, LE (or CFS) should contact the Children's Interview Center (925-646-2305) to arrange for forensic interview and possible non-acute medical examination in the CIC Medical Suite. See appendix for Procedures for CIC Medical Exam referrals.

8. Upon completion of **acute** exam, Law Enforcement if present receives the evidence from the SANE/SAFE or Law Enforcement will be called to pick up the evidence. Both the officer and examiner/or ED charge nurse will sign off on evidence collected noting the chain of custody. Once the call is received by the law enforcement agency it is imperative the agency picks up the evidence urgently to preserve the evidence.

9. A CVS Counselor will make the victim and his or her family aware of the supporting agencies within the community.

10. Victims and/or their families will be referred to CVS for additional services and referrals for the services available in Contra Costa County, Children's Interview Center, STAND! Against Domestic Violence, Victim Witness Assistance, Planned Parenthood, private physician, and/or other appropriate services).

11. Law Enforcement will coordinate with CFS as to whether removal from the home is needed, followed by placement.

12. Law Enforcement will make a determination regarding initial charges, custody, etc. of suspected offender.

13. If the case goes to trial the Sexual Assault Forensic Examiner (SAFE) will testify as a medical examiner when requested by the DA's office.

ADULT (18+) & ADOLESCENT VICTIMS (12-17AGE) –

1. Law Enforcement receives the initial verbal compliant from victim or the victim arrives to a medical facility.

2. Law Enforcement will immediately notify Community Violence Solutions 24-hour Crisis Line for a CVS Counselor, 1-800-670-7273, once a sexual assault victim presents.

3. If the victim is under the age of 18, and the abuse occurred within the home, an initial report must be made by the Law Enforcement Officer to Child & Family Services. A written report of suspected child abuse must be filed within **36 hours.**

4. Law Enforcement makes the decision to authorize a forensic examination and signs/phone authorizes the CalEMA form (appendix B). Once CCRMC has been notified the victim is in route; CCRMC then contacts the on-call SANE/SAFE, and contacts CVS if not already called by Law Enforcement.

5. A SANE/SAFE (must have ID badge) should respond to the hospital within 60 minutes of the call. It is Contra Costa Regional Medical Center's responsibility to call the SANE/SAFE following ED protocol for contact.

6. Law Enforcement if present should consult with the SANE/SAFE in regards to the case.

7. If a victim presents to Kaiser Permanente or other medical facility in Contra Costa County, the victim will have a medical screening exam and, if necessary, treated for emergent medical needs. The medical facility notifies Law Enforcement in the city in which the sexual assault occurred and informs if victim incident less than 168 hrs (5 days), then request to authorize evidentiary exam with victim consent. Once Law Enforcement has authorized the exam, the medical facility is to obtain a case number and call to notify CCRMC ED of a patient referral for a sexual assault forensic exam. The hospital where the victim presents or law enforcement will assist with arrangements for the victim to be transported to CCRMC ED.

8. CVS Crisis Intervention Counselor will respond to hospital within 60 minutes of the call from CCRMC or Law Enforcement. The CVS Crisis Intervention Counselor (must have ID badge) will identify herself to the Emergency Department, Law Enforcement and to the victim in the SART waiting room. The CVS Counselor is present to advocate for the victim, provide emotional support and information to the victim and family, and provide appropriate referrals.

9. Interviews may be done in the SART exam room. Delay of bring the victim to the hospital should be avoided.

10. Victims have a right to a support person of their choosing and a CVS Counselor present during the interview and exam, as pursuant to Penal Code 679.04 - See Appendix C.

11. A SANE/SAFE will perform the forensic medical examination, with the appropriate consent of the patient.

12. Upon completion of exam, Law Enforcement if present receives the evidence from the SANE/SAFE or Law enforcement is called to pick up the evidence. Both the officer and examiner/or ED charge nurse will sign off on evidence collected noting the chain of custody. Once the call is received by the law enforcement agency it is imperative the agency picks up the evidence urgently to preserve the evidence.

13. Victims 12 years old and older have a legal right to refuse any or all parts of the forensic exam or to stop the exam at any time.

14. CVS Crisis Intervention Counselor will provide crisis intervention, counseling, emotional support, information and referral, and follow-up.

ROLE OF LAW ENFORCEMENT

1. Once it has been determined that a sexual assault has occurred, assess the victim's immediate safety needs. Then provide for injuries that require immediate medical attention.

2. If victim is in need of immediate medical care, transport to nearest medical facility and call CVS Crisis Line (1-800-670-7273) for the on-call CVS Counselor to respond. As soon as immediate medical needs are met the medical facility will notify Contra Costa Regional Medical Center (CCRMC) that a sexual assault victim is being discharged and referred for an evidentiary exam. (In **extreme medical situations,** the medical evidentiary exam may need to be performed at the hospital where the initial medical response occurred, page SART (925) 346-4456 or (925) 346-4079 for authorization to respond to other facilities within Contra Costa County).

3. Once the victim has a completed medical screening exam, and is stable for transport and discharged, transport to CCRMC Emergency Department. The victim will be screened by an Emergency Department Nurse, and then taken to the SART room- See Appendix D for directions.

4. Contra Costa Regional Medical Center Emergency Department will contact a SANE/SAFE to perform the medical evidentiary exam once authorized by Law Enforcement. The authorization for a medical evidentiary exam may be initiated by the physical presence of an officer, or by phone authorization for a medical evidentiary examination. The phone authorization may reduce the wait time for a SANE/SAFE to respond to the hospital.

5. Explain briefly to the victim the investigative steps that must be taken to properly and effectively investigate the case; i.e., collection of evidence by medical personnel, postponement of bathing, eating, drinking and brushing teeth in order to preserve all evidence, collection of soiled clothing, etc.

6. If victim has changed clothes, secure all items of clothing that victim was wearing at the time of attack. All clothing items are to be individually packaged in paper bags. Wet items are to be air dried as soon as possible and packaged in paper bags.

7. Advise the victim that she/he has the right to a certified Sexual Assault Crisis Intervention Counselor (CVS) and a support person during the investigation and medical examination. Officer can limit support person's involvement, as per penal code 679.04. This does not pertain to the CVS Victim Advocate. See Appendix C.

8. The officer will set the evidentiary exam in motion by phone authorization or by signing the CalEMA Form authorizing the medical evidentiary exam. If the victim is in need of immediate emergency medical care, they will then be treated as any other medical emergency.

9. Assure that a CVS Victim Advocate has been contacted (1-800-670-7273) as pursuant to Penal Code 679.04 - See Appendix C. Law Enforcement is required by law to inform the victim of their right to accompaniment in each case of sexual assault.

10. Work jointly with CVS and CFS (when appropriate) by cross-referring all cases of sexual assault.

11. Prior to the start of the exam, meet briefly with the SANE/SAFE to provide information, this may assist the SANE/SAFE in focusing the exam and interview process.

12. **Law Enforcement is to notify CCRMC Emergency Department if suspect will be sent to CCRMC ED for medical clearance for custody process.**

13. Law Enforcement or assigned officer is responsible for complete investigative interview with the victim (it is suggested this occur with the SANE/SAFE so repeated interviews can be avoided). The officer will participate in the history-taking portion of the exam. Once the investigative interview is complete the officer can return to duty while waiting for the physical evidence to be collected by the SANE/SAFE. The officer will be contacted to pick up evidence or can remain till end of exam to pick up evidence. (The SANE/SAFE and CVS Counselor will remain in the examination room with the victim).

14. Upon conclusion of the exam, the SANE/SAFE will communicate with the officer to obtain any additional information critical to the investigation. It is imperative that constant communication flows between the officer and the SANE/SAFE.

15. Upon completion of exam, Law Enforcement if present receives the evidence from the SANE/SAFE or Law enforcement is called to pick up the evidence. Both the officer and examiner/or ED charge nurse will sign off on CALEMA form following the chain of custody. Once the call is received by the law enforcement agency it is imperative the agency picks up the evidence urgently to preserve the evidence.

16. Law Enforcement writes all reports required by his/her agency.

17. Law Enforcement obtains all required medical information releases from the victim.

18. Arrest and custody of the suspect.

19. Provide all reports for criminal justice processes.

20. Ensure that the victim and his/her family are kept informed in a sensitive manner throughout the investigation.

21. Law Enforcement is to ensure that all victims have a safe place in which to go after the examination/or after sexual assault. Provide transportation if needed.

22. Law Enforcement is to follow all child abuse reporting procedures when applicable.

23. Law Enforcement should have the victim and or family bring clothing to change into if clothing will be collected. (A CVS Counselor should have an extra set of clothing for the victim if needed).

24. If applicable/requested, Emergency Department should notify the clergy services of the hospital.

25. Assist CVS Counselor and CFS in following the case through the criminal justice system when appropriate.

26. A representative from each Law Enforcement Agency (if appointed by their department) shall attend quarterly SART Task Force meetings.

27. A representative from the Police Chief's will attend the Executive SART Task Force meetings.

ROLE OF CONTRA COSTA COUNTY CRIME LAB

1. Assist with training SANE/SAFE and other medical personnel as required in the proper collection and preservation of forensic evidence.

2. Provide sexual assault kits to Contra Costa Regional Medical Center.

3. Examine, analyze and interpret findings of forensic evidence collected by SANE/SAFE.

4. Provide quality assurance of evidence collection and documentation process by providing comments to SANE/SAFE.

5. Inform and update SANE/SAFE and collaborative members regarding new policies, procedures and protocols regarding evidence collection.

6. Crime Lab personnel will be available for 24 hour consultation to the SANE/SAFE. Call Sheriff's dispatch (925) 646-2441 after hours.

7. Testify in court regarding findings in SART cases.

8. Participate in SART Executive task force meetings and quarterly task force meetings.

ROLE OF CHILD & FAMILY SERVICES

1. Receive reports of suspected child abuse.

2. Cross-report all cases of suspected child abuse to Law Enforcement.

3. Work jointly with Law Enforcement in investigation of suspected abuse. Follow the protocol as established by the Children's Interview Center.

4. Help in the coordination of the initial intake with CVS appropriate referral for follow-up.

5. If appropriate, contact CVS in order to provide crisis intervention services, emotional support, information and referral, advocacy, and accompaniment from the time of report through the court process for the victim and his/her family.

6. Contact family, if not already involved.

7. Assess whether child is in jeopardy by remaining in his/her home.

8. Determine appropriate action, along with Law Enforcement, in regard to an interview, medical exam and whether child must be removed from home.

ROLE OF CCRMC/ED PRIMARY NURSE

1. Contact a CVS Counselor if not already contacted by Law Enforcement. (Performance of the exam is completed with a CVS Counselor in the examination room, unless otherwise stated by the patient).

2. Report all cases of suspected or acknowledged child sexual assault to CFS and/or Law Enforcement.

3. Patients must be given the following information:

   - *The patient has the right to refuse collection of evidence.*
   - *The local government pays for the cost of the forensic medical examination once authorized by local police. (California Penal Code Section 13823.95.)*
   - *The patient can obtain prophylactic treatment for some sexually transmitted diseases and prevention of pregnancy without charge.*
   - *Consent for evidence collection may be withdrawn at any time.*
   - *The patient has the right to refuse collection of reference specimens, such as head and pubic hair, blood and/or buccal swabs.*
   - *Failure to collect reference samples will prevent the crime lab from conduction a comparative analysis of the evidence in question.*
   - *Physical evidence deteriorates rapidly, and must be collected as soon as possible or not at all.*

3. The SANE/SAFE will have the victim or the victim's agent sign the proper consent forms/CalEMA. Confirm proper Law Enforcement authorization in accordance with the state and local policies, CalEMA Form 2-923, 2-924, 2-930 for adults/adolescents and CalEMA Form 2-925 for children.

4. Provides professional nursing care that assesses, plans, implements, and evaluates needs in order to restore and promote the bio/psycho/social health of the survivor of sexual assault/abuse and to collect, preserve and document forensic evidence

5. Primary ED nurse assures emergent medical treatment and provides information/ referral on discharge for follow-up on assault related health care concerns that are not included as part of the evidentiary exam.

6. Provide written follow-up medical procedure to the sexual assault victim. Make sure the CVS Counselor knows the medical follow-up needs of the victim so that support, accompaniment and advocacy can be provided.

ROLE OF: SEXUAL ASSAULT NURSE EXAMINERS (SANE)
SEXUAL ASSAULT FORENSIC EXAMINERS (SAFE)

Provides the sexual assault victim with a medical evidentiary exam according to the following:

1. Respond to CCRMC SART room within 60 minutes of call from CCRMC ensures that the SART room is prepared prior to exam. SANE/SAFE nurse must have ID badge.

2. Comply with minimum CalEMA SART training requirements to perform medical evidentiary exams.

3. Confirm proper Law Enforcement authorization in accordance with the state and local policies, CalEMA Forms (appendix B)

4. Ascertain that the victim or the victim's agent has signed proper consent forms.

   - Patients must be given the following information:
   - *The patient has the right to refuse collection of evidence.*
   - *The local government pays for the cost of the forensic medical examination once authorized by local police. (California Penal Code Section 13823.95.)*
   - *The patient can obtain prophylactic treatment for some sexually transmitted diseases and pregnancy without charge.*
   - *Consent for evidence collection may be withdrawn at any time.*
   - *The patient has the right to refuse collection of reference specimens, such as head and pubic hair, blood and/o rbuccal swabs.*
   - *Failure to collect reference samples will prevent the crime lab from conduction a comparative analysis of the evidence in question.*
   - *Physical evidence deteriorates rapidly, and must be collected as soon as possible or not at all.*

5. Comply with evidence collection forms CalEMA 2-923, 2-924, 2-925, 2-930 – See Appendix B.

6. Properly document findings, using CalEMA Form 2-923, 2-924, 2-925 and 2-930 accordingly.

7. Obtain pictures as indicated by procedure, label and store following chain of custody procedures set for CCRMC digital imaging / film image processing.

8. Provide expert witness as needed.

9. Refer to CVS for support services.

10. Use the designated SART exam room at CCRMC for the sexual assault exams. Each SANE/SAFE should ensure that the cart is restocked with the equipment needed for the next case. Each SANE/SAFE should also complete necessary paperwork, and make an entry in the logbook furnished in the SART room.

11. Act as liaison between the criminal justice system and the health care system. This entails conferring with Law Enforcement prior to and following the exam in order to ascertain any additional information critical to the investigation. It is imperative that constant communication flows between Law Enforcement and the Nurse Examiner.

12. Upon completion of the exam, turn over the forensic evidence kit to Law Enforcement (or ED charge nurse if Law Enforcement not present) noting the chain of custody. The officer and the SANE/SAFE/ED charge nurse will sign off on evidence collected.

13. Consults with primary ED Physician and nurse whom coordinate the actions of others in response to the health needs of the client and the client's family.

14. Contact Contra Costa Regional Medical Center Housekeeping to clean SART room.

15. Attend SANE staff meetings and educational offerings, as well as quarterly case review meetings.

16. Attend and participate in SANE/SAFE/Advocate meetings, SART Task Force, Quarterly system review.

ROLE OF THE CVS - CRISIS INTERVENTION COUNSELOR

Community Violence Solutions advocates provides continuity of care from the first contact with the survivor to case closure by the following:

1. Respond to Contra Costa Regional Medical Center Emergency Department within 60 minutes of call from CCRMC. (See Appendix C for applicable Penal Code requirements)

2. Comply with the CalEMA training requirements to receive and continue certification as a Crisis Intervention Counselor.

3. Once at the hospital, with name badge on, identify self to Emergency Department charge nurse, Law Enforcement, SANE/SAFE and the victim.

4. Provide support and information (follow current HIPPA guidelines) to the victim and/or victim's significant other(s) throughout the entire process. Explain the SART services the victim is about to receive and the process that he/she will most likely experience (if not already done by primary ED nurse). If the patient refuses an advocate, the CVS Counselor must obtain a signed "Counselor Waiver Form" (as required by CVS funders) – See Appendix E (revised 3/03) In addition, provide victims with the following information:
   - The patient has the right to refuse collection of evidence.
   - The local government pays for the cost of the forensic medical examination once authorized by local police. (California Penal Code Section 13823.95.)
   - The patient can obtain testing for pregnancy and prophylactic treatment for some STDs without charge.
   - Consent for evidence collection may be withdrawn at any time.
   - The patient has the right to refuse collection of reference specimens, such as head and pubic hair, blood and/or buccal swabs.
   - Failure to collect reference samples will prevent the crime lab from conducting a comparative analysis of the evidence in question.
   - Physical evidence deteriorates rapidly, and must be collected as soon as possible or not at all.

5. During the interview & evidence collection procedures the CVS Counselor must minimize conversation with victim to allow SANE/SAFE to conduct a thorough evidentiary examination. CVS Counselor should coordinate patient medical concerns to the primary ED RN.

5. Provide a change of clothing for the victim if needed.

6. Advocate for the victim's rights when appropriate, with Law Enforcement, hospital staff, and/or significant others.

7. Attend to the needs of the victim.

8. If present, provide support to the victim during the police interview unless he/she prefers the CVS Counselor leave the room.

9. Stay with the victim throughout the exam, unless he/she prefer the CVS Counselor leave the room.

10. Explain options to those victims who may question or refuse the evidentiary exam. If the victim refuses exam, have the victim sign CVS Waiver Form.

11. CVS Counselor must NOT handle evidence or attempt to assist in the medical exam, interview questions or the labeling of evidence. CVS Counselors also must NOT be used as language interpreters due to confidentiality requirements and availability of on-going support to the victim.

12. Assist victim in making arrangements for transportation, housing and safety and assess if they have a personal support system available to them.

13. CVS Counselors are expected to stay with the victim until the SART exam is completed, follow-up instructions are given, and the victim has all CVS information: CVS card, 24 hour crisis line number, Victim Witness information, Medical Discharge Instruction Sheet, etc. Works with Law Enforcement to reasonable provide transportation to his/her destination of their choice. CVS Counselors are prohibited from driving any victims. If transportation is unavailable the police officer is called for transport.

14. Follow-up with victim within 72 hours of initial contact (hospital out-call).

In addition, rape crisis staff, as employees of Community Violence Solutions, is responsible for the following

1. Provide case management follow-up for victims as needed, preferably, once a week for one month, then monthly for a minimum of 6 months. Provide crisis intervention services and accompaniment as needed.

2. Provide information and referral to community resources for the victim (such as CVS Crisis Line and in-person counseling services, STAND! Against Domestic Violence, Planned Parenthood, Victim Witness, CVS Counseling Center, personal physician, and other appropriate services).

3. Be a support person throughout the criminal justice process.

4. Community Violence Solutions coordinates Task Force and System Review meetings, record and submit meeting minutes, monitor implementation and operational issues and report to Executive SART Task Force members to update and change protocols.

5. Conduct training about the SART Program for Contra Costa County law enforcement agencies, medical centers, public organizations, and other groups.

SART System Review Guidelines

Mission Statement

The purpose of the Contra Costa County SART Systems Review is to insure coordination in responding to sexual assault and to secure consistent services for victims. The cases that will be reviewed at the SART Systems Review will be acute sexual assault cases where the victim is ages 14 and older. By bringing various community systems that interact with sexual assault victims together for ongoing dialogue, develop and maintain a more coordinated response to sexual violence. We are committed to meeting the diverse needs of all SART Task Force members. The Systems Review Committee exemplifies how cooperation and collaboration can enhance outcomes of multi-disciplinary programs.

The Committee is comprised of representatives from Community Violence Solutions, The Contra Costa County District Attorney's Office, Law Enforcement Agencies, Contra Costa Regional Medical Center General Hospital, Contra Costa Crime Lab and Contra Costa Victim Witness.

System Review Goals

The SART Systems Review Committee will:

- Implement policies and procedures related to the SART program in Contra Costa County. Enhance communication between systems and clarify policies and procedures
- Address issues which lead to re-victimization, barriers to services and a reluctance to report
- Evaluate the strengths and weakness of the SART program and present outcomes to the Contra Costa SART Task Force at quarterly meetings
- Collect basic demographic victim information
- Utilize the SART System Review Checklist as a tool to discuss the systems, track the SART facility, forensic examination process, law enforcement, advocate agency participation and judicial outcomes
- Continue to educate ourselves and the community through multi-disciplinary trainings and adhering to current standards of professional practice
- Provide non-judgmental and honest interaction with victims and open respectful communication with other professionals
- Address any issues that impact a quality systems response within a timely manner with appropriate parties involved
- Listen/attend to one another's concerns and opinions and offer support through community education and resources
- Adhere to Confidentiality Policy (Members of the SART Task Force will adhere to the Confidentiality Policy by signing in on the SART Systems Review "Sign-in Sheet" at each meeting)

SART System Review Confidentiality Policy

1. Each agency shall take responsibility to identify and resolve any conflicts of interest or other ethical issues that may affect the agency's participation in any given case. All committee members shall assist members of the collaboration in becoming aware of conflicts of interest issues that may arise.

2. Members of the committee agree that otherwise confidential or sensitive information shared for the purpose of helping victims is not to be used for the purpose of prosecution or punishment of these persons.

3. Members shall avoid citing sources of information disclosed at meetings that could jeopardize the relationship that any member or community agency might have with a client.

4. Members are responsible for the appropriate management and disposition of any meeting notes, consistent with their agency's guidelines, professional codes of conduct and this confidentiality policy.

5. All members can be expected to comply with fiduciary or professional duties, if any, required of their relationship to client under discussion. Where, in the judgment of a member, he/she cannot participate in a collaborative discussion without compromising a legal, ethical, moral or professional standard, member/agency should not participate in discussions concerning that client.

6. Where confidential or privileged information about a client is likely to be discussed, persons or agencies with conflicts of interest against the client should excuse and remove him/her from the discussion room or site of communication.

7. Committee members shall not seek or acquire otherwise confidential or privileged information for purposes that would adversely affect the client under discussion.

ROLE OF CONTRA COSTA COUNTY DISTRICT ATTORNEY'S OFFICE - VICTIM / WITNESS UNIT.

1. Make contact with the victim as soon as possible after receiving the case information, and no later than 48 hours after receiving copies of cases filed by the District Attorney. Contact is made to offer and provide crisis intervention, support services and court accompaniment for victim and family. Victim Witness Unit will act as a liaison within the criminal justice system for the victim and family.

2. Work closely with CVS Counselor towards providing and coordinating referrals and needed services. Make referrals to CVS for court advocacy for victims who go to court, utilizing the CVS Confidential Referral form as set out in the Operational Agreement between the District Attorney and CVS.

3. Assist with filing of Victims of Violent Crimes Claims Forms/State Board of Control for reimbursement of medical, mental health and other eligible losses resulting from the crime. Also assist with the filing of Victim Compensation Program applications for medical, mental health and other eligible losses resulting from the crime.

4. Provide victims with case disposition and assist with the implementation of rights to be notified on cases where the defendants are sent to jail and/or prison.

5. Send a representative to participate in SART Executive task force meetings and quarterly task force meetings

ROLE OF THE CONTRA COSTA COUNTY DEPARTMENT OF HEALTH SERVICES

The Division of Health Services, in the Department of Health and Human Services, will coordinate the medical response component of the Sexual Assault Response Team at Contra Costa Regional Medical Center.

A. Department of Employment and Human Services will:

1. Coordinate training and Certification of Sexual Assault Nurse Examiners.

1. Oversee credentialing and hiring process for medical personnel & training

2. Establish and maintain an appropriate billing system for sexual assault examinations, supervising all billing and collection activities.

3. Coordinate with the Community Violence Solutions, Law Enforcement, the hospitals and the District Attorney to address ongoing operational and quality assurance activities related to medical personnel and their role with SART.

B. Role of Contra Costa Regional Medical Center

Contra Costa Regional Medical Center (CCRMC) will provide the facilities needed for the medical response of the Sexual Assault Response Team as follows:

1. Provide an examination room and a secure site for the collection of evidence.

2. Maintain and service all SART equipment as needed. This includes but is not limited to the photography equipment, the microscope, supplies, locked cabinetry, furnishings, evidence, and paperwork.

3. Keep the SART rooms stocked and organized.

4. Follow all basic procedures for sexual assault victims as outlined in protocol document.

5. Provide sexual assault forensic examination in the Emergency Department if a SANE/SAFE is not available.

6. Provide emergency medical care for the sexual abuse victims.

7. Provide ED physician for consultation with a SANE/SAFE for victims.

8. Provide a Pediatrician/FP for consultation with SANE/SANE for victims age 12-17.

9. Provide pediatrician/FP to work with SANE/SAFE when Victim under 12 year of age.

10. Agree to not bill SART victims or their insurance companies for SART exams.

C. Role of Contra Costa Regional Medical Center Emergency Department Nurse Program Manager/SART Coordinator will:

1. Oversee SANE/SAFE training program.

2. Coordinate examiners schedules, assure appropriate coverage, generate and distribute schedules and assure contact mechanism for on-call examiners.

3. Establish continuing quality assurance process of SART exams through chart and case review and proctoring.

4. Coordinate with other collaborative partners to address operational issues.

5. Assist with joint training with other collaborative partners on medical and forensic issues related to SART.

6. Participate in SART Executive task force meetings and quarterly task force meetings and Case Review meetings.

7. Provide support for both the on-call SANE/SAFE and SART preceptors.

8. Coordinate monthly SANE/SAFE staff meetings, educational offerings and Quality Assurance meetings.

9. Coordinate the training of Sexual Assault Nurse Examiners by screening potential SART candidates, scheduling training facility and scheduling all trainees.

10. Follow up with all SANE/SAFE issues, concerns and complaints, in regards to SART, the Emergency Department, STAT, CVS, Crime Lab, Law Enforcement and the DA.

11. Coordinate the SART preceptor-ships for potential SANE/SAFE.

12. Write and update all SART protocols and procedures.

13. Coordinate; provide leadership for SART Executive Taskforce meetings.

14. Coordinate SART billing with STAT Nursing Registry.

15. Coordinate SART billing with police agencies.

16. Track all cases from hospital exam through judicial system.

17. Assure Sexual Assault Exam Kits (SAEK) are properly stocked at each SART room.

18. Provide implementation and assessment tools to satisfy on-going quality assurance of SANE/SAFE performance.

D. Role of the CCRMC Emergency Department Physician

1. Evaluate and treat patients for acute medical illnesses and injuries.

2. Check pregnancy status, risk of pregnancy, and treat with post coital prophylaxis, if appropriate.

3. Offer empiric treatment for STD's, when appropriate.

4. Consider/offer post exposure HIV prophylaxis to sexual assault patients when appropriate.

5. Ensure that all components of evaluation have been completed including forensic examination and medical treatment.

6. Provide follow up recommendations to sexual assault victim.

7. Be available for consultation for SANE/SAFE nurses who are providing forensic examinations of sexual assault victims who are > 12 years of age.

E. Role of Adult SART Medical Consultant

1. Update local hospitals annually regarding county SART protocols.

2. Update CCRMC ED physicians periodically regarding any SART protocol changes and coordinate in-service education as needed.

3. Provide continuing quality assurance of SART examinations through chart review of cases of patients > 12 years of age.

4. Participate in SART Executive task force meetings and case review.

5. Provide consultation to CCRMC Emergency Department physicians regarding sexual assault cases.

F. Role of the Pediatric Hospitalist

1. Participate in pediatric (<12 yr) forensic examinations with SANE/SAFE and ED physician. Pediatrician on call can be reached by paging at 925-346-4733 (4PED).

2. Respond in a timely manner to patient following the arrival of the SANE/SAFE.

3. Participate in continuing education regarding child sexual assault, including completion of CCFMTC Ped's/SAFE training

4. Provide court testimony as needed in cases that are prosecuted.

5. Provide telephone consultation to LE, CFS, or healthcare providers regarding medical aspects of child sexual abuse if pediatric SART medical consultant is not available.

G. Role of the Pediatric SART Medical Consultant

1. Be available to provide or supervise forensic examinations for non-acute cases of sexual abuse of children under the age of 18 in the CIC – medical suite or, if necessary, in the CCRMC SART Room.

2. Assist with joint training with other collaborative partners on medical and forensic issues related to SART.

3. Provide continuing quality assurance process of SART exams through chart and case review and proctoring.

4. Provide in-service education regarding child sexual abuse to pediatric hospitalist, SANE/SAFE and residents.

5. Coordinate use of CIC- medical suite or the SART exam room and supplies with staff and the SANE/SAFE as needed.

6. Provide expert witness testimony for sexual assault cases as needed.

7. Participate in SART executive task force meetings and quarterly SART task force meetings.

8. Provide consultation regarding child sexual abuse to LE, CFS, DA, and healthcare providers.

9. Provide bimonthly SART updates to Pediatric Department.

SART PROTOCOL DOCUMENT
APPROVED BY:

Contra Costa County Police Chiefs' Association

_____ **Date:** _____

Community Violence Solutions

_____**Date:** _____

Contra Costa County, Office of the District Attorney

_____**Date:** _____

Contra Costa Regional Medical Center

_____**Date:** _____

_____**Date:** _____

Contra Costa County Crime Lab

_____**Date:** _____

APPENDIX A

CHILD & FAMILY SERVICES REPORTING – FORM

(SUSPECTED CHILD ABUSE REPORT)

Print

SUSPECTED CHILD ABUSE REPORT

Reset Form

To Be Completed by **Mandated Child Abuse Reporters**
Pursuant to Penal Code Section 11166

PLEASE PRINT OR TYPE

CASE NAME: _____

CASE NUMBER: _____

A. REPORTING PARTY

NAME OF MANDATED REPORTER	TITLE	MANDATED REPORTER CATEGORY
REPORTER'S BUSINESS/AGENCY NAME AND ADDRESS — Street / City / Zip		DID MANDATED REPORTER WITNESS THE INCIDENT? ❒ YES ❒ NO
REPORTER'S TELEPHONE (DAYTIME) ( )	SIGNATURE	TODAY'S DATE

B. REPORT NOTIFICATION

❒ LAW ENFORCEMENT ❒ COUNTY PROBATION ❒ COUNTY WELFARE / CPS (Child Protective Services) — AGENCY

ADDRESS — Street / City / Zip — DATE/TIME OF PHONE CALL

OFFICIAL CONTACTED - TITLE — TELEPHONE ( )

C. VICTIM

One report per victim

NAME (LAST, FIRST, MIDDLE)	BIRTHDATE OR APPROX. AGE	SEX	ETHNICITY
ADDRESS — Street / City / Zip		TELEPHONE ( )	
PRESENT LOCATION OF VICTIM	SCHOOL	CLASS	GRADE
PHYSICALLY DISABLED? ❒ YES ❒ NO	DEVELOPMENTALLY DISABLED? ❒ YES ❒ NO	OTHER DISABILITY (SPECIFY)	PRIMARY LANGUAGE SPOKEN IN HOME
IN FOSTER CARE? ❒ YES ❒ NO	IF VICTIM WAS IN OUT-OF-HOME CARE AT TIME OF INCIDENT, CHECK TYPE OF CARE: ❒ DAY CARE ❒ CHILD CARE CENTER ❒ FOSTER FAMILY HOME ❒ FAMILY FRIEND ❒ GROUP HOME OR INSTITUTION ❒ RELATIVE'S HOME		TYPE OF ABUSE *(CHECK ONE OR MORE)* ❒ PHYSICAL ❒ MENTAL ❒ SEXUAL ❒ NEGLECT ❒ OTHER (SPECIFY)
RELATIONSHIP TO SUSPECT	PHOTOS TAKEN? ❒ YES ❒ NO		DID THE INCIDENT RESULT IN THIS VICTIM'S DEATH? ❒ YES ❒ NO ❒ UNK

D. INVOLVED PARTIES

VICTIM'S SIBLINGS

NAME	BIRTHDATE	SEX	ETHNICITY	NAME	BIRTHDATE	SEX	ETHNICITY
1.				3.			
2.				4.			

VICTIM'S PARENTS/GUARDIANS

NAME (LAST, FIRST, MIDDLE)	BIRTHDATE OR APPROX. AGE	SEX	ETHNICITY
ADDRESS — Street / City / Zip	HOME PHONE ( )	BUSINESS PHONE ( )	
NAME (LAST, FIRST, MIDDLE)	BIRTHDATE OR APPROX. AGE	SEX	ETHNICITY
ADDRESS — Street / City / Zip	HOME PHONE ( )	BUSINESS PHONE ( )	

SUSPECT

SUSPECT'S NAME (LAST, FIRST, MIDDLE)	BIRTHDATE OR APPROX. AGE	SEX	ETHNICITY
ADDRESS — Street / City / Zip	TELEPHONE ( )		
OTHER RELEVANT INFORMATION			

E. INCIDENT INFORMATION

IF NECESSARY, ATTACH EXTRA SHEET(S) OR OTHER FORM(S) AND CHECK THIS BOX ☐ *IF MULTIPLE VICTIMS, INDICATE NUMBER:* _____

DATE / TIME OF INCIDENT	PLACE OF INCIDENT

NARRATIVE DESCRIPTION (What victim(s) said/what the mandated reporter observed/what person accompanying the victim(s) said/similar or past incidents involving the victim(s) or suspect)

SS 8572 (Rev. 12/02)

DEFINITIONS AND INSTRUCTIONS ON REVERSE

DO NOT submit a copy of this form to the Department of Justice (DOJ). The investigating agency is required under Penal Code Section 11169 to submit to DOJ a Child Abuse Investigation Report Form SS 8583 if (1) an active investigation was conducted and (2) the incident was determined not to be unfounded.

WHITE COPY-Police or Sheriff's Department; BLUE COPY-County Welfare or Probation Department; GREEN COPY- District Attorney's Office; YELLOW COPY-Reporting Party

APPENDIX B

Forensic Medical Report

Cal EMA 2-923

Cal EMA 2-924

Cal EMA 2-925

Cal EMA 2-930

Cal EMA 2-923

FORENSIC MEDICAL REPORT:
ACUTE (< 168 HOURS = 7 days)

ADULT (18+ yrs old)
ADOLESCENT (12-17yrs old)

SEXUAL ASSAULT EXAMINATION

State of California
California Emergency Management Agency

FORENSIC MEDICAL REPORT: ACUTE ~~(<72 HOURS)~~ (<168 Hours) ADULT/ADOLESCENT SEXUAL ASSAULT EXAMINATION

CalEMA 2-923

For more information or assistance in completing the Cal-EMA 2-923 please contact University of California, Davis California Medical Training Center at: (916) 734-4141

This form is available on the following Web site: www.CalEMA.ca.gov

FORENSIC MEDICAL REPORT: ACUTE (~~<72 HOURS~~) (<168 Hours)
ADULT/ADOLESCENT SEXUAL ASSAULT EXAMINATION

STATE OF CALIFORNIA
California Emergency Management Agency

CalEMA 2-923

Confidential Document

Patient Identification

A. GENERAL INFORMATION (print or type)

Name of Medical Facility: Contra Costa Regional Medical Center

1. Name of patient | **Patient ID number**

2. Address | **City** | **County** | **State** | **Telephone** (W) (H)

3. Age	DOB	Gender M F	Ethnicity	Arrival Date	Arrival Time	Discharge Date	Discharge Time

B. REPORTING AND AUTHORIZATION

Jurisdiction (☐city ☐county ☐other):

1. Telephone report made to law enforcement agency
Name of Officer | **Agency** | **ID Number** | **Telephone**

Reported by:
Name | **Date** | **Time**

2. Responding Officer | **Agency** | **ID Number** | **Telephone**

3. I request a forensic medical examination for suspected sexual assault at public expense.

Law enforcement officer | **ID number** | **Agency**

Telephone Authorization
Agency:
Authorizing party:
ID number:
Date/time:

Telephone | **Date** | **Time** | **Case Number**

C. PATIENT INFORMATION

- I understand that hospitals and health care professionals are required by Penal Code Sections 11160-11161 to report to law enforcement authorities cases in which medical care is sought when injuries have been inflicted upon any person in violation of any state penal law. The report must state the name of the injured person, current whereabouts, and the type and extent of injuries. _____ (Initial)

- I have been informed that victims of crime are eligible to submit crime victim compensation claims to the State Victims of Crime (VOC) Restitution Fund for out-of-pocket medical expenses, psychological counseling, loss of wages, and job retraining and rehabilitation. _____ (Initial)

D. PATIENT CONSENT

Minors: Family Code Section 6927 permits minors (12 to 17 years of age) to consent to medical examination, treatment, and evidence collection for sexual assault without parental consent. See instructions for parental notification requirements for minors.

- I understand that a forensic medical examination for evidence of sexual assault at public expense can, with my consent, be conducted by a health care professional to discover and preserve evidence of the assault. If conducted, the report of the examination and any evidence obtained will be released to law enforcement authorities. I understand that the examination may include the collection of reference specimens at the time of the examination or at a later date. I understand that I may withdraw consent at any time for any portion of the examination. _____ (Initial)

- I understand that collection of evidence may include photographing injuries and that these photographs may include the genital area. _____ (Initial)

- I hereby consent to a forensic medical examination for evidence of sexual assault. _____ (Initial)

- I understand that data without patient identity may be collected from this report for health and forensic purposes and provided to health authorities and other qualified persons with a valid educational or scientific interest for demographic and/or epidemiological studies. _____ (Initial)

Signature _____ ☐ Patient ☐ Parent ☐ Guardian

DISTRIBUTION OF CalEMA 2-923

☐ Original - Law Enforcement ☐ Copy within evidence kit - Crime Lab ☐ Copy - Child Protective Services (if patient is a minor) ☐ Copy - Medical Facility Records

E. PATIENT HISTORY

1. Name of person providing history:	Relationship to patient:	Date	Time

2. Pertinent medical history:

- Last menstrual period

- Any recent (60 days) anal-genital injuries, surgeries, diagnostic procedures, or medical treatment that may affect the interpretation of current physical findings? ☐ No ☐ Yes
  If yes, describe:

- Any other pertinent medical condition(s) that may affect the interpretation of current physical findings? ☐ No ☐ Yes
  If yes, describe:

- Any pre-existing physical injuries? ☐ No ☐ Yes
  If yes, describe:

3. Pertinent pre- and post-assault related history:

	No	Yes	Unsure
• Other intercourse within past 10 days?	☐	☐	
If yes,			
anal (within past 10 days)? When _____	☐	☐	
vaginal (within past 10 days)? When _____	☐	☐	
oral (within past 24 hours)? When _____	☐	☐	
If yes, did ejaculation occur?	☐	☐	☐
If yes, where? _____			
If yes, was a condom used?	☐	☐	☐
• Any voluntary alcohol use within 12 hours prior to assault?	☐	☐*	
• Any voluntary drug use within 96 hours prior to assault ?	☐	☐*	
• Any voluntary drug or alcohol use between the time of the assault and the forensic exam?	☐	☐*	

* If yes, collection of toxicology samples is recommended according to local policy. ☐ Blood ☐ Urine

4. Post-assault hygiene/activity: ~~☐ Not applicable if over 72 hours~~

	No	Yes
Urinated	☐	☐
Defecated	☐	☐
Genital or body wipes	☐	☐
If yes, describe: _____		
Douched	☐	☐
If yes, with what _____		
Removed/inserted tampon☐ diaphragm☐	☐	☐
Oral gargle/rinse	☐	☐
Bath/shower/wash	☐	☐
Brushed teeth	☐	☐
Ate or drank	☐	☐
Changed clothing	☐	☐
If yes, describe: _____		

5. Assault-related history:

	No	Yes
Loss of memory? If yes, describe:	☐	☐*
Lapse of consciousness? If yes, describe:	☐	☐*

*If yes, collection of toxicology samples is recommended according to local policy. ☐Blood ☐Urine

Vomited? If yes, describe:	☐	☐
Non-genital injury, pain and/or bleeding? If yes, describe:	☐	☐
Anal-genital injury, pain, and/or bleeding? If yes, describe:	☐	☐

Patient Identification

F. ASSAULT HISTORY

1. Date of assault(s):	Time of assault(s):

2. Pertinent physical surroundings of assault(s):

3. Alleged assailant(s) name(s)	Age	Gender	Ethnicity	Relationship to patient	
				Known	Unknown
#1.		M F			
#2.		M F			
#3.		M F			
#4.		M F			

4. Methods employed by assailant(s):

	No	Yes	If yes, describe:
Weapons	☐	☐	
Threatened?	☐	☐	
Injuries inflicted?	☐	☐	
Type(s) of weapons?	☐	☐	
Physical blows	☐	☐	
Grabbing/holding/pinching	☐	☐	
Physical restraints	☐	☐	
Choking/strangulation	☐	☐	
Burns (thermal and/or chemical)	☐	☐	
Threat(s) of harm	☐	☐	
Target(s) of threat(s)	☐	☐	
Other methods	☐	☐	

Involuntary ingestion of alcohol/drugs ☐ No ☐ Yes ☐ Unsure

If yes, ☐ Alcohol ☐ Drugs

If yes, ☐ Forced ☐ Coerced ☐ Suspected

If yes, toxicology samples collected: ☐ Blood ☐ Urine ☐ None

5. Injuries inflicted upon the assailant(s) during assault? ☐ No ☐ Yes
If yes, describe injuries, possible locations on the body, and how they were inflicted.

G. ACTS DESCRIBED BY PATIENT

- **Any penetration of the genital or anal opening, however slight, constitutes the act.**
- **Oral copulation requires only contact**
- **If more than one assailant, identify by number.**

Patient Identification

1. Penetration of vagina by:

	No	Yes	Attempted	Unsure
Penis	☐	☐	☐	☐
Finger	☐	☐	☐	☐
Object	☐	☐	☐	☐

If yes, describe the object:

Describe: _____

2. Penetration of anus by:

	No	Yes	Attempted	Unsure
Penis	☐	☐	☐	☐
Finger	☐	☐	☐	☐
Object	☐	☐	☐	☐

If yes, describe the object:

Describe: _____

3. Oral copulation of genitals:

	No	Yes	Attempted	Unsure
Of patient by assailant	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐

Describe: _____

4. Oral copulation of anus:

	No	Yes	Attempted	Unsure
Of patient by assailant	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐

Describe: _____

5. Non-genital act(s):

	No	Yes	Attempted	Unsure
Licking	☐	☐	☐	☐
Kissing	☐	☐	☐	☐
Suction injury	☐	☐	☐	☐
Biting	☐	☐	☐	☐

Describe: _____

6. Other act(s):

No	Yes	Attempted	Unsure
☐	☐	☐	☐

Describe: _____

7. Did ejaculation occur?

No	Yes	Unsure
☐	☐	☐

If yes, note location(s):

- ☐ Mouth
- ☐ Vagina
- ☐ Anus/Rectum
- ☐ Body surface
- ☐ On clothing
- ☐ On bedding
- ☐ Other

Describe: _____

8. Contraceptive or lubricant products:

	No	Yes	Unsure
Foam used?	☐	☐	☐
Jelly used?	☐	☐	☐
Lubricant used?	☐	☐	☐
Condom used?	☐	☐	☐

Describe Type/Brand, if known: _____

Alleged assailant #_____

H. GENERAL PHYSICAL EXAMINATION

Record all findings using diagrams, legend, and a consecutive numbering system.

1. Blood Pressure	Pulse	Resp	Temp	2. Exam Started		Exam Completed	
				Date	Time	Date	Time

3. Describe general physical appearance	4. Describe general demeanor

Patient Identification

5. Describe condition of clothing upon arrival.

6. Collect outer and underclothing if indicated. ☐ Not indicated

7. Conduct a physical examination. ☐ Findings ☐ No Findings

8. Collect dried and moist secretions, stains, and foreign materials from the body. Scan the entire body with a Wood's Lamp.

☐ Findings ☐ No Findings

9. Collect fingernail scrapings or cuttings according to local policy.

Diagram A

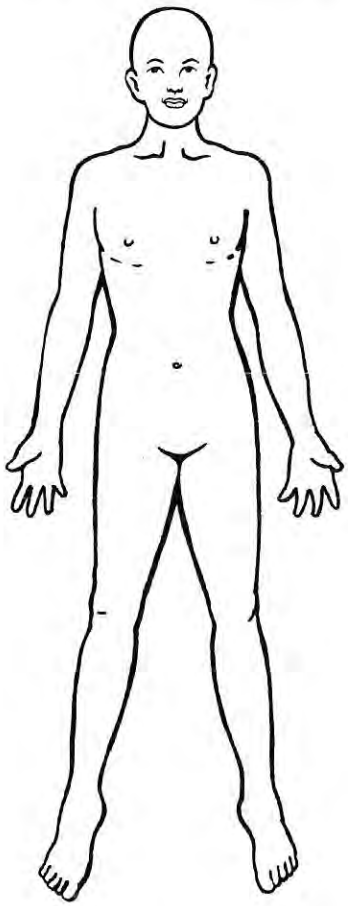
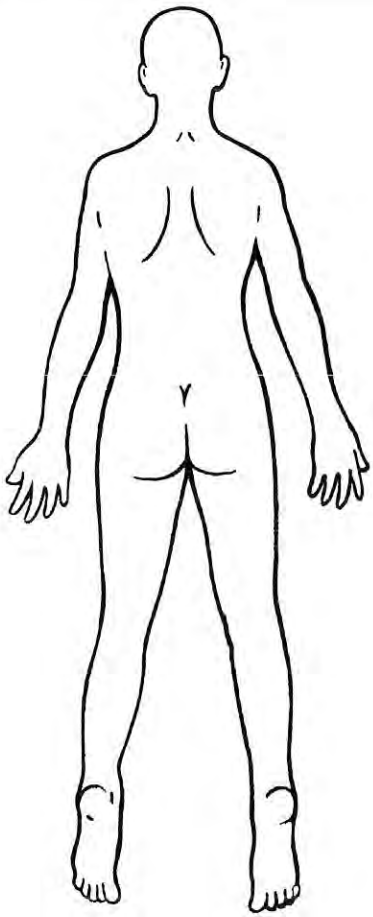


Diagram B



LEGEND: Types of Findings

AB	Abrasion	**DF**	Deformity	**FB**	Foreign Body	**MS**	Moist Secretion	**PE**	Petechiae	**TB**	Toluidine Blue ⊕
BI	Bite	**DS**	Dry Secretion	**IN**	Induration	**OF**	Other Foreign Materials (describe)	**PS**	Potential Saliva	**TE**	Tenderness
BU	Burn	**EC**	Ecchymosis (bruise)	**IW**	Incised Wound			**SHX**	Sample Per History	**V/S**	Vegetation/Soil
CS	Control Swab	**ER**	Erythema (redness)	**LA**	Laceration	**OI**	Other Injury (describe)	**SI**	Suction Injury	**WL**	Wood's Lamp ⊕
DE	Debris	**F/H**	Fiber/Hair					**SW**	Swelling		

Locator #	Type	Description	Locator #	Type	Description

RECORD ALL CLOTHING AND SPECIMENS COLLECTED ON PAGE 8

I. HEAD, NECK, AND ORAL EXAMINATION

Record all findings using diagrams, legend, and a consecutive numbering system.

1. **Examine the face, head, hair, scalp, and neck for injury and foreign materials** ☐ Findings ☐ No Findings
2. **Collect dried and moist secretions, stains, and foreign materials from the face, head, hair, scalp, and neck.** ☐ Findings ☐ No Findings
3. **Examine the oral cavity for injury and foreign materials (if indicated by assault history). Collect foreign materials.** **Exam done:** ☐ Not applicable ☐ Yes ☐ Findings ☐ No Findings
4. **Collect 2 swabs from the oral cavity up to 12 hours post assault and prepare one dry mount slide from one of the swabs.**
5. **Collect head hair reference samples according to local policy.**

Patient Identification

Diagram C

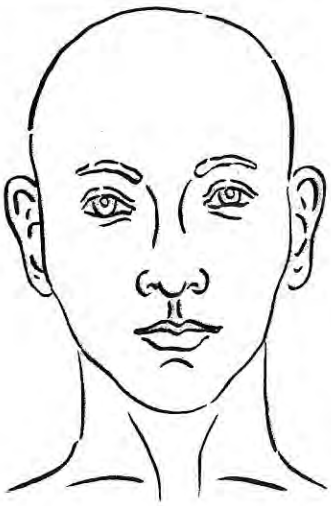


Diagram D

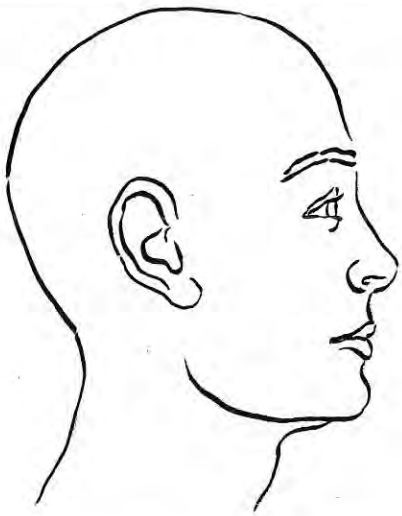
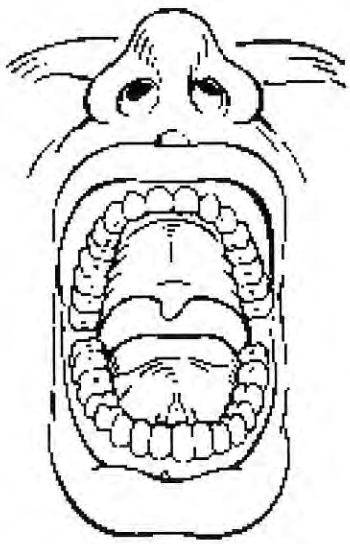


Diagram E



Diagram F



LEGEND: Types of Findings

AB	Abrasion	**DF**	Deformity	**FB**	Foreign Body	**MS**	Moist Secretion	**PE**	Petechiae	**TB**	Toluidine Blue ⊕
BI	Bite	**DS**	Dry Secretion	**IN**	Induration	**OF**	Other Foreign Materials (describe)	PS	Potential Saliva	**TE**	Tenderness
BU	Burn	**EC**	Ecchymosis (bruise)	**IW**	Incised Wound			**SHX**	Sample Per History	**V/S**	Vegetation/Soil
CS	Control Swab	**ER**	Erythema (redness)	**LA**	Laceration	**OI**	Other Injury (describe)	**SI**	Suction Injury	**WL**	Wood's Lamp ⊕
DE	Debris	**F/H**	Fiber/Hair					**SW**	Swelling		

Locator #	Type	Description	Locator #	Type	Description

RECORD ALL SPECIMENS COLLECTED ON PAGE 8

J. GENITAL EXAMINATION - FEMALES

Record all findings using diagrams, legend, and a consecutive numbering system.

1. Examine the inner thighs, external genitalia, and perineal area. Check the box(es) if there are assault related findings:

☐ No Findings

☐ Inner thighs
☐ Perineum
☐ Labia majora
☐ Labia minora
☐ Clitoris/surrounding area
☐ Periurethral tissue/urethral meatus
☐ Perihymenal tissue (vestibule)
☐ Hymen
☐ Fossa navicularis
☐ Posterior fourchette

2. Collect dried and moist secretions, stains, and foreign materials. Scan the area with a Wood's Lamp. ☐ Findings ☐ No Findings

3. Collect pubic hair combing or brushing.

4. Collect pubic hair reference samples according to local policy.

5. Examine the vagina and cervix. Check the box(es) if there are assault related findings.

☐ No Findings ☐ Vagina ☐ Cervix

6. Collect 4 swabs from the vaginal pool. Prepare one wet mount slide and one dry mount slide.

7. Collect 2 cervical swabs (if over 48 hours post assault).

8. Examine the buttocks, anus, and rectum (if indicated by history).
Exam done: ☐ **Yes** ☐ **Not applicable**
Check the box(es) if there are assault related findings:

☐ No Findings

☐ Buttocks ☐ Anal verge/folds/rugae
☐ Perianal skin ☐ Rectum

9. Collect dried and moist secretions, stains, and foreign materials.
☐ Findings ☐ No Findings

10. Collect 2 anal and/or rectal swabs and prepare one dry mount slide.

11. Conduct an anoscopic exam if rectal injury is suspected or if there is any sign of rectal bleeding.
Rectal bleeding ☐ No ☐ Yes
If yes, describe:_____

12. Exam position used:
☐ Supine ☐ Other Describe:

LEGEND: Types of Findings

AB Abrasion	**EC** Ecchymosis (bruise)	**MS** Moist Secretion	**SI** Suction Injury
BI Bite	**ER** Erythema (redness)	**OF** Other Foreign	**SW** Swelling
BU Burn	**F/H** Fiber/Hair	Materials (describe)	**TB** ToluidineBlue⊕
CS Control Swab	**FB** Foreign Body	**OI** Other Injury (describe)	**TE** Tenderness
DE Debris	**IN** Induration	**PE** Petechiae	**V/S** Vegetation/Soil
DF Deformity	**IW** Incised Wound	**PS** Potential Saliva	**WL** Wood's Lamp⊕
DS Dry Secretion	**LA** Laceration	**SHX** Sample Per History	

Locator #	Type	Description

Patient Identification

Diagram G

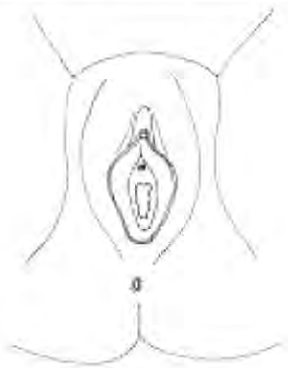


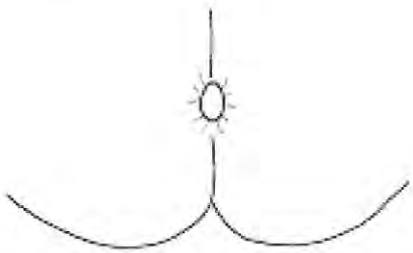
Diagram H



Diagram I



Diagram J



RECORD ALL SPECIMENS COLLECTED ON PAGE 8

K. GENITAL EXAMINATION – MALES

Record all findings using diagrams, legend, and a consecutive numbering system.

1. **Examine the inner thighs, external genitalia, and perineal area. Check the box(es) if there are assault related findings:**
   - ☐ No Findings
   - ☐ Inner thighs ☐ Glans penis ☐ Scrotum
   - ☐ Perineum ☐ Penile shaft ☐ Testes
   - ☐ Foreskin ☐ Urethral meatus
2. **Circumcised:** ☐ No ☐ Yes
3. **Collect dried and moist secretions, stains, and foreign materials. Scan the area with a Wood's Lamp.** ☐ Findings ☐ No Findings
4. **Collect pubic hair combing or brushing.**
5. **Collect pubic hair reference samples according to local policy.**
6. **Collect 2 penile swabs, if indicated by assault history.** ☐ N/A
7. **Collect 2 scrotal swabs, if indicated by assault history.** ☐ N/A
8. **Examine the buttocks, anus, and rectum (if indicated by history)**
   Exam done: ☐ **Yes** ☐ **Not applicable**
   Check the box(es) if there are assault related findings:
   - ☐ No Findings
   - ☐ Buttocks ☐ Anal verge/folds/rugae
   - ☐ Perianal skin ☐ Rectum
9. **Collect dried and moist secretions, stains, and foreign materials.**
   ☐ Findings ☐ No Findings
10. **Collect 2 anal and/or rectal swabs and prepare one dry mount slide.**
11. **Conduct an anoscopic exam if rectal injury is suspected or if there is any sign of rectal bleeding.**
    Rectal bleeding: ☐ No ☐ Yes
    If yes, describe: _____
12. **Exam position used:**
    ☐ Supine ☐ Other Describe:

LEGEND: Types of Findings

AB	Abrasion	**EC**	Ecchymosis (bruise)	**MS**	Moist Secretion	**SI**	Suction Injury
BI	Bite	**ER**	Erythema (redness)	**OF**	Other Foreign Materials (describe)	**SW**	Swelling
BU	Burn	**F/H**	Fiber/Hair			**TB**	ToluidineBlue⊕
CS	Control Swab	**FB**	Foreign Body	**OI**	Other Injury (describe)	**TE**	Tenderness
DE	Debris	**IN**	Induration	**PE**	Petechiae	**V/S**	Vegetation/Soil
DF	Deformity	**IW**	Incised Wound	**PS**	Potential Saliva	**WL**	Wood's Lamp⊕
DS	Dry Secretion	**LA**	Laceration	**SHX**	Sample Per History		

Locator #	Type	Description

Patient Identification

Diagram K

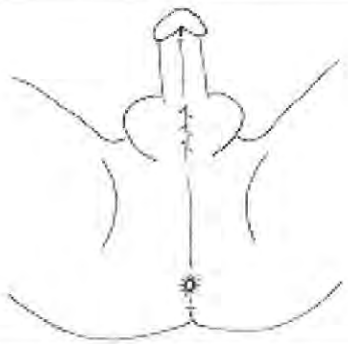


Diagram L

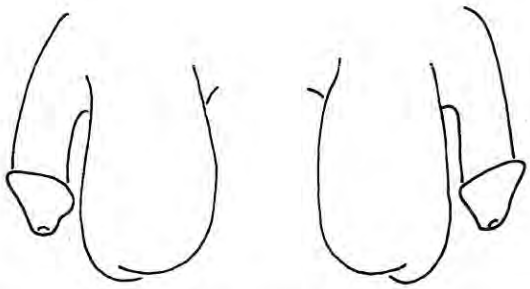


Diagram M

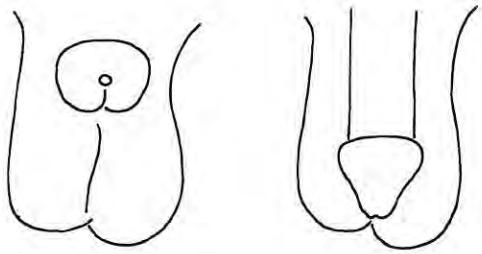
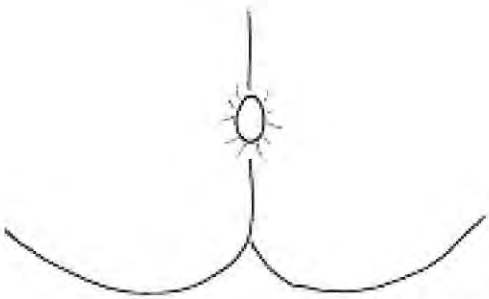


Diagram N



RECORD ALL SPECIMENS COLLECTED ON PAGE 8

L. EVIDENCE COLLECTED AND SUBMITTED TO CRIME LAB

1. Clothing placed in evidence kit	Other clothing placed in bags
	☐ Collection Paper

2. Foreign materials collected

	No	Yes	Collected by:
Swabs/suspected blood	☐	☐	
Dried secretions	☐	☐	
Fiber/loose hairs	☐	☐	
Vegetation	☐	☐	
Soil/debris	☐	☐	
Swabs/suspected semen	☐	☐	
Swabs/suspected saliva	☐	☐	
Swabs/Wood's Lamp⊕ area(s)	☐	☐	
Control swabs	☐	☐	
Fingernail ~~scrapings~~/cuttings	☐	☐	
Matted hair cuttings	☐	☐	
Pubic hair ~~combings~~/brushings	☐	☐	
Intravaginal foreign body	☐	☐	
If yes, describe:			
Other types	☐	☐	
If yes, describe:			

3. Oral/genital/anal/rectal samples

	# Swabs	# Slides	Time collected	Collected by:
Oral				
Vaginal				
Cervical		X		
Anal		X		
Rectal				
Penile		X		
Scrotal				

Aspirate/washings (optional) ☐ No ☐ Yes

4. Vaginal wet mount slide

	No	Yes	Time	Examiner:
Slide prepared				
Motile sperm observed				
Non-motile sperm observed				

M. TOXICOLOGY SAMPLES

	No	Yes	Time	Collected by:
Blood alcohol/toxicology (gray top tube)				
Urine toxicology				

N. REFERENCE SAMPLES

	No	Yes	Collected by:
Blood (lavender top tube)	X		
Blood (yellow top tube)	X		
Blood Card (optional) (FTA Card)			
Buccal swabs (optional)			
Saliva swabs	X		
Head hair			
Pubic hair			

O. PHOTO DOCUMENTATION METHODS

	No	Yes	Colposcope/ 35mm	Macrolens/ 35mm	Colposcope/ Videocamera	Other Optics
Body	☐	☐	☐	☐	☐	☒ Digital
Genitals	☐	☐	☐	☐	☐	☒ Digital

Photographed by:

Patient Identification

P. RECORD EXAM METHODS

	No	Yes		No	Yes
Direct visualization only	☐	☐	Toluidine Blue Dye	☐	☐
Colposcopy	☒	☐	Anoscopic exam	☐	☐
Other magnifier	☐	☐	Anal speculum exam	☐	☐
Other	☐	☐			

If yes, describe: _____

Q. RECORD EXAM FINDINGS

☐ **Physical Findings** ☐ **No Physical Findings**

R. RECORD ASSESSMENT OF FINDINGS

☐ Exam consistent with history
☐ Exam inconsistent with history

S. SUMMARIZE FINDINGS

☐ Photo review pending (may alter assessment)

☐ Recommend interview & non-acute exam at CIC

T. PRINT NAMES OF PERSONNEL INVOLVED

History taken by:	Telephone:
Exam performed by:	
Specimens labeled and sealed by:	
Assisted by: ☐ N/A	
Signature of examiner	License No.

U. EVIDENCE DISTRIBUTION	GIVEN TO:
Clothing (item(s) not placed in evidence kit)	
Evidence Kit	
Reference blood samples	
Toxicology samples	

V. SIGNATURE OF OFFICER RECEIVING EVIDENCE

Signature: _____

Print name and ID #: _____

Agency: _____

Date: Phone:

Cal EMA 2-924

FORENSIC MEDICAL REPORT:
NO TIME LIMITATIONS

ABBREVIATED

ADULT (18+ yrs old)
ADOLESCENT (12-17yrs old)

SEXUAL ASSAULT EXAMINATION

State of California
California Emergency Management Agency

FORENSIC MEDICAL REPORT:

ABBREVIATED ADULT/ADOLESCENT SEXUAL ASSAULT EXAMINATION

CAL EMA 2-924

For more information or assistance in completing the CAL EMA 2-924, please contact the
California Clinical Forensic Medical Training Center at:
(916) 930-3080

This form is also available on the following websites:
www.ccfmtc.org
www.calema.ca.gov

FORENSIC MEDICAL REPORT: ABBREVIATED
ADULT/ADOLESCENT SEXUAL ASSAULT EXAMINATION

STATE OF CALIFORNIA
California Emergency Management Agency

Cal EMA 2-924

Confidential Document | Patient Identification

A. GENERAL INFORMATION (print or type)

1. Name of Medical or Examination Facility

Contra Costa Regional Medical Center

Name of patient | Patient ID number | Date | Time

B. MANDATORY REPORTING RESPONSIBILITY

1. Jurisdiction (☐ City ☐ County ☐ Other) Patient refused to disclose ☐ or unable to disclose location of assault ☐

2. Telephone report made to law enforcement agency ☐ Yes ☐ No ☐ N/A
Name of Officer | Agency | ID Number | Telephone

Reported by:
Name | Date | Time

3. Responding Officer | Agency | ID Number | Telephone

4. Acknowledgement of Mandatory Reporting Law for Healthcare Professionals by Patient

I understand that Penal Code Sections 11160-11161 requires healthcare professionals to make both a telephone and written report to a law enforcement agency if they provide medical services for a physical condition to a patient whom he or she knows or reasonably suspects is suffering from any wound or other physical injury where the injury is a result of assaultive or abusive conduct. Sexual assault statutes are listed in this mandate and they include, but are not limited to: rape, attempted rape, assault to commit rape, oral copulation, sodomy, and sexual battery. Sexual battery is defined as touching the intimate part of another person against the person's will. Touching is defined as physical contact with another person, whether accomplished directly through the clothing or physical contact with the skin of another person against a person's will. Submit the Cal EMA 2-920 Mandatory Reporting form to comply with the written report requirement. Use the Mandatory Report Case Number (also called Agency Incident Number) given by the law enforcement agency as identifying information for the Cal EMA 2-920, the Cal EMA 2-924,and the evidence kit; NOT the patient's name. Consult your local District Attorney's office if you have questions about this statute. Both the Cal EMA 2-920 and 2-924 can be downloaded from www.ccfmtc.org or www.calema.ca.gov. Also enter this identifying number on the patient discharge instructions for the patient. ____(Initial)

Mandatory Report Case Number (also called Agency Incident Number) obtained from the law enforcement agency: _____

Alternate Case Number (per local protocol) if incident not consistent will mandatory reporting law (see instructions): _____

C. INFORMED PATIENT CONSENT FOR ABBREVIATED ADULT/ADOLESCENT SEXUAL ASSAULT EXAMINATION

1. In accordance with the Violence Against Women Act of 2005, 42 U.S.C. § 3796gg-4(d), states and territories may not "require a victim of sexual assault to participate in the criminal justice system or cooperate with law enforcement in order to be provided with a forensic medical exam." Abbreviated Forensic Medical Exams provide individuals who have been reportedly sexually assaulted access to a Sexual Assault Forensic Medical Exam (SAFE) without engaging with law enforcement.

1. ____(Initial)

2. **By delaying an interview and not engaging with law enforcement at this time, the following may occur:** 2. ____(Initial)
   - An Abbreviated Sexual Assault Forensic Medical Exam collecting only perishable evidence will be performed.
   - Evidence that would normally be collected by law enforcement will be permanently lost.
   - Suspects and witnesses will not be interviewed, they may not be identifiable or located, or willing to cooperate at a later time.
   - It may be more difficult, if at all possible, for a prosecutor to file charges against a suspect.
   - I may or may not be eligible for California Victim Compensation Funds to pay for out-of-pocket expenses relating to this crime, including counseling, out-of-pocket medical expenses for medical evaluation and treatment, moving expenses and lost wages by not cooperating with law enforcement per State law.

3. **If I decide instead to engage with law enforcement at this time, the benefits will include:**
   Law enforcement will have an opportunity to collect evidence from the crime scene(s), interview suspect(s) and witnesses in a timely fashion, and a complete Sexual Assault Forensic Examination will be performed. 3. ____(Initial)

4. **I do not want to be interviewed at this time by law enforcement and request an Abbreviated Sexual Assault Forensic Medical Exam.** 4. ____(Initial)

5. **I understand that I will not be billed for this exam per Violence Against Women Act (VAWA) of 2005, 42 U.S.C. § 3796gg-4(d)** 5. ____(Initial)

6. **After a Sexual Assault Forensic Medical Exam is performed, law enforcement will transport the evidence collected to storage, and law enforcement will store this evidence for 2 years.** 6. ____(Initial)

   All evidence collected during the Abbreviated Sexual Assault Forensic Medical Exam may be destroyed by law enforcement agencies after 2 years and a 60 day notice will be given to me pursuant to the Sexual Assault Victim Bill of Rights. Law enforcement will need, however, a current address on file. If requested in writing, I will be notified before the evidence kit is destroyed.

7. **I understand that medication is available to decrease the risk of pregnancy and/or sexually transmitted diseases that may occur as a result of the sexual assault. The SAFE can provide you with a referral for this follow up medical care, if needed.** 7. ____(Initial)

8. **Material from the exam, including photographs, may be used without identifiers for education and scientific purpose.** 8. ____(Initial)

I have read and understand all of the above and consent to an Abbreviated Sexual Assault Forensic Medical Exam.

Patient's name (please print) | Signature | Date

D. PATIENT HISTORY: FORENSIC MEDICAL EXAM QUESTIONNAIRE TO BE COMPLETED BY PATIENT

Name_____ Age _____ Date of Birth_____ Gender M F Date/Time_____

Who is filling out this form, if not patient? _____ Relationship_____

Please answer all of the following questions. The answers will help preserve the details of the sexual assault if you decide to report to law enforcement later. The answers will be kept confidential. If you do not understand any of the words in this questionnaire, please ask the medical provider.

When did the sexual assault occur? Date_____ Time _____

Where did the sexual assault occur? _____

Name of assailant(s) _____ Age _____ Gender M F Relationship_____
_____ Age_____ Gender M F Relationship _____

#	Sexual Acts that Occurred	No	Yes	Unsure	Choose not to answer	Additional Details
1.	Did the assailant put any of the following in your vagina?					
	Penis					
	Finger					
	Other object (what?)					
2.	Did the assailant put any of the following in your anus?					
	Penis					
	Finger					
	Other objects (what?)					
3.	Did assailant's mouth touch your genitals?					
4.	Did assailant's penis touch your mouth?					
5.	Did assailant's mouth touch your anus?					
6.	Did the assailant make you put your mouth on his/her anus?					
7.	Did assailant lick you with his/her tongue, kiss you, suck on you (hickey) or bite you? If yes, where?					
8.	Did the assailant ejaculate (cum/finish)?					
	In your mouth?					
	In your vagina?					
	In your anus?					
	On your skin?					
	On any of the clothes you were wearing?					
9.	Did the assailant use any lubricants, such as: saliva, lotions, gels, or creams? Please circle					
10.	Did the assailant use a condom?					

#	Other information about the assault, before the assault and since the assault:	No	Yes	Unsure	Choose not to answer	Additional Details
1.	Did the assailant have or use a weapon? Please circle.					
2.	Did the assailant strangle/choke you?					
3.	Did the assailant force you to drink alcohol or take drugs?					
4.	Do you think you might have been drugged without your knowledge?					
5.	Did you scratch or injure the assailant?					
6.	Did you pass out or lose consciousness?					
7.	Do you remember what happened clearly?					
8.	Did you vomit during or afterwards?					
9.	Do you think your genitals were injured?					
10.	Do you think your anus was injured?					
11.	Do you think your body was injured anywhere? Where?					
12.	Have you had intercourse with anyone else within the past 5 days: anal, vaginal, or oral? Please circle.					
13.	If the answer to #12 is yes, was a condom used?					
14.	Did you voluntarily use alcohol within 12 hours prior to the assault?					
15.	Did you voluntarily use any drugs or prescription medications within 96 hours prior to the assault?					
16.	Did you voluntarily use drugs or prescription medications or alcohol between the time of the assault and now?					
17.	What was the first day of your last menstrual period?	Answer:				

#	Since the assault, have you...	No	Yes	Unsure	Choose not to answer	Additional Details
1.	Urinated?					
2.	Had a bowel movement?					
3.	Washed, bathed or showered? Circle.					
4.	Douched?					
5.	Removed or inserted a tampon or a diaphram? Circle.					
6.	Gargled or rinsed your mouth out?					
7.	Wiped off your genitals?					
8.	Brushed your teeth?					
9.	Had anything to eat or drink? Circle.					
10.	Changed your clothing?					

Signed _____ (Patient)

Date _____

Reviewed _____ (SAFE) – Print Name

_____ (SAFE) – Signature

E. GENERAL INFORMATION (print or type)

1. Name of patient		Patient ID number		Patient Identification	
2. Address		City			
County	State		Zip		
Telephone (H)	(C)				
3. Age	DOB	Gender M F	Ethnicity	Date/Time patient arrived at facility	Date/Time patient discharged from facility

F. GENERAL PHYSICAL EXAMINATION

Record all findings using diagrams, legend, and a consecutive numbering system

1. Blood Pressure	Pulse	Date/Time History and the Exam Process Started	Date/Time Exam Process Completed	2. Was patient able to cooperate with exam: ☐Yes ☐No
				If no explain:

3. Collect clothing that is nearest to genital structures.
4. Review patient questionnaire and conduct a physical examination for findings relevant to assault. Injuries? ☐ Yes ☐ No Foreign Materials? ☐ Yes ☐ No
5. Collect samples per patient history and per Wood's Lamp⊕. Samples Collected? ☐ Yes ☐ No
6. Collect fingernail scrapings or cuttings according to local policy.
7. Collect 2 swabs from the oral cavity up to 24 hours post assault, if indicated per history, or if history absent or incomplete.

Diagram A

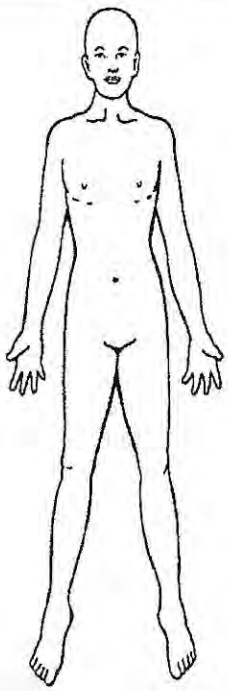


Diagram B

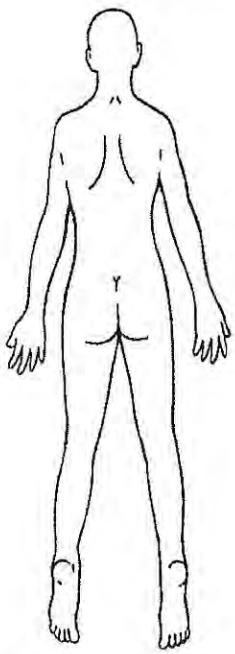
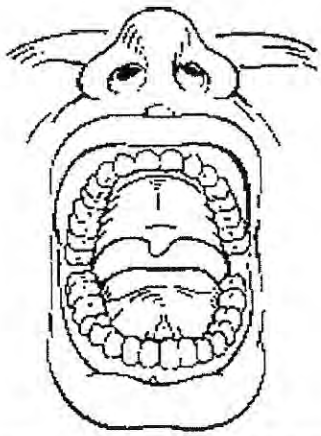


Diagram C



LEGEND: Types of Findings

AB Abrasion	DF Deformity	FB Foreign Body	OF Other Foreign Materials (describe)	SI Suction Injury
BI Bite	DS Dry Secretion	IN Induration	OI Other Injury (describe)	SW Swelling
BU Burn	EC Ecchymosis (bruise)	IW Incised Wound	PE Pelechiae	TB Toluidine Blue®
CS Control Swab	ER Erythema (redness)	LA Laceration	PS Potential Saliva	TE Tenderness
DE Debris	F/H Fiber/Hair	MS Moist Secretion	SHX Sample Per History	V/S Vegetation/Soil
				WL Wood's Lamp®

Locator #	Type	Description	Locator #	Type	Description

G. FEMALE GENITALIA

Record all findings using diagrams, legend, and a consecutive numbering system.

1. Examine the inner thighs, external genitalia, vestibule, vagina and perineal area. Check the box(es) if there are assault related findings.
   - ☐ No Findings
   - ☐ Inner thighs
   - ☐ Perineum
   - ☐ Labia Majora
   - ☐ Labia Minora
   - ☐ Clitoris/surrounding area
   - ☐ Vagina
   - ☐ Periurethral tissue/urethral meatus
   - ☐ Perihymenal tissue (vestibule)
   - ☐ Hymen
   - ☐ Fossa Navicularis
   - ☐ Posterior Fourchette
   - ☐ Cervix
2. Collect 4 swabs from the vagina pool.
3. Collect 2 cervical swabs.

H. MALE GENITALIA

Record all findings using diagrams, legend, and a consecutive numbering system.

1. Examine the inner thighs, external genitalia, and perineal area. Check the box(es) if there are assault related findings.
   - ☐ No Findings
   - ☐ Inner thighs
   - ☐ Perineum
   - ☐ Foreskin
   - ☐ Glans penis
   - ☐ Penile Shaft
   - ☐ Urethral meatus
   - ☐ Scrotum
   - ☐ Testes
2. Circumcised: ☐ No ☐ Yes
3. Collect 2 penile swabs, if indicated by assault history. ☐ N/A
4. Collect 2 scrotal swabs, if indicated by assault history. ☐ N/A
5. Collect dried and moist secretions, stains, and foreign materials.
   ☐ Findings ☐ No Findings

I. ANAL AND RECTAL EXAM

Record all findings using diagrams, legend, and a consecutive numbering system.

1. Examine the buttocks and external anus using traction. Check findings if relevant to assault:
   - ☐ No Findings
   - ☐ Buttocks
   - ☐ Perianal Skin
   - ☐ External anus/anal verge/folds/rugae
   - ☐ Rectum
2. Collect 2 perianal swabs.
3. Conduct an anoscopic exam if rectal injury is suspected or if there is any sign of rectal bleeding. Collect 2 rectal swabs if anoscopy done.
   Rectal Bleeding: ☐ No ☐ Yes, describe:
   Rectal Injuries/Other: ☐ No ☐ Yes, describe:
4. Exam position used: ☐ Supine ☐ Other describe:

LEGEND: Types of Findings

AB Abrasion	EC Ecchymosis (bruise)	MS Moist Secretion	SI Suction Injury
BI Bite	ER Erythema (redness)	OF Other Foreign Materials (describe)	SW Swelling
BU Burn	F/H Fiber/Hair	OI Other Injury (describe)	TB Toluidine Blue®
CS Control Swab	FB Foreign Body	PE Pelechiae	TE Tenderness
DE Debris	IN Induration	PS Potential Saliva	V/S Vegetation/Soil
DF Deformity	IW Incised Wound	SHX Sample Per History	WL Wood's Lamp®
DS Dry Secretion	LA Laceration		

Locator #	Type	Description

PATIENT IDENTIFICATION

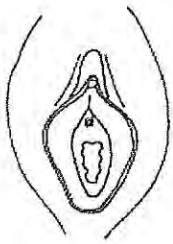


Diagram D

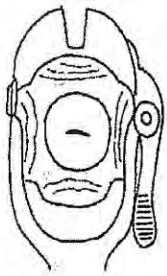


Diagram E

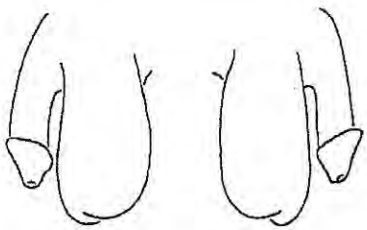


Diagram F

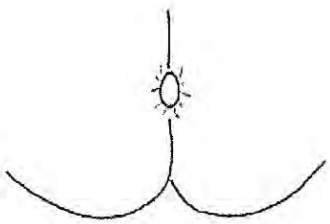


Diagram G

J. EVIDENCE COLLECTED

1. Underwear Collected? ☐ No ☐ Yes

2. Foreign materials collected

	No	Yes	Collected by:
Swabs/suspected blood	☐	☐	
Dried secretions	☐	☐	
Fiber/loose hairs	☐	☐	
Vegetation soil/debris	☐	☐	
Swabs/suspected semen	☐	☐	
Swabs/suspected saliva	☐	☐	
Swabs/Wood's Lamp⊕	☐	☐	
Control swabs	☐	☐	
Fingernail scrapings/cuttings	☐	☐	
Matted hair cuttings	☐	☐	
Intravaginal foreign body	☐	☐	

If yes, describe: _____

Other types ☐ ☐ _____

If yes, describe: _____

3. Oral/genital/anal/rectal/samples

Type	# Swabs	Time Collected	Collected By:
Oral			
Vaginal			
Cervical			
Anal			
Rectal			
Penile			
Scrotal			

K. TOXOLOGY SAMPLES

	No	Yes	Collected By:
Blood alcohol/toxicology	☐	☐	
Urine toxicology	☐	☐	

L. PHOTO DOCUMENTATION METHOD

	No	Yes	Colposcope	Macrolens	Other Optics
Body	☐	☐	☐	☐	☐
Genitals	☐	☐	☐	☐	☐

Still images, ~~video images~~? (Circle)

Photographed by: _____

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☐ Copy within evidence kit ☐ Copy to Exam Facility

Patient Identification

M. RECORD EXAM METHODS

	NO	YES
Colposcopy	☐	☐
Toluidine Blue Dye	☐	☐
Vaginal Speculum Exam	☐	☐
Anoscopic Exam	☐	☐
Other	☐	☐

Describe: _____

N. RECORD EXAM FINDINGS

☐ Physical Findings ☐ No Physical Findings

O. SUMMARY OF POSITIVE FINDINGS:

P. PRINT NAMES OF PERSONNEL INVOLVED

Exam performed by:	Telephone:
Specimens labeled and sealed by:	
Assisted by: ☐ N/A	
Signature of examiner:	License No.

Q. SIGNATURE OF OFFICER RECEIVING EVIDENCE

Signature:

Print Name and ID No.

Agency:

Date:

R. OTHER STORAGE LOCATION ☐ No ☐ Yes

If yes, specify: _____

S. DATE/TIME EXAM COMPLETED, EVIDENCE DRIED AND PACKAGED, AND WRITE-UP COMPLETED

Date _____ Time _____

Cal EMA 2-925

FORENSIC MEDICAL REPORT:
NON-ACUTE (> 120 HOURS = 5 days)

CHILD (UNDER AGE 12)

SEXUAL ASSAULT EXAMINATION

State of California
California Emergency Management Agency

FORENSIC MEDICAL REPORT: NONACUTE (~~>72 HOURS~~) (>120 Hours) CHILD/ADOLESCENT SEXUAL ABUSE EXAMINATION

CAL EMA 2-925

For more information or assistance in completing the CAL EMA 2-925, please contact
California Clinical Forensic Medical Training Center at:
(916) 930-3080 or www.ccfmtc.org

This form is also available on the following website:
www.calema.ca.gov

> 120 Hours

FORENSIC MEDICAL REPORT: NONACUTE (~~>72 HOURS~~)
CHILD/ADOLESCENT SEXUAL ABUSE EXAMINATION
STATE OF CALIFORNIA
CALIFORNIA EMERGENCY MANAGEMENT AGENCY

CalEMA 2-925

Confidential Document

Patient Identification

A. GENERAL INFORMATION (print or type)

Name of Medical Facility: Contra Costa Regional Medical Center

1. **Name of patient** — **Patient ID number**

2. **Address** — **City** — **County** — **State** — **Telephone**

3. Age	DOB	Gender	Ethnicity	Date/time of arrival	Date/time of discharge

4. **Name of :** ☐ Mother ☐ Stepmother ☐ Guardian — **Address** — **City** — **County** — **State** — **Telephone** W: H:

5. **Name of :** ☐ Father ☐ Stepfather ☐ Guardian — **Address** — **City** — **County** — **State** — **Telephone** W: H:

6. Name(s) of Siblings	Gender	Age	DOB	Name(s) of Siblings	Gender	Age	DOB
	M F				M F		
	M F				M F		

B. REPORTING AND AUTHORIZATION

Jurisdiction (☐ city ☐ county ☐ other**):**

1. Telephone report made to	Name	Agency	ID number	Telephone
Law Enforcement ☐ and/or Child Protective Services ☐				

2. Responding Personnel (to medical facility)	Name	Agency	ID number	Telephone
Law Enforcement ☐ and/or Child Protective Services ☐				

3. Assigned Investigator (if known)	Name	Agency	ID number	Telephone
Law Enforcement ☐				
Child Protective Services ☐				

4. Authorization for evidential exam requested by law enforcement or child protective services agency

I request a forensic medical examination for suspected sexual abuse at public expense.

Telephone Authorization
Agency:
Authorizing party:
ID number:
Date/time:

☐ **Law enforcement officer** **ID number** ☐ **Child Protective Services**

Telephone **Date** **Time** **Case number**

C. CONSENT FOR EXAMINATION BY PATIENT/PARENT/GUARDIAN

Note: Parental consent is not required for a suspected child sexual abuse examination if the child is in protective custody. Family Code Section 6927 permits minors (12 to 17 years of age) to consent to medical examination, treatment, and evidence collection for sexual assault without parental consent. See instructions regarding parental notification requirements for minors.

- I hereby consent to a forensic medical examination for evidence of sexual abuse. I understand that collection of evidence may include photographing injuries and that these photographs may include the anal-genital area (private parts). I further understand that medical providers are required to notify child protective authorities of known or suspected child abuse; and, if child abuse is found or suspected, this form and any evidence obtained will be released to a child protective agency.
- I have been informed that victims of crime are eligible to submit crime victim compensation claims to the State Victims of Crime (VOC) Restitution Fund for out-of-pocket medical expenses, psychological counseling, loss of wages, and job retraining/rehabilitation.
- I understand that data without patient identity may be collected from this report for health and forensic purposes and provided to health authorities and other qualified persons with a valid educational or scientific interest for demographic and/or epidemiological studies.

Signature _____ ☐ Patient ☐ Parent ☐ Guardian

DISTRIBUTION OF CalEMA 2-925

☐ Original – Law Enforcement ☐ Copy – Child Protective Services ☐ Copy – Medical Facility Records

D. PATIENT HISTORY

1. Record time or time frame of the incident(s)	Date(s)	Time or time frame
☐ More than 72 hours		
☐ Multiple incidents over time		

2. Record patient's name for:	3. Alleged perpetrator(s) name(s)	Age	Gender	Ethnicity	Relationship to Patient	
Female genitalia					Known	Unknown
Male genitalia	#1.		M F			
Breasts	#2.		M F			
Anus	#3.		M F			

E. ACTS DESCRIBED BY HISTORIAN

Name of historian	Relationship to patient	History obtained by:	Telephone	Agency ☐ Not applicable

	No	Yes	Attempted	Unsure	N/A	Describe pain and/or bleeding and additional pertinent history:
Genital/vaginal contact/penetration by:						
Penis	☐	☐	☐	☐	☐	
Finger	☐	☐	☐	☐	☐	
Object (Describe)	☐	☐	☐	☐	☐	
Associated pain?	☐	☐		☐	☐	
Associated bleeding?	☐	☐		☐	☐	
Anal contact/penetration by:						
Penis	☐	☐	☐	☐	☐	
Finger	☐	☐	☐	☐	☐	
Object (Describe)	☐	☐	☐	☐	☐	
Associated pain?	☐	☐		☐	☐	
Associated bleeding?	☐	☐		☐	☐	
Oral copulation of genitals:						
Of patient by assailant	☐	☐	☐	☐	☐	
Of assailant by patient	☐	☐	☐	☐	☐	
Oral copulation of anus:						
Of patient by assailant	☐	☐	☐	☐	☐	
Of assailant by patient	☐	☐	☐	☐	☐	
Anal/genital fondling:						
Of patient by assailant	☐	☐	☐	☐	☐	
Of assailant by patient	☐	☐	☐	☐	☐	
Non-genital act(s)?	☐	☐			☐	
If yes: ☐ Fondling ☐ Licking ☐ Kissing ☐ Suction Injury ☐ Biting						
Other acts? (Describe)	☐	☐	☐	☐	☐	
Did ejaculation occur?	☐	☐		☐	☐	
If yes, note location(s):						
☐ Mouth ☐ Vagina ☐ Body surface ☐ On bedding						
☐ Anus/Rectum ☐ On clothing ☐ Other						
Contraceptive or lubricant products? ☐ No ☐ Yes					☐	
If yes, note type/brand: ☐ Foam ☐ Jelly ☐ Lubricant ☐ Condom						
Were force or threats used? ☐ No ☐ Yes ☐ Force ☐ Threats					☐	
Were pictures/videotapes taken☐ or shown☐? ☐ No ☐ Yes					☐	
If yes, note type(s): ☐ Pictures ☐ Videotapes						
Were drugs ☐ or alcohol ☐ used? ☐ No ☐ Yes*					☐	
Loss of memory? ☐ No ☐ Yes*					☐	
Lapse of consciousness? ☐ No ☐ Yes*					☐	
Vomited after act(s)? ☐ No ☐ Yes					☐	
Behavioral changes in patient? ☐ No ☐ Yes					☐	

***Collection of urine toxicology sample (<96 hours) is recommended according to local policy.**

F. ACTS DESCRIBED BY PATIENT

1. Acts disclosed by patient to: ☐ Law Enforcement Officer ☐ Medical Examiner ☐ Multi-disciplinary Interview Team ☐ Social Worker ☐ Other:

Patient Identification

	No	Yes	Attempted	Unsure	N/A
Genital/vaginal contact/penetration by:					
Penis	☐	☐	☐	☐	☐
Finger	☐	☐	☐	☐	☐
Object (Describe)	☐	☐	☐	☐	☐
Associated pain?	☐	☐		☐	☐
Associated bleeding?	☐	☐		☐	☐
Anal contact/penetration by:					
Penis	☐	☐	☐	☐	☐
Finger	☐	☐	☐	☐	☐
Object (Describe)	☐	☐	☐	☐	☐
Associated pain?	☐	☐		☐	☐
Associated bleeding?	☐	☐		☐	☐
Oral copulation of genitals:					
Of patient by assailant	☐	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐	☐
Oral copulation of anus:					
Of patient by assailant	☐	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐	☐
Anal/genital fondling:					
Of patient by assailant	☐	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐	☐
Non-genital act(s)?	☐	☐			☐
If yes: ☐ Fondling ☐ Licking ☐ Kissing ☐ Suction Injury ☐ Biting					
Other acts? (Describe)	☐	☐	☐	☐	☐
Did ejaculation occur?	☐	☐		☐	☐
If yes, note location(s):					
☐ Mouth ☐ Vagina ☐ Body surface ☐ On bedding					
☐ Anus/Rectum ☐ On clothing ☐ Other					
Contraceptive or lubricant products?	☐ No	☐ Yes			☐
If yes, note type/brand: ☐ Foam ☐ Jelly ☐ Lubricant ☐ Condom					
Were force or threats used?	☐ No	☐ Yes	☐ Force	☐ Threats	☐
Were pictures/videotapes taken ☐ or shown ☐?	☐ No	☐ Yes			☐
If yes, note type(s): ☐ Pictures ☐ Videotapes					
Were drugs ☐ or alcohol ☐ used?	☐ No	☐ Yes*			☐
Loss of memory?	☐ No	☐ Yes*			☐
Lapse of consciousness?	☐ No	☐ Yes*			☐
Vomited after act(s)?	☐ No	☐ Yes			☐
Behavorial changes?	☐ No	☐ Yes			☐

2. Describe pain and/or bleeding (using exact patient's words) and additional pertinent history:

_____

_____

_____

H. GENERAL PHYSICAL EXAMINATION

Record all findings using diagrams, legend, and a consecutive numbering system.

1. BP	Pulse	Resp	Temp	Height	Weight	2. Date/time examination	
						Started	Completed

3. Female Tanner Stage – Breast 1☐ 2☐ 3☐ 4☐ 5☐

4. Describe general demeanor and relevant statements made during exam.

5. Conduct a physical examination. ☐Findings ☐No Findings

General exam within normal limits: ☐Yes ☐No If no, describe:

Patient Identification

Diagram A

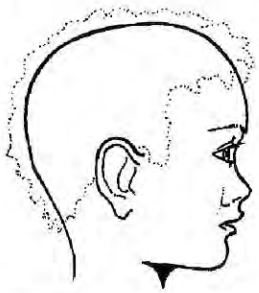


Diagram B

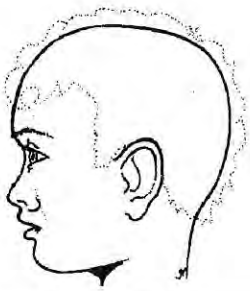
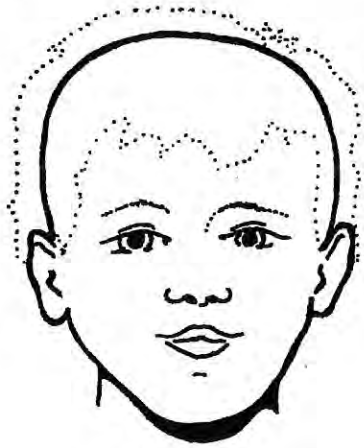


Diagram C



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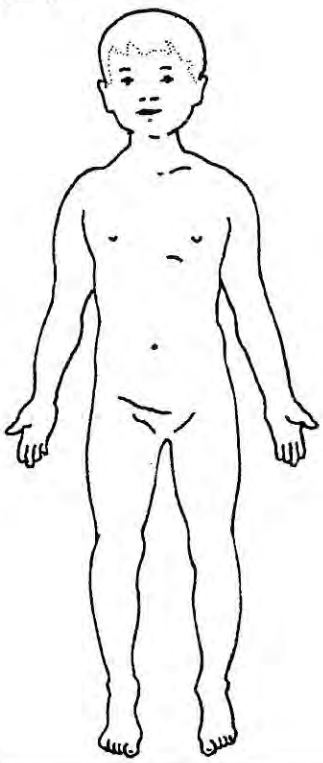


Diagram E

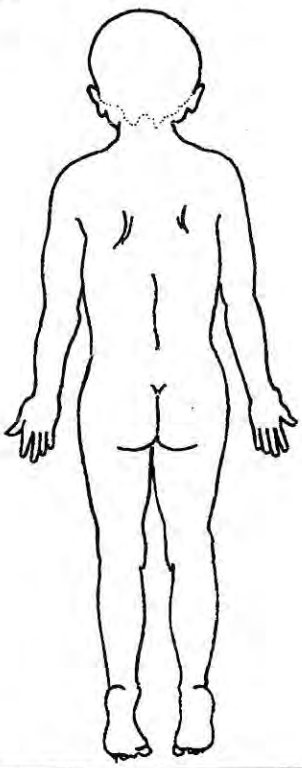
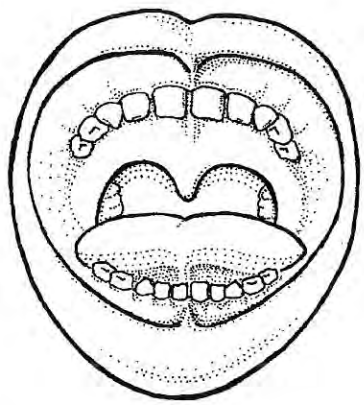


Diagram F



LEGEND: Types of Findings

AB	Abrasion	**BU**	Burn	**DI**	Discharge	**HC**	Hymenal Cleft	**OSC**	Other Skin Condition	**PGW**	Possible Genital Wart	**SW**	Swelling
AHT	Absent Hymenal Tissue	**CV**	Congenital Variation	**EC**	Ecchymosis (bruise)	**IN**	Induration	**OT**	Other	**SH**	Submucosal Hemorrhage	**TE**	Tenderness
AL	Anal Laxity	**DE**	Debris	**ER**	Erythema (redness)	**LA**	Laceration	**PW**	Perianal Wart			**VL**	Vesicular Lesion
BI	Bite	**DF**	Deformity	**FB**	Foreign Body	**OI**	Other Injury (describe)	**PE**	Petechiae	**SI**	Suction Injury		
				GT	Granulation Tissue								

Locator #	Type	Description	Locator #	Type	Description

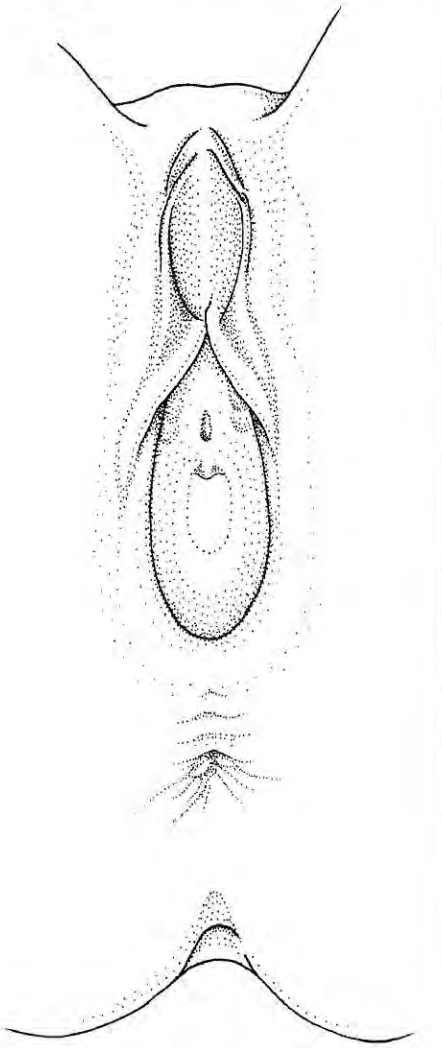
I. EXAMINATION OF THE EXTERNAL GENITALIA AND PERINEAL AREA

Record all findings using diagrams, legend, and a consecutive numbering system.

1. Use a colposcope or employ other means of magnification.
2. Examine the genital structures.
   - See page 5 of instructions for diagrams of the genital structures.
   - Use exam techniques described in instructions.
   - Diagram the position that best illustrates your findings.

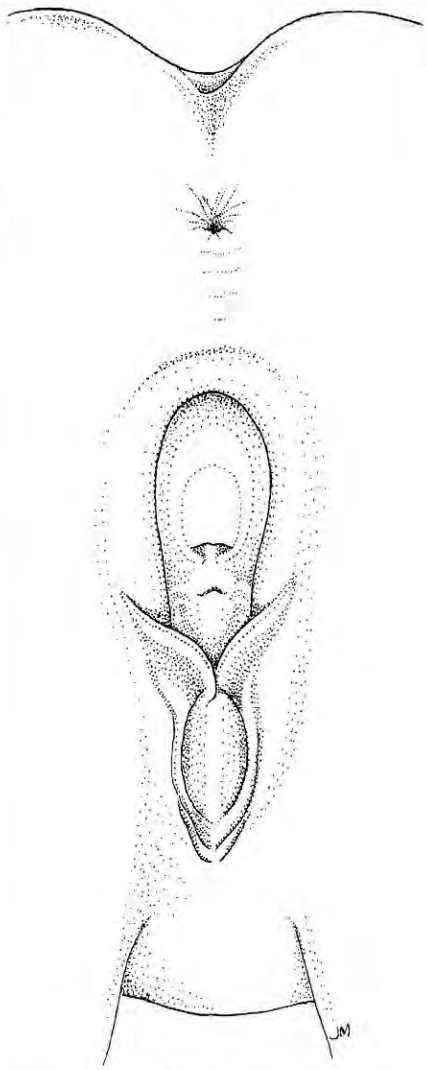
Patient Identification

Diagram G



Supine

Diagram H



Knee-Chest

Diagram I

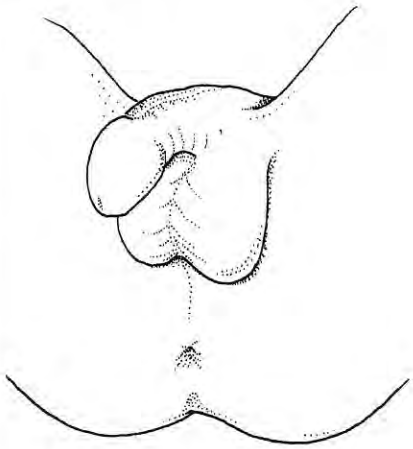
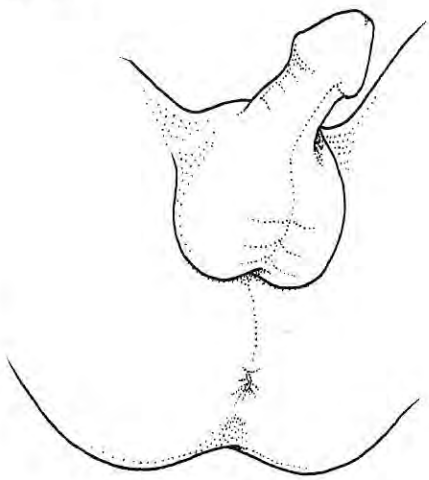


Diagram J



Penis

LEGEND: Types of Findings

AB	Abrasion	**BU**	Burn	**DI**	Discharge	**HC**	Hymenal Cleft	**OSC**	Other Skin Condition	**PGW**	Possible Genital Wart	**SW**	Swelling
AHT	Absent Hymenal Tissue	**CV**	Congenital Variation	**EC**	Ecchymosis (bruise)	**IN**	Induration					**TE**	Tenderness
AL	Anal Laxity	**DE**	Debris	**ER**	Erythema (redness)	**LA**	Laceration	**OT**	Other	**SH**	Submucosal Hemorrhage	**VL**	Vesicular Lesion
BI	Bite	**DF**	Deformity	**FB**	Foreign Body	**OI**	Other Injury (describe)	**PW**	Perianal Wart				
				GT	Granulation Tissue			**PE**	Petechiae	**SI**	Suction Injury		

Locator #	Type	Description	Locator #	Type	Description

J. ANAL-GENITAL FINDINGS

1. Exam method:

☐Direct visualization ☐Colposcope ☐Other magnification

2. General Female/Male	WNL	ABN	Describe
Inguinal adenopathy	☐	☐	
Perineum	☐	☐	

3. Genital Tanner Stage 1☐ 2☐ 3☐ 4☐ 5☐

4. Female Genitalia

Exam positions/methods: Separation Traction Knee chest

Supine	☐	☐	☐
Prone	☐	☐	☐

☐ Saline/water ☐ Moistened swab ☐ Catheter ☐ Other:

	WNL	ABN	Describe
Labia majora	☐	☐	
Labia minora	☐	☐	
Clitoral hood	☐	☐	
Perihymenal tissues (vestibule)	☐	☐	
Hymen ☐Supine ☐Prone	☐	☐	

Record morphology:

☐ Annular _____

☐ Crescentic _____

☐ Imperforate _____

☐ Septate _____

Fossa navicularis	☐	☐	
Posterior fourchette	☐	☐	
Vagina (pubertal adolescents)	☐	☐	
Cervix (pubertal adolescents)	☐	☐	

Discharge ☐No ☐Yes If yes, describe:

Patient Identification

5. Male Genitals	WNL	ABN	Describe
Penis	☐	☐	
Circumcised ☐			
Uncircumcised ☐			
Foreskin	☐	☐	
Glans Penis	☐	☐	
Penile Shaft	☐	☐	
Urethral meatus	☐	☐	
Scrotum	☐	☐	
Testes	☐	☐	

Discharge ☐No ☐Yes If yes, describe:

6. Female/Male Anus and Rectum

Exam positions	Observation	Observation with traction
Supine	☐	☐
Supine knee chest	☐	☐
Prone knee chest	☐	☐
Lateral recumbent	☐	☐

Exam methods: ☐ Moistened swab ☐ Other:_____ ☐ Anoscopy

	WNL	ABN	Describe:
Buttocks	☐	☐	
Perianal skin	☐	☐	
Anal verge/folds	☐	☐	
Rectum	☐	☐	

Anal dilation ☐ No ☐ Yes If yes: ☐ Immediate ☐ Delayed

Stool present in rectal ampulla ☐ No ☐ Yes ☐Undetermined

K. FINDINGS AND INTERPRETATION

1. Anal-Genital Findings

☐ Normal anal-genital exam

☐ Abnormal anal-genital exam

☐ Indeterminate anal-genital exam

2. Assessment of Anal-Genital Findings

☐ Consistent with history

☐ Inconsistent with history

☐ Limited/Insufficient history

3. Interpretation of Anal-Genital Findings

☐ Normal exam: can neither confirm nor negate sexual abuse

☐ Non specific: may be caused by sexual abuse or other mechanisms

☐ Sexual abuse is highly suspected

☐ Definite evidence of sexual abuse and/or sexual contact.

4. ☐ Need further consultation/investigation

5. ☐ Lab results or photo review pending (may alter assessment)

L. MEDICAL LAB TESTS PERFORMED

STD Cultures	GC	Chlamydia	Other	Describe	Taken by
Oral	☐	☐	☐		
Vestibular	☐	☐	☐		
Vaginal	☐	☐	☐		
Cervical	☐	☐	☐		
Rectal	☐	☐	☐		
Penile	☐	☐	☐		
Wet mount	☐	☐	☐		

Serology Syphilis ☐ HIV ☐ Hepatitis ☐

Pregnancy test Blood ☐ Urine☐

Other test(s)

M. TOXICOLOGY

Urine Toxicology ☐ No ☐ Yes Taken by: _____

6. Additional comments regarding findings, interpretations, and recommendations.

N. PHOTO DOCUMENTATION METHODS

	No	Yes	Colposcope/35mm	Macrolens/35mm	Colposcope/Videocamera	Other Optics	Photographed by:
Body	☐	☐	☐	☐	☐	☐	
Genitals	☐	☐	☐	☐	☐	☐	

O. PRINT NAMES OF PERSONNEL INVOLVED

History taken by:	Exam performed by:	Telephone:	Signature of Examiner:	License No.

Cal EMA2-930

FORENSIC MEDICAL REPORT:
ACUTE (< 120 HOURS = 5 days)

CHILD (UNDER AGE 12)

SEXUAL ASSAULT EXAMINATION

State of California
California Emergency Management Agency

FORENSIC MEDICAL REPORT: ACUTE (~~<72 HOURS~~) (<120 Hours) CHILD/ADOLESCENT SEXUAL ABUSE EXAMINATION

CAL EMA 2-930

For more information or assistance in completing the CAL EMA 2-930, please contact
California Clinical Forensic Medical Training Center at:
(916) 930-3080 or www.ccfmtc.org

This form is also available on the following website:
www.calema.ca.gov

(<120 Hours)

FORENSIC MEDICAL REPORT: ACUTE ~~(<72 HOURS)~~ CHILD/ADOLESCENT SEXUAL ABUSE EXAMINATION

STATE OF CALIFORNIA
CALIFORNIA EMERGENCY MANAGEMENT AGENCY

CalEMA 2-930

Confidential Document

Patient Identification

A. GENERAL INFORMATION (print or type)

Name of Medical Facility: Contra Costa Regional Medical Center

1. Name of patient — Patient ID number

2. Address — City — County — State — Telephone

3. Age	DOB	Gender M F	Ethnicity	Date/time of arrival	Date/time of discharge

4. Name of : ☐ Mother ☐ Stepmother ☐ Guardian — Address — City — County — State — Telephone W: H:

5. Name of : ☐ Father ☐ Stepfather ☐ Guardian — Address — City — County — State — Telephone W: H:

6. Name(s) of Siblings	Gender	Age	DOB	Name(s) of Siblings	Gender	Age	DOB
	M F				M F		
	M F				M F		

B. REPORTING AND AUTHORIZATION

Jurisdiction (☐city ☐county ☐other):

1. Telephone report made to	Name	Agency	ID number	Telephone
Law Enforcement ☐ and/or Child Protective Services ☐				

2. Responding Personnel (to medical facility)	Name	Agency	ID number	Telephone
Law Enforcement ☐ and/or Child Protective Services ☐				

3. Assigned Investigator (if known)	Name	Agency	ID number	Telephone
Law Enforcement ☐ and/or Child Protective Services ☐				

4. Authorization for evidential exam requested by law enforcement or child protective services agency

I request a forensic medical examination for suspected sexual abuse at public expense.

Telephone Authorization	☐ Law enforcement officer	ID number	☐ Child Protective Services
Agency:			
Authorizing party:			
ID number:			
Date/time:			

Telephone	Date	Time	Case number

C. CONSENT FOR EXAMINATION BY PATIENT/PARENT/GUARDIAN

Note: Parental consent is not required for a suspected child sexual abuse examination if the child is in protective custody. Family Code Section 6927 permits minors (12 to 17 years of age) to consent to medical examination, treatment, and evidence collection for sexual assault without parental consent. See instructions regarding parental notification requirements for minors.

- I hereby consent to a forensic medical examination for evidence of sexual abuse. I understand that collection of evidence may include photographing injuries and that these photographs may include the anal-genital area (private parts). I further understand that medical providers are required to notify child protective authorities of known or suspected child abuse; and, if child abuse is found or suspected, this form and any evidence obtained will be released to a child protective agency.
- I have been informed that victims of crime are eligible to submit crime victim compensation claims to the State Victims of Crime (VOC) Restitution Fund for out-of-pocket medical expenses, psychological counseling, loss of wages, and job retraining/rehabilitation.
- I understand that data without patient identity may be collected from this report for health and forensic purposes and provided to health authorities and other qualified persons with a valid educational or scientific interest for demographic and/or epidemiological studies.

☐ Signature _____ ☐ Patient ☐ Parent ☐ Guardian

DISTRIBUTION OF CALEMA 2-930

☐ Original – Law Enforcement ☐ Copy – Child Protective Services ☐ Copy within evidence kit – Crime Lab ☐ Copy – Medical Facility Records

D. PATIENT HISTORY

1. Record time or time frame of the incident(s)	Date(s)	Time or time frame
☐ Less than 72 hours		
☐ Multiple incidents over time		

2. Pertinent physical surroundings of abuse/assault:

Patient Identification

3. Record patient's name for:	4. Alleged perpetrator(s) name(s)	Age	Gender	Ethnicity	Relationship to Patient	
					Known	Unknown
Female genitalia						
Male genitalia	#1.		M F			
Breasts	#2.		M F			
Anus	#3.		M F			

E. ACTS DESCRIBED BY HISTORIAN

Name of historian	Relationship to patient	History obtained by:	Telephone	Agency	☐ Not applicable

	No	Yes	Attempted	Unsure	N/A	Describe pain and/or bleeding and additional pertinent history:
Genital/vaginal contact/penetration by:						
Penis	☐	☐	☐	☐	☐	
Finger	☐	☐	☐	☐	☐	
Object (Describe)	☐	☐	☐	☐	☐	
Associated pain?	☐	☐		☐	☐	
Associated bleeding?	☐	☐		☐	☐	
Anal contact/penetration by:						
Penis	☐	☐	☐	☐	☐	
Finger	☐	☐	☐	☐	☐	
Object (Describe)	☐	☐	☐	☐	☐	
Associated pain?	☐	☐		☐	☐	
Associated bleeding?	☐	☐		☐	☐	
Oral copulation of genitals:						
Of patient by assailant	☐	☐	☐	☐	☐	
Of assailant by patient	☐	☐	☐	☐	☐	
Oral copulation of anus:						
Of patient by assailant	☐	☐	☐	☐	☐	
Of assailant by patient	☐	☐	☐	☐	☐	
Anal/genital fondling:						
Of patient by assailant	☐	☐	☐	☐	☐	
Of assailant by patient	☐	☐	☐	☐	☐	
Non-genital act(s)?	☐	☐			☐	
If yes: ☐ Fondling ☐ Licking ☐ Kissing ☐ Suction Injury ☐ Biting						
Other acts? (Describe)	☐	☐	☐	☐	☐	
Did ejaculation occur?	☐	☐		☐	☐	
If yes, note location(s):						
☐ Mouth ☐ Vagina ☐ Body surface ☐ On bedding						
☐ Anus/Rectum ☐ On clothing ☐ Other						
Contraceptive or lubricant products? ☐ No ☐ Yes					☐	
If yes, note type/brand: ☐ Foam ☐ Jelly ☐ Lubricant ☐ Condom						
Were force or threats used? ☐ No ☐ Yes ☐ Force ☐ Threats					☐	
Were weapons used? ☐ No ☐ Yes					☐	
If yes, describe: _____						
Were pictures/videotapes taken☐ or shown☐? ☐ No ☐ Yes					☐	
If yes, note type(s): ☐ Pictures ☐ Videotapes						
Were drugs ☐ or alcohol ☐ used? ☐ No ☐ Yes*					☐	
Loss of memory? ☐ No ☐ Yes*					☐	
Lapse of consciousness? ☐ No ☐ Yes*					☐	
Vomited after act(s)? ☐ No ☐ Yes					☐	
Behavioral changes in patient? ☐ No ☐ Yes					☐	

***Collection of toxicology samples is recommended according to local policy.**

F. ACTS DESCRIBED BY PATIENT

1. Acts disclosed by patient to: ☐ Law Enforcement Officer ☐ Medical Examiner ☐ Multi-disciplinary Interview Team ☐ Social Worker ☐ Other:

	No	Yes	Attempted	Unsure	N/A
Genital/vaginal contact/penetration by:					
Penis	☐	☐	☐	☐	☐
Finger	☐	☐	☐	☐	☐
Object (Describe below)	☐	☐	☐	☐	☐
Associated pain?	☐	☐		☐	☐
Associated bleeding?	☐	☐		☐	☐
Anal contact/penetration by:					
Penis	☐	☐	☐	☐	☐
Finger	☐	☐	☐	☐	☐
Object (Describe below)	☐	☐	☐	☐	☐
Associated pain?	☐	☐		☐	☐
Associated bleeding?	☐	☐		☐	☐
Oral copulation of genitals:					
Of patient by assailant	☐	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐	☐
Oral copulation of anus:					
Of patient by assailant	☐	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐	☐
Anal/genital fondling:					
Of patient by assailant	☐	☐	☐	☐	☐
Of assailant by patient	☐	☐	☐	☐	☐
Non-genital act(s)?	☐	☐			☐
If yes: ☐ Fondling ☐ Licking ☐ Kissing ☐ Suction injury ☐ Biting					
Other acts? (Describe below)	☐	☐	☐	☐	☐
Did ejaculation occur?	☐	☐		☐	☐
If yes, note location(s): ☐ Mouth ☐ Vagina ☐ Body surface ☐ On bedding ☐ Anus/Rectum ☐ On clothing ☐ Other					
Contraceptive or lubricant products? ☐ No ☐ Yes					☐
If yes, note type/brand: ☐ Foam ☐ Jelly ☐ Lubricant ☐ Condom					
Were force or threats used? ☐ No ☐ Yes ☐ Force ☐ Threats					☐
Were weapons used? ☐ No ☐ Yes					☐
If yes, describe: _____					
Were pictures/videotapes taken☐ or shown☐? ☐ No ☐ Yes					☐
If yes, note type(s): ☐ Pictures ☐ Videotapes					
Were drugs ☐ or alcohol ☐ used? ☐ No ☐ Yes*					☐
Loss of memory? ☐ No ☐ Yes*					☐
Lapse of consciousness? ☐ No ☐ Yes*					☐
Vomited after act(s)? ☐ No ☐ Yes					☐
Behavioral changes? ☐ No ☐ Yes					☐

*Collection of toxicology samples is recommended according to local policy.

2. Describe pain and/or bleeding (using patient's exact words) and additional pertinent history from above.

_____

_____

_____

_____

Patient Identification

G. MEDICAL HISTORY (to be completed by medical personnel)

1. Name of person providing history | **Relationship to patient**

	No	Yes
2. Any recent (60 days) anal-genital injuries, surgeries, diagnostic procedures, or medical treatment that may affect the interpretation of physical findings?	☐	☐
3. Any other pertinent medical conditions that may affect the interpretation of physical findings?	☐	☐
4. Any pre-existing physical injuries?	☐	☐
5. Any previous history of physical abuse and/or neglect?	☐	☐
6. Any previous history of sexual abuse?	☐	☐
7. Other intercourse? (For adolescents only)	☐	☐
If yes, (Past 10 days)		
anal (within past ☒ days)? When _____	☐	☐
vaginal (within past ☒ days)? When _____	☐	☐
oral (within past 24 hours)? When _____	☐	☐
If yes, did ejaculation occur?	☐	☐
If yes, where? _____		
If yes, was a condom used?	☐	☐
8. Menstrual periods? If yes, age of menarche: _____	☐	☐
Last menstrual period: _____		

9. Other symptoms disclosed	**by patient:** No	Yes	**by historian:** No	Yes	Unk
Abdominal/pelvic pain	☐	☐	☐	☐	☐
Pain on urination	☐	☐	☐	☐	☐
Genital discomfort or pain	☐	☐	☐	☐	☐
Genital itching	☐	☐	☐	☐	☐
Genital discharge	☐	☐	☐	☐	☐
Genital bleeding	☐	☐	☐	☐	☐
Rectal discomfort or pain	☐	☐	☐	☐	☐
Rectal itching	☐	☐	☐	☐	☐
Rectal bleeding	☐	☐	☐	☐	☐
Constipation	☐	☐	☐	☐	☐
Other _____	☐	☐	☐	☐	☐

If yes, describe onset, duration, and intensity:

10. Post-assault hygiene activity ~~☐ Not applicable if over 72 hours~~	**by patient:** No	Yes	**by historian:** No	Yes	Unk
Urinated	☐	☐	☐	☐	☐
Defecated	☐	☐	☐	☐	☐
Genital or body wipes	☐	☐	☐	☐	☐
If yes, describe:_____	☐	☐	☐	☐	☐
Douched					
If yes, with what?_____	☐	☐	☐	☐	☐
Removed/inserted ☐tampon ☐ diaphragm	☐	☐	☐	☐	☐
Oral gargle/rinse	☐	☐	☐	☐	☐
Bath/shower/wash	☐	☐	☐	☐	☐
Brushed teeth	☐	☐	☐	☐	☐
Ate or drank	☐	☐	☐	☐	☐
Changed clothing	☐	☐	☐	☐	☐
If yes, describe:					

H. GENERAL PHYSICAL EXAMINATION

Record all findings using diagrams, legend, and a consecutive numbering system.

1. BP	Pulse	Resp	Temp	Height	Weight	2. Date/time examination	
						Started	Completed

3. Female Tanner Stage – Breast 1☐ 2☐ 3☐ 4☐ 5☐

4. Describe general physical appearance.

5. Describe general demeanor and relevant statements made during exam.

6. Describe condition of clothing upon arrival.

7. Collect outer and underclothing if indicated. ☐ Not indicated

Patient Identification

8. Conduct a physical examination. ☐ Findings ☐ No Findings
General exam within normal limits: ☐ Yes ☐ No If no, describe:

9. Collect dried and moist secretions, stains, and foreign materials from the body. Scan the entire body with a Wood's Lamp.
☐ Findings ☐ No Findings

10. Collect fingernail scrapings or cuttings according to local policy.

Diagram A

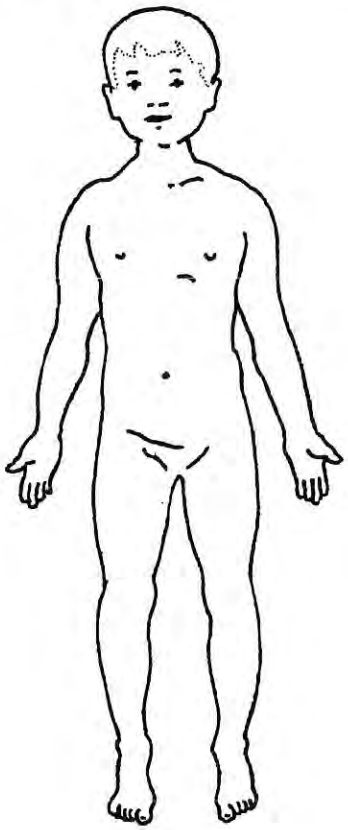
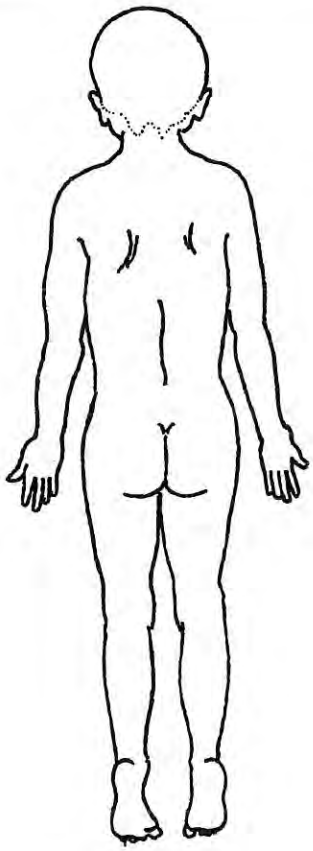


Diagram B



LEGEND: Types of Findings

AB	Abrasion	**CS**	Control Swab	**DS**	Dry Secretion	**HC**	Hymenal Cleft	**OI**	Other Injury (describe)	**PE**	Petechiae	**SW**	Swelling
AHT	Absent Hymenal Tissue	**CV**	Congenital Variation	**EC**	Ecchymosis (bruise)	**IN**	Induration			**PGW**	Possible Genital Wart	**TB**	Toluidine Blue⊕
AL	Anal Laxity	**DE**	Debris	**ER**	Erythema (redness)	**IW**	Incised Wound	**OSC**	Other Skin Condition	**PS**	Potential Saliva	**TE**	Tenderness
BI	Bite	**DF**	Deformity	**FB**	Foreign Body	**LA**	Laceration	**OT**	Other	**SH**	Submucosal Hemorrhage	**V/S**	Vegetation/Soil
BU	Burn	**DI**	Discharge	**F/H**	Fiber/Hair	**MS**	Moist Secretion	**PW**	Perianal Wart	**SHX**	Sample Per History	**VL**	Vesicular Lesion
				GT	Granulation Tissue	**OF**	Other Foreign Materials (describe)			**SI**	Suction Injury	**WL**	Wood's Lamp⊕

Locator #	Type	Description	Locator #	Type	Description

RECORD ALL CLOTHING AND SPECIMENS COLLECTED ON PAGE 8

I. HEAD, NECK, AND ORAL EXAMINATION

Record all findings using diagrams, legend, and a consecutive numbering system.

1. **Examine the face, head, hair, scalp, and neck for injury and foreign materials.**
   ☐ Findings ☐ No Findings
2. **Exam method:**
   ☐Direct visualization ☐Colposcope ☐Other magnification
3. **Collect dried and moist secretions, stains, and foreign materials from the face, head, hair, scalp, and neck.**
   ☐ Findings ☐ No Findings
4. **Examine the oral cavity for injury and foreign materials. Collect foreign materials.**
   ☐ Findings ☐ No Findings
5. **Collect 2 swabs from the oral cavity up to 12 hours post assault and prepare one dry mount slide from one of the swabs.**
6. **Collect head hair reference samples according to local policy.**

Patient Identification

Diagram C

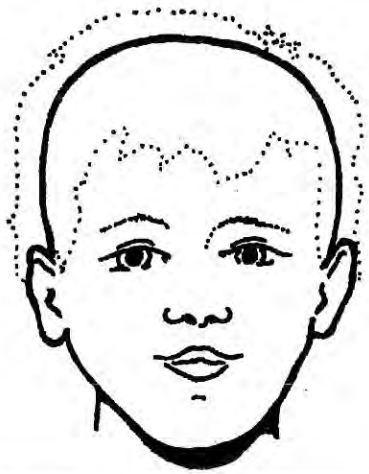


Diagram D

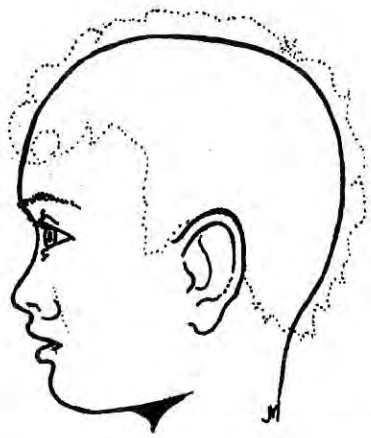


Diagram E

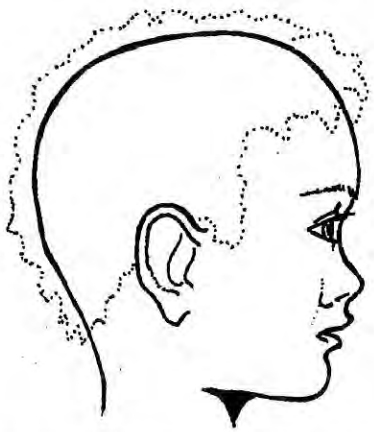
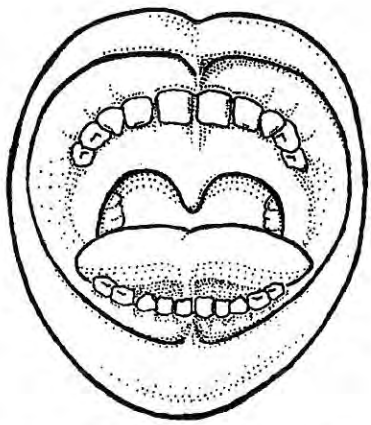


Diagram F



LEGEND: Types of Findings

AB	Abrasion	**CS**	Control Swab	**DS**	Dry Secretion	**HC**	Hymenal Cleft	**OI**	Other Injury (describe)	**PE**	Petechiae	**SW**	Swelling
AHT	Absent Hymenal Tissue	**CV**	Congenital Variation	**EC**	Ecchymosis (bruise)	**IN**	Induration	**OSC**	Other Skin Condition	**PGW**	Possible Genital Wart	**TB**	Toluidine Blue⊕
AL	Anal Laxity	**DE**	Debris	**ER**	Erythema (redness)	**IW**	Incised Wound	**OT**	Other	**PS**	Potential Saliva	**TE**	Tenderness
BI	Bite	**DF**	Deformity	**FB**	Foreign Body	**LA**	Laceration	**PW**	Perianal Wart	**SH**	Submucosal Hemorrhage	**V/S**	Vegetation/Soil
BU	Burn	**DI**	Discharge	**F/H**	Fiber/Hair	**MS**	Moist Secretion			**SHX**	Sample Per History	**VL**	Vesicular Lesion
				GT	Granulation Tissue	**OF**	Other Foreign Materials (describe)			**SI**	Suction Injury	**WL**	Wood's Lamp⊕

Locator #	Type	Description	Locator #	Type	Description

RECORD ALL SPECIMENS COLLECTED ON PAGE 8

J. GENITAL EXAMINATION - FEMALES

Record all findings using diagrams, legend, and a consecutive numbering system.

1. **Examine the inner thighs, external genitalia, and perineal area.**

2. **Exam method:** ☐Direct visualization ☐Colposcope ☐Other magnification

Exam positions/methods:

	Separation	Traction	Knee Chest
Supine	☐	☐	☐
Prone	☐	☐	☐

☐ Saline/Water ☐ Moistened swab ☐Toluidine Blue Dye

☐ Catheter ☐ Other:

3. **Genital Tanner Stage** 1☐ 2☐ 3☐ 4☐ 5☐

4. **Examine the genital structures. Check the ABN box(es) if there are abuse/assault related findings and describe.**

	WNL	ABN	Describe:
Inner thighs	☐	☐	
Inguinal adenopathy	☐	☐	
Labia majora	☐	☐	
Labia minora	☐	☐	
Clitoral hood	☐	☐	
Perineum	☐	☐	
Periurethral tissue/urethral meatus	☐	☐	
Perihymenal tissue (vestibule)	☐	☐	
Hymen ☐Supine ☐Prone	☐	☐	
Record morphology:			
☐ Annular			
☐ Crescentic			
☐ Imperforate			
☐ Septate			
Fossa navicularis	☐	☐	
Posterior fourchette	☐	☐	
Vagina (pubertal adolescents)	☐	☐	
Cervix (pubertal adolescents)	☐	☐	

Discharge ☐ No ☐ Yes

If yes, describe:_____

No Findings ☐

5. **Collect dried and moist secretions, stains, and foreign materials. Scan the area with a Wood's Lamp.** ☐ Findings ☐ No Findings

6. **Collect swabs and prepare slides.**
   - ☐ **Prepubertal female**
     - ☐ **Collect at least 2 vulvar and 2 vestibular swabs.**
   - ☐ **Pubertal female**
     - ☐ **Collect 4 swabs from the vaginal pool.**
     - ☐ **Prepare one wet mount and one dry mount slide.**
     - ☐ **Collect 2 cervical swabs (if over 48 hours post assault).**

7. **Collect pubic hair combing or brushing.** ☐ Not applicable

8. **Collect pubic hair reference samples according to local policy.** ☐ Not applicable

Patient Identification

Diagram the position that best illustrates your findings.

Diagram G Genitalia - Supine

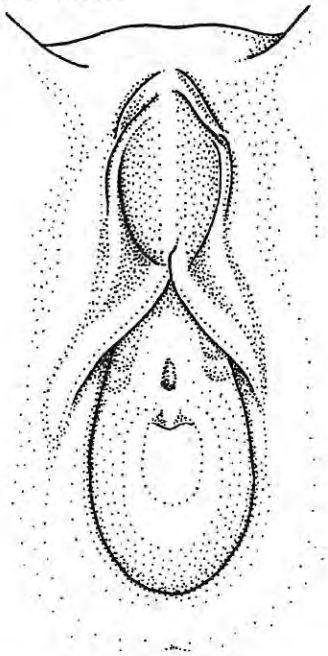
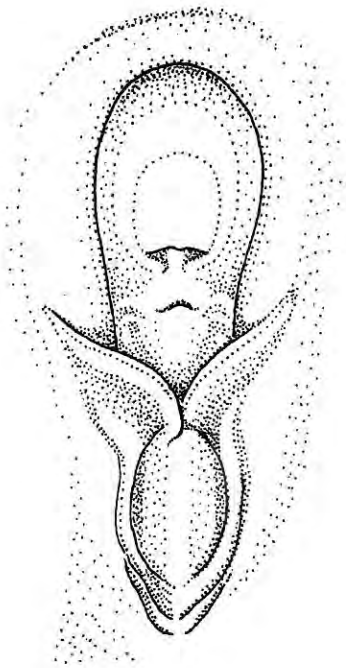


Diagram H Genitalia - Knee-Chest



LEGEND: Types of Findings

AB	Abrasion	**DF**	Deformity	**LA**	Laceration	**SH**	Submucosal Hemorrhage
AHT	Absent Hymenal Tissue	**DI**	Discharge	**MS**	Moist Secretion		
		DS	Dry Secretion	**OF**	Other Foreign Materials (describe)	**SHX**	Sample Per History
		EC	Ecchymosis (bruise)			**SI**	Suction Injury
AL	Anal Laxity	**ER**	Erythema (redness)	**OI**	Other Injury (describe)	**SW**	Swelling
BI	Bite	**FB**	Foreign Body	**OSC**	Other Skin Condition	**TB**	Toluidine Blue⊕
BU	Burn	**F/H**	Fiber/hair	**OT**	Other	**TE**	Tenderness
CS	Control Swab	**GT**	Granulation Tissue	**PW**	Perianal Wart	**V/S**	Vegetation/Soil
CV	Congenital Variation	**HC**	Hymenal Cleft	**PE**	Petechiae	**VL**	Vesicular Lesion
		IN	Induration	**PGW**	Possible Genital Wart	**WL**	Wood's Lamp⊕
DE	Debris	**IW**	Incised Wound	**PS**	Potential Saliva		

Locator #	Type	Description

RECORD ALL SPECIMENS COLLECTED ON PAGE 8

K. GENITAL EXAMINATION – MALES

Record all findings using diagrams, legend, and a consecutive numbering system.

1. **Examine the inner thighs, external genitalia, and perineal area.**
2. **Exam method:** ☐Direct visualization ☐Colposcope ☐Other magnification
   Exam positions/methods:
   ☐Supine ☐Prone ☐ Moistened swab
   ☐Toluidine Blue Dye ☐Other:_____
3. **Genital Tanner Stage** 1☐ 2☐ 3☐ 4☐ 5☐
4. **Circumcised:** ☐ No ☐ Yes
5. **Check the ABN box(es) if there are abuse/assault related findings and describe.**

	WNL	ABN	Describe:
Inner thighs	☐	☐	
Inguinal adenopathy	☐	☐	
Perineum	☐	☐	
Foreskin	☐	☐	
Glans Penis	☐	☐	
Penile shaft	☐	☐	
Urethral meatus	☐	☐	
Scrotum	☐	☐	
Testes	☐	☐	

Discharge ☐No ☐Yes If yes, describe:_____

No Findings ☐

6. **Collect dried and moist secretions, stains, and foreign materials. Scan the area with a Wood's Lamp.** ☐ Findings ☐ No Findings
7. **Collect pubic hair combing or brushing.** ☐ Not applicable
8. **Collect pubic hair reference samples according to local policy.** ☐ Not applicable
9. **Collect 2 penile swabs, if indicated by assault history.** ☐ Not applicable
10. **Collect 2 scrotal swabs, if indicated by assault history.** ☐ Not applicable

L. FEMALE/MALE ANAL AND RECTAL EXAMINATION

1. **Examine the buttocks, perianal skin, and anal folds for injury, foreign materials, and other findings.**
2. **Record exam positions, methods, observations:**
   ☐Direct visualization ☐Colposcope ☐Other magnification

Exam positions	Observation	Observation with traction
Supine	☐	☐
Supine knee chest	☐	☐
Prone knee chest	☐	☐
Lateral recumbent	☐	☐

Exam methods: ☐Moistened swab ☐ Toluidine blue dye ☐ Anoscopy ☐ Other:_____

3. **Check the ABN box(es) if there are abuse/assault related findings and describe any abnormal or unusual findings.**
   ☐ No Findings

	WNL	ABN	Describe:
Buttocks	☐	☐	
Perianal skin	☐	☐	
Anal verge/folds/rugae	☐	☐	
Rectum	☐	☐	

Anal dilation ☐ No ☐ Yes If yes: ☐ Immediate ☐ Delayed
Stool present in rectal ampulla ☐ No ☐ Yes ☐Undetermined

4. **Collect dried and moist secretions, stains, and foreign materials.**
   ☐ Findings ☐ No Findings
5. **Collect 2 anal and/or rectal swabs and prepare one dry mount slide.**
6. **Rectal bleeding:** ☐No ☐Yes If yes, describe:

LEGEND: Types of Findings

AB	Abrasion	**DF**	Deformity	**LA**	Laceration	**SH**	Submucosal Hemorrhage
AHT	Absent Hymenal Tissue	**DI**	Discharge	**MS**	Moist Secretion	**SHX**	Sample Per History
		DS	Dry Secretion	**OF**	Other Foreign Materials (describe)	**SI**	Suction Injury
		EC	Ecchymosis (bruise)			**SW**	Swelling
AL	Anal Laxity	**ER**	Erythema (redness)	**OI**	Other Injury (describe)	**TB**	Toluidine Blue⊕
BI	Bite	**FB**	Foreign Body	**OSC**	Other Skin Condition	**TE**	Tenderness
BU	Burn	**F/H**	Fiber/hair	**OT**	Other	**V/S**	Vegetation/Soil
CS	Control Swab	**GT**	Granulation Tissue	**PW**	Perianal Wart	**VL**	Vesicular Lesion
CV	Congenital Variation	**HC**	Hymenal Cleft	**PE**	Petechiae	**WL**	Wood's Lamp⊕
		IN	Induration	**PGW**	Possible Genital Wart		
DE	Debris	**IW**	Incised Wound	**PS**	Potential Saliva		

Locator #	Type	Description

Patient Identification

Diagram I - Penis

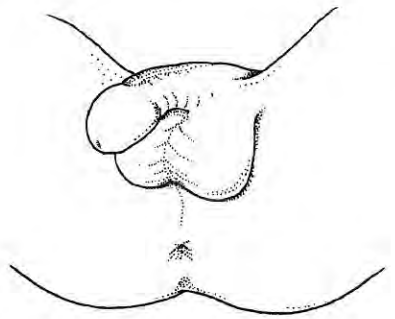


Diagram J - Penis

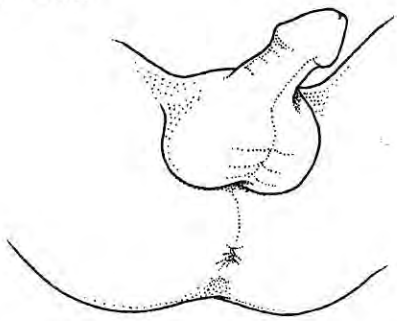


Diagram K - Anus Supine

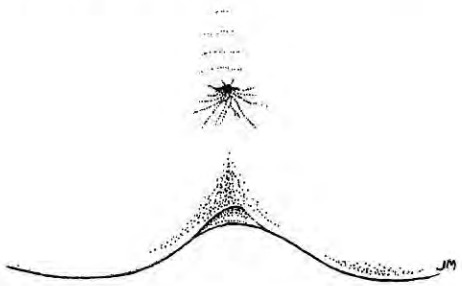
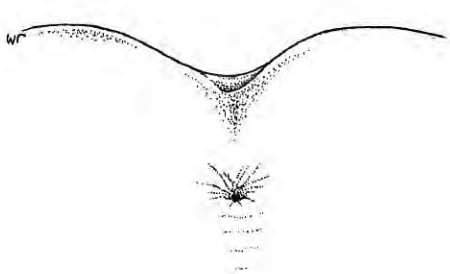


Diagram L - Anus Prone



RECORD ALL SPECIMENS COLLECTED ON PAGE 8

M. EVIDENCE COLLECTED AND SUBMITTED TO CRIME LAB

1. Clothing placed in evidence kit	Other clothing placed in bags
	☐ Collection Paper

Patient Identification

2. Foreign materials collected

	No	Yes	Collected by:
Swabs/suspected blood	☐	☐	
Dried secretions	☐	☐	
Fiber/loose hairs	☐	☐	
Vegetation	☐	☐	
Soil/debris	☐	☐	
Swabs/suspected semen	☐	☐	
Swabs/suspected saliva	☐	☐	
Swabs/Wood's Lamp⊕ area(s)	☐	☐	
Control swabs	☐	☐	
Fingernail ~~scrapings~~/cuttings	☐	☐	
Matted hair cuttings	☐	☐	
Pubic hair ~~combings~~/brushings	☐	☐	
Intravaginal foreign body	☐	☐	
Describe:			
Other types	☐	☐	
If yes, describe:			

3. Oral/genital/anal/rectal samples

	# Swabs	# Slides	Time collected	Collected by:
Oral				
Vulvar				
Vestibular				
Vaginal				
Cervical				
Anal				
Rectal				
Penile				
Scrotal				
Aspirate/washings (optional) ☐ No ☐ Yes				

4. Vaginal wet mount slide

	No	Yes	Time	Examiner:
Slide prepared				
Motile sperm observed				
Non-motile sperm observed				

N. TOXICOLOGY SAMPLES

	No	Yes	Time	Collected by:
Blood alcohol/toxicology (gray top tube)				
Urine toxicology				

O. REFERENCE SAMPLES

	No	Yes	Collected by:
Blood (lavender top tube)	X		
Blood (yellow top tube)	X		
Blood Card (optional) (FTA Card)			
Buccal swabs (optional)			
Saliva swabs	X		
Head hair			
Pubic Hair			

P. PHOTO DOCUMENTATION METHODS

	No	Yes	Colposcope/ 35mm	Macrolens/ 35mm	Colposcope/ Videocamera	Other Optics
Body	☐	☐	☐	☐	☐	☒ Digital
Genitals	☐	☐	☐	☐	☐	☒ Digital

Photographed by:

Q. FINDINGS AND INTERPRETATION

1. Anal-Genital Findings
- ☐ Normal anal-genital exam
- ☐ Abnormal anal-genital exam
- ☐ Indeterminate anal-genital exam

2. Assessment of Anal-Genital Findings
- ☐ Consistent with history
- ☐ Inconsistent with history
- ☐ Limited/Insufficient history

3. Interpretation of Anal-Genital Findings
- ☐ Normal exam: can neither confirm nor negate sexual abuse
- ☐ Non specific: may be caused by sexual abuse or other mechanisms
- ☐ Sexual abuse is highly suspected
- ☐ Definite evidence of sexual abuse and/or sexual contact

4. ☐ Need further consultation/investigation

5. ☐ Lab results or photo review pending (may alter assessment)

6. Additional comments regarding findings, interpretations, and recommendations:

☐ Recommend interview & non-acute exam at CIC

R. MEDICAL LAB TESTS PERFORMED

STD Cultures	GC	Chlamydia	Other	Describe	Collected by:
Oral	☐	☐	☐		
Vestibular	☐	☐	☐		
Vaginal	☐	☐	☐		
Cervical	☐	☐	☐		
Rectal	☐	☐	☐		
Penile	☐	☐	☐		
Wet mount	☐	☐	☐		
Serology Syphilis☐ HIV☐ Hepatitis☐					
Pregnancy test Blood☐ Urine☐					
Other test(s)					

S. PRINT NAMES OF PERSONNEL INVOLVED

History taken by:	Telephone
Exam performed by:	
Specimens labeled and sealed by:	
Assisted by: ☐N/A	
Signature of examiner	License No.

T. EVIDENCE DISTRIBUTION

	GIVEN TO:
Clothing (item(s) not placed in evidence kit)	
Evidence Kit	
Reference blood samples	
Toxicology samples	

U. SIGNATURE OF OFFICER RECEIVING EVIDENCE

Signature: _____

Print name and ID#: _____

Agency: _____

Date: Telephone:

APPENDIX C

PENAL CODE 679.04

ACCOMPANIMENT LAW

CA Penal Code 679.04.

(a) A victim of sexual assault as the result of any offense specified in paragraph (1) of subdivision (b) of Section 264.2 has the right to have victim advocates and a support person of the victim's choosing present at any interview by law enforcement authorities, district attorneys, or defense attorneys. However, the support person may be excluded from an interview by law enforcement or the district attorney if the law enforcement authority or the district attorney determines that the presence of that individual would be detrimental to the purpose of the interview. As used in this section, "victim advocate" means a sexual assault victim counselor, as defined in Section 1035.2 of the Evidence Code, or a victim advocate working in a center established under Article 2 (commencing with Section 13835) of Chapter 4 of Title 6 of Part 4.

(b) (1) Prior to the commencement of the initial interview by law enforcement authorities or the district attorney pertaining to any criminal action arising out of a sexual assault, a victim of sexual assault as the result of any offense specified in Section 264.2 shall be notified orally or in writing by the attending law enforcement authority or district attorney that the victim has the right to have victim advocates and a support person of the victim's choosing present at the interview or contact. This subdivision applies to investigators and agents employed or retained by law enforcement or the district attorney.

(2) At the time the victim is advised of his or her rights pursuant to paragraph (1), the attending law enforcement authority or district attorney shall also advise the victim of the right to have victim advocates and a support person present at any interview by the defense attorney or investigators or agents employed by the defense attorney.

(c) An initial investigation by law enforcement to determine whether a crime has been committed and the identity of the suspects shall not constitute a law enforcement interview for purposes of this section.

APPENDIX D

DIRECTIONS TO CCRMC
AND
WITHIN CCRMC TO SART ROOM

Contra Costa Regional Medical Center
2500 Alhambra Avenue
Martinez, CA 94553

Emergency Department located on the backside of hospital - follow the signs to ED

From East and Central County
Take Highway 4 towards Martinez
Exit Highway 4 at Alhambra Avenue
Turn Right at Stop Light at Exit
Medical Center is 1 mile down on left hand side at B Street

From West County
Take I-80 East
Exit I-80 at Highway 4 East towards Martinez
Exit Highway 4 at Alhambra Avenue
Turn left at Stop Light under Freeway
Medical Center is 1 mile down on left hand side at B Street

APPENDIX E

CVS VOLUNTEER

COUNSELOR WAIVER FORM



Contra Costa County
SART Team

Rape Crisis Counselor Waiver

Victim's Name: _____

I have chosen to not have a Rape Crisis Counselor present during the exam for the collection of forensic evidence.

I understand that I may contact the 24–Hour Crisis Line 800-670-7273 (RAPE) at any time in the future for the support services that they offer.

Date:_____ **Time:** _____ **AM/PM**

Signature: _____

Relationship, if other than patient: _____

Witness: _____

Witness: _____

APPENDIX F

SART FLOW CHART

Contra Costa County Law Enforcement Agencies

Adult 18+ & Adolescent (12-17)

If emergency medical treatment is needed victim to the closest Emergency Department by EMS or Law Enforcement

Acute Incident

Less then168 hours (7 days)

- **Evidentiary Exam needed**
- Officer call CCRMC ED (925-370-5975)
- Phone Authorization for exam and provide the following information
  1. Victim Name
  2. DOB
  3. Officer: Name & Badge #
  4. Case Number

Non Acute Incident

More then 168 hours (7 days)

- **NO Acute Evidentiary Exam needed**
- Refer victim to:
- Community Violence Solutions / Rape Crisis Counselor
  (800) 670-7273
- Adolescents (12-17) Consider referral to CIC for interview & Non Acute exam
  (925) 646-2305

Contra Costa County Police Agencies:
ADULT SEXUAL Assault Victims Action Plan

Sexual Assault Victim Makes Contact with Police Agency

↓

ADULT PATIENTS >12 & ABOVE, (<12 see pediatric)

Victim discloses sexual assault history

Obtain a detailed history of incident.

* **ACUTE INCIDENT** <168 hours (7 days)

** **NON-ACUTE INCIDENT** > 168 hours (7 days

↓

MEDICAL TREATMENT:

If Officer feels emergency medical treatment is needed i.e. obvious broken bone, facial swelling, head battered with object, cuts, altered level of alertness

Emergency Evaluation Needed:

Victim to the closest Emergency Department by EMS or Police

ED to perform triage, registration and physician medical screening exam and any needed emergent medical needs. Discharges then refer CCRMC for SART Exam. If discharged in stable condition: transport to SART Site (CCRMC)

*→Non –Acute Incident >168 hours

This includes victim's whom refuse evidentiary exam

If unsure call Charge Nurse at CCRMC ED SART site for consultation

(Advise medical follow-up in a health care system)

Community Violence Solutions / Rape Crisis Counselor:

1-800-670-7273

No SART evidentiary exam required

**→Acute <168 hours of incident

Ask victim to consent to medical care & evidentiary exam

Community Violence Solutions / Rape Crisis Counselor

1-800-670-7273

↓

SART Contra Costa Regional Medical Center - ED (925) 370-5975

Request Charge Nurse: Provides the following Victim Information:

* Name, * age, *DOB, * time of incident, * authorizing officers name and *badge number, *Case Number

CCRMC will call in the SART nurse if the patient is in route per the police officer to CCRMC ED

Contra Costa County Law Enforcement Agencies

PEDIATRIC (Under 12 yrs old)

If emergency medical treatment is needed victim to the closest Emergency Department by EMS or Law Enforcement

Acute Incident

Less then 120 hours (5 days)

- **Evidentiary Exam needed**
- Officer call CCRMC ED (925-370-5975)
- Phone Authorization for exam and provide the following information
  1. Victim Name
  2. DOB
  3. Officer: Name & Badge #
  4. Case Number

Non Acute Incident

More then 120 hours (5 days)

- **NO Acute Evidentiary Exam needed.**
- Refer victim / care taker to:
- Community Violence Solutions / Rape Crisis Counselor
  (800) 670-7273
- Consider referral to CIC for interview & Non Acute exam
  (925) 646-2305

Contra Costa County Police Agencies: PEDIATRIC Sexual Assault Victims Action Plan

Pediatric Sexual Assault Victim Makes Contact with Police Agency

↓

Infant / Child Pediatric Victim: < 12 years of age (> 12 years of age = ADULT)

History of Victim disclosing sexual assault history

Determine the time of incident by detailed victim history

Incident described occurred:

* **NON-ACUTE INCIDENT** > 120 hours (5 days)

** **ACUTE INCIDENT**→ Incident may of occurred within last 120 hours (5 days)

MEDICAL TREATMENT:

If Officer feels emergency medical treatment is needed i.e. obvious broken bone, facial swelling, head battered with object, cuts, altered level of alertness

Emergency Evaluation Needed:

Victim to the closest Emergency Department by EMS or Police

ED to perform triage, registration and physician medical screening exam and any needed emergent medical needs. Discharges then refer CCRMC for SART Exam. If discharged in stable condition: transport to SART Site (CCRMC)

*→Non –Acute Incident >120 hours

► Most pediatric victims fall into this category as disclosure occurs very late→ Incident > 5 days to a week, or month ago, or now again; or the parent may say I am not sure when occurred, story vague in-determent time or no collectable evidence

↓

Officer to refer pediatric victim / care takers:

Community Violence Solutions/Rape Crisis Counselor

1-800-670-7273

Children's Interview Center 925-646-2305

**→Acute <120 hours of incident

Evidentiary Exam needed. No emergency medical treatment needed

↓

Officer calls Contra Costa Regional Medical Center ED (925) 370-5975

Request Charge Nurse: Provides the following Victim Information:

*Victim name, *DOB, *age,*time of incident, *authorizing officers name and *badge * Case Number

↓

Community Violence Solutions /Rape Crisis Counselor

1-800-670-7273

Police Interview can continue at the SART site.

CCRMC will call in the SART nurse if the patient is in route per police officer to CCRMC ED

Proceed with acute pediatric victim to the **CCRMC Emergency Department Site**

APPENDIX G

Medical Exam Referral to the CIC

PROCEDURES FOR MEDICAL EXAM REFERRALS TO THE CIC

PROCEDURE: 05-01

SUBJECT: PROCEDURES FOR MEDICAL EXAM REFERRALS TO THE CIC

PURPOSE: The Examiner is an MD or appropriately qualified medical practitioner, SAFE whose role is to conduct specific NON-ACUTE Forensic Medical Evaluations.

I. Policy

The CIC is NOT a medical clinic. **ACUTE** cases should follow the SART Guidelines.

The CIC is not required by law to conform to HIPPA Guidelines, and the signature on the State Forms allows for photography during the evaluation.

II. Procedure

CIC Forensic Medical Evaluation Intake, Scheduling and Billing:

A. It is preferred that the minor be interviewed at CIC prior to the CIC non-acute Forensic Medical Evaluation.
The Examiner needs to know what happened in order to compare findings, etc. with the history.

B. California State Forms (CalEMA 2-925) page 1 must be filled out and signed appropriately by an officer from the referring investigating agency prior to the FME being conducted. Faxed copies are acceptable.

C. CIC staff set the appointment with the Examiner and mark the main calendar as a "med" (in black) on the date noting the time.

D. The family / caregiver will be contacted by CIC staff prior to the appointment to confirm their ability to locate the facility and to facilitate transportation, if necessary. The CIC staff does not transport clients, but a bus line comes right by the Center.

E. Once completed, the CIC FME File remains in the possession of the Examiner in a securely locked cabinet. Interview and Medical records are to be kept separate once the medical evaluation is completed. DO NOT ATTACH ANY FME INFORMATION TO THE CIC INTERVIEW FILE FOLDER.

F. Officers requesting an FME can come by the Center to pick up the FME completed forms or have it mailed. Social workers should request a copy, if appropriate.

G. Community Violence Solutions is responsible for managing the FME Billing and payments from law enforcement jurisdictions. CVS will provide an accounting of the CIC FME fees as requested by the CIC Policy Oversight Committee.

APPENDIX H

RESOURCE
AND
REFERRAL NUMBERS

Contra Costa Child & Family Services

24 hour: (925) 646-1680

Antioch District Office
4545 Delta Fair Blvd.
Antioch, CA 94509
(925) 522-7610

Martinez District Office
500 Ellinwood Way
Pleasant Hill, CA 94523
(925) 602-9200

Richmond District Office
1275 A. Hall Ave
Richmond, CA
(510) 231-8157

Community Violence Solutions / Rape Crisis Center

24-hour crisis line: 1-800-670-7273

2101 Van Ness Street
San Pablo, CA, 94806
Phone: (510) 237-0113
Fax: (510) 237-0177

STAND / Domestic Violence

24-hour crisis line: 1-888-215-5555

P.O. Box 6406
Concord, CA 94524
Business Office: (925) 676-2845

Contra Costa Regional Medical Center / SART Program

CCRMC - Emergency Department (925) 370-5975

Contact Information

Mary Murphy
ED/SART Nurse Program Manager
Emergency Department

2500 Alhambra Avenue
Martinez, CA 94553
ED: (925) 370-5975
Office Phone: (925) 370-5171
Fax: (925) 370-5385
E-mail: mmurphy2@hsd.cccounty.us
Pager: (925) 346-4398

Ana Rea
SART Program Coordinator
Emergency Department

2500 Alhambra Avenue
Martinez, CA 94553
ED: (925) 370-5975
Office Phone: (925) 370-5905
Fax: (925) 370-5442
E-mail: area@hsd.cccounty.us
Pager: (925) 346-4456

Jim Carpenter MD, MPH
Pediatrician

2500 Alhambra Ave
Martinez, CA 94553
E-mail: Drjimcarpenter@yahoo.com
Pager: (925) 346-4210

Hospital Pediatrician On-call
Pager: (925) 346-4733

Ritu Malik MD
Emergency Department

2500 Alhambra Ave
Martinez, CA 94553
ED: (925) 370-5975
E-mail: rmalik829@yahoo.com

Contra Costa District Attorney Sexual Assault/Domestic Violence

(925) 957-8602
900 Ward Street, 2rd floor
Martinez, CA 94553

Contra Costa County Crime Lab

(925) 646-2455
1122 Escobar
Martinez, CA 94553

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 3
	RELATED ORDERS: CCCSO 1.05.72, 1.05.73, 1.05.39	
ISSUE DATE: 2-1-2011 **REVISION DATE:** 4-28-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Travel Request Instructions**	

I. REQUESTS.

A. Prior to any travel to schools, training, seminars, etc., by Office of the Sheriff employees the Travel Request Form must be correctly completed, in accordance with Office of the Sheriff Policy Section 1.05.39, as follows:

1. Name(s) of person(s) attending the training/travel.
2. Title (Deputy Sheriff, Sergeant, Records Clerk, etc.).
3. Phone number of employee who can answer questions regarding the Travel Request. (Usually the person completing the form.)
4. Actual date of departure (if the employee is attending a course which starts June 11 at 0800 hours in Los Angeles, he/she will have to be in Los Angeles the day before, making the departure date June 10).
5. Date the employee returns to this County, most often the day the course ends.
6. Location of the training.
7. The "Travel Justification" section of the Travel Request must explain why the travel is necessary and beneficial to the County. The explanation must include the importance of the trip to the employee's responsibilities and the Office of the Sheriff. One or two sentences explaining the need to send the employee away; i.e., "to attend homicide investigations school. Detective Jones is newly assigned to the Homicide Unit."
8. A copy of the conference schedule and/or itinerary should also be attached.
9. County Car - no cost; Plane - the round trip airfare. The tickets will be purchased by a Purchasing Clerk; Rental car - estimated cost. Vouchers provided by the Purchasing Department.
10. The actual round trip mileage to the destination. You may only charge for the distance to/from your place of employment to/from your assigned destination. (If you leave from your home, and it is a greater distance from your approved destination than your assigned facility/station house, use your place of

employment as your starting/ending point.) The reimbursement rate for mileage is changed periodically to conform to IRS-approved rates.

11. Reimbursement for meals: Actual expenses, including tax and gratuity, for individual meals, and snacks, will be reimbursed up to $65.00 per day, if the individual is eligible for three meals on that day. If eligible for two or fewer meals, the following individual maximums shall apply:

    a. Breakfast $10.00

    b. Lunch $20.00

    c. Dinner $35.00

    - Receipts of actual expenses required.

12. The number of nights lodging is required times the room rate plus tax.

13. Any other expenses such as tuition, registration fee, supplies, parking, cab fare, rental car, bridge tolls, telephone and FAX charges (relative to County business), BART or bus fares, tips, porterage (baggage handling), checking fees, etc. If meals are included in the registration fee, state this on the request and omit meals in No.11.

14. Total amount.

15. Type "Office of the Sheriff" on the line requesting Department and date the request.

16. If it is a POST-reimbursed course, note it and the plan (POST Plan II).

B. The Travel Request must be submitted by the employee to the employee's Supervisor. The Supervisor will submit the Request to the Division Assistant Sheriff for approval/disapproval.

C. Travel costing less than $1,000, and involving fewer than five travelers on the same trip, and with the travel destination within the continental United States, requires the approval of the traveler's Bureau Assistant Sheriff. Travel costing $1,000 or more per person, or involving five travelers or more on the same trip, or with a travel destination outside of the continental United States requires the approval of the traveler's Bureau Assistant Sheriff and the County Administrator's Office.

D. All Travel Requests should be fully approved at least two weeks prior to the commencement of travel. If the travel requires approval by the County Administrator's Office, allow an additional week for processing.

E. Travel Requests submitted late will not be granted except in unusual, urgent, or exigent circumstances. Travel undertaken in the absence of an approved Travel Request will not be reimbursed.

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 4
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2011 **REVISION DATE: 11-6-2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Employee Evaluations**	

I. INTRODUCTION TO THE JOB PERFORMANCE EVALUATION.

A. The purpose of the performance evaluation interview is to bring supervisors and employees together to review the employee's job performance and job related standards. In addition, the interview should serve to encourage communications regarding performance expectations on the part of both persons, and to develop a positive, cooperative approach to maintaining and improving job performance in the future.

II. OBJECTIVES.

A. To encourage strengths and improve weak areas of performance.

B. To improve communication within the organization.

C. To recognize special skills and training possessed by employees.

D. To stimulate an employee to enter a self-improvement program.

E. To establish realistic goals and objectives for the employee.

III. STANDARDIZED EVALUATION GUIDELINES.

A. The evaluation standards are subdivided into clearly defined performance areas. Each of these performance areas is defined by expected employee behavior in relation to the performance area.

B. The standards, in the form of behavioral guidelines/examples, are presented for each definition. Each area describes the expected behavior of each employee. Employees who meet, exceed, or prove deficient within a specific area, will be rated on a scale of 1 to 4, with 4 representing the highest rating and 1 representing the lowest rating within a category.

IV. RATER'S RESPONSIBILITY.

A. The Division Commander will schedule the most appropriate supervisor to conduct the evaluation when an employee has been with a supervisor for fewer than four months and an evaluation is due.

B. Supervisors are encouraged to keep notes (both positive and negative) that will enable accurate recall of incidents that should be discussed during the interview.

C. Supervisors conducting evaluations are encouraged to obtain data from other supervisors who have personally supervised the employee during the evaluation period.

D. Schedule the interview where undivided attention can be directed toward the employee.

E. Advise the employee of the scheduled interview at least one week in advance and provide a blank copy of the Evaluation Package for self-evaluation.

F. Complete the worksheet prior to the interview. Be specific in your remarks and focus on job-related performance. Avoid the "Halo Effect" (one good trait causes high ratings in all categories) or the "tendency to the mean" (all employees evaluated midrange).

G. Review the employee's self-evaluation worksheet prior to the interview and be prepared to discuss any variances.

H. Any potential flaws noted in the system should be brought to the attention of Administration in writing with suggested modification.

I. Supervisors conducting evaluations must determine the weight to be given each trait/behavior as it relates to an employee's overall performance in an area. Having only one trait or behavior which is unacceptable does not necessarily determine the employee's overall performance in that area unless that trait carries significant and controlling weight for that performance area as determined by the supervisor.

V. EMPLOYEE RESPONSIBILITIES.

A. Prior to your scheduled meeting with your supervisor, you should review the evaluation worksheet in detail and compare your performance during the rating period with the standards.

B. Rate yourself in each category. Include any pertinent information which supports your rating.

C. Submit the completed worksheet to your supervisor at least two work days prior to your scheduled interview.

D. Come to the evaluation meeting with a positive attitude prepared to objectively discuss your strengths, weaknesses and what you hope to accomplish during the next evaluation period.

VI. EMPLOYEE OPTIONS.

A. The evaluated employee may submit a memo in response to each performance evaluation, which will be filed in both the divisional and departmental file. This memo shall be submitted within five days of the performance evaluation.

VII. FORMS.

A. Employee Performance Evaluation Forms are maintained on the Office of the Sheriff's Intranet in the "Forms" tab. Evaluation Forms are also maintained on the Sheriff's Network "G" Drive in the "Forms" folder, "Evaluations" subfolder. Four categories of evaluation forms are available for use for both sworn and professional staff:

1. Probationary Employee Evaluation
2. Employee Evaluation
3. Supervisor Evaluation
4. Manager Evaluation

VIII. RATING GUIDELINES.

A. Each of the evaluation forms listed above includes ratings guidelines that shall be used by all evaluators.

IX. RED STRIPE POLICY REVIEW.

A. At the conclusion of each employee, supervisor, or manager evaluation, the evaluator will review the Red Stripe policies. Red Stripe Policies are those that are critical knowledge for proper conduct during high-risk events that do not occur frequently. Personnel to whom a particular “Red Stripe” Policy applies must know the policy in total so that effective and correct action may be taken when there is no discretionary time available to reference the manual or other resources. (Reference CCCSO Policies and Procedures Section 1.01.01).

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 5
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Training for Peace Officers**	

I. REQUIRED TRAINING FOR PEACE OFFICERS.

A. THE FOLLOWING MANDATED TRAINING IS PROVIDED IN ACCORDANCE WITH STATE REQUIREMENTS:

1. POST Basic Academy
2. POST Continuing Professional Training
3. POST Supervisory Course (for new first-line sworn supervisors)
4. POST Management Course (for new sworn middle managers)
5. STC Basic Jail Operations
6. STC Annual Corrections Update
7. First Aid
8. Cardiopulmonary Resuscitation
9. Domestic Violence
10. Firearms Qualification

II. SPECIALIZED TRAINING.

A. ADMINISTRATIVE SERVICES.

1. Background Investigator
2. Community Relations Specialist
3. Criminal Intelligence Officer
4. Department Instructor
5. Internal Affairs Investigator
6. Training Manager

B. PATROL.

1. Contract City Officer
2. Field Training Officer
3. Marine Patrol Unit

C. FORENSIC SERVICES DIVISION.

1. Crime Scene Investigator
2. Criminalist
3. Fingerprint Examiner
4. Fingerprint Technician
5. Forensic Toxicologist
6. Property Technician
7. Coroner Investigator

D. TECHNICAL SERVICES.

1. Dispatcher
2. Field Training Officer
3. Records, Clerical Supervisor

E. EMERGENCY SERVICS DIVISION.

1. Mutual Aid Coordinator
2. Volunteer Services Coordinator

F. DETENTION DIVISION.

1. Classification Deputy
2. Facility Training Officer
3. Search Team Deputy
4. Transportation Deputy

G. INVESTIGATIONS DIVISION.

1. Fraudulent Document Investigator
2. Homicide Investigator
3. Juvenile/Sexual Assault Investigator
4. Narcotics Investigator
5. Special Services Investigator

H. SPECIALIZED POSITIONS.

1. Hostage Negotiator

2. Narcotic Enforcement Team
3. Special Weapons and Tactics Team
4. Suppression Team

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 6
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Post Certificate Regulations**	

I. PROFESSIONAL CERTIFICATE PROGRAM.

A. The Commission on POST has set forth the following guidelines for the Professional Certificate Program. To qualify for award of certificates, applicants shall have completed combinations of education, training and experience as prescribed by the Commission.

B. BASIC CERTIFICATE.

1. Have satisfactorily met the appropriate POST Basic Course training requirement.

2. Have satisfactorily completed the period of probation, of no less than one year. An applicant must acquire the certificate upon completion of probation but within 24 months of date of hire.

C. INTERMEDIATE CERTIFICATE.

1. Possess or be eligible to possess a basic certificate; and

2. Satisfy the prerequisite basic course training requirement, and have acquired the training and education points and/or the college degree designated and the prescribed years of law enforcement experience in one of the following combinations:

Minimum Training Points Required	15	30	45		
Minimum Education Points or Degree Required	15	30	45	Associate Degree	Baccalaureate Degree
Years of Law Enforcement Experience Required	8	6	4	4	2

D. ADVANCED CERTIFICATE.

1. Possess or be eligible to possess an intermediate certificate; and

2. Satisfy the prerequisite basic course training requirement and have acquired the training and education points and/or the college degree designated and the prescribed years of law enforcement experience in one of the following combinations:

Minimum Training Points Required	30	45			
Minimum Education Points or Degree Required	30	45	Associate Degree	Baccalaureate Degree	Masters Degree
Years of Law Enforcement Experience Required	12	9	9	6	4

E. SUPERVISORY CERTIFICATE.

1. Possess or be eligible to possess an intermediate certificate; and

2. Have no less than 60 semester units; and

3. Satisfactorily meet the training requirement of the Supervisory Course; and

4. Have served satisfactorily for a period of two years as a first-line Supervisor, middle Manager, assistant Department head, or Department head as defined in POST regulations.

F. MANAGEMENT CERTIFICATE.

1. Possess or be eligible to possess an advanced certificate; and

2. Have no less than 60 semester units; and

3. Satisfactorily meet the training requirement of the Management Course; and

4. Have served satisfactorily for a period of two years as a middle Manager, assistant Department head, or Department head as defined in POST regulations.

G. EXECUTIVE CERTIFICATE.

1. Possess or be eligible to possess an advanced certificate; and

2. Have no less than 60 semester units; and

3. Satisfactorily meet the training requirements of the Executive Development Course; and

4. Have served satisfactorily for a period of two years as a Department head as defined in POST regulations.

Former Policy Deleted

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 8
	RELATED ORDERS: None.	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 4-28-2014	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Personnel Files**	

I. PERSONNEL FILES.

A. The following personnel files exist in Contra Costa County for employees of the Sheriff's Office:

File Name	Custodian of Records	File Contents
Contra Costa County Human Resources Personnel File (Personnel Department 2nd Floor)	Director of Human Resources	Hiring Information; disciplinary actions affecting employment; name changes; changes in classification; merit increment reports. **Access**: Employee; Personnel Department; others must subpoena request.
Office of the Sheriff Personnel File (7th Floor)	Chief of Management Services	Personnel actions; all memos to, from, and about employee; commendations, imposed discipline, counseling, evaluations, and assignment memos. **Access**: Employee; Admin. Staff; Division Commanders; Management Level Supervisors; and Internal Affairs personnel.

File Name	Custodian of Records	File Contents
Division File	Division Commander	General intra-division correspondence. **Access**: Division Commanders and Division Supervisors.
Supervisor's Notes (maintained for employee evaluations)	Division Commander	Used to assist in Employee evaluations; includes both positive and negative notes from Supervisor-employee

		performance review meetings; Access: Sworn employee, supervisors, Managers (per Poole v. Orange County).
Internal Affairs Unit Files (11th Floor)	Internal Affairs Lieutenant	Completed investigations and related documents, letters of reprimand, counseling, and proposed and final discipline documents. **Access**: Employee (limited access); Administrative Staff; Division Commanders.
Training Files	Training Division Commander	Training records for all sworn employees and records for the Auditor on educational incentive. **Access**: Employee; Training Staff; Division Commanders.
Medical Files	Sheriff's Office Administration	Medical status reports and medical documentation related to work injuries; FMLA; disability accommodations and other medically related absences. **Access**: Director of Support Services-Personnel Unit or his/her designee.

Former Policy Deleted

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 10
	RELATED ORDERS: 1.06.34	
ISSUE DATE: 2-1-2006 REVISION DATE: 5-12-2014	CLEARANCE: Office of the Sheriff	
CHAPTER: APPENDICES	SUBJECT: Bloodborne Pathogens Exposure Control Plan	

I. DEFINITIONS.

A. BODY FLUIDS. Blood, Semen, Drainage, Pus, Saliva, Sputum, Mucus, Vomit, Urine, Feces, Vaginal Secretions, Cerebrospinal Fluid, Synovial Fluid, Pleural Fluid, Pericardial Fluid, Peritoneal Fluid, and Amniotic Fluid.

B. BLOOD. Human Blood, Human Blood Components, and products made from Human Blood.

C. BLOODBORNE PATHOGENS. Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV).

D. CONTAMINATED. The presence or reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

E. DECONTAMINATION. The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

F. ENGINEERING CONTROLS. Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

G. EXPOSURE INCIDENT. A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

H. HAND WASHING FACILITIES. A facility providing an adequate supply of running potable water, soap and single use of towels or hot air drying machines.

I. HBV. Hepatitis B Virus which causes an infectious disease of the liver transmitted by blood or sexual fluids.

J. HIV. Human Immunodeficiency Virus is the virus that causes AIDS.

K. LICENSED HEALTH CARE PROFESSIONAL. A person whose legally permitted scope of practice allows them to independently perform the activities as described in

Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-Up Sections of this plan.

L. OCCUPATIONAL EXPOSURE. Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

M. OTHER POTENTIALLY INFECTIOUS MATERIALS. Body Fluids contaminated with human blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids, any unfixed tissue or organ (other than intact skin) from a human living or dead.

N. PARENTERAL. Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, and abrasions.

O. PATHOGEN. Disease causing organism.

P. PERSONAL PROTECTIVE EQUIPMENT. Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Q. REGULATED WASTES. Liquid blood, semi-liquid blood or potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in liquid, semi-liquid state, or dried state.

R. SHARPS. Any object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of wires.

S. SOURCE INDIVIDUAL. Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.

T. WORK PRACTICE CONTROLS. Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique.)

II. PURPOSE OF THE PLAN.

A. One of the major goals of the Occupational Safety and Health Administration (OSHA) is to regulate facilities where work is carried out, to promote safe work practices in an effort to minimize the incidence of illness and injury experienced by employees. Relative to this goal, OSHA has enacted the Bloodborne Pathogens Standard, codified as 29 CFR (Code of Federal Regulations) 1910.1030. The purpose of the Bloodborne Pathogens Standard is to "reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV) and other "bloodborne pathogens" that employees may encounter in the workplace.

B. The Contra Costa County Sheriff's Office believes there are a number of "good safety practices" that should be followed when working with bloodborne pathogens. These principals include:

1. Minimize all exposures to bloodborne pathogens.

2. The risk of exposure to bloodborne pathogens should never be underestimated.

3. The Sheriff's Office shall institute as many practical work practices and engineering controls as possible to eliminate or minimize employee exposure to bloodborne pathogens.

C. The Exposure Control Plan purpose is to meet the letter and intent of the OSHA Bloodborne Pathogens Standard. The objective of this plan is twofold:

1. To protect employees from the health hazards associated with bloodborne pathogens.

2. To provide appropriate treatment and counseling should an employee be exposed to bloodborne pathogens.

III. BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN

A. INSTRUCTIONS

1. The immediate supervisor of an employee who has sustained an exposure has the responsibility to ensure that the following steps are taken:

a. Employee must have blood drawn within 24 hours to determine baseline. They will test for HIV, HEP B, and HEP C. Physicians should be requested to begin antibody procedures immediately.

b. Employee MUST go to either Muir/Diablo Occupational Medicine, or Kaiser Occupational Medicine. The employee may not seek treatment from their own medical provider, UNLESS a Physician's Predesignation form is on file in the Sheriff's Personnel Unit (call Personnel 925-335-1500 to verify).

2. **If Subject consents to blood draw**, contact Blood Alcohol Detection (BAD) Nurse via Dispatch.
   a. BAD Nurse will respond and perform blood draw of subject.
   b. Subject MUST initial and sign "Consent for HIV Antibody Test" form. Fax form Attention: Sheriff's Professional Standards, 651 Pine St., Martinez (925-335-1508).
   c. Blood must be transported as soon as possible by Sheriff's personnel to:

      CONTRA C0STA REGIONAL MEDICAL CENTER (CCRMC)
      2500 Alhambra Avenue, Martinez
      Public Health Lab, Room 209

3. **If Subject does NOT consent to blood draw**, immediately complete "Petition and Proposed Order to Test for Bloodborne Pathogens" form.
   a. Immediately deliver or fax Petition to Sheriff's Professional Standards (fax: 925-335-1301), who will obtain a signature from a Superior Court presiding judge.
   b. If exposure occurs after hours or on the weekend, contact Sheriff's Watch Commander (925-313-2481), who will immediately seek a signature from the on-call judge.
   c. Once Petition Order is signed, note Subject's refusal to sign on "Consent for HIV Antibody Test: form. Forward form to Professional Standards Division, 651 Pine St., Martinez.
   d. Contact BAD Nurse via Dispatch to perform blood draw of Subject.
   e. Blood must be transported as soon as possible by Sheriff's personnel to CCRMC Public Health Lab (see address above).

f. Forward original forms to Sheriff's Professional Standards, 651 Pine St., Martinez.

4. **If the person is deceased**, call and email a supervisor in the Coroner's Division to arrange for an immediate blood draw.

5. Documentation as a result of any exposure to bloodborne pathogens will be maintained by the Health Services Department for thirty (30) years, (see V.F.3.a.

6. 6.) If "Declaration of Phlebotomist" document is received, FAX copy to Sheriff's Standards (925-335-1532) and send original to: Contra Costa D.A.'s Office, 900 Ward St., Martinez, ATTN: Paul Mulligan, Chief of Inspectors.

IV. GENERAL.

A. RESPONSIBLE PERSONS. The Sheriff's Office has four major categories of responsibility to effectively implement the Exposure Control Plan. These categories are the Professional Standards Division, Division Commander, Division and Sheriff's Office Training Units, and all Sheriff's Office employees.

1. Professional Standards Division.

a. The Professional Standards Division will be responsible for overall management and support of the Sheriff's Office Bloodborne Pathogens Compliance Program. Responsibilities typically include, but are not limited to:

1. Implementing the Exposure Control Plan for the Sheriff's Office and identifies employees whose jobs entail potential exposure hazards.

2. Working with Division Commanders/designees and the Professional Standards Lieutenant to develop and administer any additional bloodborne pathogen-related policies and practices needed to support the effective implementation of this plan.

3. Implement this Exposure Control Plan, as well as revise and update the plan when necessary.

4. Collect and maintain a suitable reference library on the Bloodborne Pathogens Standard and bloodborne pathogens safety and health information.

5. Act as the Sheriff's Office liaison during OSHA Inspections.

6. Review and update the plan at least annually.

b. The Professional Standards Division will require assistance in fulfilling their responsibilities. To assist in implementing required duties, a Manager from each Division will be appointed as a member of the Safety

Committee that is chaired by the Professional Standards Division and meets on a regularly scheduled basis.

2. Division Commanders.

   a. Division Commanders are responsible for exposure control in their respective Divisions and will ensure that proper exposure control procedures are followed. The Division Commanders will also select a divisional Manager to serve on the Safety Committee.

3. Sheriff's Office Training Unit

   a. The Training Unit will be responsible for providing information and training to all employees who have potential exposure to bloodborne pathogens. Activities falling under the direction of the Training Unit include:

      1. Maintain an up-to-date list of Sheriff's Office employees for training. (Information to be provided by Divisions.)

      2. Develop suitable education/training programs.

      3. Assisting Divisions with periodic training of employees.

   b. Maintain appropriate training documentation such as "Sign in Sheets" for the duration of employment plus 30 years. (Divisions will maintain those training documents for update and Division specific training.)

   c. Review training programs with the Professional Standards Division, and the Safety Committee annually to include appropriate new information.

   d. The Training Unit Commander will annually appoint and ensure qualification of the Sheriff's Office Bloodborne Pathogen Instructors with concurrence from the Professional Standards Division.

4. Sheriff's Office Employee Responsibilities.

   a. As with all of the Sheriff's Office activities, employees have the most important role in the bloodborne pathogens compliance program and for the ultimate execution of the plan. In this capacity, employees must:

      1. Know what tasks have possible occupational exposure.

      2. Attend bloodborne pathogens training sessions.

      3. Plan and conduct all operations in accordance with work practice controls.

      4. Develop and maintain good hand washing techniques.

      5. Understand their responsibilities listed in the Sheriff's Office Injury and Illness Prevention Program.

V. AVAILABILITY OF THE EXPOSURE CONTROL PLAN TO EMPLOYEES.

A. To assist employees with their efforts, the Exposure Control Plan is available to employees at any time. Employees are advised of this availability during Sheriff's Office orientation and training sessions. Copies of the Exposure Control Plan are kept in the Appendix of the Sheriff's Office Manual and Illness and Injury Prevention Program. The

Sheriff's Office recognizes that it is important to keep an Exposure Control Plan updated. To ensure this, the plan will be reviewed and revised under the following circumstances:

1. Annually, on or before July, of each year.
2. When new or modified tasks and procedures are implemented which affect occupational exposure of employees.
3. When employees' jobs are revised such that new instances of occupational exposure may occur.
4. When new positions are established and their tasks/functions involve potential exposure to bloodborne pathogens.

B. EXPOSURE DETERMINATION - JOB CLASSIFICATIONS IN WHICH ALL EMPLOYEES HAVE EXPOSURE TO BLOODBORNE PATHOGENS. Listed below are Sheriff's Office job classifications in which all employees may come in contact with human blood or other potentially infectious materials, which may result in possible exposure to bloodborne pathogens:

JOB CLASSIFICATION	**DIVISION LOCATION**
1. Deputy	Sheriff's Officewide
2. Criminalist	Forensic
3. Deputy Sheriff Criminalist	Forensic
4. Forensic Supervisor	Forensic
5. Deputy Sheriff Forensic Supervisor	Forensic
6. Forensic Manager	Forensic
7. Deputy Sheriff Forensic Manager	Forensic
8. Deputy Sheriff Reserve	Sheriff's Officewide
9. Deputy, Special In-County Service Area P-1	Patrol
10. Detention Service Aide	Custody
11. Detention Service Worker	Custody
12. Director of Support Services	Custody
13. Crime Scene Investigator	Forensic/FOB
14. Fingerprint Technician (Crime Scene Inv.)	Forensic/FOB
15. Laboratory Aide	Forensic
16. Fingerprint Examiners	Forensic
17. Fingerprint Technician	Identification Unit (Records & ID)
18. Director of Property and Evidence Services	Property
19. Sheriff's Specialist	Forensic/Property Bureau/Custody/CAF
20. Lead Detention Service Worker	Custody
21. Sergeant	Sheriff's Officewide
22. Sheriff's Aide	Forensic/Property Bureau/Custody
23. Sheriff's Ranger	Custody/Court Security
24. Chief of Forensics	Forensic

C. EXPOSURE DETERMINATION - JOB CLASSIFICATIONS IN WHICH SOME EMPLOYEES HAVE EXPOSURE TO BLOODBORNE PATHOGENS. Listed below are Sheriff's Office job classifications in which some employees may come in contact with human blood or other potentially infectious materials, which may result in possible exposure to bloodborne pathogens:

JOB CLASSIFICATION	DIVISION LOCATION
1. Account Clerk	Custody/Operations
2. Clerk – Specialist Level	Custody/Operations/Coroner
3. Clerk – Senior	Custody/Operations/Forensic/Coroner
4. Secretary	Forensic
5. Sheriff's Aide	Custody/Intake; Forensic/Property Section
6. Sheriff's Ranger	Custody/Courts
7. Sheriff's Specialist	Custody
8. Student Worker	Patrol

D. EXPOSURE DETERMINATION - WORK ACTIVITIES INVOLVING POTENTIAL EXPOSURE TO BLOODBORNE PATHOGENS. Listed below are Office of the Sheriff tasks and procedures where employees may come into contact with human blood or other potentially infectious materials which may result in exposure to bloodborne pathogens:

JOB CLASSIFICATION	DIVISION/LOCATION	TASK/PROCEDURE
1. Clerk – Specialist Level	Custody/Operations	Handles Blood/Urine Specimens for Health Department Courier.
2. Deputy/Reserve	Sheriff's Officewide	Restrains combative subjects/ administers first Aid/CPR, removal of dead bodies & body fluids as associated with deceased, collection of evidence contaminated with body fluids.
3. Sergeant	Forensic	Same tasks/procedures for Deputies, also examines evidence at crime scenes and autopsies; blood typing, examination of items stained with blood, semen or saliva. Performs analysis of blood and urine for presence of Alcohol/drugs.
4. Student Worker	Forensic	
5. Deputy Sheriff Criminalist Deputy Sheriff Forensic Supv.	Forensic	
6. Detention Service Aide	Custody	Disposes of biohazardous wastes.
7. Detention Service Worker	Custody	
8. Lead Detention Service Worker	Custody	
9. Director of Support Services	Custody	Performs weekly inspection of housing units; inspects trash bags for facility clothing/ kitchenware.
10. CSI/Fingerprint Technician	Forensic	Collects evidence at crime scenes and autopsies, processes evidence for latent prints, handles fingerprint cards which may be contaminated with body fluids, fingerprints deceased persons.
11. Criminalist Forensic Supv.	Forensic	Performs analysis of blood and urine for presence of alcohol or drugs. Examines evidence at crime scenes and autopsies; blood typing, examination of items stained with blood, semen

		or saliva. Performs analysis of blood and urine for presence of alcohol/drugs.
12. Laboratory Aide	Forensic	Disposes of biohazardous wastes, performs analysis of blood and urine for the presence of drugs. Examines items stained with blood, semen or saliva. Examines crime scenes.
13. Fingerprint Examiner	Forensic	Processes evidence for latent prints, handles fingerprint cards which may be contaminated with body fluids, fingerprints deceased persons.
14. Sheriff's Specialist	Forensic/Custody/Property	Package, store and destroy evidence, package urine for drug alcohol testing.
15. Director Property/Evidence	Forensic	Package, store and destroy evidence.
16. Sheriff's Aide	Forensic/Custody	Handles property that may be contaminated with body fluids.

E. METHODS OF COMPLIANCE. To effectively minimize exposure to bloodborne pathogens, this plan and training sessions will address the use of universal precautions, establish appropriate engineering controls, implement appropriate work practice controls, use of necessary personal protective equipment and implement appropriate housekeeping procedures.

1. Universal Precautions.

a. Section 1.06.34 of the Sheriff's Office Manual addresses Universal Precautions. The assumption is made that all human blood and body fluids which are contaminated by human blood, such as semen, vaginal secretions, feces, and saliva are treated as if they are known to be infectious with HBV or HIV, and other bloodborne pathogens.

b. In circumstances where it is difficult or impossible to differentiate between body fluid types, we assume all body fluids to be potentially infectious.

c. Each Division is responsible for overseeing the Universal Precautions Program.

2. Engineering Controls.

a. In accordance with 1910.1030 of Title 29 CFR, one of the key aspects to an Exposure Control Plan is the use of Engineering Controls to eliminate or minimize employee exposure to bloodborne pathogens. As a result, employees use cleaning, maintenance and equipment that is designed to prevent contact with blood or other potentially infectious materials.

b. Each Division will establish and periodically work with Managers and Supervisors to review tasks and procedures performed in daily operations where engineering controls can be implemented or updated. The hazard assessment shall include:

1. Operations where engineering controls are currently employed.

2. Operations where engineering controls can be updated.

3. Operations currently not employing engineering controls, but where engineering controls could be beneficial.

c. Each of these controls will be reexamined during the annual Exposure Control Plan review and opportunities for new or improved engineering controls will be identified. Any existing engineering control equipment will be reviewed for proper function and needed repair or replacement every twelve months, in conjunction with the Division work site safety inspection and remediation process.

d. In addition to the identified engineering controls, the following controls shall be used throughout Sheriff's Office operations:

1. Hand washing facilities (or antiseptic hand cleaners and towels or antiseptic towelettes), which are readily accessible to all employees who have the potential for exposure.

2. Color-coded, puncture-resistant containers or containers labeled with a biohazard warning label for contaminated sharps.

3. Red bio-hazard bags used to dispose of contaminates.

a. Work Practice Controls.

1. Division Commanders shall assume the responsibility for overseeing the implementation of general work practice controls. Division Managers and Supervisors will work in conjunction with Division Training Coordinators to assist with implementation of the code of safe work practices as outline in the Sheriff's Office IIPP.

2. Each Division shall develop their own Work Practice Controls, if there are specific tasks performed that are not covered in the Sheriff's Office code of safe work practices.

3. When an employee is first hired, or changes jobs, the Division Commander shall ensure training, upon assignment, on the appropriate work practice controls of those classifications listed in the Work Activities Involving Potential Exposure list and as outlined in the IIPP documentation of this training is required and retention of these records shall form to the IIPP guidelines.

4. Personal Protective Equipment.

a. The Sheriff's Office provides Personal Protective Equipment that is needed to protect employees against exposure. This equipment may include, where appropriate and necessary, but not be limited to:

1. Gloves

2. Safety Glasses

3. Goggles

4. Masks and respirators

5. Coats/Jackets

b. To ensure that personal protective equipment is not contaminated and is in the appropriate condition to protect employees from potential exposure, the following will be practiced for non-disposable items:

1. All personal protective equipment is inspected periodically and repaired or replaced as needed to maintain its effectiveness.

2. Reusable personal protective equipment is cleaned, laundered and decontaminated as needed.

3. Single-use personal protective equipment (or equipment that cannot, for whatever reason, be decontaminated is disposed of by forwarding that equipment to the Coroner Division. (Refer to divisional procedures for collection of disposable items)

c. To make sure that this equipment is used as effectively as possible, employees will adhere to the following practices when using their personal protective equipment:

1. Any garments soiled by blood or other infectious materials will be removed while using gloves immediately, or as soon as is feasible.

2. Potentially contaminated personal protective equipment is removed prior to (or as soon as is feasible) leaving a work area or accident/incident site and placed in a biohazardous material container.

5. Uniform Laundering. Division Commanders will ensure that employees submit all potentially contaminated personal uniforms to be laundered as follows:

a. Seal contaminated garments in a red biohazard bag.

b. Attach a memo including employee's name and work location, article description and quantity, date of contamination, suspected contaminant if known, and case number/property number associated with the exposure. The Supervisor will retain a copy of the memo.

c. Supervisor will call Crime Scene Cleaners, Inc. at 1-800-357-6731 who will respond to the work location within two hours. The Crime Scene Cleaners receipt should be attached to the memo.

d. Once the decontaminated garment has been returned, all paperwork should be forwarded to the Professional Standards Division.

6. Housekeeping.

a. Employees will ensure that the work site is maintained in a clean and sanitary condition. Appropriate Divisions will determine and implement an adequate written schedule for cleaning and method of decontamination and disinfection based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

b. The following employees are designated to develop the work schedule and maintain housekeeping records:

Coroner	Administration Sergeant
Forensics	Forensic Manager/Deputy Sheriff Forensic Mgr.
Detention	Bureau of Administrative Svcs. Sergeants
Investigations	Team Sergeants
Patrol	Administration Sergeants

c. The Division Commander is responsible for ensuring completion within their respective Divisions.

7. Disposal.

a. All bloodstained trash will be sealed in a red "biohazard" labeled bag. No items shall be transported in a manner other than using the biohazard labeled bags while wearing protective gloves. The Martinez and West County Detention Facilities dispose of their own biohazard bags. The designated Sheriff's Office drop-off point is located at:

1. The Coroner's Office, 1960 Muir Road, Martinez

F. HEPATITIS B VACCINATION, INFECTIOUS DISEASE POST EXPOSURE EVALUATION AND FOLLOW UP. The Sheriff's Office recognizes that even with good adherence to all exposure prevention practices, exposure incidents can occur. As a result, a Hepatitis B Vaccination Program has been implemented as well as procedures for infectious disease post-exposure evaluation and follow-up, should exposure to bloodborne pathogens occur.

1. Vaccination Program.

a. To protect employees as much as possible from the possibility of Hepatitis B infection, the Sheriff's Office has implemented a vaccination program. This program is available, at no cost, to all employees who have occupational exposure to bloodborne pathogens. The vaccination program consists of a series of three inoculations over a six-month period. As part of the bloodborne pathogens training, employees will have received information regarding Hepatitis B vaccinations, including the effectiveness.

b. Division Commanders may schedule employee vaccinations through the Occupational Health Department.

2. Infectious Disease Post-Exposure Evaluation and Followup.

a. If an employee is involved in an incident where exposure to bloodborne pathogens may have occurred, the two most important steps taken will be:

1. Making sure that the employee receives medical consultation and treatment as expeditiously as possible after exposure at either Muir/Diablo Occupational Medicine or Kaiser Occupational Medicine.

2. Investigating and documenting the circumstances surrounding the exposure incident.

b. The affected employee's Division Commander will investigate the exposure incident. This investigation is initiated within 24 hours after the incident occurs and involves gathering the following information through

the completion of an Employee's Injury Reporting Form (AK30) and Sharp's Injury Form (if appropriate):

1. When the incident occurred - Date and Time
2. Where the incident occurred
3. What potentially infectious materials were involved in the incident - Type of material (blood, etc.)
4. Source of the material
5. Under what circumstances the incident occurred - Type of work being performed
6. How the incident was caused
7. Personal protective equipment being used at the time of the incident
8. Actions taken as a result of the incident
9. Employee decontamination
10. Cleanup
11. Notifications made

c. After this information is gathered it is evaluated, a written summary of the incident and its causes is prepared and recommendations are made for avoiding similar incidents in the future. It will then be forwarded to the Sheriff's Professional Standards Division.

d. In order to make sure that employees receive the best and timeliest treatment if an exposure to bloodborne pathogens should occur, the Sheriff's Office has set up a comprehensive post-exposure evaluation and follow up process.

e. Because the exposure is work related, the exposed employee qualifies for Workers' Compensation. The Division Commanders will advise the exposed employee to make an appointment with a qualified healthcare professional of their choice to discuss the employee's medical status. The employee will take a copy of the AK30 and the "Employee's Claim for Workers' Compensation Benefits" form (DWC FORM 1) to the chosen healthcare professional.

f. *NOTE: The above is applicable only following immediate medical treatment for the exposed employee.

3. Medical Recordkeeping.

a. The Health Services Department Director of Pre-employment Clinic is responsible for maintaining the records of vaccination status and exposures. These records should include the following:

1. Name of the employee
2. Social security number of the employee
3. A copy of the employee's Hepatitis B Vaccination status

4. Dates of vaccinations

5. Medical Records relative to the employee's ability to receive vaccination

6. Documentation as a result of any exposure to Bloodborne pathogens will be maintained for thirty years.

b. As with all information of this type, it is recognized that it is important to keep the information in these medical records confidential. Disclosure or reporting of this information to anyone will not be done without the employee's written consent (except as required by law).

G. LABELS AND SIGNS.

1. One of the warnings of possible exposure to bloodborne pathogens are biohazard labels. Because of this, the Sheriff's Office when appropriate uses red "color-coded" containers and red bio-hazard bags. Division Commanders are responsible for maintaining the availability of the warning labels and signs.

H. TRAINING AND INFORMATION.

1. Having well informed and educated employees is extremely important when attempting to eliminate or minimize employees' exposure to bloodborne pathogens. All employees who have potential for exposure to bloodborne pathogens are put through a comprehensive training program and furnished with as much information as possible within 10 days of receiving a new assignment.

2. Employees will be retrained at least annually to keep their knowledge current or to address changes in the workplace. Additionally, all new employees, as well as employees changing jobs or job functions, will be given additional training that a new position may require at the time of a new job assignment.

3. The Training Unit is initially responsible for ensuring that all employees who have potential exposure to bloodborne pathogens receive training. All other training on bloodborne pathogens will be coordinated by the Division Training Coordinators with assistance in instructor selection by the Training Unit.

4. The following topics covered in the Sheriff's Office training program include, but are not limited to the following:

a. Use and recognition of the Sheriff's Injury and Illness Prevention Program.

b. Bloodborne Pathogens Standard

c. The epidemiology and symptoms of bloodborne diseases

d. The modes of transmission of bloodborne pathogens

e. The Sheriff's Office Exposure Control Plan (and where employees can obtain a copy)

f. Appropriate methods of recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

g. A review of the use and limitations of methods that will prevent or reduce exposure, including:

1. Engineering controls

2. Work practice controls

3. Personal protective equipment

h. Selection and use of personal protective equipment including:

1. Types available

2. Proper use

3. Location within facility

4. Removal

5. Handling

6. Decontamination

7. Disposal

i. Visual warnings of biohazards within the facility including label, signs and "colored-coded" containers

j. Information on the Hepatitis B Vaccine, including its:

1. Efficacy

2. Safety

3. Method of Administration

4. Benefits of Vaccination

5. The Sheriff's Office Free Vaccination Program

k. Actions to take and persons to contact in an emergency involving blood or other potentially infectious materials

l. The procedures to follow if an exposure incident occurs, including incident reporting

m. Information on the post exposure evaluation and follow up, and the medical consultation.

5. The Office of the Sheriff training methods will use numerous training techniques and allow employees an opportunity to ask questions and interact with instructors.

I. RECORDKEEPING. To facilitate the training of Office of the Sheriff employees, as well as to document the training process, training records will contain the following information:

1. Dates of all training sessions

2. Contents/summary of the training sessions

3. Names and qualifications of the instructor

4. Names and job titles of employees attending training sessions

5. These training records are maintained by the Training Unit, and site Manager's on the Safety Committee which are available to employees and their representatives, as well as OSHA and its representatives for examination and duplication.

J. SHARPS INJURY LOG. Every Division shall maintain a written or electronic Sharps Injury Log documenting each exposure incident involving a sharp. Each exposure incident shall be recorded on the log within 14 working days of the date the incident is reported to the employer. The information recorded shall contain the following information, if known or reasonably available:

1. Date and time of the exposure
2. Type and brand of sharp involved
3. A description of the exposure incident which shall include:
    a. Job classification of the employee
    b. Work area where the exposure occurred
    c. Task the employee was performing at the time of the exposure
    d. How the incident occurred
    e. The body part involved
    f. If the sharp had engineered injury protection, whether the protective mechanism was activated, and whether the injury occurred before, during or after the activation of the mechanism.
    g. If the sharp had no engineered injury protection, the injured employee's opinion as to whether and how such a mechanism could have prevented the injury.
    h. The employee's opinion about whether any engineering, administrative or work practice control could have prevented the injury.

K. CONFIDENTIAL ASSISTANCE. For additional information or for confidential or general questions regarding this plan, exposure, risks or infection, contact:

1. Office of the Sheriff
   Professional Standards Division 335-1517
   Worker's compensation 335-1527
2. Public Health Department
   Public Health Nurse: 313-6740

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 11
	RELATED ORDERS: None	
ISSUE DATE: 2-1-2006 **REVISION DATE:** 12-30-2011	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Office of the Sheriff Firearms Qualification Courses**	

I. SHERIFF'S OFFICE FIREARMS QUALIFICATION COURSE. (PISTOL)

A. A.O. QUALIFICATION. The following shall constitute the current Sheriff's Office Firearms Qualification Course. All Deputy Sheriffs shall be required to satisfactorily complete the Sheriffs Office Firearms Qualification Course on an annual basis, as scheduled by the Training Division. This course of fire shall be followed at Advanced Officers (A.O.) training.

1. COURSE OF FIRE.

a. Semiautomatic Weapons shall be loaded with twelve rounds in the weapon and six rounds each in two magazines. Revolvers shall be loaded with six rounds in the weapon and eighteen rounds in speed loaders.

Stage 1: From the one-yard line, six rounds are fired, one-handed grip or two-handed grip, with a time limit of six seconds.

Stage 2: From the five-yard line, six rounds are fired, two-handed grip, shoulder level, with a time limit of five seconds.

Stage 3: From the seven-yard line, six rounds are fired, two-handed grip, shoulder level, with a time limit of ten seconds.

Stage 4: From the fifteen-yard line, six rounds are fired, two-handed grip, shoulder level, with a time limit of fifteen seconds.

b. Five Round Revolvers - twenty rounds. All stages of fire begin with the firearm loaded with five rounds secured in a snapped holster.

Stage 1: From the one-yard line, five rounds are fired, one-handed grip or two-handed grip, with a time limit of six seconds.

Stage 2: From the five-yard line, five rounds are fired, two-handed grip, shoulder level, with a time limit of five seconds.

Stage 3: From the seven-yard line, five rounds are fired, two-handed grip, shoulder level, with a time limit of ten seconds.

Stage 4: From the fifteen-yard line, five rounds are fired, two-handed grip, shoulder level, with a time limit of fifteen seconds.

2. MODE OF FIRE. Revolvers shall be fired double-action only during all stages. Semi-automatic pistols shall be fired double-action only on the first shot and single-action only on all subsequent shots at each stage.

3. TARGET. Each course of fire shall utilize one CCCSO-1CB silhouette target.

4. SCORING.

   a. Semiautomatic Weapons and Six Round Revolvers. Scoring shall include all shots located within the 8, 9 and 10 rings of the CCCSO-1CB target. Shots located on or touching the ring itself shall count as if located within the ring. The firearms instructor administering the shoot shall resolve any disputed shot placement. Each shot shall count for the numeric value of the ring the shot is placed in, i.e. a shot in the 10 rings counts 10 points and so forth. Shots located outside of the 8 ring shall be counted as misses. Shots made after the time limit shall result in a deduction of 10 points from the overall score for that course of fire. A total possible score for a single course of fire shall be 240 points.

   b. Five Round Revolvers. Scoring shall include all shots located within the 8, 9 and 10 rings of the CCCS0-1CB target. Shots located on or touching the ring itself shall count as if located within the ring. The firearms instructor administering the shoot shall resolve any disputed shot placement. Each shot shall count for the numeric value of the ring the shot is placed in, i.e. a shot in the 10 rings counts 10 points and so forth. Shots located outside of the 8 ring shall be counted as misses. Shots made after the time limit shall result in a deduction of 10 points from the overall score for that course of fire. A total possible score for a single course of fire shall be 200 points.

5. QUALIFYING. In order to satisfactorily complete the Sheriffs Office Firearms Qualification, a qualifying score and weapon proficiency must be demonstrated to the satisfaction of the firearms instructor.

   All Deputy Sheriffs who carry semiautomatic weapons or six shot revolvers shall fire a single twenty-four round course of fire All Deputy Sheriffs who carry five shot revolvers shall fire a single twenty round course of fire. All rounds fired are on a single A qualifying score shall be a minimum of 80% of the possible total score of 240 points (or 192 points) for semiautomatic weapons and six shot revolvers, and a minimum of 80% of the possible total score of 200 points—(or 160 points) for five shot revolvers.

   All Deputy Sheriffs must demonstrate proficiency in safe manipulation of the weapon to include:
   - Five step pistol presentation;
   - Tactical reload;
   - Out-of-battery reload;
   - Clearing malfunctions.

6. SHOOTING BADGE.

a. Shooting badges shall be awarded to those Deputy Sheriffs who have satisfactorily completed the annual Sheriffs Office Firearms Qualification and have demonstrated a superior proficiency in marksmanship, as follows:

	Semiautomatic Weapons/Six Shot Revolvers	**Five Shot Revolvers**
Marksman level:	216 to 227 points	180 to 189 points
Expert Level:	228 to 240 points	190 to 200 points
Qualifying scores:	192 to 215 points	160 to 179 points

b. At the conclusion of the qualification course of fire, any Deputy Sheriff obtaining a final score that merits issuance of a shooting badge shall receive it.

II. SHERIFF'S OFFICE FIREARMS ALTERNATE QUALIFICATION COURSE. (PISTOL)

A. SUMMER QUALIFICATION. The following shall constitute the Sheriff's Office Firearms Alternate Qualification Course. All sworn personnel shall be required to satisfactorily complete a Sheriff's Office Firearms Qualification Course on an annual basis. This course of fire shall be followed at the Summer Qualification.

1. COURSE OF FIRE.

a. Semiautomatic weapons with a magazine capacity of 12 or more will begin with 13 rounds in the weapon and one 12 round magazine in the magazine pouch.

Stage 1: From the one-yard line, six rounds are fired in four seconds, two from retention center mass, shooter takes one step to the rear and fires four from point center mass, follow through, assess, and holster.

Stage 2: From the five-yard line, seven rounds are fired in six seconds. All rounds fired center mass, complete an out of battery reload (Not timed) with a twelve round magazine from the magazine pouch, follow through, assess, and holster.

Stage 3: From the seven-yard line, six rounds are fired in six seconds center mass, follow through, assess, and holster.

Stage 4: From the ten-yard line, six rounds are fired in seven seconds center mass.

b. Semiautomatic weapons with a magazine capacity of less than 12 rounds and 6 shot revolvers will begin loaded with 6 rounds in the weapon and 3 magazines or speed loaders loaded with 6 rounds each in the magazine pouch.

Stage 1: From the one-yard line, six rounds are fired in four seconds. Two from retention center mass, shooter takes one step

to the rear and fires four from point center mass. Reload (Not timed), follow through, assess, and holster.

Stage 2: From the five-yard line, six rounds are fired in six seconds. All rounds fired center mass. Complete an out of battery reload, follow through, assess, and holster.

Stage 3: From the seven-yard line, six rounds are fired in six seconds center mass. Reload, follow through, assess, and holster.

Stage 4: From the ten-yard line, six rounds are fired in seven seconds center mass, follow through, assess, and holster.

c. 5 shot revolvers will begin loaded with 5 rounds in the weapon and 3 speed loaders loaded with 5 rounds each in the magazine pouch.

Stage 1: From the one-yard line, five rounds are fired in four seconds. Two from retention center mass, shooter takes one step to the rear and fires three from point center mass. Reload (Not timed), follow through, assess, and holster.

Stage 2: From the five-yard line, five rounds are fired in six seconds. All five rounds fired center mass. Reload (Not timed), follow through, assess, and holster.

Stage 3: From the seven-yard line, five rounds are fired in six seconds center mass. Reload (Not timed), follow through, assess and holster.

Stage 4: From the ten-yard line, five rounds are fired in seven seconds center mass, follow through, assess, and holster.

2. MODE OF FIRE. Revolvers shall be fired double-action only during all stages. Semi-automatic pistols shall be fired double-action only on the first shot and single-action only on all subsequent shots at each stage.

3. TARGET. Each course of fire shall utilize one FBI Q silhouette target.

4. SCORING.

a. Semiautomatic weapons with a magazine capacity of 12 rounds or more. Scoring will be based on the hit/miss system. Scoring shall include all shots located within the marked silhouette or touching the line of the silhouette. The minimum passing score is 80%. Twenty hits inside the silhouette constitute a passing score. The firearms instructor administering the shoot shall resolve any disputed shot placement. Shots located outside of the silhouette shall be counted as misses. Shots made after the time limit shall result in a deduction of 1 point from the overall score for that course of fire. A total possible score for a single course of fire is 25.

b. Semiautomatic weapons with a magazine capacity of less than 12 rounds and 6 shot revolvers. Scoring will be based on the hit/miss system. Scoring shall include all shots located within the marked silhouette or touching the line of the silhouette. The minimum passing score is 80%. Nineteen hits inside the silhouette constitute a passing score. The firearms instructor administering the shoot shall resolve any disputed

shot placement. Shots located outside of the silhouette shall be counted as misses. Shots made after the time limit shall result in a deduction of 1 point from the overall score for that course of fire. A total possible score for a single course of fire is 24.

c. Five Round Revolvers. Scoring will be based on the hit/miss system. Scoring shall include all shots located within the marked silhouette or touching the line of the silhouette. The minimum passing score is 80%. Sixteen hits inside the silhouette constitute a passing score. The firearms instructor administering the shoot shall resolve any disputed shot placement. Shots located outside of the silhouette shall be counted as misses. Shots made after the time limit shall result in a deduction of 1 point from the overall score for that course of fire. A total possible score for a single course of fire is 20.

5. QUALIFYING. In order to satisfactorily complete the Sheriff's Office Firearms Qualification, a qualifying score and weapon proficiency must be demonstrated to the satisfaction of the firearms instructor.

a. All sworn personnel who carry semiautomatic weapons shall fire a single 25 round course of fire. Six shot revolvers shall fire a single 24 round course of fire. All sworn personnel who carry five shot revolvers shall fire a single 20 round course of fire. All rounds fired are on a single FBI Q target and a qualifying score shall be a minimum of 80% of the possible total score. There is a maximum of 25 points possible for high capacity semiautomatic weapons and 24 points for low capacity semiautomatic weapons and six shot revolvers, and a maximum of 20 points for five shot revolvers.

b. All sworn personnel must demonstrate proficiency in safe manipulation of their weapon.

III. SHERIFF'S OFFICE FIREARMS QUALIFICATION COURSE. (RIFLE)

1. Rifle Qualification. The course shall be conducted by a trained rifle instructor and will consist of classroom instruction, demonstration, practical application on the range, a written test, and live fire qualification. When practical, this Basic Rifle Course will be presented and conducted following a POST-approved course outline and course of instruction (to allow the employee to meet the requirements of PC 12020 when handling and deploying other agency weapons.)

a. Qualification. Qualification with the Rifle will consist of firing 32 rounds on an approved course of fire. To qualify, deputies must strike the target a minimum of 25 times (80%). The approved course of fire is:

Distance	Action/Drill	# of Rounds	Time (Secs)
25 yards	Standing	2 rds. to body	3.5
25 yards	Standing to kneeling	2 rds. to body	5.0
50 yards	Standing to kneeling	2 rds. to body	6.5
50 yards	Standing to prone	2 rds. to body	10.0
10 yards	Double Tap	2 rds. to body	2.5
10 yards	Failure drill	2 rds. to body 2 rds. to head	3.5
10 yards	Tactical reload	N/A	6.0
10 yards	Pistol transition/ Malfunction/failure to	1 rd. to body, transition to pistol, 2	15.0

	fire (dummy rd on top of mag).	rds. Body; clear malfunction, 2 rds. to body	
10-7 yards	Shooting on the move, forward	2 rds. to body	2.5
7-10 yards	Shooting on the move, backwards	2 rds. to body	2.5
7 yards	Pistol transition, out of battery reload	1 rd. to body, transition, 2 rds. to the body, out of battery reload, 2 rds. to the body	18.0
7 yards	Multiple target drill, 3 targets: 1 designated “no shoot”	2 rds. to body each target (4 rds. total)	4.0

b. Requalification. Requalification with the rifle will consist of completing the same course of fire as done for qualification.

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 12
	RELATED ORDERS: California Penal Code Sections 26150-26225,	
ISSUE DATE: 2-1-2006 **REVISION DATE: 7-18-2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **License to Carry a Concealed Weapon**	

I. INITIAL APPLICATION.

A. SHERIFF'S DESIGNEE. Applications and licenses for the carrying of a concealed weapon (CCW) are issued by the Sheriff, or his/her designee, and registered with the California Department of Justice pursuant to provisions associated with California Penal Code Sections 26150-26225.

1. The Sheriff's Designee, for the daily administration of the program is the Internal Affairs Lieutenant.

B. Authorized signatory to Concealed Weapons Licenses is the Sheriff.

C. PROVIDING APPLICATIONS. Any resident of Contra Costa County who is a United States citizen[1] and/or is otherwise permitted to purchase a firearm in the State of California will be issued the appropriate application forms and instructions upon request. Such request may be received in person, by phone or United States mail.

D. RESTRICTING ABILITY TO APPLY. The ability of a citizen to apply for a CCW will not be abridged or restricted.

E. MAINTAINING APPLICATIONS. Applications and instructions will be provided by Sheriff's Administration, and Internal Affairs.

F. MAINTAINING RECORD OF ISSUE. Internal Affairs will maintain a log or registry of CCW Licenses issued. This record will contain, as a minimum, the following information:

1. The number of licenses issued to civilians;

2. The number of licenses issued to Reserves; and

3. The number of licenses issued to judges.

G. REPORTING REQUIREMENTS. Annually, Internal Affairs will submit to the California Attorney General the total number of CCW licenses issued to Reserve officers and the number issued to judges.[2]

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1 Proof of citizenship, either native-born, naturalized, or as a resident alien, is required.
2 Pursuant to P.C. §26225 (effective 1/1/2011)

H. PROHIBITION AGAINST REPRODUCTION. Internal Affairs is charged with maintaining control and accurate records on the application, processing and issuance of CCW licenses. Therefore, applications and instructions will not be reproduced or copied, except by Internal Affairs. Reproduced applications shall not be processed (original only.)

I. COMPLETION OF APPLICATION. It is the responsibility of the applicant to accurately complete all components of the application.

1. The application must be on the latest revision of the California Department of Justice application "License to Carry Concealed Weapon" form and in the format required by the Sheriff's Office at the time the application is received.

2. There is no requirement that applications be typed, however, applications that are not clearly readable, understandable, or incomplete will be rejected without action or prejudice.

3. If an application is complete and acceptable for processing, the applicant will be advised, by a series of letters, as to the next step required, such as fingerprinting, formal interview, and training requirements. Each such letter shall require that the respective step be completed and the information sought submitted within the time specified in the letter. The failure to abide by these timelines shall be considered an abandonment of the application and the application and all submissions will be destroyed.

J. SUBMISSION OF COMPLETED APPLICATION. All applications for a CCW may be mailed or delivered in person to:

1. Contra Costa County Office of the Sheriff
Concealed Carry Weapons Processing Unit / Internal Affairs
651 Pine St., 11th Floor
Martinez, CA 94553

II. FEES.

A. ESTABLISHMENT OF FEES. Fees are established by statute (P.C. §26190).

B. ANNOUNCEMENT OF FEES. Fees shall be itemized and listed in the application instructions provided with each application. Fees paid are not reimbursable.

III. BACKGROUND INVESTIGATION.

A. OVERVIEW. The purpose of a background investigation is to determine an applicant's qualification and establish some reasonable expectation of suitability for a CCW.

B. CONFIDENTIALITY. Information developed during a CCW background investigation, unless specifically waived by the applicant or subject to disclosure under the California Public Records Act, shall be deemed confidential except in cases where evidence of unreported criminal activity surfaces.

1. All applications shall include a waiver informing the applicant that their name and reason for issuance of a CCW may be released to the newspapers or other persons requesting information. (Government Code 6250, et seq. and CBS INC. vs. BLOCK, (1986), 41 Cal 3rd 646).

C. WAIVERS. Applicants may be requested to grant the Sheriff's Office specific releases necessary to the making of an informed evaluation of the applicant. Such information

access may include, but is not limited to: employment, medical, judicial and financial.

D. SPECIFIC CONSIDERATION. The applicant's background shall address, as minimum, the following areas:

1. Criminal, civil, and social history

2. Physical ability to handle a firearm

3. Emotional stability to control a firearm

E. METHODOLOGY. The background investigation is divided into three phases, commencing with information provided by the applicant. These are non-invasive, direct, and reference investigations as described below.

1. Non-Invasive Investigation. A non-invasive background examination is records oriented and generally consists of the following historical reviews: federal, state, and local criminal history; civil history including restraining orders; tax and Assessor's rolls; and driver's license history.

2. Direct Investigation. A direct investigation will consist of a personal interview with Sheriff's personnel and may include a home visit, contact with the applicant's employer, co-workers, neighbors or other persons of interest to whom the applicant is known.

3. Reference Investigation. A reference investigation shall generally focus on a specific professional assessment of the candidate. Such inquiries are designed to determine freedom from physical or emotional impairment which, when coupled with a concealed firearm, could place the applicant or others at risk. The scope of this investigation may vary based upon the candidate, non-invasive and direct findings, and the needs of public safety.

F. NOTIFICATION. The Sheriff's Office must notify an applicant, in writing, if their application has been approved or denied within 90 days of the original application or within 30 days after receipt of the applicant's criminal background check from the Department of Justice, whichever is later.

IV. LICENSE RESPONSIBILITIES AND RESTRICTIONS.

A. LICENSE TIME LIMITS. Generally, licenses are valid for twenty-four (24) calendar months and expire on their issue anniversary date. For information on licenses having a greater than two-year life and for additional restrictions, see the following sections: Revocation, Seizure or Amendment of License, Special Purpose Licenses (law enforcement), and Renewals.

B. GENERAL RESPONSIBILITY. The license holder is responsible for compliance with any regulations or conditions imposed by the Sheriff. In addition, the license holder is responsible for the exercise of good judgment and sound decision-making in the care, transport, holstering, discussion, display, and/or use of a licensed weapon.

1. In the event a license holder is detained or arrested by any law enforcement officer, and is carrying a firearm at such time, the license holder shall immediately present his/her CCW along with his/her California Driver License to the officer.

2. In the event a license holder is detained or arrested by any law enforcement agency, or he/she is asked to present his/her CCW License to any peace officer, the license holder shall notify Contra Costa County Sheriff's Internal Affairs as soon as it is practical to do so. This notification shall be made to the Internal

Affairs Lieutenant and will require the license holder to describe the details of the law enforcement contact.

3. A license holder must notify the Sheriff's Office Internal Affairs within 10 days of any change in residence address.

4. A license will expire 90 days after the license holder moves from Contra Costa County if the residence was the basis for the issuance of the license.

C. GENERAL RESTRICTIONS. The Sheriff may exercise a variety of options within the law to ensure public safety. These may include, but are not limited to:

1. The application of specific restrictions on CCWs

2. The granting of probationary or provisional CCWs

3. Mandate of inspections, weapons qualifications, and reevaluation of license holder's fitness

4. Any other reasonable and appropriate conditions regarding an individual requesting or renewing a CCW license

D. RESTRICTIONS BY ACT. Any of the following or similar acts while in possession of a firearm shall be considered a violation of the license holder's general responsibilities as specified above:[3]

1. Violation of law

2. Under the influence of alcohol or any narcotic/drug, including an adverse reaction to prescription medications

3. Any unjustified display

4. Failure to show the license to any peace officer upon demand

5. Failure to surrender weapons to any peace officer upon demand

6. Impeding or interfering with any peace officer

7. Possessing a weapon altered from its originally approved design

8. Any other act, omission or commission, deemed by the Sheriff to violate these regulations and/or the Sheriff's reasonable expectation of sound judgment and responsible conduct

E. SHERIFF'S RESERVATION OF RIGHT. The Sheriff may revoke, amend or impose any specific restrictions on a licensee as deemed reasonable and appropriate by the Sheriff. These restrictions need not be specifically cited in these regulations but may be assigned to each license as needed or warranted to be in the public good.

V. DETERMINATION OF GOOD CAUSE.

A. GENERAL. The Sheriff's determination of good cause is based on an overall consideration of public good and safety.

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3 The act of possession is complete whenever a firearm, its ammunition, and the person can be united with relative ease. Hence, a license holder arrested for driving under the influence and having a weapon in the glove compartment of the car and ammunition in his/her pocket would be considered to be in "possession."

B. GOOD CAUSE. CCW applicants must demonstrate good cause. Such cause may vary based on the nexus between one or more of the following factors: degree or frequency or exposure to harm, employment, demographics and victimization or risk to applicant averted by the granting of a CCW.[4]

1. In making a determination as to good cause, the Sheriff will consider all available information and, where there exists a sufficient nexus between the approval of a CCW and the avoidance of victimization, the Sheriff will make that decision most beneficial to public good and safety.[5] A fear of victimization, unsupported by articulated facts that would cause a reasonable person to believe that he or she was specifically and personally targeted for serious harm, is generally insufficient to support the good cause requirement. Similarly, the desire to carry a firearm, unaccompanied by other factors that support good cause, is generally also insufficient. In making a determination, the Sheriff will rely primarily on standards, personal history, training and professional evaluations of the applicant, in addition to other factors.

VI. RENEWALS.

A. GENERAL. The application must be on the latest revision of the California Department of Justice application "License to Carry Concealed Weapon" form and in the format required by the Sheriff's Office at the time the application is received. All applicants renewing their licenses are to complete this form in its entirety and may be subject to a full background investigation to determine if any changes have occurred since the initial issuance of the license. This process will be administered by Internal Affairs. All licenses issued may, absent other administrative action, be renewed and reissued as long as the justification for the license has not materially changed.

B. FEES. The Sheriff may, when appropriate, assess such fees as are necessary to recover the costs associated with renewal of a CCW License. Those costs will be listed in the application instructions.

C. PROPERTY RIGHTS. An applicant, even if once approved for a CCW, neither earns nor holds any property right to a license and/or its renewal.

D. LIBERTY RIGHTS. An applicant, even if once approved for a CCW, neither earns nor holds any actual, inferred or implied liberty rights resulting from, or in relation to, a license and/or its renewal.

VII. CCW LICENSE ISSUE, NUMBERING AND INSPECTION.

A. California Department of Justice, Bureau of Firearms, License to Carry Concealed pistol, revolver, or other firearm within the State of California will be completed and provided to successful applicants after all requirements and fees have been paid. Licenses issued by the Sheriff shall clearly specify the CCW License expiration date, limitations, weapon(s) and such other data as deemed appropriate.

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4 Contra Costa County consists of urban, suburban, rural and wilderness areas. What may be reasonable cause in one area of the County may be wholly unreasonable in another area.

5 In general, acts associated with the normal course of living, working, and conducting business shall not constitute sufficient cause for issuance of a concealed weapons license. However, the totality of circumstances surrounding the applicant and the application will be considered. For example, a CCW will not be issued solely because the applicant "handles money," but may be issued based on the volume of money, frequency, absence of alternatives, history of victimization, and related factors. Correspondingly, an issued license may be either unrestricted or subject to specific limitations.

B. CCW Licenses shall be numbered and controlled as to clearly identify the applicant and all related information within the Sheriff's records.

C. All licenses are subject to inspection upon demand by the Sheriff or any peace officer.

D. The Sheriff shall provide, upon demand, any information required to be disclosed pursuant to the California Public Records Act. The Sheriff may charge a reasonable fee for the research, reproduction and/or presentation of such information.

VIII. WEAPONS: TYPE, QUALIFICATIONS AND TRAINING.

A. TYPE. Only those weapons allowable on the Sheriff's Range shall be approved for use. Those approved weapons shall be the product of a recognized manufacturer; free from mechanical and other flaws, within tolerances determined by manufacturer's specifications; and in good working order.[6] Weapons approved shall be either a revolver or semi-automatic handgun with an ammunition capacity of no fewer than five rounds.

1. Revolvers. The following revolvers are authorized for use as a concealed weapon:

   a. Make. Smith & Wesson, Colt or Ruger; additional makes must be pre-approved by the Internal Affairs Lieutenant.

   b. Caliber. Not less than .32 caliber, nor greater than .45 caliber.

   c. Barrel. Not less than 2 inches, nor greater than 6 inches.

   d. Sights. Fixed or adjustable.

   e. Finish. Blued, parkerized, nickel, chromed or stainless steel.

   f. Grips. Standard grips.

2. Semi-automatic. The following semi-automatic handguns are authorized for use as a concealed weapon:

   a. Make. Smith & Wesson, Beretta, Sig Sauer, or Glock; additional makes must be pre-approved by the Internal Affairs Lieutenant.

   b. Caliber. Not less than .32 caliber, nor greater than .45 caliber.

   c. Barrel. Not less than 2 inches, nor greater than 6 inches.

   d. Sights. Fixed or adjustable.

   e. Grips. Standard.

   f. Additional. Internal Firing Pin Block Safety; manual decocking lever/safety and firing pin safety. (First round can be fired double-action.)

3. Licenses will not be issued for derringer or other "hide-away" type weapons.[7]

B. TRAINING REQUIREMENTS.

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6 It is impractical to list every potential manufacturer. Questions concerning a particular firearm may be directed to the Sheriff's Range Master/Armorer. The final decision on the quality, and therefore safety, of a firearm not listed shall rest with Internal Affairs.

7 Commonly, these weapons are designed for excessive concealment and may include, but are not limited to, wallet guns, buckle guns, sleeve guns, hat guns, etc. This shall include any weapon, regardless of manufacturer ammunition capacity, as determined to be inappropriate for use by Internal Affairs.

1. New CCW Applicants. New applicants must successfully pass a course of instruction/training as provided or recognized by the Office of the Sheriff prior to the issuance of the license. During the course of that instruction/training, the applicant must pass a written exam and demonstrate firearms proficiency during a qualification shoot by a qualified Sheriff's Office range master.

2. CCW License Renewals (every 2 years). Prior to renewal, complete a 4-hour legal firearms update refresher course. Renewal applicants must qualify on each weapon listed on CCW License.

3. The Office of the Sheriff will develop and maintain a course of instruction/training or approve a course provided by local community colleges. This course shall be offered in such locations, at such times, and with such frequency as to allow for reasonable applicant access. It will consist of the following:

   a. Firearms safety;

   b. Weapons maintenance and inspection;

   c. Actual demonstration of firearm skill;

   d. Inspections and approval of weapon to be carried;

   e. California laws regarding the possession and use of firearms; and

   f. Use of force.

4. The cost of this course shall be the responsibility of the applicant.

C. QUALIFICATIONS.

1. The Sheriff's Office may waive the required course of instruction/training upon certification of acceptable, like training, i.e., 832 P.C. Course, Reserve Officer training, NRA Firearms Instructor, etc.

2. The Sheriff's Office will not waive the requirement that the applicant demonstrate firearms proficiency during a qualification shoot by a qualified Sheriff's Office range master.

3. Range Qualifications. Licensees must qualify biennially (every 2 years) or upon renewal of license with the weapon(s) / type(s) listed on license. If additional weapons are desired, qualification is required on all weapons listed on CCW License.

4. Failure to successfully pass the course of instruction upon remediation shall constitute failure and termination of the new and renewal applicant process.

IX. DETERMINATION OF PHYSICAL FITNESS / PSYCHOLOGICAL TESTING.

A. PHYSICAL FITNESS. The applicant may be required to provide certification from a competent medical doctor acceptable to the Sheriff, on a form specified by the Sheriff, attesting to the fact the applicant is free from physical characteristics which, when coupled with a firearm, might present an unacceptable risk to the applicant or others.[8]

8 The Sheriff reserves the right to specify and or reject certification without a showing of cause. Generally, such examination from a recognized health maintenance organization (HMO), hospitals, clinics, and established general practice physicians will be accepted.

1. Such an examination may include, but is not limited to, reasonable eye sight and hearing, regular consumption of mood or muscle reflex-altering medications and neurological disorders.[9]

2. The cost of this examination shall be the responsibility of the applicant.

B. PSYCHOLOGICAL TESTING. The applicant may be required to undergo a psychological evaluation from the Sheriff's Office psychologist or psychiatrist that he/she is free from mental disorders which might, when coupled with a firearm, present an unacceptable risk to the applicant or others.[10] The psychologist or psychiatrist who is consulted must be the same professional who is used for the evaluation of Sheriff's Office employees.

X. WAIVER OF FEES OR CONDITIONS.

A. WAIVER OF FEES. Fees may be waived under the four following conditions:

1. Where the fee is for completion of a redundant service.[11]

2. Where the fee is for a service separately certified.[12]

3. Where the fee imposes an undue hardship.[13]

4. County fees for a Sheriff's Office Reserve Officer.

XI. REVOCATION, SEIZURE OR AMENDMENT OF LICENSE.

A. The Sheriff reserves the right to revoke, seize, amend or not renew any CCW at any time.

1. When a CCW is revoked, seized, amended or not renewed, the Internal Affairs Lieutenant may, but is not obligated to, hear matters of mitigation presented by the applicant. The Sheriff is the final authority in all contested licenses or restrictions.

2. As the holder of a CCW, the holder has neither a property nor liberty right to the license, the Sheriff is not obligated to demonstrate cause for the revocation, seizure, or amendment of conditions associated with that license.

3. The Sheriff shall not be liable for any costs incurred by the applicant arising from the applicant's anticipation or holding of a license subsequently revoked, seized, amended or not renewed.

4. When the Sheriff takes action under this section, the applicant shall not be

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9 Each applicant will be evaluated on his/her own merit. While some characteristics, such as loss of hearing, might seem to automatically exclude an applicant, this may not be the case when the totality of circumstances is considered.
10 The same general conditions as discussed for physical fitness above, shall apply to psychological testing.
11 Where there is a competent record already on file with the Sheriff that meets the requirement of the CCW application.
12 Where a certificate of equivalency is on file with the Sheriff, the fee and performance may be waived. A common example might be Internal Affairs' acceptance of prior weapons training, resulting in waiver of the classroom training and resulting fee.
13 The Sheriff may waive all or part of the fees for services rendered by the Sheriff's Department upon a showing of cause. Such cause shall normally consist of a demonstration by the applicant, through official governmental records, the total payment of these fees would constitute an undue hardship. The waiver of fees shall require the approval of the Sheriff. The Sheriff may not waive, absorb or intervene on behalf of an applicant for fees required by another service provider, e.g., a physician.

charged fees for administrative services initiated by the Sheriff.[14]

XII. SPECIAL PURPOSE LICENSES (Law Enforcement).

A. GENERAL. There are a variety of law enforcement and governmental personnel, either active or separated under honorable conditions, who may not meet the specific requirements of being a "peace officer" or "member of the criminal justice system" as defined by the California Penal Code or defined elsewhere within these procedures.

1. Such persons may, for example, be associated with federal agencies, foreign governments or be peace officers or officers of the court within another state or territory of the United States.[15]

2. The Sheriff reserves the right, but is not compelled, to accept and treat such persons as having prima facie reasonable cause for issuance of CCW Licenses or certification and/or to treat them as Sheriff's Office employees for the waiver fees or conditions.[16]

B. Pursuant to California Penal Code Section 26220, CCW licenses may, at the Sheriff's discretion on an individualized basis, be issued to the following individuals for a period of four (4) years:

1. A Reserve peace officer appointed pursuant to Penal Code Section 830.6. (This includes Level I, II, and III Reserves, per Penal Code Section 832.6).

C. Sitting judges shall be issued a CCW license for a period of three years.

XIII. AUTHORITY TO CONDUCT RANDOM INSPECTIONS.

A. GENERAL. The Sheriff reserves the right to inspect any license, weapon or associated equipment at will.

1. The refusal or failure of a license holder to comply with a request or demand for such inspection within a reasonable time, given the prevailing circumstances of that request or demand, shall subject the license to immediate revocation.

XIV. NUMBER OF WEAPONS ALLOWED PER LICENSE.

A. GENERAL. Licenses shall normally be limited to no more than two (2) weapons. Any exception to this standard shall be considered a waiver of conditions and requires the express approval of the Sheriff.

1. All weapons authorized by the license must be registered to the applicant.

XV. SPECIFICATION OF AMMUNITION.

A. GENERAL. The type of ammunition carried and used will be within the guidelines as defined by Internal Affairs.

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14 For example, where a license is amended to add restrictions or take some other action deemed appropriate by the Sheriff, and these changes require a new license be issued, the applicant will not be charged for the cost of issuing the new license. If, however, the applicant requests an amendment to conditions or restrictions imposed on a license, and that request is granted and requires the issuance of a new license, the applicant may be charged for the cost of issuing the new amended license.

15 Penal Code Section 25650 as it relates to honorably retired federal officers or agents of federal law enforcement agencies.

16 See Waiver of Fees or Conditions.

1. Ammunition designed to fragment, explode, inject or that is capable of penetrating body armor or armor plating, is prohibited. The mere fact that such ammunition is available for sale or is not prohibited by other laws of California or the nation is immaterial.

2. Pellet rounds, commonly called "Snake Shot," may be used as appropriate.

3. Dart rounds or rounds containing animal tranquilizer may be carried if the licensee is certified, qualified and has appropriate need and use for such ammunition. Authorization for this, or other specialized ammunition, must be specified at the time of application and be reflected on the license as a special authorization.

4. Violation of these conditions shall subject the license to revocation.

XVI. ALTERATION OF WEAPON.

A. GENERAL. The alteration of a weapon approved for a CCW is prohibited.

1. This includes the addition of equipment, alteration of trigger pull, trimming of springs, honing or filing of mechanical parts or any similar or related alteration.

2. The addition of flashlights, laser sights, expanded capacity or extended magazines, or similar modifications, are prohibited and shall constitute an alteration.

3. The alteration of a weapon shall be cause for the immediate seizure of the weapon and revocation of the license.[17]

XVII. NUMBER OF LICENSES ALLOWED.

A. GENERAL. The Sheriff may, at his/her discretion, limit the total number of licenses allowed at any one time or within any geographical zone or political subdivision of the County.

XVIII. SHERIFF'S OFFICE EMPLOYEES.

A. GENERAL. Not all Sheriff's Office employees, by mere virtue of their employment, possess prima facie reasonable cause for possession of a CCW. This determination, unless specified elsewhere within these procedures, shall be made on an individual basis.

B. Sheriff's Office employees shall not be subject to County fees for services provided by the Sheriff as part of the CCW application process. However, the Sheriff may not absorb the costs of fees required by other agencies for issuance of a CCW.[18]

C. Sheriff's Office employees already subjected to a law enforcement background investigation, Contra Costa approved physical examination, psychological examination or related physical, emotional and character examinations need not repeat, unless there is

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17 A license issued for one or more specific weapons does not extend to any other weapon or to a weapon altered in violation of the license. Therefore, the possession of such a weapon carried concealed within a vehicle or the person is not protected by the CCW and is in violation of provisions associated with California Penal Code Sections 26150-26225 (et. seq.).

18 The Sheriff may not make a gift of public funds. Therefore, for example, if the Department of Justice requires a new set of fingerprint cards to be filed with a CCW License and charges a fee for processing these cards, then the cost of that service must be paid by the employee. The same would apply to the costs associated with a reevaluation of physical fitness or psychological testing, if warranted.

specific cause, these procedures for the purpose of a CCW application.[19]

D. The granting of a CCW to a member of the Sheriff's Office shall be specifically noted and posted in that individual's official personnel file, located in Sheriff's Administration.

E. All Sheriff's Office employees applying for a CCW must meet the following minimum qualifications:

1. Must be off initial probation (re-hires will be evaluated on a case by case basis).

2. Not be a subject of an internal investigation.

3. Not undergoing disciplinary action.

4. Have a current evaluation report rated "meets standards" or above.

5. Complete a course of instruction as provided in Section VIII. C. or provide documentation of completion of an acceptable firearm safety course.

F. Those employee applicants who reside in Contra Costa County will:

1. Complete a memorandum requesting the CCW application form and their reasons for the request. The memorandum shall be forwarded to their Bureau Assistant Sheriff via their Chain of Command.

2. The Bureau Assistant Sheriff will review the request for the application and return it to the applicant indicating the Sheriff's Office will/will not process their application further and state reasons for denial.

3. If approved by the Bureau Assistant Sheriff, the applicant will forward the endorsed request for the CCW application to Internal Affairs for further processing.

G. Those Sheriff's Office employee applicants who reside outside of Contra Costa County will: [20]

1. Complete a memorandum requesting a favorable recommendation to another county jurisdiction regarding their CCW application process. The memorandum shall be forwarded to their Bureau Assistant Sheriff via their Chain of Command.

2. The Bureau Assistant Sheriff will review the request for a recommendation and return it to the applicant indicating the Sheriff's Office will/will not make a positive recommendation to another county or state the reason for denial.

3. If approved by the Bureau Assistant Sheriff, the applicant's request for a positive recommendation will then be forwarded to Internal Affairs for processing and preparation of the letter for the Sheriff's signature.

H. All firearms qualifications for a CCW shall be conducted on off-duty time.

I. All general employees are prohibited from carrying a concealed weapon at any time while on duty with the Sheriff's Office; this includes general employees who have a CCW License unless they have the permission of the Sheriff pursuant to Sheriff's Office Policy

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19 In this case "cause" may include a variety of factors. The physical health, emotional stability, performance or conduct of an employee may have changed between original hiring and CCW application. Such changes may not impact the individual's job retention, but may warrant reevaluation in considering granting a license to carry a concealed weapon.

20 The Sheriff cannot issue a standard license to any person not residing within Contra Costa County. However, he/she can recommend to another county favorable consideration be given to the applicant.

Section 1.07.35, On-Duty General Employee Possession of Concealed Weapon.

J. Upon separation from the Sheriff's Office, the continued possession of the CCW shall be evaluated. The license may be revoked at the discretion of the Sheriff.

K. When a CCW is issued to any Sheriff's Office employee who resides in a Contra Costa County Municipality, the Sheriff's Office will notify that police department of the issuance and restrictions.

XIX. SHERIFF'S JURISDICTION FOR ISSUE OF CCW LICENSES.

A. GENERAL. The Sheriff may issue licenses to any eligible resident of the County. Non-resident Reserve Deputy Sheriffs are also eligible. The Sheriff shall not issue a CCW to any person within a prohibited class as defined by Federal or State law.

B. The Sheriff will generally not issue a license to any person residing within a municipality that doesn't have police services contracted with the Sheriff.

1. Persons residing in a municipality should contact their local Police Chief and apply for the license there.[21]

2. Applications submitted to the Sheriff's Office by residents of a municipality who have not first applied with their local Police Chief may be denied without prejudice.

3. Residents of a municipality who have applied with their local Police Chief and allowed sufficient time for a decision to be made, may apply or renew their application for a CCW with the Office of the Sheriff.

a. It is the responsibility of the applicant to provide sufficient evidence confirming the status of his/her application with the Chief of Police where he/she resides.

b. Any action by the Chief of Police of the municipality where the applicant resides will be given appropriate weight for the approval or denial of an application for a CCW with the Sheriff's Office. However, that action will not be the sole consideration when deciding the merits of an applicant's "good cause."

C. If notified by the Department of Justice that a current license holder is within a prohibited class, the Sheriff's Office shall revoke his/her license and may take whatever legal steps are available to recover the license.

XX. RELATIONSHIP TO ALLIED AGENCIES.

A. The Sheriff may treat County residents who are employed within the Criminal Justice System of an allied jurisdiction as if they were Sheriff's Office employees.

B. The Sheriff may deny such consideration where the same waivers and considerations are not provided to Sheriff's Office employees.

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21 Reference Section XXI of this policy regarding Municipalities contracting with the Sheriff for general law enforcement services.

XXI. CONTRACT CITY MUNICIPAL CODES.

A. GENERAL. Municipalities contracting with the Sheriff for general law enforcement services shall consider these procedures as incorporated into their services contract as a part of General Administrative Support Services.

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 13
	RELATED ORDERS: CCCSO 1.04.62, 1.04.63, 1.04.72, 1.05.76; MOU's for Local 1, Local 512, Local 2700; Management Unit, and the DSA.	
ISSUE DATE: 6-1-2007 **REVISION DATE: 9-5-2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Retirement Checklist**	

I. SUBMITTING DOCUMENTATION.

A. Gather the required documentation CCCERA (Contra Costa County Employee Retirement Association) needs to process your retirement:

1. Your birth certificate.
2. Birth certificates of all your beneficiaries.
3. Social Security Numbers (SSN) of all your beneficiaries.
4. Marriage Certificate if you are married, or State of California Domestic Partnership Registration, if you are a registered domestic partner.
5. Divorce Decree, if you are/were divorced.
6. If you have any service in Tier 2, you must submit an estimate from the Social Security Administration before your final benefit calculation is completed.
7. Request an Application for Service Retirement packet from CCCERA. (Call 925-646-5741).
8. Submit your completed application along with required documentation no earlier than 2 months (60 days) before your planned retirement date to:

   a. CCCERA
   1355 Willow Way, Suite 221
   Concord, California 94520

B. RETIREMENT MEMO TO DIVISION.

1. It is suggested that each employee submit a memo to his/her Division Commander not less than 30 days prior to retirement advising of the employee's intention to retire in order that retirement checks not be delayed. It shall then be incumbent upon the Division Commander to ensure that the Undersheriff, the Administrative Services Bureau Assistant Sheriff, the Bureau Assistant Sheriff affected by the leave, the Training Division Commander, the Professional Standards Division Commander, and the Chief of Management Services receive a copy of the memo immediately.

C. IDENTIFICATION CARD.

1. Sheriff's Administration will issue a new identification card to honorably retired safety employees in accordance with current statutes. If eligible, a Deputy Sheriff's identification will have an endorsement stating "CCW Approved". (A Deputy Sheriff who has retired in lieu of termination will not be issued an identification card or CCW endorsement.) Civilian employees do not receive a retiree identification card.

2. It is the responsibility of the Retiree to ensure their identification card and CCW endorsement is renewed upon expiration.

3. Retirees are required to complete the CCW Firearms Qualification course every three years and present proof of their qualification to Sheriff's Administration. The Retiree can qualify at the Sheriff's Range or with an Official Range Master at a location of their choice. Special retiree shoots will be scheduled two times each year by the Training Unit. One of those qualification shoots will correspond with the DSA "Old Timers Night".

D. RETIREMENT HEALTH COVERAGE.

1. Upon retirement, employees may remain in the same County group medical and Dental plans if, immediately before their retirement, they are active subscribers to one of the County Health Plans. (Employees on authorized leave of absence without pay who have retained individual conversion membership from the County plan may also qualify.) All retiree health plan requirements are subject to the employee's MOU and specific requirements of the employee's health plan. All retiring employees are encouraged to research their retirement health coverage through the Human Resources Department, Employee Benefits Service Unit, Retiree Health and Dental Coverage Desk on the fifth floor of 651 Pine St., Martinez.

E. RETIREE BADGE.

1. Badges for all Safety Members, as well as badges for Dispatchers, Rangers, Aides, and Specialists shall be returned to the Training Unit. At no cost to the employee, the badge will be refurbished, and a ribbon installed at the bottom of the badge that states "Retired."

F. BUYING YOUR HANDGUN.

1. The Office of the Sheriff may, under certain circumstances, sell a semi-automatic pistol to an honorably retiring Deputy Sheriff. The retiring Deputy must petition the Sheriff or his/her designee for permission to purchase the firearm, pursuant to CCCSO Policy Section 1.07.33. If the petition is granted, the firearm(s) will be sold for one dollar ($1.00) each.

G. ACCUMULATED SICK LEAVE.

1. Upon retirement, an employee's accumulated sick leave shall be converted to retirement time on the basis of one (1) day of retirement service credit for each day of accumulated sick leave credit.

H. RETURNING EQUIPMENT.

1. Retiring Deputy Sheriffs shall turn in all Sheriff's Office issued equipment:

a. To Training:

- Handgun
- Three Magazines
- Trigger Lock
- Gun Case
- Flashlight/Battery/Chargers
- Two Sets of Handcuffs
- O.C. (Pepper) Spray
- Leather Duty Belt
- Holster
- Magazine Pouch
- Two Handcuff Cases or One Double Handcuff Case
- OC Pouch
- Key Holder
- Radio Holder
- Four Keepers
- Baton/ASP
- Baton Holder (brass or plastic)/ASP Holder
- Respirator Mask
- Ballistic Vest
- Rain Gear
- Locked Container (Hornady Lockbox)
- Taser/Cartridge/Battery/Taser Holster
- Gas Mask/Filters/Holder

b. To FOB:

- FOB Card
- Report Writing Manual

c. To Your Duty Station:

- Department Keys
- Patrol Rifle/Magazine Holder/Three 30 Round Magazines (Patrol Division)
- Active Shooter Kit (Patrol Division)
- Any Additional Duty Station Equipment Assigned

I. RECOGNITION CEREMONY.

Sworn or General employees with a minimum of ten years working in the field of law enforcement, with five of those years being with the Office of the Sheriff, who are honorably retired, will be invited to participate in a dinner or receive recognition during a scheduled Oath of Rank/Oath of Office ceremony (at the discretion of the Sheriff.) All employees being recognized will receive the same recognition regardless of job classification or rank. The dinner/award ceremony will be held annually. Each employee will be recognized by an introduction and a brief synopsis of his/her career and given a plaque of recognition.

Contra Costa County Office of the Sheriff General Policies and Procedures	CCCSO	APPENDIX 14
	RELATED ORDERS: None.	
ISSUE DATE: 6-1-2011 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Approved Badge Images**	

I. APPROVED BADGE IMAGES.

A. The following photographs and graphic images are the only approved badge images allowed by the Office of the Sheriff. Other variants of the badge image (example: the LETC uses an approved image with the words Law Enforcement Training Center above and below the badge), and new photographs and alternative images may be used for specific applications upon the approval of an Assistant Sheriff.

1. The black and white Sheriff-Coroner badge image.



2. The Photographed Sheriff Badge.



3. The Photographed Sheriff-Coroner Badge.



4. The Photographed Sheriff Badge without name ribbon.



5. The full color Sheriff-Coroner badge image.



Contra Costa County Office of the Sheriff General Policy and Procedure	CCCSO	APPENDIX 15
	RELATED ORDERS: CCCSO General Policy 1.05.39	
ISSUE DATE: 5-12-2022 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Remote Work Guidelines**	

I. SCOPE

The Contra Costa County Office of the Sheriff is adhering to the County Administrative Bulletin 439 Remote Work Policy effective August 6, 2021. Employees should read and become familiar with the policy. All employees requesting a Remote Work schedule must meet all of the Eligibility Requirements contained in the County Admin Bulletin 439, Sec. IV. A.

The CCCSO Remote Work Guidelines are necessary for efficient operations, including our ability to maintain service delivery standards and to meet federal and state compliance requirements. These guidelines are intended to be consistent with, and not in conflict with the County Remote Work Policy. (County Admin Bulletin 439, Sec. IV. D.)

Providing proper service to the public is paramount and shall not be compromised by remote work. It is incumbent upon managers to ensure operations are not impacted by remote work schedules.

II. REFERENCES

Contra Costa County Administrative Bulletin 439, Remote Work Policy
Contra Costa County Administrative Bulletin 541, County Owned and Issued Electronic Communication Devices
Contra Costa County Administrative Bulletin 435
Contra Costa County Office of the Sheriff General Policy and Procedure 1.05.42, Personal Appearance
Contra Costa County Office of the Sheriff General Policy and Procedure 1.07.11, Care and Maintenance of County Equipment
Contra Costa County Office of the Sheriff General Policy and Procedure 1.07.21, Dress Code / Uniforms
Contra Costa County Office of the Sheriff General Policy and Procedure 1.07.53, Use of Office of the Sheriff Personal Computers

III. GUIDELINES

A. Work Hours, Scheduling, Communications (County Admin Bulletin 439, Sec. IV. D.)

1. Allowable remote work schedules are 20 hours per week (Regular, Flexible, or Alternate Work Schedules) or up to fifty percent (50%) of the employee's work schedule (4/10 or 9/80 Work Schedules)

2. Remote Work Agreements may not exceed 12 months and must be renewed upon expiration. Renewal is not automatic.

3. Unless otherwise directed, employees must be visible on camera when participating in meetings held via MS Teams, Zoom or other electronic platforms.

4. Policies 1.05.42 (Personal Appearance) and 1.07.21 (Dress Code / Uniforms) remains the same for employees while working remotely.

5. Employees shall not eat during video meetings.

6. Employees must be logged into, and available, on MS Teams at the start of their workday.

7. Employees must log on to the CCCSO network via VPN and applicable programs used to complete work assignments at the start of each shift and must log off at the end of the shift following supervisor expectations for reporting time.

8. Employees must utilize MS Outlook calendaring system to note all appointments, training, and out-of-office arrangements (vacation, sick day, etc.) and share their calendars with their designated supervisor(s).

9. Employees' desk/office phone calls must be forwarded to their remote location or mobile phone on remote workdays.

10. Unless otherwise noted via a calendared appointment, employees must respond to communication from supervisors within thirty-minutes.

11. Sworn managers and others as designated who are approved to work remotely must have a one-hour response time to their assigned work location. All exceptions must be approved by their division commander.

B. Workspace (County Admin Bulletin 439, Sec. IV. A. B. m.)

1. The employee shall designate a permanent workspace at the designated work location for equipment to be used while working remotely.

2. For the employee to demonstrate that they have an appropriate remote work site as required in the Admin Bulletin, the employee will provide the specific address and location of the workspace and submit three photos of the workspace with the Remote Work Request and Decision Form (Attachment 1). Updated photos must be submitted each time the Remote Work Agreement is renewed.

3. Photo Submission Requirements

a. Photo #1 – Front view of workspace



b. Photo #2 – Side view of workspace



c. Photo #3 –Employee sitting and/or standing



4. Employees may request a change of work location if necessary (to care for family, etc.) but may only begin working from the alternate work location after receiving their supervisors approval.

C. Equipment (County Admin Bulletin 439, Sec. IV. B.C.D.)

1. The costs associated with working remotely are primarily the responsibility of the remote worker/employee. However, the Sheriff's Office will provide standard office supplies (pens, paper, pencils, etc.) and may provide equipment or software, if required to perform assigned duties.

2. The employee must verify that their Internet connection speed is **at least 3MB upload and 3MB download** to meet County business needs. See Section IV(4) for further information.

3. The equipment, software, data, and supplies, when provided by the Department for use at the designated work location, are limited to authorized persons and for purposes related to Department business. Only assigned CCCSO employees are permitted to use Department-owned equipment.

4. The remote worker will immediately report to their supervisor and the Help Desk of any equipment or data line malfunctions, and any Internet or CCCSO network (VPN, etc.) connectivity issues, including Public Safety Power Shutoffs (PSPS). The supervisor will determine if the employee can continue to work remotely while the equipment is being repaired.

5. The employee is responsible for coordinating with Tech Services to provide access to equipment for necessary repairs and upgrades.

6. The County and Sheriff's Office are not responsible for providing any home workspace furniture or ergonomic equipment for the employee's remote work location.

D. Confidentiality (County Admin Bulletin 439, Sec. IV. B. j. k. l.)

1. All Department materials must be kept in the designated work area and only used for activities that support remote work. Supervisor approval may be required to remove confidential documents from the office.

2. The remote worker must ensure that confidential materials are not visible to others in the work area.

3. Employees will follow the privacy and protection operating procedures defined by their supervisor and adhere to the requirements of the County Admin Bulletin 439.

4. Examples of Maintaining Confidentiality

a) Utilize headphones when taking calls and close the door, or lock the computer, then go into a more private area of the home to ensure conversations are not overheard, including by children.

b) Do not leave monitors and paperwork open to unauthorized observation.

c) Securely file notes/documentation that must be retained. Shred any scratch paper notes/documentation or deposit in the office confidential shred box.

E. If the employee's work productivity declines, the employee is repeatedly not accessible, or the privilege is being abused, remote working will be revoked. In addition, remote working may be suspended or revoked at any time due to departmental needs.

IV. REQUESTING TO WORK FROM HOME

A. Employee Responsibility

1. Employees interested in applying for remote work must read and become familiar with the County Administrative Bulletin 439 Remote Work Policy effective August 6, 2021 and the CCCSO Remote Work Guidelines before submitting a request for remote work.

2. Completely fill out the Remote Work Request and Decision Form.

3. Include the required photos as defined in the CCCSO Remote

Work Guidelines Section III. B. 3

4. Include verification of home internet bandwidth.

   a) Using a County Laptop or PC, connect to your home network by establishing either a wireless or wired connection

   b) Open the Edge browser

   c) Navigate to http://www.speedtest.net

   d) Press the Go button

   e) Take a screenshot of the results

   f) Include the screenshot with the Remote Work Request and Decision Form

5. Submit the completed, signed and dated **Part I** section of the Remote Work Request and Decision Form with the photos and verification of Internet bandwidth to the supervisor/manager for approval. The employee will be advised by the supervisor/ manager when a signature for **Part IV** should be completed**.**

6. The employee will complete the CCC Office Ergonomics Awareness Training on Target Solutions, comply with the County Ergonomic Program Employee Responsibilities, and maintain an ergonomic working environment.

B. Supervisor/Manager Responsibility

1. The supervisor/manager will review and discuss the employee's proposed schedule, remote work logistics, and complete list of remote work assignments in the request. Ensure that the employee's productivity and performance are clearly defined.

This request is for a remote working schedule.

Proposed start date: 10/4/2021 Proposed end date: 10/3/2022

I request that I be permitted to work remotely as proposed below. I acknowledge that this is just a proposal.

REMOTE WORK PLAN

Day	Work Hours	Location
Monday	9:00 a.m. – 5:30 p.m.	☒ Office ☐ Remote
Tuesday	9:00 a.m. – 5:30 p.m.	☐ Office ☒ Remote
Wednesday	9:00 a.m. – 5:30 p.m.	☒ Office ☐ Remote
Thursday	9:00 a.m. – 5:30 p.m.	☐ Office ☒ Remote
Friday	9:00 a.m. – 5:30 p.m.	☒ Office ☐ Remote
Saturday	N/A	☐ Office ☐ Remote
Sunday	N/A	☐ Office ☐ Remote
Total Number of Hours	40 hours (16 hours Remote/24 hours in Office)	

2. The supervisor/manager will also be responsible for reviewing the attached photographs of the workspace for potential safety and ergonomic hazards, as well as confirming the internet bandwidth meets the minimum standard established in Section III. C. 2.

3. If supervisor approves the request they will sign and date **Part II** of the form and complete the Remote Work Plan under **Part IV** of the form. The employee's remote work hours will remain the same as their assigned shift at their current work location.

4. The supervisor/manager will indicate their recommendation for approval by signing and dating under **Part IV** and will advise the employee to sign and date under **Part IV** of the form.

5. If the supervisor/manager does not approve of the request, they will indicate a recommendation for denial, sign, and date **Part II** of the form.

6. A denial by a supervisor will be sent to their manager for review.

7. Supervisor/manager approved requests will be forwarded to the Division Commander for review.

C. Division Commander Responsibility

1. The request will be reviewed by the Division Commander, who will approve or deny the request, and sign and date under **Part III.**

2. If the request is approved, it will be forwarded to the Bureau Assistant Sheriff for review.

D. Bureau Assistant Sheriff Responsibility

1. The request will be reviewed by the Assistant Sheriff, who will approve or deny the request, and sign and date under **Part V.**

2. A request that is approved will be distributed to the employee, the supervisor/manager, the Division Commander, and the Personnel and Finance Division for tracking purposes.

V. DENIAL APPEAL PROCESS

1. Pursuant to the County Policy (Admin Bulletin 439, Sec. IV. E.) an employee whose remote work request has been denied, modified, or terminated may request an appeal.

2. All denials will be returned to the employee via email.

3. The employee has fifteen (15) calendar days from the receipt of the denial to file an appeal.

4. The employee shall submit a memo via their chain of command requesting an appeal and providing a basis for the appeal.

5. If the employee does not file a timely appeal by the 15th calendar day, the person who denied the request will send a copy of the denied Remote Work Request and Decision Form to the Personnel and Finance Division for tracking.

6. If the employee does file a complete and timely appeal, the Assistant Sheriff or their designee will contact the employee to arrange a meeting date that shall occur within 15 calendar days of the request, consistent with County Policy Admin Bulletin 439. Therefore, every effort must be made to conduct the meeting within the prescribed timelines.

7. Employees have the option to opt-out of the meeting and request to only receive written correspondence of their appeal decision instead.

8. At the meeting, which may be conducted over the phone, via Zoom, or in-person, the Assistant Sheriff or designee will hear the employee's appeal and presentation. The employee may be accompanied by their union representative.

9. The Assistant Sheriff, or designee, shall provide a decision regarding the appeal on a memo within ten (10) calendar days after the meeting.

CONTRA COSTA COUNTY
Office of the County Administrator
ADMINISTRATIVE BULLETIN

Number: 439
Date: 08/06/21
Section: Personnel
SUBJECT: Remote Work Policy

I. **PURPOSE:** This remote work policy outlines the procedural guidelines for employees to work from a location other than their primary work location. Contra Costa County (County) recognizes the benefits of remote work, including:

- Promoting options for employees to effectively balance work-life commitments;
- Boosting employee morale, productivity and job satisfaction while reducing absenteeism and enhancing employee retention;
- Improving service delivery by allowing for work hours beyond the traditional 8am to 5pm Monday through Friday schedule in appropriate situations;
- Allowing for more efficient use of County buildings, office space and parking facilities;
- Improving the County's ability to provide essential services during and following an emergency;
- Improving air quality, reducing greenhouse gas emissions; and
- Reducing traffic, transit and parking congestion.

II. **APPLICABILITY.** This bulletin replaces and supersedes all other County and department policies regarding remote work.

III. **AUTHORITY.** In accordance with the provisions of Contra Costa County Ordinance Code Section 24-4.008, the County Administrator has the authority and the responsibility to establish and enforce personnel policies in County departments and agencies, including work schedule policies.

IV. **POLICY.** Remote work is defined for the purposes of this policy as an employee working from a remote site other than their primary work location, such as a designated satellite workstation or at home on a temporary or regular on-going basis. Remote work must maintain or improve service delivery and productivity for the employee, colleagues, and customers.

The County has the exclusive right to determine which positions and/or duties are suitable for remote work, and to grant (or revoke) permission for individual employees to work remotely according to the guidelines in this Administrative Bulletin. Department Heads are required to identify positions that are suitable for remote work in whole or in part and are authorized to enter into a remote work agreement with eligible employees in accordance with this Administrative

Bulletin. It is the intent of this policy that department heads have reasonable flexibility in developing remote work agreements that reflect the nature of work of their department and characteristics of their employees.

The following criteria will be considered by department heads when determining which positions are eligible for remote work and considering whether or not to approve individual remote work agreements:

a. Achieves the benefits outlined in the Purpose section above;
b. Remote work arrangement will maintain or improve service delivery and productivity for the employee, colleagues and customers;
c. Proposed remote work would enable continued performance of all current duties;
d. Employee is able to meet all eligibility and standard requirements referenced in this policy; and
e. Individual Remote Work Request and Decision Form adequately documents capacity to meet these requirements.

Duties, obligations, responsibilities, and conditions of employment with Contra Costa County remain unchanged except those obligations and responsibilities specifically addressed in this policy and associated documents.

Remote working is a voluntary arrangement between the employee and the department. Employees who wish to remote work must complete and submit a Remote Work Request and Decision form. If approved, the department reserves the right to modify or revoke remote working at any time.

In determining eligibility of positions, job duties and employees for remote work, departments should consider the federal, state, and local laws and regulations that may be implicated by a remote work program.

Department Heads shall ensure supervisors and managers who will be supervising remote workers are trained and/or provided guidance to sufficiently supervise a remote employee as soon as feasible after the remote worker assignment begins.

The County Administrator's Office shall be responsible for overseeing consistent application of this policy by departments.

A. <u>Eligibility Requirements:</u>

Although meeting eligibility requirements does not guarantee approval to remote work, the following are the mandatory requirements for an employee to be considered for remote work:

a. Employee is in compliance with County and department rules, regulations and policies
b. Job performance demonstrating the ability to work independently as determined by the department head with input from the immediate supervisor
c. Job performance meets or exceeds expectations
d. Employee can demonstrate that they have an appropriate remote work site
e. Employee agrees to attend training on successful remote work as assigned
f. Employee's job assignment is appropriate for working remotely on either a full time or part time basis.

B. Standard Requirements:

The following is required for an employee to work remotely:

a. Remote Work Request and Decision Form is completed and approved.
b. If needed, ability to access County Network and/or Internet from the remote work site and/or ability to send and receive telephone calls.
c. Employee reviews, signs and complies with County Administrative Bulletin 541 – County Owned and Issued Electronic Communication Devices.
d. Employee provides Internet network connectivity with reasonable speeds to successfully complete assigned work.
e. Employee must follow secure practices to protect equipment, County data and systems, as well as public records, both physical and electronic, in their care and immediately report any issues (including but not limited to potential data breaches, viruses, compromises, loss or theft) to their supervisor and the DoIT Help Desk.
f. All County rules regarding the use of computers and the Internet apply while an employee is working remotely, regardless of whether the employee is using County provided or personal equipment.
g. All County-owned equipment issued to an employee in order to work remotely must be returned immediately upon the end of the remote work arrangement.
h. County issued equipment is subject to relevant asset protection policies.
i. Employee must follow County policy for reporting on-the-job work injuries by notifying their manager/supervisor immediately and completing all necessary documents regarding the injury.
j. Employee must comply with all federal, state and local laws, including but not limited to Health Insurance Portability and Accountability Act (HIPAA).
k. Employee must comply with all County and departmental policies and procedures including relevant Administrative Bulletins, IT security, privacy and confidentiality policies and guidelines just as when working in the office.
l. Employee shall ensure the integrity and confidentiality of all information and take steps to ensure County information, confidential information, Federal Tax Information (FTI) or other Personal Identifying Information (PII) is safeguarded and viewable only by employee. Employees who have access to FTI from a remote work site may be required to abide by additional security precautions as determined by the Department Head to ensure the security of FTI in accordance

with IRS Publication 1075 guidelines. Any additional security precautions will be described in the Remote Work Plan in the Remote Work Request and Decision Form.

m. Employee will complete the CCC Office Ergonomics Awareness Training on Target Solutions, comply with the County Ergonomic Program Employee Responsibilities and maintain an ergonomic working environment. The County will provide training to employees on setting up a safe and ergonomically appropriate work environment but will not enter employees' homes to perform inspections. This is consistent with federal OSHA policy not to conduct inspections of employees' home worksites while balancing concerns for maintaining the employee's home environment's privacy and protecting the employee's safety.
n. Employee must take appropriate steps to ensure the privacy of County customers and other County employees while working remotely.
o. No in-person meetings are to take place at a remote work site.
p. Employee shall ensure that child or dependent care will not interfere with remote work responsibilities.
q. Employee must be able to communicate with those with whom they normally conduct business (e.g., supervisor, management, coworkers, vendor contacts, customers, etc.) by phone, email and other electronic means, including videoconferencing, as required by the supervisor.
r. If employee is unable to work at the remote work site, employee shall immediately notify his/her supervisor. If the issue is temporary, the employee and supervisor may to determine whether the employee can perform other tasks at the remote work site, should report to the office or, subject to approval, take time off using accruals.
s. Employee shall adhere to the established work schedule as agreed in the Remote Work Request and Decision Form and any modifications or overtime requires prior written supervisor approval.

C. <u>Cost Responsibilities</u>

a. The costs associated with working remotely are primarily the responsibility of the remote worker/employee. However, the County will provide standard office supplies (pens, paper, pencils, etc.) and may provide equipment or software, if feasible and approved by the department.
b. Unless otherwise agreed upon by the supervisor/manager, departments are not required to provide employees with any equipment needed while working remotely. Departments providing equipment, software, or other supplies to employees working remotely must reasonably allocate those resources based on operational and workload needs and must utilize an inventory tracking system for this equipment.
c. Existing County policy and departmental procedures to request mileage reimbursement are to be followed. (Note: The remote worker will not receive mileage reimbursement for any travel that would not occur if the remote worker were at the County's office worksite. The remote worker will not receive mileage

reimbursement for the distance of any travel between home and the normal work site for any reason on remote workdays.)

d. No other costs will be covered by the County unless prior written approval is given by the Department Head.
e. In general, any cost not itemized as covered by the County will be the employee's responsibility to pay, including, but not limited to, utilities, insurance and maintenance costs, home workspace furniture, ergonomic equipment and related modifications, Internet network connectivity, and liability claims by third parties, including family members.

D. Department's Rights Reserved

Administering the remote work program is under the authority of the Department Head with general oversight by the County Administrator's Office. The Department may establish specific time periods for submitting requests, acceptance or rejection of requests, duration of the remote work period, and review and/or termination of the remote work participation. The County will not establish remote work only positions without offering to meet and confer with the employee organization that represents said position(s). Any remote work schedules of more than 20 hours per week (regular, Flexible, or Alternate Work Schedules) or more than fifty percent (50%) of the employee's work schedule (4/10 or 9/80 Work Schedules) must be approved in writing by the CAO. To protect local County jobs, new remote work arrangements shall not be granted to any employee who resides more than 200 miles from the County Administration Building.

The Department shall have the right to accept or reject any application for remote working and modify or terminate any existing agreement for remote working at any time and for any reason. Reasons for rejecting an application shall be provided to the employee in writing on the Remote Work Request and Decision Form. If the Department initiates modification or termination of an existing remote work agreement, the reason(s) for the modification or termination will be provided to the employee in writing. If the employee requests to modify or terminate an existing remote work agreement, the employee must make the request in writing to his/her supervisor for consideration.

Departments may develop or maintain guidelines that are not in conflict with this Administrative Bulletin, subject to approval by the County Administrator's Office. Departments are responsible for maintaining accurate and up-to-date information on all remote work arrangements and reporting that information to the County Administrator's Office and County Human Resources as needed.

E. Appeal Procedure

Employees that are denied the opportunity to work remotely or for whom an existing remote work agreement is modified or terminated may file an appeal within fifteen (15) calendar days. The appeal shall be directed to the employee's department head or

designee and shall cause a meeting to be conducted within fifteen (15) calendar days of the request. The meeting shall be attended by the operational manager denying the request, the Department Head or designee, the employee, and the employee's union representative upon request of the employee. The Department Head or designee shall review the remote work request and the reasons for rejection/modification/termination of said request, and make a final decision regarding the request. The appeal decision shall be issued within ten (10) calendar days after the appeal meeting.

The decision of the Department Head or designee is final and not subject to the grievance procedure or any other appeal.

Related Documents

1. Remote Work Request and Decision Form
2. Administrative Bulletin 541- County Owned and Issued Electronic Communication Devices.

Originating Department: County Administrator

Monica Nino
County Administrator

Contra Costa County

Remote Work Request and Decision Form

Part I – To be completed by Employee

Employee Name: Job Title: Employee ID:

Department: Supervisor's Name:

Official Work Location/Unit:

This request is for a remote working schedule. Proposed start date: Proposed end date:

I request that I be permitted to work remotely as proposed below. I acknowledge that this is just a proposal and, if remote work is approved, the actual schedule and work assignment(s) will be defined by me and my supervisor in Part IV below.

Proposed Work Schedule

Day	Work Hours	Location
Monday		☐ Office ☐ Remote
Tuesday		☐ Office ☐ Remote
Wednesday		☐ Office ☐ Remote
Thursday		☐ Office ☐ Remote
Friday		☐ Office ☐ Remote
Saturday		☐ Office ☐ Remote
Sunday		☐ Office ☐ Remote
Total Number of Hours		

Remote Work Logistics

Phone number(s) to be used for conducting County business during remote work hours: For Supervisor/Co-Workers: For Customers/Vendors, etc.:	Remote Work Address:

Proposed Remote Work Assignment(s)

I propose the following assignments/projects will be done during remote work:

Part I (continued) - Employee Signature

I have read the Remote Work Policy, have read and signed Administrative Bulletin 541 and agree to comply with all provisions in these documents and in this Remote Work Request and Decision Form and am requesting approval for remote work.

_____ _____

Signature of Employee Date

Part II – To be completed by Manager/Supervisor

Based on the Remote Work Policy and the proposal of the Employee herein, I recommend:

☐ Employee's request be approved.

☐ Employee's request for remote work be denied because:

- ☐ Request will not achieve the benefits outlined in the Purpose section of the Policy
- ☐ Request will not maintain or improve service delivery and productivity for the employee, colleagues and customers
- ☐ Request will not enable continued performance of all current duties
- ☐ This Remote Work Request and Decision Form inadequately documents capacity to meet Policy requirements
- ☐ Employee not in compliance with County and department rules, regulations and policies
- ☐ Job performance does not demonstrate the ability to work independently
- ☐ Job performance does not meet or exceed expectations
- ☐ Employee cannot demonstrate that they have an appropriate remote work site
- ☐ Employee cannot attend training on successful remote work or failed to successfully complete said training
- ☐ Employee's job assignment is not appropriate for remote work
- ☐ Other:

_____ _____

Signature of Manager/Supervisor Date

Part III – To be completed by Division Commander

I have reviewed the employee's request and manager/supervisor's recommendation. Based on this review, I have determined that remote working should be: ☐ Denied ☐ Approved subject to final approval of the Remote Work Plan.

_____ _____

Signature of Division Commander Date

Part IV -- To be completed by Manager/Supervisor and Employee

REMOTE WORK PLAN

Remote Work Schedule

Day	Work Hours	Location
Monday		☐ Office ☐ Remote
Tuesday		☐ Office ☐ Remote
Wednesday		☐ Office ☐ Remote
Thursday		☐ Office ☐ Remote
Friday		☐ Office ☐ Remote
Saturday		☐ Office ☐ Remote
Sunday		☐ Office ☐ Remote
Total Number of Hours		

Employee has received the following tools and equipment for remote work use:

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Remote Work Assignments

Training Assignments

1. CCC Office Ergonomics Awareness Training	Complete By:
2.	Complete By:

Employee and manager/supervisor have met and completed/reviewed the above work schedule and work assignments, and Employee agrees to abide by same. Employee acknowledges:

- They have read the Remote Work Policy and Contra Costa County Administrative Bulletin 541 and agrees to comply with all provisions in the policy, Administrative Bulletin, and in this Request and Decision Form.
- That remote work assignments may be modified from time to time pursuant to instructions in writing from Manager/Supervisor.
- That they are not allowed to modify their schedule and are not authorized to work overtime without prior written approval from Manager/Supervisor.

This work plan will become effective on _____ and continue until:

☐ (Specify Date)* _____ ☐ Project Completion ☐ Termination by Employee or Manager/Supervisor

☐ Other (specify) _____

_____ _____

Signature of Manager/Supervisor Signature of Employee

*Subject to right of termination by either Employee and/or Manager/Supervisor at an earlier date

Part V – To be completed by Bureau Assistant Sheriff

I have reviewed the final work plan and said plan is ☐ Approved ☐ Denied

_____ _____

Signature of Bureau Assistant Sheriff Date

Part VI – To be completed by the County Administrator's Office

***Only for requests where the employee is scheduled to work more than 50% or twenty hours of their weekly assignment remotely:**
I have reviewed the final work plan and said plan is ☐ Approved ☐ Denied

_____ _____

Signature of County Administrator (or designee) Date

Contra Costa County **Office of the Sheriff** General Policy and Procedure	**CCCSO**	**APPENDIX 16**
	RELATED ORDERS: Government Code §§ 7070-7075; CCCSO General Policy 1.07.30	
ISSUE DATE: 4-29-2022 **REVISION DATE:**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **APPENDICES**	**SUBJECT:** **Government Code § 7070 Defined Equipment Inventory**	

I. GOVERNMENT CODE § 7070 DEFINED EQUIPMENT INVENTORY

Equipment Name / Category: Small Unmanned Aircraft System (sUAS) – Government Code § 7070(c)(1)	
Quantity Owned: See description below	**Lifespan:** 10 years

Manufacturers Product Description(s):

DJI Matrice M200v2 with Z30 and XT2 cameras, approx. cost $35,000, quantity: 1. The ultimate platform for aerial productivity combines a rugged design and simple configurability to work as a solution for a variety of industrial applications. Improvements to the M200 Series V2 enhance intelligent control systems, flight performance, and add flight safety and data security features. https://www.dji.com/matrice-200-series-v2 Additional description: An enterprise platform UAV that provides up to 45 minutes of flight time and around 3 miles of range. This UAV has interchangeable zoom and thermal imaging cameras that record video and still pictures. The Matrice can be tethered to the ground for unlimited flight.

DJI Mavic 2 Enterprise Advanced, approx. cost $7,000 each, quantity: 6. Capture accurate details in any mission with the Mavic 2 Enterprise Advanced – a highly versatile yet compact tool that packs a whole lot of performance upgrades. With high-resolution thermal and visual cameras, the M2EA supports up to 32× digital zoom and is capable of centimeter-level positioning accuracy with the RTK module. https://www.dji.com/mavic-2-enterprise-advanced Additional description: An enterprise platform UAV that provides up to 30 minutes of flight time and around 2 miles of range. This UAV has fixed color and thermal imaging cameras that can record video and still pictures. This UAV can be outfitted with a loudspeaker or spotlight. This UAV has an approximate weight of 899 grams.

DJI Phantom 4 Pro, approx. cost $2,000 each, quantity: 4. An uprated camera is equipped with a 1-inch 20-megapixel sensor capable of shooting 4K/60fps video and Burst Mode stills at 14 fps. The adoption of titanium alloy and magnesium alloy construction increases the rigidity of the airframe and reduces weight, making the Phantom 4 Pro similar in weight to the Phantom 4. The Flight Autonomy system adds dual rear vision sensors and infrared sensing systems for a total of 5-direction of obstacle sensing and 4-direction of obstacle avoidance. https://www.dji.com/phantom-4-pro?from=p4p-or-p4a Additional description: A prosumer UAV that provides up to 30 minutes of flight time and around 2 miles of range. This platform is dated, but still has one of the best camera systems available, as the camera has a mechanical shutter for optimal picture quality. This UAV is mostly used for overhead mapping and 3D imaging.

DJI Mavic Mini 1, approx. cost $500 each, quantity: 4. DJI Mavic Mini - Drone FlyCam Quadcopter UAV with 2 7K Camera 3-Axis Gimbal GPS 30min Flight Time less than 0 55lbs Gray. Charging Temperature Range - 5° to 40°C (41° to 104°F). https://www.dji.com/mavic-mini

Additional description: A consumer UAV that provides up to 20 minutes of flight time and around 1 mile of range. This UAV has a color camera that can record video and still images. The Mavic Mini 1 is an extremely small platform that can be fitted with propellor guards and flown inside buildings and tight spaces.

DJI Mavic Mini 2, approx. cost $600 each, quantity: 19. DJI Mini 2 is beginner-friendly, powerful, and well, mini. Impressive performance, stunning image quality, and creative videos are just a few taps away. Explore an entirely new perspective, capturing the moments that make your life truly yours. https://www.dji.com/mini-2 Additional description: A consumer platform UAV that provides up to 25 minutes of flight time and around 1 mile of range. This UAV has a 4K color camera that can record video and still images. Like its predecessor, the Mini 1, this is a very small platform UAV that is ideally suited for flying inside buildings and tight spaces, especially when fitted with propellor guards. The Mini 2 weighs 249 grams.

DJI Mavic Pro, approx. cost $1500, quantity: 1. The DJI Mavic Pro is a portable and powerful drone with a 3-axis gimbal 4K camera, a max transmission range of 4.1 mi (7 km), and a sophisticated design. https://www.dji.com/mavic Additional description: This consumer platform UAV is dated but still has an excellent camera system. This UAV weighs approximately 1.5 pounds and has a 30-minute flight time.

Wingtra Gen 1, approx. cost $45,000, quantity: 1. The Wingtra is a professional fixed-wing platform UAV that can take off and land from a vertical position. The Wingtra has around 60 minutes of flight time and is only used for overhead imaging. The primary purpose of this UAV is to rapidly map large areas during disaster response. The Wingtra cannot record video and flights must be pre-programmed before takeoff.

DJI Mavic Enterprise Zoom, approx. cost $2200 each, quantity: 2. The DJI Mavic 2 Enterprise is a foldable, portable, long-range flying camera and accessory system that adapts well to uses by first responders and businesses that routinely inspect hard-to-reach assets. https://www.dji.com/mavic-2-enterprise Additional description: An enterprise level UAV that has a color camera as well as an audible speaker and light. As the name implies, this UAV has good zooming capability, which enables it to fly higher, as to not agitate potential suspects on the ground. This UAV is capable of video recording and weighs approximately 2 pounds. The Mavic Zoom offers up to a 30-minute flight time.

DJI Mavic Enterprise Dual, approx. cost $2500 each, quantity: 2. Mavic 2 Enterprise Dual features a three-axis gimbal stabilized camera housing a side-by-side 4K sensor for capturing visible light and a FLIR imaging sensor for capturing thermal data. Together these sensors allow pilots to perform flights at night, as well as fly in complex daytime conditions like fog and smoke. https://www.dji.com/mavic-2-enterprise Additional description: UAV that has a color "Day" camera as well as infrared nighttime capabilities. This UAV also has an audible speaker and light. This UAV is the predecessor to the more robust Mavic 2 Enterprise Advanced, which has a much better infrared and zoom camera system. This UAV weighs approximately 2 pounds and offers up to a 30-minute flight time.

DJI FPV, approx. cost $1500 each, quantity: 2. DJI FPV has a built-in imaging system, high-definition, low-latency transmission with a range of up to 10 km, and a battery life of approximately 20 minutes. https://www.dji.com/dji-fpv Additional description: This unique "First Person View" UAV offers an immersive flying experience and is currently being tested for indoor flying. The pilot wears a headset and can view a live feed of the UAV as if walking through the building it is being flown through. This UAV also serves as a training platform, as it requires a much higher level of skill to fly than most other UAVs.

Purpose: To be deployed when its view would assist officers or incident commanders with the following situations, which include but are not limited to: (1) major collision investigations, (2) search for missing persons, (3) natural disaster management, (4) crime scene photography, (4) SWAT, tactical, or other public safety and life preservation mission, and (6) in response to specific requests from local, state, or federal fire authorities for fire response and/or prevention.

Authorized Use: Only assigned operators who have completed the required training shall be permitted to operate the drones during approved missions.
Fiscal Impact: Annual maintenance and battery replacement cost is approximately $500 per unit
Training: All Sheriff's Office sUAS operators are licensed by the Federal Aviation Administration for sUAS operation as remote pilots under FAA Part 107. In addition, each operator must attend Sheriff's Office approved ongoing training.
Legal and Procedural Rules: Use is established under General Policy 1.06.84 (Small Unmanned Aircraft Systems) and FAA Regulation 14 CFR Part 107. It is the policy of the Sheriff's Office to utilize UAS only for official law enforcement or training purposes, and in a manner that respects the privacy of our community, pursuant to applicable law.
Additional Information: None

Equipment Name / Category: Unmanned, remotely piloted, powered ground vehicles – Government Code § 7070(c)(12)	
Quantity Owned: 4	**Lifespan:** All robots, 8-10 years
Manufacturer's Product Description(s): **ROBOTEX Avatar II,** cost $12,500, quantity: 2. The AVATAR® enhances the capabilities of SWAT and tactical response teams by allowing them to inspect dangerous situations quickly and safely, there is no longer a need to send personnel in before you have had a chance to assess the situation. The AVATAR® saves lives by keeping first responders out of harm's way, and it does so at a fraction of the price of other robots. The AVATAR® Robots are regarded by tactical teams as a standard operational tool, like a firearm, vehicle, or piece of body armor. Departments across the United States and internationally are using the AVATAR® Robots. https://robotex.com/products/avatar-tactical-robot/ **TRANSCEND TACTICAL Vantage**, cost $16,900, quantity: 1. Transcend's Vantage robot is the world's only double-patented automatic stair and obstacle climbing robot for First Responders. It's the only option for First Responders that want their robot to "just figure it out" on the first attempt to climb stairs, clothes, and junk without the burden of tedious manual controls associated with flippers and other limb systems. This means the Vantage can be used without prior training to enter a house or building to see, hear and learn what's happening before sending officers inside. https://www.transcendrobotics.com/transcendproduct/vantage-patrol-robot/#overview **RECON ROBOTICS Throwbot 2**, cost $2,000, quantity: 1. The Recon Robotics Throwbot 2 is a throwable micro-robot platform that enables operators to obtain instantaneous video and audio reconnaissance within indoor or outdoor environments. https://reconrobotics.com/products/throwbot-2-robot/	
Purpose: This robot is used in response to critical incidents to enhance officer and community safety. They can be used to remotely gain visual/audio data, deliver the Hostage Negotiation Team throw phone, open doors, and clear buildings.	
Authorized Use: Only personnel who have been trained in the use of the robots will be authorized to use them.	
Fiscal Impact: Annual maintenance cost is approximately $500	
Training: All operators must have completed a familiarization training in the set-up, control, and safe deployment of the robots. All operators are also members of the SWAT team who have completed an 80-hour POST-certified Special Weapons and Tactics Course.	
Legal and Procedural Rules: It is the policy of the Sheriff's Office to utilize a robot only for official law enforcement purposes, and in a manner that respects the privacy of our community,	

pursuant to applicable law.
Additional Information: None

Equipment Name / Category: Armored Personnel Carrier – Government Code § 7070(c)(2)	
Quantity Owned: 2	**Lifespan:** 25 years
Manufacturers Product Description(s): **LENCO BEARCAT, G2**, cost: $244,043.42, quantity: 1. The Lenco BearCat G2 is the standard tactical armored vehicle for special operations units within the US Law Enforcement community. Since the early 2000s, agencies such as LAPD, LASD SEB, NYPD ESU, Boston PD and hundreds of Federal, State and Local Law Enforcement agencies have made the BearCat G2 part of their standard operating procedure. The G2 has excellent on-road driving characteristics and maneuverability in tight urban settings. The large floor plan seats 10 – 12 fully equipped officers with a long list of tactical features **only** found on the Lenco BearCat line of armored SWAT vehicles for Police and Government. https://www.lencoarmor.com/model/bearcat-g2-police-government/ **LENCO BEARCAT, G3**, cost: $291,283, quantity: 1. The BearCat G3 provides Lenco's proven armor system in a ruggedized off-road platform. The G3 utilizes the same body design, interior features, and tactical options as the G2, but it comes standard with a heavier duty upgraded suspension and off-road tires, rims & run flats to provide enhanced off-road performance. The increased ground clearance and robust suspension allows for emergency response in rural regions and natural disaster scenarios where standard armored SWAT vehicles would experience challenges. If your mission takes you off-road, the Lenco BearCat G3 will get you where you need to go. Available with mission-specific design features for Police and Government, Medical and Fire Response. https://www.lencoarmor.com/model/bearcat-g3-police-government/	
Purpose: To be used in response to critical incidents to enhance officer and community safety, improve scene containment and stabilization, and assist in resolving critical incidents.	
Authorized Use: The use of armored rescue vehicles shall only be authorized by a SWAT commander, Assistant SWAT commander, or designee, based on the specific circumstances of a given critical incident. The Patrol Division Commander will be notified of the deployment of the armored vehicle as soon as practical. Armored rescue vehicles shall be used only by personnel trained in their deployment and in a manner consistent with Patrol Division policy 3.01.72.	
Fiscal Impact: Annual maintenance cost of approximately $2,500 each.	
Training: Operators are required to participate in initial and yearly Sheriff's Office approved training to demonstrate familiarity with the operation and controls of the armored vehicle.	
Legal and Procedural Rules: Use is established under General Policy 1.06.24 and Patrol Division policy 3.01.72, as well as applicable law.	
Additional Information: The Lenco Bearcat G2 was purchased in 2007 with Homeland Security grant funding.	

Equipment Name / Category: Command and control vehicles – Government Code § 7070(c)(5)	
Quantity Owned: 1	**Lifespan:** 20 years
Manufacturers Product Description(s): **LDV, C40MCC-10,** cost $913,110.11, quantity: 1. Ten large workstations, an additional exterior workstation, a lavatory and plentiful communications storage and interior workspace, this floorplan is all business. With middle entry and four slide outs, there is room to spare allowing for front conference space as needed. https://www.ldvusa.com/truck/contra-costa-county-sheriff-mobile-command-center/	
Purpose: To be used based on the specific circumstances of a given critical incident. A mobile office that provides shelter, access to computer systems, and restroom facilities during extended events. The Mobile Command Vehicle (MCV) can also be utilized for SWAT/HNT and other	

critical incidents, pre-planned large events, searching for missing persons, natural disasters, and community events.
Authorized Use: The MCV shall be used by officers trained in its deployment and in a manner consistent with Sheriff's Office policies and training. Only officers who have completed the California Class B Commercial driving school and are properly licensed are allowed to drive the MCV.
Fiscal Impact: Annual maintenance cost is approximately $2,500
Training: The driver/operator shall receive Sheriff's Office approved training in the safe handling of the vehicle. Driver/operators shall also undergo California Department of Motor Vehicles commercial vehicle testing.
Legal and Procedural Rules: Use is established under General Policy 1.06.26, as well as applicable law.
Additional Information: The MCV was purchased using Homeland Security grant funds.

Equipment Name / Category: Explosive breaching apparatuses / battering rams – Government Code § 7070(c)(7)	
Quantity Owned: See description below	**Lifespan:** 10 years
Manufacturers Product Description(s): **REMINGTON 870 breaching shotgun**, cost is unknown as they were purchased before 2006, quantity: 2. A specially designed Remington 870 shotgun that is retrofitted with a spiked standoff breaching barrel that allows for the safe and effective firing of frangible copper rounds. Similar breaching shotgun: https://royalarms.com/shop/royal-remington-870-police-parkerized-breaching-shotgun-2/ **ROYAL ARMS TESCR shotgun breaching ammunition**, cost $4.50 per round, quantity: 21. Green Cap 2-3/4" 375 Grain Clayvon® Frangible 12 Ga Shotgun Slug. Additional description: A frangible round which is deployed from a 12-gauge breaching shotgun. https://royalarms.com/shop/tescr3-frangible-breaching-ammo/ **NONEL nonelectric delay detonator**, cost $7.50 each, quantity: 60. It consists of a length of orange shock tube with high strength detonator attached to one end and the other end sealed. A white J-hook is affixed near the sealed end, providing easy means of connection to detonating cord. **PRIMACORD 10 Detonating cord**, cost $691, quantity: 1000 ft. PRIMACORD detonating cords are flexible linear explosives with a core of PETN explosive encased in a textile outer jacket. PRIMACORD detonating cords are designed for use as trunklines and/or downlines in various mining, quarrying and construction applications. **BATTERING RAM**, cost (included with Lenco Bearcat), quantity: 2. Each Lenco Bearcat has the ability to mount a ram to the front of the vehicle. The ram can be used for both creating an entry point into a location, as well as safely deploying a chemical agent into a location.	
Purpose: Used in high-risk tactical operations to destroy deadbolts, locks, and hinges. During crisis situations, it may become necessary for a SWAT team to facilitate an entry into a location to ensure the safety of innocent persons inside the stronghold, the suspect, the officers, and the public.	
Authorized Use: SWAT personnel trained in its proper use for law enforcement purposes.	
Fiscal Impact: Approx. $5.00 per round and will be purchased as needed to replenish existing supply as they are used during deployments and training. Expected to purchase approximately 10 breaching rounds for $50 during the year.	
Training: Instructor-led training which involves familiarization, authorized uses, and hands-on instruction. The instructor will have attended a Shotgun Breaching Course. Additionally, all operators are also members of the SWAT team who have completed an 80-hour POST certified Special Weapons and Tactics Course.	

Only SWAT team members who have attended a 9-day tactical explosive breacher course are allowed to handle the nonelectric detonators and detonating cord.
Legal and Procedural Rules: Use is established under General Policy 1.06.24, 1.06.61, and 1.07.32, as well as applicable law.
Additional Information: None

Equipment Name / Category: Specialized firearms and ammunition – Government Code § 7070(c)(10)	
Quantity Owned: See description below	**Lifespan:** Approximately 5 to 15 years depending on usage
Manufacturers Product Description(s): The Office of the Sheriff has the following rifles in its inventory which are capable of firing .223/5.56mm caliber rifle rounds. These rifles are used by SWAT personnel. **HK G36C**, approx. cost $1,900, quantity: 4. With its short 8.98-inch (228 mm) barrel and buttstock folded, the G36C (compact carbine) has an overall length of less than 20 inches—shorter that an MP5 submachine gun. It is the perfect 5.56 mm weapon for use in confined areas such as a vehicle. The G36C can even be fired with its buttstock folded. With the installation of an HK G36 magazine conversion magazine well, the G36C can use widely available AR/M16/M4 type magazines. https://hk-usa.com/hk-models/g36c/ The Office of the Sheriff has the following rifles in its inventory which are capable of firing .308 caliber rifle rounds: **GA Precision .308 rifles**, cost $4,986, quantity: 8. **Remington 700 .308 rifles,** Cost is unknown as the last one was purchased in 2006, quantity: 8. The Model 700 SPS Tactical is a highly maneuverable member of the family. It's built for tack-driving accuracy with a 20" heavy-contour tactical-style barrel and dual-point pillar bedding in its black synthetic stock. Hogue® over moldings on the stock facilitate sure handling, and it has a semi-beavertail fore-end for added stability off a rest. https://www.remarms.com/rifles/bolt-action/model-700/model-700-sps-tactical The Office of the Sheriff has the following firearms in its inventory that are capable of firing 9mm rounds: **HK MP5**, approx. Cost $2,000, quantity: 2. Developed by Heckler & Koch in the mid-1960s, the 9 mm MP5 submachine gun uses the same delayed blowback operating system found on the famous HK G3 automatic rifle. Reliability, accuracy, ease of handling, simple maintenance, and safety - all the elements of HK excellence are highlighted on the MP5. Firing from the closed-bolt position in all modes of fire make MP5 submachine guns extremely accurate and controllable. https://hk-usa.com/hk-models/mp5-2/ **HORNADY .308 WIN TAP ELD**, approx. cost: $1.25 per round, quantity: 10,000. Hornady 308 WIN TAP 168 gr. ELD MATCH TAP PRECISION ammunition was designed as an improvement on the 168 gr. A-MAX TAP PRECISION load by incorporating the new ELD Match bullet. The 168 gr. ELD Match bullet with Heat Shield tip delivers the excellent terminal performance TAP Precision is known for, but features a resilient, heat resistant polymer tip that improves the ballistic coefficient, resulting in higher impact velocities, less drop, less wind drift, and more energy on target. https://www.hornadyle.com/rifle-ammunition/168-gr-eld-match-tap-precision#!/	
Purpose: The rifle can be more effective than a sidearm when dealing with certain critical and life-threatening situations including overcoming heavily armed resistance, achieving containment, and saving lives. Such situations include but are not limited to: (1) Violent and armed suspects	

wearing body armor, (2) Subjects armed with high-capacity automatic or semi-automatic weapons, (3) Multiple armed suspects, (4) Distance is beyond the capabilities of handgun, and (5) Hostage situation where precision is necessary and is beyond the capabilities of a handgun.
Authorized Use: All full-time sworn peace officers are trained in its proper use for law enforcement purposes.
Fiscal Impact: Approximately $6,000 per year for ammunition and $1,000 per year for maintenance on the GA Precision rifles.
Training: All personnel issued a rifle capable of firing a .308 caliber round are members of the SWAT team, have attended an 80-hour POST-certified Special Weapons and Tactics Course and a 40-hour Rifle Marksmanship and Sniper/Observer Course. These personnel attend SWAT team training and an additional 8-hour training day each month specifically for the deployment of the .308 rifle.
Legal and Procedural Rules: Use is established under General Policy 1.06.61, 1.07.32, and as well as applicable law.
Additional Information: The HK G36C rifles and HK MP5 firearms are only used for training and demonstration purposes and have not been an assigned to a SWAT team member as their primary rifle for several years. Five of the Remington 700 rifles are no longer in service. Three of the Remington 700 rifles recently had their barrels and their triggers replaced. The three recently refurbished rifles can be used if a GA Precision rifle is being serviced and is unable to be used during a SWAT operation.

Equipment Name / Category: "Flashbang" grenades – Government Code § 7070(c)(12)	
Quantity Owned: 101	**Lifespan:** 5 years
Manufacturers Product Description(s): **Defense Technology Low Roll Non-Reloadable Distraction Device**, cost $50 each, quantity: 101. The Non-Reloadable Distraction Device® unit incorporates an M201A1 type fuze with hex design gun steel body. This is a compact version of the 8933 Low Roll® body Distraction Device is the newest version of the first reusable non-bursting canister that limits movement and rolling once deployed. The compact Distraction Device fits safely in your hand and packs all the power of the full-size Distraction Device. This is a smaller, lighter device with the same output. https://www.defense-technology.com/product/low-roll-12-gram-non-reloadable-distraction-device/	
Purpose: The diversionary device is designed to temporarily incapacitate an individual through sound and light.	
Authorized Use: The device is utilized in situations where it is necessary to gain a tactical advantage or provide a distraction, to overcome a situation where the threat of violence or danger exceeds the capabilities of standard Office of the Sheriff equipment. Examples are a hostage or barricaded subject incident and a high-risk warrant where there may be extreme hazards to personnel.	
Fiscal Impact: They will be purchased as needed to replenish existing supply as they are used during deployments and training. It is anticipated that 20 diversionary devices will be purchased for a cost of $1,000.	
Training: All members of the SWAT team who have completed an 80-hour POST-certified Special Weapons and Tactics Course and personnel who have attended a course for diversionary devices are authorized for use. All SWAT team members receive refresher training from personnel who have attended an instructor course for diversionary devices.	
Legal and Procedural Rules: It is the policy of the Sheriff's Office to utilize noise flash diversionary devices (NFDD) only for official law enforcement or training purposes and pursuant to applicable law.	

Additional Information: None.

Equipment Name / Category: Tear gas and pepper balls – Government Code § 7070(c)(12)	
Quantity Owned: See description below	**Lifespan:** 5 years
Manufacturers Product Description(s): **DEFENSE TECHNOLOGY Spede-Heat CS Grenade**, cost approx. $20 each, quantity: 33. The Spede-Heat™ CS Grenade is a high volume, continuous burn it expels its payload in approximately 20-40 seconds. The payload is discharged through four gas ports on top of the canister, three on the side and one on the bottom. This launchable grenade is 6.12 in. by 2.62 in. and holds approximately 2.9 oz. of active agent. https://www.defense-technology.com/product/spede-heat-continuous-discharge-chemical-grenade-cs/ **DEFENSE TECHNOLOGY Riot Control CS Grenade**, cost approx. $25, quantity: 169. The Riot Control CS Grenade is designed specifically for outdoor use in crowd control situations with a high-volume continuous burn that expels its payload in approximately 20-40 seconds through four gas ports located on the top of the canister. This grenade can be used to conceal tactical movement or to route a crowd. The volume of smoke and agent is vast and obtrusive. This launchable grenade is 6.0 in. by 2.35 in. and holds approximately 2.7 oz. of active agent. https://www.defense-technology.com/product/riot-control-continuous-discharge-grenade-cs/ **DEFENSE TECHNOLOGY Riot Control OC Grenade**, cost approx. $25, quantity: 5. The Riot Control OC Grenade is designed specifically for outdoor use in crowd control situations with a high-volume continuous burn that expels its payload in approximately 20-40 seconds through four gas ports located on the top of the canister. This grenade can be used to conceal tactical movement or to route a crowd. The volume of smoke and agent is vast and obtrusive. This launchable grenade is 6.0 in. by 2.35 in. and holds approximately 0.88 oz. of active agent. https://www.defense-technology.com/product/riot-control-continuous-discharge-grenade-oc/ **DEFENSE TECHNOLOGY Pocket Tactical CS Grenade**, cost approx. $20, quantity: 1. The Pocket Tactical CS Grenade is small, and lightweight. The 0.9 oz. of active agent will burn approximately 20-40 seconds. At 4.75 in. by 1.4 inches in size, it easily fits in most tactical pouches. This is a launchable grenade; however, it is normally used as a signaling or covering device. Though this device is slightly over four inches in length, it produces a smoke cloud so fast it appears to be an enveloping screen produced by a full-size tactical grenade. https://www.defense-technology.com/product/pocket-tactical-grenade-cs/ **DEFENSE TECHNOLOGY Instantaneous Blast CS Grenade**, cost approx. $35, quantity: 21. The Instantaneous Blast CS Grenade is designed for indoor or outdoor use; this grenade's powder is expelled upon initiation of a small internal detonator that has sufficient force to split the canister at six machined groves on the outside surface. this device is well suited for affecting numerous subjects grouped within a contained portion of a prison yard or area, using wind to the advantage. This 6.12 in. by 2.62 in. grenade will deliver approximately 1.5 oz. of active agent. https://www.defense-technology.com/product/instantaneous-blast-cs-grenade/ **DEFENSE TECHNOLOGY Instantaneous Blast OC Grenade**, cost approx. $20, quantity: 100. The Instantaneous Blast OC Grenade is designed for indoor or outdoor use; this grenade's powder is expelled upon initiation of a small internal detonator that has sufficient force to split the canister at six machined groves on the outside surface. This device is well suited for affecting numerous subjects grouped within a contained portion of a prison yard or area, using wind to the advantage. This 6.12 in. by 2.62 in. grenade will deliver approximately 1.5 oz. of active agent. https://www.defense-technology.com/product/instantaneous-blast-oc-grenade/ **DEFENSE TECHNOLOGY Flameless Tri-Chamber Grenade**, cost approx. $35, quantity: 15. The design of the Tri-Chamber Flameless CS Grenade allows the contents to burn within an internal can and disperse the agent safely with reduced risk of fire. The grenade is designed	

primarily for indoor tactical situations to detect and/or dislodge a barricaded subject. This grenade will deliver approximately .70 oz. of agent during its 20-25 seconds burn time. The Tri-Chamber Flameless Grenade can be used in crowd control as well as tactical deployment situations by Law Enforcement and Corrections but was designed with the barricade situation in mind. Its applications in tactical situations are primarily to detect and/or dislodge barricaded subjects. The purpose of the Tri-Chamber Flameless Grenade is to minimize the risks to all parties through pain compliance, temporary discomfort, and/or incapacitation of potentially violent or dangerous subjects. The Tri-Chamber Flameless Grenade provides the option of delivering a pyrotechnic chemical device indoors, maximizing the chemicals' effectiveness via heat and vaporization, while minimizing or negating the chance of fire to the structure. https://www.defense-technology.com/product/flameless-tri-chamber-cs-grenade/

DEFENSE TECHNOLOGY Triple-Chaser CS grenade, cost approx. $33, quantity: 50. The Triple-Chaser® CS consists of three separate canisters pressed together with separating charges between each. When deployed, the canisters separate and land approximately 20 feet apart allowing increased area coverage in a short period of time. This grenade can be hand thrown or launched from a fired delivery system. The grenade is 6.5 in. by 2.7 in. and holds an approximately 3.2 oz. of active agent payload. It has an approximate burn time of 20-30 seconds. https://www.defense-technology.com/product/triple-chaser-separating-canister-cs/

DEFENSE TECHNOLOGY Triple-Chaser Smoke grenade, cost approx. $43, quantity: 33. The Triple-Chaser® Saf-Smoke™ consists of three separate canisters pressed together with separating charges between each. When deployed, the canisters separate and land approximately 20 feet apart allowing increased area coverage in a short period of time. This grenade can be hand thrown or launched from a fired delivery system and is an effective way to quickly deploy a wide blanket of agent. The grenade is 6.5 in. by 2.7 in. and delivers Saf-Smoke™. It has an approximate burn time of 20 seconds. https://www.defense-technology.com/product/triple-chaser-separating-canister-saf-smoke/

DEFENSE TECHNOLOGY Stinger CS rubber ball grenade, cost approx. $43, quantity: 79. The Stinger® CS Rubber Ball Grenade is a maximum effect device that delivers four stimuli for psychological and physiological effects: rubber pellets, light, sound, and CS. The Stinger® Grenade is most widely used as a crowd management tool by Law Enforcement and Corrections. The Stinger® Grenade has an initial 1.5 second delay that initiates fuze assembly separation, followed by another .5 second delay before the blast which is sufficient to project the rubber balls and chemical agent in a 50-foot radius. https://www.defense-technology.com/product/stinger-cs-rubber-ball-grenade/

DEFENSE TECHNOLOGY Stinger OC rubber ball grenade, cost approx. $40.50, quantity: 16. The Stinger® OC Grenade is a maximum effect device that delivers four stimuli for psychological and physiological effects: rubber pellets, light, sound, and OC. The Stinger Grenade is most widely used as a crowd management tool by Law Enforcement and Corrections. The Stinger Grenade has an initial 1.5 second delay that initiates fuze assembly separation, followed by another .5 second delay before the blast which is sufficient to project the rubber balls and chemical agent in a 50-foot radius. https://www.defense-technology.com/product/stinger-rubber-ball-grenade-oc/

DEFENSE TECHNOLOGY Inert rubber ball grenade, cost approx. $36, quantity: 91. The Inert Rubber Blast Ball Grenade can be used effectively in both training and crowd management situations. It simulates the dispersion of Riot Control Agents from a CS, CN, or OC Blast Ball in a training environment, but without the actual chemical exposure. Deployed in crowd management /custodial situations to deliver light/sound stimuli from a rubber ball style grenade without chemical agent exposure https://www.defense-technology.com/product/rubber-ball-blast-grenade-inert/

DEFENSE TECHNOLOGY Military-style SAF-Smoke grenade (White), cost approx. $26, quantity: 37. The Saf-Smoke™ Grenade was designed for training, but may also be used in

operations. The Saf-Smoke Grenade offers the same approximate burn times as the Spede-Heat™ Grenade in CN or CS and the Riot Control Grenade in CN or CS. The similar burn times may make it the appropriate choice for training or simulation deployment of chemical agent canisters. The Saf-Smoke formulation is considered to be less toxic than Hexachloroethane (HC) smoke. The Saf-Smoke Grenade emits a very white smoke. https://www.defense-technology.com/product/military-style-saf-smoke-grenade/

DEFENSE TECHNOLOGY Military-style Green smoke grenade, cost approx. $37, quantity: 15. The Maximum Smoke Grenade is designed specifically for outdoor use in crowd control situations with a high volume continuous burn that expels its payload in approximately 30-40 seconds through four gas ports located on the top of the canister. This grenade can be used to conceal tactical movement or to route a crowd. The volume of smoke and agent is vast and obtrusive. This launchable colored smoke grenade is 6.0 in. by 2.35 in. and holds approximately 2.9 oz. of active agent. https://www.defense-technology.com/product/military-style-green-smoke-grenade/

DEFENSE TECHNOLOGY Maximum HC Smoke, cost approx. $39, quantity: 22. The Maximum Smoke Grenade is designed specifically for outdoor use in crowd control situations with a high volume continuous burn that expels its payload in approximately 1.5 – 2 minutes through four gas ports located on the top of the canister. This grenade can be used to conceal tactical movement or to route a crowd. The volume of smoke and agent is vast and obtrusive. This launchable grenade is 6.0 in. by 2.6 in. and holds approximately 2.9 oz. of active agent. https://www.defense-technology.com/product/maximum-smoke-hc-large-style-canister/

DEFENSE TECHNOLOGY CS Powder 40mm Ferret, cost approx. $20, quantity: 51. The ferret 40mm round is non-burning and suitable for indoor use. Used primarily by tactical teams, it is designed to penetrate barriers, such as windows, hollow core doors, wallboard, and thin plywood. Upon impacting the barrier, the nose cone ruptures and instantaneously delivers a small chemical payload inside the structure or vehicle. Defense Technology no longer makes this type of ferret.

DEFENSE TECHNOLOGY CS Barricade Penetrating 40mm Ferret, cost approx. $20, quantity: 20. The Ferret® 40 mm Barricade Penetrating Round is filled with a CS powder chemical agent. It is a frangible projectile that is spin stabilized utilizing barrel rifling. It is non-burning and designed to penetrate barriers. Primarily used to dislodge barricaded subjects, it can also be used for area denial. Primarily used by tactical teams, it is designed to penetrate barriers, such as windows, hollow core doors, wallboard, and thin plywood. Upon impact the nose ruptures and instantaneously delivers the agent payload inside a structure or vehicle. https://www.defense-technology.com/product/ferret-40-mm-powder-barricade-round-cs/

DEFENSE TECHNOLOGY Liquid CS 40mm Ferret, cost approx. $20, quantity: 33. The Ferret® 40mm Round is non-burning and suitable for indoor use. Used primarily by tactical teams, it is designed to penetrate barriers, such as windows, hollow core doors, wallboard, and thin plywood. Upon impacting the barrier, the nose cone ruptures and instantaneously delivers a small chemical payload inside of a structure or vehicle. In a tactical deployment situation, the 40mm Ferret is primarily used to dislodge barricaded subjects from confined areas. Its purpose is to minimize the risks to all parties through pain compliance, temporary discomfort and/or incapacitation of potentially violent or dangerous subjects. https://www.defense-technology.com/product/ferret-40-mm-liquid-barricade-penetrator-round-cs/

DEFENSE TECHNOLOGY Direct impact 40mm OC crushable foam round, cost $20 each, quantity: 81. The 40mm Direct Impact® munition is a point-of-aim, point-of-impact direct-fire round. An excellent solution whether you need to incapacitate a single subject or control a crowd. When loaded with OC powder, the Direct Impact combines blunt trauma with the effects of an irritant powder, maximizing the potential for incapacitation. https://www.defense-technology.com/product/direct-impact-40-mm-oc-crushable-foam-round/

COMBINED TACTICAL SYSTEMS 5210 White Smoke Grenade, cost $40.90, quantity 6.

Pyrotechnic smoke grenade used for concealment or as a signaling device. https://www.combinedsystems.com/product/5210-white-smoke-canister-grenade/ **COMBINED TACTICAL SYSTEMS 5230 Jet Lite CS Grenade**, cost $40.90, quantity 9. A large diameter burning grenade designed to discharge a high volume of smoke and chemical agent rapidly through multiple emission ports. The smoke composition is formulated to burn rapidly decreasing the possibility that the grenade can be picked up and thrown back at crowd management officers. The Jet-Lite should not be deployed on rooftops, in crawl spaces or indoors due to fire producing capability. Can be hand thrown or launched. https://www.combinedsystems.com/product/5230jl-cs-baffled-canister-grenade-pyro-low-flame-potential-copy/ **COMBINED TACTICAL SYSTEMS 5430 Flameless CS Grenade**, cost $40.90, quantity 6. Large diameter flameless grenade posing no risk of fire and discharging a large powder payload instantaneously through multiple emission ports. Provides best results when used indoors. https://www.combinedsystems.com/product/5430-cs-flameless-expulsion-canister-grenade/
Purpose: The chemical irritant causes discomfort and encourages subjects to retreat from its vicinity so officers can safely resolve a critical incident, such as a situation involving a barricaded subject.
Authorized Use: Only personnel who have received training by an instructor who has attended a POST chemical agent or less lethal instructor course may use.
Fiscal Impact: Munitions will be purchased as needed to replenish existing supply as they are used during deployments and training. It is anticipated that the Sheriff's Office will spend approximately $6,000 this year on munitions.
Training: All operators will receive training by an instructor who has attended a POST certified chemical agent instructor or less lethal course.
Legal and Procedural Rules: Use is established under General Policy 1.06.24, 1.06.60, 1.06.61, and 1.07.32, as well as applicable law.
Additional Information: The Mutual Aid Mobile Field Force (MAMFF) has additional munitions in its inventory that have expired and are only for training purposes.

Equipment Name / Category: Long Range Acoustic Device (LRAD) – Government Code § 7070(c)(13)	
Quantity Owned: 2	**Lifespan:** 25 years
Manufacturers Product Description(s): **LRAD 100x**, cost approx. $15,000, quantity: 2. The LRAD 100X is a self-contained, portable communication system for on-scene and tactical communication. With unparalleled vocal clarity and up to 30db louder than bullhorns, megaphones, and vehicle P.A. systems, the LRAD 100X is also four to six times louder than other acoustic hailers of comparable size and weight. LRAD's optimized driver and waveguide technology ensures every message is clearly broadcast, heard and understood, even above engine, crowd, siren, and background noise. The LRAD warning tone commands attention to the voice messages that follow and provides a safer alternative to non-lethal and kinetic measures for changing behavior. https://genasys.com/wp-content/uploads/Datasheet_LRAD_100X_2021_QR.pdf	
Purpose: To safely communicate critical announcements and de-escalate critical incidents by ensuring communications are clear and effectively delivered. They are typically used by the Office of the Sheriff during high-risk search/arrest warrant service and barricaded subject incidents but can be used in other situations as needed when it is necessary to ensure information and messages are clearly communicated. The LRAD may also be used to issue a warning tone.	
Authorized Use: The LRAD shall only be used by personnel trained in its deployment and used in a manner consistent with that training.	
Fiscal Impact: Annual maintenance cost of approximately $400.	

Training: All operators will receive Sheriff's Office approved training prior to operating any of the LRADs in the field.
Legal and Procedural Rules: It is the policy of the Sheriff's Office to utilize the LRAD only for official law enforcement or training purposes and pursuant to applicable law.
Additional Information: None.

Equipment Name / Category: 40mm projectile launchers and munitions – Government Code § 7070(c)(14)	
Quantity Owned: See product description	**Lifespan:** 15 years
Manufacturers Product Description(s): **PENN ARMS GL6-40**, approx. cost $1500, quantity: 3. A 40MM spring-advance magazine drum launcher with a six-shot capacity and a rifled barrel and six-inch cylinder. https://www.combinedsystems.com/product/l640-1-40mm-spring-wound/ **DEFENSE TECHNOLOGY 4 SHOT 40mm launcher**, approx. cost $1500, quantity: 2. Designed for riot and tactical situation, the Defense Technology 1440 40mm Tactical 4-Shot Launcher is low-profile and lightweight, providing multi-shot capability in an easy to carry launcher. https://www.defense-technology.com/product/40mm-tactical-4-shot-launcher/ **DEFENSE TECHNOLOGY 40mm single shot launcher**, approx. cost $900, quantity: 52. Manufactured exclusively for Defense Technology®, the 40LMTS is a tactical single shot launcher that features an expandable ROGERS Super Stoc and an adjustable Integrated Front Grip (IFG) with light rail. The ambidextrous Lateral Sling Mount (LSM) and QD mounting systems allow both a single and two point sling attachment. The 40LMTS will fire standard 40mm less lethal ammunition, up to 4.8 inches in cartridge length. The Picatinny Rail Mounting System will accept a wide array of enhanced optics/sighting systems. https://www.defense-technology.com/product/40mm-lmt-tactical-single-launcher-expandable-stock/ **LEWIS MACHINE AND TOOL 40mm single shot launcher,** approx. cost $1000, quantity: 1. The LMT® Tactical Single Shot Launchers are a lightweight, low-cost tactical single shot launcher available in 2 models: 40 mm and 37 mm. They feature an expandable ROGERS Super Stoc and an adjustable Integrated Front Grip (IFG) with light rail. The Picatinny Rail Mounting System with a bead sight will accept a wide array of enhanced optics/sighting systems for added customizability. https://www.aardvarktactical.com/products/lmt-tactical-launcher **PEPPERBALL FTC pepperball launcher**, approx. cost $400, quantity: 13. Compact and lightweight, the PepperBall FTC is the industry gold standard for crowd-control and other applications where speed and reliability are a factor. https://pepperball.com/launchers/ftc-1/ **FN 303 LAUNCHER**, approx. cost $1,300, quantity: 7. The FN 303 Less Lethal Launcher is constructed from durable lightweight polymer with comfortable ergonomics and an easy to operate safety. The FN 303 Launcher is equipped with both flip-up iron sights and an integrated MIL-STD-1913 top mounting rail for optical or electronic sights or other accessories. The lightweight polymer magazine holds 15 projectiles and offers a clear rear cover to allow the operator to instantly verify both the payload type and the number of projectiles remaining. https://fnamerica.com/products/discontinued-products/fn-303-launcher/ **DEFENSE TECHNOLOGY eXact impact 40mm sponge round**, cost $18 each, quantity: 559. The eXact iMpact™ 40 mm Sponge Round is a point-of-aim, point-of-impact direct-fire round. This lightweight, high-speed projectile consisting of a plastic body and sponge nose that is spin stabilized via the incorporated rifling collar and the 40 mm launcher's rifled barrel. The round utilizes smokeless powder as the propellant, and, therefore, have velocities that are extremely consistent. Used for Crowd Control, Patrol, and Tactical Applications. https://www.defense-technology.com/product/exact-impact-40-mm-standard-range-sponge-round/ **DEFENSE TECHNOLOGY Direct impact 40mm marking crushable foam round**, cost $18 each, quantity: 150. A 40mm sponge round that is a point-of-aim, point-of-impact direct-fire	

round. The direct impact round has a green marking agent that can be used to indicate the aggressor in a crowd or riot situation to the team on the ground. https://www.defense-technology.com/product/direct-impact-40-mm-marking-crushable-foam-round/

DEFENSE TECHNOLOGY Stinger 40mm 60-caliber rubber balls, cost $19 each, quantity: 305. The Stinger® 40 mm 60-Caliber Round is most widely used as a crowd management tool by Law Enforcement and Corrections. The round contains approximately eighteen 60-Caliber rubber balls. It utilizes smokeless powder as the propellant and has more consistent velocities and tighter patterns compared to its 37 mm counterpart. It is suitable for administering a means of pain compliance over a greater distance than its 32-Caliber Stinger® counterpart. Used for routing crowds or groups that are mildly resistive. https://www.defense-technology.com/product/stinger-40-mm-60-caliber-rubber-balls-round/

DEFENSE TECHNOLOGY 40mm warning/signaling munition, cost $39 each, quantity: 275. The 40mm Aerial Warning/Signaling Munition, 50 meters, is intended for use in situations where stand-off distance is desired, giving the operator the ability to engage crowds, vehicles, or vessels. Launched from a 40mm platform, the munitions deflagrate at a set distance of 50 meters to deliver 170 dB of sound and 5 million candelas of light, noticeable in day or night conditions. A tactile feature on the nose of the cone indicates the designated distance. https://www.defense-technology.com/product/40-mm-warning-signaling-munition-50-meter/

DEFENSE TECHNOLOGY Drag Stabilized 12-gauge bean bag round, cost $5.50 each, quantity: 22. The Drag Stabilized 12-gauge round is a translucent 12-gauge shell loaded with a 40-gram tear shaped bag made from a cotton and ballistic material blend and filled with #9 shot. This design utilizes four stabilizing tails and utilizes smokeless powder as the propellant. The 12-Gauge Drag Stabilized Round has secured its place as the Law Enforcement Communities' number one choice for specialty impact munitions. This round has a velocity of 270 fps with a maximum effective range of 75 feet. https://www.defense-technology.com/product/drag-stabilized-12-gauge-bean-bag-round/

PEPPERBALL PAVA ammunition, approx. cost: $2.25 per round, quantity: 958. .68 caliber A powerful concentration of 5% PAVA pepper powder. One round of LIVE-X™ contains the equivalent PAVA irritant chemical agent in more than 2 classic PepperBall LIVE™ rounds. Excellent for direct impact, area saturation and crowd control. https://pepperball.com/projectiles/live-x/

FN 303 marking projectile, approx. cost $5 per round, quantity: 296. This projectile is intended for marking suspects and objects with an indelible colorant for later identification, arrest or questioning. https://fnamerica.com/products/less-lethal/projectiles/?referrer=law-enforcement

FN 303 PAVA/OC POWDER projectile, approx. cost $5 per round, quantity: 300. This projectile is intended as an irritant for individual suspects, point-specific targets or small-area denial. The active ingredient is 0.5% PAVA/OC in a powder form for ease of storage, deployment, and clean-up. https://fnamerica.com/products/less-lethal/projectiles/?referrer=law-enforcement

Purpose: The 40mm and less lethal launchers are a necessary de-escalation tool which can reasonably result in use of a lesser level of force being used against a subject. Less lethal munitions may also be deployed when other levels of force are not proportional or are inappropriate because of the surroundings or situation. The goal of less lethal deployment is to exert control over a subject(s) with increased safety and with a lower potential for injury.

Authorized Use: Personnel trained in its proper use for law enforcement purposes.

Fiscal Impact: Each type of munition will be purchased as needed to replenish existing supply as they are used during deployments and training. It is anticipated that the Sheriff's Office will be spend approximately $2,000 on munitions this year.

Training: All operators will receive training by an instructor who has attended a POST certified less lethal course.

Legal and Procedural Rules: Use is established under General Policy 1.06.24, 1.06.60, 1.06.61, and 1.07.32, as well as applicable law.
Additional Information: The Defense Technology 40mm chemical agent rounds are listed in the inventory for Government Code § 7070(c)(12) equipment. The Mutual Aid Mobile Field Force (MAMFF) has additional Stinger rounds, 40mm bean bag rounds, and 12-gauge bean bag rounds which are all expired and are being disposed of. They also have 6 Pepper Ball launchers which are no longer used.

Contra Costa County

OFFICE OF THE SHERIFF

Air Support Unit

Policy and Procedure

2018



Preface

The purpose of this Manual is to establish policy, direction, guidelines, and operational procedures for managing the Office of the Sheriff Air Support Unit.

The objective of this Manual is to provide standardization in the use of aircraft, reporting procedures, flight operations, aircraft maintenance, personnel selection criteria, training procedures and to ensure Departmental aircraft are used in an effective, efficient, and safe manner. Safety, above all else, is the primary concern in each and every operation.

This version of the Manual supersedes all previously issued versions of the Air Support Unit's Manuals, but it does not supersede any applicable State, Federal Laws and Regulations.

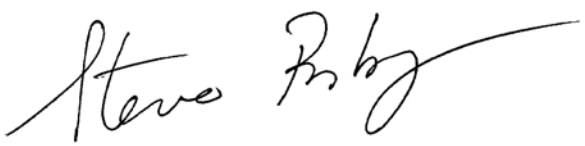
As FAA regulations, industry standards, and mission procedures evolve, so must the content of this Manual. Therefore, it is imperative that all personnel assigned to the Air Support Unit be given the opportunity to provide suggestions during the annual review and updates.

Mission Statement

The mission of the Air Support Unit is to enhance community safety and protect life and property by assisting Sheriff's Patrol, Marine Patrol, and allied law enforcement agencies in their capabilities to provide law enforcement services.

Additionally, the Office of the Sheriff Air Support Unit shall use its airborne resources to protect the lives and property of the community by preventing and detecting crime, providing aerial support to locate and assist in the apprehension of wanted persons, and to conduct search and rescue missions, both on the water and land, throughout Contra Costa County.

Finally, the Air Support Unit can be requested to perform any task that can best be accomplished in the air in a safe, efficient, and effective manner.



Captain Steve Borbely
Special Operations Commander
September 2018

Contra Costa County Office of the Sheriff
Marine Services – Air Support Unit Policy and Procedures Manual

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	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: 1 Administration	SUBJECT: Purpose of the Air Support Unit Manual	

I. POLICY.

A. The Air Support Unit (ASU) will provide aerial assistance and support to all law enforcement patrol, maritime personnel, and other first responder agencies within Contra Costa County.

B. Aviation safety will be paramount during all flight operations conducted by the Air Support Unit.

II. GENERAL INFORMATION.

A. PURPOSE AND SCOPE.

1. The purpose of the ASU manual is to:

   a. Maximize safety in aviation operations by providing operational policies, procedures, and guidelines.

   b. Assist in the establishment of the Crew Resource Management (CRM) procedures and Safety Management Systems (SMS).

   c. Provide clear standards for the pilots and air crew members.

   d. Comply with FAA regulations and industry standards set forth by outside agencies, Cal-Fire, the Airborne Law Enforcement Association (ALEA), and Helicopter Association International (HEI).

B. ANNUAL REVIEW.

1. The Air Support Unit Lieutenant shall review the ASU manual on an annual basis and make any revisions and / or changes to reflect current unit standards, procedures, flight operations, and FAA regulations.

2. The Special Operations Division Captain will authorize any policy changes.

3. Any policy changes and manual revisions shall be made available to all members of the Air Support Unit.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 1.2
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: 1 Administration	SUBJECT: Organization, Structure, and Duties	

I. ORGANZIATION.

A. The Air Support Unit is under the command of the Marine Services Unit within the Special Operations Division. The Marine Services Unit Commander reports to the Special Operations Division Commander.

B. All aircraft utilized by the Air Support Unit are owned by Contra Costa County. Maintenance and support are provided by private vendors contracted through existing County procurement process.

II. STRUCTURE AND DUTIES.

A. UNIT COMMANDER (MARINE SERVICES UNIT LIEUTENANT).

1. The Unit Commander is responsible for ensuring adherence to Federal Aviation Regulations, general and unit policies and procedures, and all pertinent laws and standards for flight operations. In addition, the Unit Commander shall ensure accountability for accuracy of maintenance records and invoices, budget recommendations and control, personnel selection, identifying training, and purchasing of aviation related equipment.

B. UNIT SUPERVISOR (SERGEANT).

1. The Unit Supervisor is responsible for the day to day aviation operations including the review of all daily and monthly activity flight reports, schedule flight missions and special event requests, scheduling of air crew and aircraft, reviewing and approving crime reports, review all ride-along requests, equipment inventory and maintenance. The Unit Supervisor will also ensure the aircraft are serviced and maintained for airworthiness by the contract service provider. The Unit Supervisor shall serve as the unit's Safety Officer.

C. TACTICAL FLIGHT OFFICER (DEPUTY SHERIFF).

1. The Tactical Flight Officer's (TFO) primary function is to be an airborne coordinator between the aircraft and ground personnel. The senior TFO may also be called "Lead TFO" or "Crew Chief" for CRM purposes. The senior TFO will be responsible for providing training to other crew members when required. The TFO has overall responsibility of all flight missions.

2. Other responsibilities of the TFO's include but are not limited to:

   a. At the beginning of every shift, ensuring all specialized aircraft and rescue equipment are in working order. All damaged or lost equipment are to be reported to the Unit Supervisor immediately, or as soon as practical. The equipment to be checked include:

   - [redacted]
   - [redacted]
   - [redacted]
   - [redacted])
   - [redacted]
   - [redacted]
   - [redacted]

   b. Operation of all specialized aircraft equipment during flight.

   c. Monitoring and communicating on all Sheriff's and outside agencies' radio frequencies, as required.

   d. Pursuit and perimeter management, if requested.

   e. Coordinating search and rescue efforts.

   f. Coordinating initial fire suppression requests and operations.

   g. Navigation of the aircraft; this includes directing flight paths and patterns (orbits). The pilot shall evaluate each request from the TFO for flight safety before performing any flight maneuvers.

   h. Maintenance, completion, and updating of all required flight reports and crime reports.

3. All TFO's shall receive and successfully complete 10 hours of rotorcraft flight instruction from a certified flight instructor and initial ground training shall be given by the contract pilot on principles of flight.

   a. All TFO's will continue to receive sufficient, recurring flight instruction from the Lead Pilot(s) to enable the TFO to land the aircraft safely in an emergency.

D. AIRCRAFT PILOTS (CONTRACTS).

1. Aircraft pilots are civilian contractors who have successfully completed a thorough background check, authorized to operate the Office of the

Sheriff's aircraft, and must wear the authorized Office of the Sheriff's flight uniform.

2. In addition to successfully completing the initial Manufacturer's Factory Flight and Ground school for all Office of the Sheriff aircraft models, pilots must meet the following flight requirements prior to entering into a contractual agreement with the County and being designated as a pilot in command of an Office of the Sheriff's aircraft:

   a. Must have a minimum of 3,000 hours logged as a pilot in command in a rotorcraft aircraft.

   b. Must have 2,000 hours logged in a turbine aircraft.

   c. Preferred to have 500 hours logged in night time flight and 50 hours logged with night vision goggles (NVG's) during night time flight.

   d. The pilots must possess a current and valid Commercial and Instrument Rotorcraft rating.

   e. The pilots must maintain proficiency and currency of all required licenses, to include annual refresher training for all make and models of the Office of the Sheriff's aircraft.

3. Other responsibilities of the pilots include but are not limited to:

   a. Assure maximum safety for all passengers and crewmembers.

   b. Act as "Pilot in Command" of assigned aircraft.

   c. Assure aircraft is airworthy prior to initial scheduled flight (pre-flight).

   d. Assure proper certificates, licenses, manuals and supplies are aboard aircraft.

   e. Conduct flight operations in accordance with federal, state, local and Unit regulations / policies.

   f. Maintain an increasing level of aviation knowledge and proficiency in accordance with industry and aviation standards.

   g. Maintain a professional manner and appearance reflected by the uniform, attitude, and bearing.

   h. Complete any aviation related assignments as designated by the Unit Supervisor or Unit Commander.

E. ADDITIONAL MISSION ESSENTIAL CREWMEMBERS.

1. Additional Mission Essential Crewmembers may be assigned and scheduled to the Air Support Unit daily and authorized to fly in the Office of the Sheriff's aircraft during all flights. Mission Essential Crewmembers are comprised of Contra Costa County Fire Protection District (Con-Fire) Captain Paramedics and Search and Rescue (SAR) volunteers who are specifically trained in aviation rescue operations and initial attack fire suppression operations.

2. Mission Essential Crewmembers shall be part of the CRM procedures aboard the aircraft.

3. The Con-Fire and SAR personnel must be approved by the Unit Commander and must successfully complete the minimum requirements and currency proficiency standards in human external cargo and long-line operations to be considered as Mission Essential Crewmembers.

4. Mission Essential Crewmembers assigned to the Air Support Unit may be trained to serve as an additional observer from the aft seat of the aircraft. The crewmembers shall not manipulate the controls of the aircraft or TFO equipment unless under the direction and supervision of the Lead TFO.

5. Mission Essential Crewmembers shall only wear the authorized flight uniform or aviation type garments that are approved by the Unit Supervisor and Unit Commander.

6. Mission Essential Crewmembers will help with cleaning of the aircraft, maintenance of the hangar and office space, and assist with any other duty as directed by the Unit Supervisor and / or Unit Commander.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	**AIR SUPPORT**	**NUMBER:** **Section 1.3**
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 **REVISION DATE:** **06/01/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: 1 **Administration**	**SUBJECT:** **Airport Base Operations**	

I. POLICY.

A. The Office of the Sheriff's Air Support Unit shall follow all FAA and control tower regulations during flight operations in or near all airport airspace. Furthermore, the Air Support Unit shall foster a positive working relationship with the Operations Administration of the Buchanan Airport (Concord), the lease owner of the unit's office space and hangar, and the local Flight Standards District Office (FSDO) / Federal Aviation Administration (FAA).

II. GENERAL INFORMATION.

A. AIR SUPPORT UNIT OFFICE AND HANGAR.

1. [redacted]

2. Unit members will not leave the building unoccupied without making sure the office and hangar have been secured.

3. Non-Sheriff's Office employees shall not be left unattended or unescorted inside the office or hangar.

4. All personnel are equally responsible for maintaining the building in a neat, clean, and orderly fashion.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 1.4
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Hours of Operations	

I. SCHEDULING

A. DAILY FLIGHT SCHEDULES

1. Hours of operations will vary at times, depending on the need for the Air Support Unit and the availability of the flight crew.

   a. [redacted].

   b. The Unit Supervisor or Unit Commander shall be notified and approve working beyond the 10-hour tour of duty.

2. In the interest of safety and efficiency, guidelines on the number of duty hours a member can work in any 24-hour period are necessary.

   a. [redacted]

   b. [redacted]

3. Any air crew member shall cancel or terminate the flight anytime he or she experiences fatigue or illness that would jeopardize the safety of the flight.

4. Conditions such as weather, aircraft maintenance, or operational necessity may require alterations of the schedule. Such alterations shall be recorded on the Daily Flight Activity Log and the Unit Supervisor shall be notified as soon as practical.

5. Any deviation from this policy section can only be authorized by the Unit Commander.

6. Regular operations shall be controlled by the posted, approved monthly schedule.

7. Schedules shall be submitted to the Unit Commander for approval prior to the beginning of each month.

II. REQUEST FOR S.T.A.R.R. DURING NON-OPERATION DAYS / CALL-OUTS

A. PROCEDURE

1. Any request for S.T.A.R.R. helicopters during non-operational days or hours can be authorized by the Unit Commander or Watch Commander.

2. All other requests for outside agency aircraft shall be exhausted before calling in the Air Support Unit during non-operational hours.

3. The Air Support Unit is not mandated to be available for call-outs. The response will be determined if the pilot and a Tactical Flight Officer are available to respond.

4. The following types of incident can necessitate a need for a S.T.A.R.R. call out:

   a. Officer involved fatal incident

   b. Extended missing juvenile

   c. Missing elderly with life threatening medical conditions

   d. Search and Rescue

   e. Escapee

   f. Major felony incident

   g. Critical incidents

5. The Tactical Flight Officer or Unit Supervisor will check in with the Watch Commander or Unit Commander and request the following information:

   a. Description of the incident, involved vehicles and persons (race, clothing description, color of hair, hats, etc.).

   b. Direction of travel, time element, etc.

6. The Pilot and the Tactical Flight Officer or Unit Supervisor will have the final determination to launch during a call out request. The following shall be considered:

   a. Weather conditions

   b. Adequate rest period for the pilot and air crew members

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	**AIR SUPPORT**	**NUMBER:** **Section 1.5**
	RELATED ORDERS: CCCSO 1.07.21 CCCSO 1.07.22	
ISSUE DATE: 06/01/2017 **REVISION DATE:** **06/01/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Uniforms and Personal Equipment**	

I. POLICY.

A. All uniform, dress and grooming standards are set forth in the General Policy and Procedures Manual and are applicable to personnel assigned to the Air Support Unit.

B. Uniforms, flight suits, and applicable equipment will be clean and presentable at all times.

II. UNIFORMS.

A. FLIGHT SUITS.

1. When engaged in flight activities, the pilot and air crew members shall wear the issued fire-resistant flight suit. To be most effective, the sleeves should be rolled down and the zippers fully closed. Other protective equipment (gloves and boots) should be worn during flight.

2. Undergarments and civilian clothing worn under the flight suits shall be made of wool or cotton. Synthetic fabrics, such as rayon or polyester, should not be worn, as they melt when exposed to fire.

3. Flight suits will have the departmental patch on each sleeve, authorized embroidered badge over left chest, and leather name tag on the right chest. Rank insignia shall be worn, where appropriate.

4. No part of the uniform, including distinctive caps, is to be worn while engaged in secondary employment.

5. Deputies and contract pilots who are assigned to the Air Support Unit, and are required to appear in court, will comply with the General Policy and Procedures for dress. Flight suites are not authorized for court appearances.

6. Any member of the Air Support Unit choosing to wear a flight suit en route to, or from, work shall cover / remove Department or Unit insignia, badges, etc.

7. Flight suits are considered safety gear and will be replaced every two years or per the manufacturers recommendations. Any flight suit with unrepairable rips or tears will be taken out of service and replaced.

B. Deputies assigned to the Air Support Unit full time are authorized to wear the appropriate Air Support Unit pin on the Class A – C uniform shirt and/or jacket, centered just above the name tag.

III. PERSONAL PROTECTION EQUIPMENT.

A. FLIGHT HELMETS.

1. Flight helmets shall be worn at all times while in the aircraft.

a. Any deviation from this requirement requires approval from the Unit Supervisor.

B. BOOTS.

1. Any department approved leather boot for wear by patrol officers or firefighting is approved for wear by the Air Support Unit personnel.

C. JACKETS.

1. Flight crew uniform jacket will be an optional NOMEX or leather flight jacket.

D. RESCUE HARNESS AND PERSONAL FLOATATION DEVICES (PFD'S).

1. Only the approved Class II or Class III rescue harness and flight vests shall be worn by members of the Air Support Unit. The following equipment shall be issued by the Department:

a. Rescue and pilot knives.

b. Heeds compressed air bottles.

c. Approved PFD's.

d. NOMEX gloves.

e. Emergency Position Indicating Radio Beacon (EPIRB).

E. SERVICE WEAPONS.

1. Service weapons are to be worn by flight crew members authorized to carry such weapons.

a. [redacted]

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	**AIR SUPPORT**	**NUMBER:** **Section 1.6**
	RELATED ORDERS: CCCSO 1.06.78 CCCSO 1.06.21	
ISSUE DATE: 06/01/2017 **REVISION DATE: 06/01/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **News and Social Media Relations**	

I. POLICY.

A. The Air Support Unit shall follow the Office of the Sheriff's General Policy and Procedures concerning any press release and / or use of social media involving any event wherein the S.T.A.R.R. helicopters were instrumental in the capture of a suspect or the protection of persons or property.

II. GENERAL.

A. MEDIA PRESS RELEASES.

1. Inquiries from news media shall be forwarded to the Unit Commander for evaluation and consideration.

    a. The Unit Commander shall also notify the PIO and Special Operations Division Commander of the inquiry.

2. All requests of video release to the news media shall be reviewed and approved by the Chain of Command.

B. SOCIAL MEDIA.

1. All social media requests shall be forwarded to the Office of the Sheriff's Public Information Officer (PIO).

2. Videos and pictures requested to be used in social media may be sent to the PIO in "raw" form for editing.

3. No videos or pictures shall be used for personal social media use.

C. UNUSUAL INCIDENT REPORTS (UIR'S).

1. UIR's involving the S.T.A.R.R. helicopters will be forwarded to the PIO.

2. The PIO may use the information contained within the UIR's for news or social media releases.

3. The following incidents shall generate a UIR:

    a. Any completed short-haul rescue or victim extraction.

b. Any completed initial fire suppression mission; use of Bambi bucket.

c. All approved mutual aid or outside assist (outside Contra Costa County) requests for S.T.A.R.R. helicopters.

d. Any incident involving a “laser strike” against a S.T.A.R.R. helicopter.

e. Any significant event in which the use of the S.T.A.R.R. helicopters played as significant part in the operation.

4. UIR’s may be prepared by the Unit Commander, Watch Commander, or Unit Supervisor.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 1.7
	RELATED ORDERS: CCCSO 1.06.42	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Ride-Along Program	

I. POLICY.

A. The Air Support Unit shall encourage all sworn members of the Office of the Sheriff to participate in familiarization ride-along flights with the S.T.A.R.R. helicopters to learn about the program and the county.

B. Ride-Along flights by non-sworn members of the Office of the Sheriff, outside agency representatives, or civilians must be referred up the chain of command for approval by the Bureau Assistant Sheriff, Undersheriff, or Sheriff.

II. GENERAL.

A. PROCEDURE.

a. All ride-along requests shall be referred to the Air Support Unit Commander.

b. Upon approval, the Unit Supervisor will schedule the ride-along.

c. The Unit Supervisor shall ensure a Ride-Along waiver (Form PF-52) is completed and forwarded to the Field Operations Bureau – Special Operations Division Administration for processing via the Unit Commander.

d. Any ride-along participant arriving later than 15 minutes after their scheduled ride-along time shall be rescheduled for a later date.

e. All requests for ride-alongs involving VIP's shall be referred to Sheriff's Administration for review and approval.

B. AIR CREW RESPONSIBILTIES.

f. All ride-along participants shall be required to watch the "Safety Briefing" video.

g. Additional safety information shall be provided by the Unit Supervisor or Lead Tactical Flight Officer to include; use of the

issued personal floatation device, communications headsets, helicopter emergencies, etc.

h. All ride-along participants must sign the approved Air Support Unit Ride -Along Form.

i. The Unit Supervisor, Lead Tactical Flight Officer, and/or Pilot will terminate any ride-along flight if the S.T.A.R.R. helicopter is requested to perform a Special Aircraft Operation.

j. Under no circumstances will a ride-along participant be left unattended near or inside the S.T.A.R.R. helicopters, even if the aircraft is powered down.

k. Unless under extreme circumstances (mechanical failure) or if necessary to complete a rescue or fire suppression mission, off-airport landings are not authorized while a ride-along passenger is onboard the S.T.A.R.R. helicopters.

m. Under no circumstances will a ride-along be left unattended during an off-airport landing.

n. Ride-alongs are not to participate in any specialized helicopter training (short-haul, water rescue, etc.) unless specifically scheduled for that purpose. Role players (civilian volunteers and off-duty sworn) used for such training are authorized with prior approval from the Unit Supervisor.

- A complete training plan shall be submitted to the Unit Commander for review and approval prior to any role player allowed to participate in any specialized helicopter training.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 1.8
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Use of Non-Departmental Aircraft	

I. POLICY.

A. Operational necessity occasionally dictates the need to rent or borrow privately-owned aircraft to accomplish the law enforcement mission.

B. Such use will only be permitted if the Office of the Sheriff aircraft are unavailable or incapable of performing a mission.

II. PROCEDURES.

A. UNIT COMMANDER RESPONSIBILITIES.

1. The Unit Commander shall assess the need to use a non-departmental aircraft.

2. The Unit Commander and / or designee shall exhaust all local or regional aviation resources before considering using a non-departmental aircraft. This will include the use of the Office of the Sheriff's Air Squadron (volunteers).

3. The Unit Commander shall forward the request to the Division Commander with his / her recommendation for use of the non-departmental aircraft, to include what expenses, if any, should be reimbursed to the owner of the aircraft. The Division Commander will make the final approval on such requests.

B. PILOTS.

1. The contract pilot shall make the final determination if he / she is qualified, capable, and licensed to fly the non-departmental aircraft.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 2.1
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Maintenance Standards	SUBJECT: Helicopter Maintenance	

I. POLICY.

A. Properly maintained aircraft are essential to safe aviation operations. Compliance with manufacturer's scheduled maintenance checks, airworthiness directives issued by the FAA, pre-flight inspections outlined in the aircraft operating manual and immediate repairs of mechanical problems ensure the availability and safety of the Office of the Sheriff's aircraft.

B. Aircraft maintenance shall be provided by a certified aircraft mechanic who has successfully completed a factory maintenance course provided by the manufacturer of the Office of the Sheriff's aircraft requiring the maintenance.

C. The contracted maintenance provider / facility shall have primary responsibility for ensuring the Office of the Sheriff's aircraft are maintained in accordance with Federal Aviation Administration (FAA) and manufacturer maintenance directives, monitoring the workmanship of the maintenance employees to ensure required standards are met, keeping maintenance records, logs, job tags, and performing other duties related to aircraft and equipment.

D. In accordance with the current maintenance provider contract, the Office of the Sheriff's aircraft are to be maintained in accordance to manufacturer's specifications and FAA Part 91 (non-commercial) and FAA Part 135 (commercial) standards.

E. Office of the Sheriff employees shall not perform actual maintenance of any kind on any Office of the Sheriff aircraft. Furthermore, no equipment or items shall be affixed, attached, or altered onto the aircraft without the approval of the Unit Commander.

II. DEFINITIONS.

A. AIRCRAFT FLIGHT LOG. Flight record book kept in each aircraft.

B. AIRCRAFT MAINTENANCE RECORDS. Maintenance records required to be kept by the FAA for each aircraft.

C. CONTRACT MAINTENANCE PROVIDER. Aircraft repair/maintenance vendor with whom Contra Costa County has a contractual service agreement to provide authorized maintenance work and repairs to the aircraft.

D. PREVENTATIVE MAINTEANNCE. Minor, preservation repairs or service, or the replacement of small standard parts not involving complex assembly of the aircraft or parts.

E. SCHEDULED MAITNEANCE. Periodic maintenance on aircraft at known intervals, per manufacturer's recommendations and specifications.

F. UNSCHEDULED MAINTENANCE. Repairs or service to an aircraft in response to mechanical deficiencies or discrepancies.

III. CONTRACT MAINTENANCE PROVIDERS.

A. The contract maintenance provider shall designate a lead civilian mechanic.

B. All civilian maintenance personnel authorized to perform maintenance on a Office of the Sheriff's aircraft shall:

1. Hold a FAA mechanic certificate with airframe and power plant rating; and,

2. Attend model specific factory field maintenance training.

C. The Unit Commander or designee shall make a physical visit to the contract maintenance provider's facility ahead of a contract renewal with the vendor. The facility should be inspected for cleanliness, hazards, and overall aircraft care satisfaction prior to renewing a contract with the maintenance provider.

D. The contract maintenance provider will be responsible for keeping all logs and journals current on all Office of the Sheriff's aircraft. The logs and journals are to be kept at the Air Support Unit office.

E. A weekly "Time Sheet" shall be generated by the contract maintenance provider or mechanic and forwarded to the Air Support Unit Commander and Supervisor for review.

1. Any reporting discrepancies in the Time Sheets shall be reported immediately to the contracted maintenance provider and/or mechanic. The aircraft shall be placed "out of service" until the discrepancy is clarified, endorsed, and documented in the log book by the mechanic.

IV. GENERAL.

A. MAINTENANCE FACILITIES.

1. Any routine or scheduled maintenance can be done by the contract maintenance provider at the Air Support Unit's hangar.

2. Any major service inspection, overhaul, and major avionics upgrades shall require the aircraft to fly-in or be transported (ferried) to the contracted maintenance provider's facility or other facility of their choice.

B. OPERATIONAL CHECK FLIGHTS.

1. Operational Check Flights or "Check Flights" are required when maintenance procedures or modifications have been made which could affect the flight characteristics of the aircraft.

2. Checks Flights will only be conducted when the aircraft has been returned to service by an authorized maintenance provider or mechanic under FAR 43.7.

3. One Office of the Sheriff contract pilot and one mechanic shall be assigned to perform the Check Flight(s).

4. The pilot and mechanic shall have the final say if an aircraft is to be returned to service. The Unit Supervisor and Unit Commander are to be notified of the aircraft's status.

5. The Unit Supervisor will ensure the maintenance log books and records reflect the maintenance work performed.

V. DISCREPENCY REPORTING SYSTEM.

A. Pilots shall take the following action when mechanical irregularities are discovered during pre-flight and/or flight.

1. For minor problems that do not necessitate aircraft grounding (out of service):

a. Document the problem in the Aircraft Flight Log.

b. If available, notify the mechanic.

c. The incident shall be documented in an Incident Report Form, completed by either the Unit Supervisor or Tactical Flight Officer.

d. The Incident Report Form shall be forwarded to the Unit Commander.

2. For major problems requiring grounding:

a. Document the problem in the Aircraft Flight Log.

b. Notify the Unit Supervisor for instructions.

c. Affix a placard to the primary aircraft controls indicating the aircraft is "out of service".

d. Arrange for security for the aircraft if the aircraft is grounded at a location other than a County facility. Any Office of the Sheriff's aircraft grounded at an off-airport location must have security maintained at all times.

e. The Unit Commander shall be notified as soon as possible.

f. Complete an Incident Report Form and forward a copy to the Unit Commander.

VI. UNIT RESPONSIBILITIES.

A. UNIT COMMANDER.

1. The Unit Commander has overall responsibility for assuring proper maintenance for all Office of the Sheriff aircraft.

2. The Unit Commander shall review the maintenance invoices submitted by the contracted maintenance provider for accuracy. Should discrepancies be found, he/she shall contact the provider for corrections.

3. The Unit Commander shall receive weekly and monthly reports (Time Sheets) compiled by the contracted maintenance provider regarding all maintenance on life-limited components, scheduled and unscheduled maintenance.

B. UNIT SUPERVISOR.

1. The Unit Supervisor shall monitor the quality of work performed by the contracted maintenance provider. If any problems are detected, they will be brought to the attention of the provider for immediate correction.

2. The Unit Supervisor shall ensure accurate aircraft maintenance records and flight officer records required by either the FAA or this manual are maintained.

3. The Unit Supervisor shall receive weekly and monthly reports (Time Sheets) compiled by the contracted maintenance provider regarding all maintenance on life-limited components, scheduled and unscheduled maintenance.

4. The Unit Supervisor will assure that a Check Flight test is made of any aircraft following maintenance that could change the flight characteristics of the aircraft.

5. The Unit Supervisor shall notify the Unit Commander of the results of the Check Flight.

C. PILOT.

1. Conduct a thorough pre-flight inspection of the aircraft in accordance with the aircraft operating manual. The Discrepancy Reporting System shall be followed if problems are noted.

2. The Aircraft Flight Log shall be reviewed prior to flight and the appropriate data entered after each flight.

3. Pilots are not authorized to order work, parts, or other service from the contracted maintenance provider without first obtaining authorization from the Unit Supervisor.

4. The pilot is the final authority on whether to fly an aircraft with a mechanical discrepancy (non-grounding nature) and to determine, in his/her opinion, if the aircraft is not airworthy.

VII. AIRCRAFT CLEANING.

A. All aircraft will be cleaned weekly, both interior and exterior. Waxing will be done on an as-needed basis.

B. The use of aircraft fuel as a solvent or cleaner shall be avoided. Nonflammable, safe solvents should be used.

C. Hazards are present in many forms when cleaning aircraft including: falls, eye and skin injuries from chemicals. Employees shall exercise caution when performing this duty.

D. The pilots and Tactical Flight Officers are responsible for cleaning the aircraft.

E. The Unit Sergeant will inspect all aircraft weekly to ensure cleanliness.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 3.1
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Training	SUBJECT: Training - General	

I. POLICY.

A. The Air Support Unit shall maintain safe policies and procedures in place for continuous safe operations and a high professional level of aviation competency. A primary step to maintaining a safe aviation program is establishing minimum and recurrent standards and training for personnel and mission readiness and response.

II. GENERAL.

A. ANNUAL TRAINING BUDGET.

1. The Unit Commander will meet with the Air Support Unit crew members annually to ascertain training needs for the upcoming fiscal year.
2. The Air Support Unit crew members shall complete two recurrent training courses to be determined by the Unit Supervisor or Unit Commander each calendar year. Training course topics may include, but not limited to: Human Factors, Tactical Flight Operations, Flight Training, Rescues, The annual Airborne Public Safety Association Conference, or other related Pilot refresher courses.
3. The annual flight hours shall include 30 minutes of flight time per shift dedicated to recurrent training.
4. Conferences and training seminars will be approved for air crew members and Pilots based on the relationship to the Air Support Unit's operations, crew scheduling and cost.

III. AIR CREW TRAINING.

A. UNIT MANAGERS.

1. Within one year of appointment, Unit Managers should complete the Unit Managers course offered by the Airborne Law Enforcement Association.

B. TACTICAL FLIGHT OFFICERS.

1. Training objectives will vary, depending on whether the member is new to the Air Support Unit or an existing member. Objectives should challenge the member to increase his or her competency in the knowledge and skills necessary to perform as a member of the Air Support Unit.

2. New Tactical Flight Officers shall complete following initial, recurring, and proficiency training:

   a. The Air Support Unit's Tactical Flight Officer training program.

   b. The Air Support Unit's Short-Haul and Fire Suppression Operations training program.

      - Proficiency with all rescue devices
      - Helicopter rigging with rescue and fire devices

   c. The Airborne Public Safety Association's Basic Tactical Flight Officer Course.

   d. Airborne Thermographer Certification course.

   e. Water Egress training (in-house or by vendor).

   f. 10 hours of Basic Helicopter Pilot training.

   g. Complete Ground School training from lead pilot.

3. Existing members shall receive required recurrent training as identified by the Unit Commander and/or Unit Supervisor.

C. TRAINING RECORDS

1. All training records will be secured and kept at the Air Support Unit Office and readily accessible to the Unit Commander and Special Operations Division Captain.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 3.2
	RELATED ORDERS: Title 14 CFR Part 61 Title 14 CFR Part 61 Section 61.31(k)	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Training	SUBJECT: Pilot - Training, Currency, and Proficiency	

I. POLICY.

A. Training requirements are established by the Federal Aviation Regulation FAR Part 61. This manual does not waive nor make exception to any rules regarding training requirements as specified under FAR Part 61.

B. The required certificates, flying experience, and training of each pilot will be documented and a record of same will be kept in a pilot's training folder secured at the Air Support Unit's office.

II. GENERAL.

A. TRAINING MINIMUMS.

1. Pilots who meet the minimum requirements for hire will be evaluated at the time of hire to determine the need for immediate or recurrent training prior to assignment to the Air Support Unit operations.

2. Pilots conducting Night Vision Goggle (NVG) operations shall obtain training and certification by a FAA approved course.

3. Pilots holding certified flight instructor ratings are authorized the necessary training to maintain that rating.

B. INITIAL, CURRENCY, AND PROFICIENCY TRAINING.

1. Pilots shall successfully complete the following initial, recurrent, and/or proficiency training:

   a. Initial aircraft manufacturer's factory ground and flight school.

   b. Annual "check" rides or refresher course.

   c. Bi-annual recurrence training.

   d. Night Vision Goggles certification.

   e. Emergency procedure training.

   f. Night flight recurrence training.

g. Bi-annual Part 107.

h. Medical.

i. Cal-Fire Carding.

j. “Bambi” bucket recurrence with and without extension.

k. Long-line and Short-haul with 100’ and 150’ line.

l. Water egress.

2. In addition to the above training, all pilots must demonstrate proficiency in the following skills and equipment prior to being authorized to deploy to specific flight missions:

a. Aircraft radio and functionality.

b. Fire suppression water drops.

c. FAA Part 141 long-line skills course.

d. Night Vision Goggles (NVG) flight.

e. Skid deployment.

f. External loads.

- Jettison procedures.

g. Short-haul operations.

- Various rescue device.

  Rigging of the helicopter.

h. Law enforcement missions.

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

i. Formation flights.

j. Off-airport landings (day / night).

k. Water rescue operations.

- Helo-casting.
- Water “picks” and rescues.

- Various rescue devices.

l. Load calculations.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	**AIR SUPPORT**	**NUMBER:** **Section 3.3**
	RELATED ORDERS: 14 CFR Part 133	
ISSUE DATE: 06/01/2017 **REVISION DATE:** **06/01/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Training**	**SUBJECT:** **Short-Haul / Long-Line Operations** **Qualifications and Requirements**	

I. QUALIFATIONS AND REQUIREMENTS.

A. A safe and effective short-haul and aerial fire-fighting program is highly dependent upon precision long-line skills. The S.T.A.R.R. pilot(s) must comply with the following minimum requirements before they are approved to conduct these operations:

1. Must complete a 141-standard precision placement course under the observation of the Unit Commander or PIC; or qualified in accordance with 14 CFR 133 for Class A and B external load operations.
2. Logged 2,000 hours as Pilot-in-Command (PIC) in a rotorcraft type aircraft.
3. Logged 200 hours PIC in a helicopter in the preceding 12 months; 50 hours of vertical reference experience requiring precision placement in the preceding 12 months.
4. Approved for long-line operations.
5. Understand short-haul techniques, short-haul signals and operational concerns.
6. Demonstrate the ability to work with an air rescue crew.
7. Obtain final approval from the Unit Commander.

B. Precision Placement Course.

1. Center Circle.

a. Using a 100-ft. long line with a designated weight at the end of the rope, the pilot must maintain the load within a 10’ circle for 2 out of 3 minutes. The load must not rise higher than 6’ Above Ground Level (AGL). Higher than 6’ stops the test clock and lowering back to 6’ or less resumes the test clock. Touching load to the ground resets the testing clock. Leaving the circle stops the clock, re-entering resumes the clock.

2. Corner Circles.

b. Move load from corner to corner, placing load into circle. The circles are 50’ apart arranged in a square. After lowering the load to the ground, the load must not lean greater than a 45-degree angle. The placement must be held for 5 seconds.

3. Serpentine.

c. Move load through serpentine course at no greater than 6’ AGL. The serpentine course is 50’ long with 4 vertical obstacles 10’ apart (cones, rebar stakes, etc). Reverse and retrace serpentine to exit. The load must be kept within 8’ of serpentine course track.

II. TACTICAL FLIGHT OFFICERS / FLIGHT RESCUE TECHNICIANS.

A. Tactical Flight Officers shall complete the following minimum requirements:

1. Successful completion of the Tactical Flight Officer’s training program.
2. Demonstrate knowledge of the inspection, nomenclature, characteristics (breaking strength), care and maintenance of short-haul and water rescue equipment.
3. Demonstrate the ability to rig the helicopter for short-haul, provide a safety briefing and conduct a safety check of short-haul personnel without procedural errors.
4. Demonstrate knowledge of emergency procedures.
5. Conduct five (5) self-picks (harness only) and five (5) short-haul flights with each rescue / victim extraction equipment without procedural errors.
6. Demonstrate the ability to work with the pilot during short-haul and water rescue missions.
7. Demonstrate knowledge of risk assessment and mission structure.
8. Obtain final approval from Unit Commander.

B. Flight Rescue Technicians shall complete the following minimum requirements:

1. Successful completion of the Flight Rescue Technician training manual and program.
2. Demonstrate knowledge of the inspection, nomenclatures, characteristics (breaking strength), care and maintenance of short-haul and water rescue equipment and rigging.
3. Demonstrate knowledge of short-haul and water rescue procedures.
4. Demonstrate knowledge of emergency procedures.
5. Conduct five (5) self-picks (harness only) and five (5) short-haul flights with each rescue / victim extraction equipment without procedural errors.
6. Demonstrate knowledge of risk assessment and mission structure.

III. PROFIECENCY STANDARDS.

A. SHORT-HAUL AND WATER RESCUE MISSIONS AND EQUIPMENT FAMILIARITY.

1. It will be the responsibility of the Unit Commander or designees to determine, beyond the minimum requirements listed above, the frequency of proficiency short-hauls for all Tactical Flight Officers and Flight Rescue Technicians, including the pilots. An operational short-haul rescue within the proficiency period may count as a proficiency short-haul.

2. Minimum Standards.

	Annual	**Proficiency**
Pilot	Pass the precision placement course. Operational training. Demonstrate the ability to short-haul.	2 short-haul evolutions every 90 days or less.
TFO's	Operational training 1 short-haul evolution with each rescue equipment without procedural error (4 total).	2 short-haul evolutions every 90 days or less.
FRT's	Operational training 1 short-haul evolution with each rescue equipment without procedural error (4 total).	2 short-haul evolutions every 90 days or less.

B. WATER RESCUE OPERATIONS.

1. Minimum Standards.

	Annual	**Proficiency**
Pilot	Pass the precision placement course. Operational training. Demonstrate the ability to short-haul.	2 short-haul evolutions every 6 months or less.
TFO's	Operational training 1 water rescue evolution with each rescue equipment without procedural error.	2 short-haul evolutions every 6 months or less.
FRT's	Operational training 1 water rescue evolution with each rescue equipment without procedural error.	2 short-haul evolutions every 6 months or less.

C. FIRE SUPPRESSION OPERATIONS.

1. The S.T.A.R.R. pilot(s) must complete four live fire water drop exercises without procedural errors before being approved for live fire-fighting operations.

2. The pilot(s) must complete four (4) Bambi Bucket evolutions within a one-year period to remain current. An operational fire suppression (water drop) operation within the proficiency period may count as a proficiency water drop evolution.

3. Minimum Standards.

	Annual	**Proficiency**
Pilot	Pass the precision placement course. Operational training. Demonstrate the ability to conduct an initial strike fire-fighting water drop.	Four Bambi Bucket evolutions within a one-year period.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 4.1
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Safety	SUBJECT: Safety - General	

I. POLICY.

A. It is incumbent upon every member of the Air Support Unit to contribute to the goal of continued safe operations in and/or around the S.T.A.R.R. aircraft. This contribution may come in many forms and includes maintaining an alert, conscientious posture during day-to-day operations. Any safety hazard, whether procedural, operational, or maintenance-related should be identified and notified as soon as possible after, if not before, an incident occurs. Any suggestions in the interest of improving the safety of operations should be made without reservation.

B. If any member observes or has knowledge of an unsafe or dangerous act committed by another member of the Unit, the Unit Supervisor and/or Unit Commander shall be notified immediately so that corrective action may be taken. The incident shall be documented in a Hazards / Incident Report form and forwarded to the Unit Commander via Chain of Command.

II. GENERAL.

A. No person shall operate the Office of the Sheriff's aircraft in a careless or reckless manner likely to endanger life or property.

B. No person will perform the duties of a crew member or ride in the Office of the Sheriff's aircraft if his / her physical or psychological condition might be detrimental to safety.

1. For example:

   a. Motion sickness.

   b. Anxiety.

   c. Various medications with serious side-effects.

C. Smoking is prohibited in, and within 50 feet of, the Office of the Sheriff's aircraft.

III. RESPONSIBILITIES.

A. PILOTS

1. Ensure all safety equipment is installed per the appropriate aircraft operator's manual and any additional Air Support Unit's requirements.
2. Ensure all rotors/props have stopped rotating and are secured before leaving the aircraft unattended.
3. Complete performance planning to ensure adequate power for each flight as needed or required. The same performance planning will suffice for consecutive take-offs and landings where load and/or environmental conditions have not changed significantly.
4. Under no circumstances will any Pilot engage or attempt an aerobatic flight maneuver.
5. The Pilot in Command of an Office of the Sheriff's aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.
6. In an in-flight emergency requiring immediate action, the Pilot in Command may deviate from a section of this policy and FAA Rule Part 91 to the extent required to meet that emergency.

B. TACTICAL FLIGHT OFFICERS AND AIR CREW MEMBERS

1. Conduct a safety briefing to all non-air crew passengers.
2. Demonstrate how to properly wear and deploy all personal safety issued equipment.
3. Ensure every person entering / riding in the aircraft can operate the seat belts, communication equipment, and doors.
4. Ensure every person is in a seat, or is properly secured.
5. Ensure all aft doors to the aircraft are properly closed.
6. Escort all non-air crew passengers in, out, and away from the aircraft.

IV. TACTICAL MISSIONS.

A. ESSENTIAL CREW MEMBERS

1. During tactical missions, rescues, or firefighting missions, no person may be carried on an Air Support Unit aircraft who does not meet one of the following criteria:
    a. Is a required crew member.
    b. Is a flight crew-member trainee.
    c. Performs an essential function in connection with the operation.
    d. Is necessary to accomplish the work activity directly associated with that operation.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 4.2
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Safety	SUBJECT: Unit Safety Officer	

I. POLICY.

A. The Unit Supervisor will act as the Unit Safety Officer.

II. DUTIES

A. UNIT SUPERVISOR.

1. Duties of the Safety Officer include the following:

   a. Take appropriate action once a hazard is identified.

   b. Complete and forward all OHIR's or Aviation Incident Forms to Unit Commander.

   c. Assist the Unit Commander with investigating and resolving OHIR's.

   d. Copy and circulate pertinent safety information.

   e. Prepare documentation (memos and monthly reports) containing all reported safety-related matters with aircraft/facilities/procedures and corrective action taken. If there was an in-flight problem, the proper procedures for resolving that problem will be documented.

   f. Prepare and circulate emergency safety bulletins.

   g. Establish a file containing miscellaneous reading materials, references, and sources related to safe operations and accessible to all Air Support Unit crew members. Materials can come from magazines, FAA publications, etc.

   h. Maintain and update mishap and overdue aircraft response plans and ensuring all Air Support Unit crew members are familiarized with the plan(s).

   i. Coordinate and schedule monthly Unit Safety meetings.

j. Track, post, and advise on aircraft maintenance.

k. Work with the air crew to schedule aircraft maintenance.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 4.3
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Safety	SUBJECT: Medical Factors	

I. POLICY.

A. All Air Support Unit crew members shall report to work rested and mentally prepared for the assignment.

II. GENERAL.

A. PHYSIOLOGICAL AND PSYCHOLOGICAL READINESS

1. Physical illness, exhaustion, emotional problems, etc., can impair judgement, memory, and alertness. The safest rule for all crew members is to remove themselves prior to any flight when suffering from any of the above. Crew members are expected to ground themselves when these problems could reasonably affect their ability to perform flight duties.

   a. A self-assessment of physical condition shall be made by all flight crew members during pre-flight activities.

   b. No Air Support Unit crew member shall participate in any flight operation within 72-hours of donating blood. Loss of red blood cells that carry oxygen to all body organs and the reduction of iron content of the blood will cause the body to be less tolerant to altitude, G-forces, turbulence, shock, and stress. 72-hours allows the body to adjust and replenish lost fluids.

      - The Unit Supervisor shall be notified prior to blood donations in sufficient time to adjust schedules to accommodate the 72-hour grounding period.

B. FATIGUE

1. Crew members should have a minimum of eight (8) consecutive hours of "off duty" whenever possible.

2. Pilot fatigue is cause for grounding during any mission.

3. Anytime a crew member believes his/her performance has been adversely affected by fatigue, he/she shall remove themselves from flight status.

4. The Unit Supervisor shall be notified when a flight is canceled or postponed due to fatigue.

C. MEDICATIONS

1. Performance can be significantly affected by prescription and over-the-counter drugs and medications. The Unit Supervisor shall be advised any time such drugs are being taken by any flight crew member.

   a. The Unit Supervisor will, if necessary, consult with the Employees' Health Service to determine if member should be prohibited from engaging in flight activities while taking medication.

   b. Per FAR 91.17(a)(3), all crew members should be aware of the side effects of all drugs they use with respect to their ability to function normally under all flight conditions. When uncertainty exists, Pilots should consult with an FAA Medical Examiner to determine potential side effects.

   c. Prior to taking a prescription that will be used before or during any flight assignment Pilots should consult with an FAA Medical Examiner to determine potential side effects.

D. ALCOHOL CONSUMPTION

1. No Air Support Unit crew member will participate in any flight operations within eight hours after consumption of any alcohol beverage, while under the influence of alcohol, or while having a .04% or more of weight of alcohol in the blood.

2. Alcoholic beverages shall not be consumed while on duty.

3. Alcoholic beverages shall not be consumed while on reserve status or on "standby".

III. PILOT REQUIREMENTS.

A. MEDCIAL EXAMINATIONS.

1. All pilots shall obtain a Class II medical physical annually administered by an authorized FAA Medical Examiner. Flight physicals are obtained at the Pilot's expense but may be reimbursed through monthly billing.

   a. Pilots who allow their physicals to expire shall be grounded until the physical is renewed. Once the physical is obtained, a copy of the medical certificate shall be submitted to the Unit Supervisor.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 4.4
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Safety	SUBJECT: Operational Hazard and Incident Reports (OHIR)	

I. POLICY.

A. To provide an orderly compilation of information and efficiency of reporting, the Operation Hazard and Incident Report (OHIR), otherwise known as the Aviation Incident Report, shall be used to report any anticipated, current, or observed safety hazard. The hazard may be mechanical or procedural.

II. GENERAL.

A. PROCEDURE.

1. Any air crew member shall immediately report any hazards associated with the Office of the Sheriff's aircraft, either mechanical or procedural.
2. The Unit Supervisor, or in his absence the Lead Tactical Flight Officer, shall investigate the nature of the hazard and complete an Aviation Incident or Hazard Report.
3. Hazards requiring immediate attention shall be brought to the attention of the Unit Commander without delay, verbally or by completing the Aviation Incident Report.
4. The Aviation Incident Report should document in detail the hazard being reported, the cause, and procedures taken to mitigate the hazard when discovered.
    a. If mitigation actions are identified, the Unit Supervisor will ensure these steps are taken and documented on a mitigation supplement to the OHIR.
5. The Aviation Incident Report shall be forwarded to the Unit Commander for review and follow up.
6. The Unit Commander shall notify the Special Operations Division Commander if any aircraft is grounded due to a mechanical hazard.
7. The Unit Commander will investigate any procedural hazards and determine if any corrective actions are needed.

8. All Air Support Unit members are authorized to take action to correct a hazard if, in that member's opinion, delay will result in accident or injury. The Unit Commander will be notified immediately in such situations.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.1
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Requests for Air Support	

I. POLICY.

A. The helicopters shall be operated only by a County contracted licensed pilot during general operations. The pilot shall exercise the final authority to commence a flight mission or request based on all factors which could affect the safe outcome of the flight.

II. REQUESTS FOR AIR SUPPORT.

A. DURING DUTY HOURS.

1. Requests for air support assistance will be handled by the crew on duty.

   a. Requests can be made in the following manner:

   - Via Sheriff's Office Dispatch.
   - Direct telephone call to the Air Support Unit's office or Tactical Flight Officer on duty.
   - Via radio transmission; the Air Support Unit monitors multiple law enforcement and fire frequencies.

2. Depending on the incident, the Air Support Unit may begin a law enforcement or search and rescue related response, prior to being dispatched, should the incident warrant such action.

3. Air Support Unit requests are often made directly through the Tactical Flight Officer and/or the air flight crew will self-initiate a response. In either case, the flight crew will notify Dispatch of the nature and the location of the mission as soon as practical or upon take-off.

4. If the Air Support Unit is not available and immediate assistance is needed or if the request exceeds the capabilities of the Contra Costa Sheriff's Office aircraft, the request shall be referred to the California Highway Patrol or East Bay Regional Parks.

5. The on-duty Tactical Flight Officer shall call Sheriff's Office Dispatch and tell them what aircraft is available (call-sign) and when the tour of duty ends.

B. DURING NON-DUTY HOURS.

1. Requests for immediate assistance will be referred to the Watch Commander.

   a. The Watch Commander will refer all non-duty hour requests for air support to the California Highway Patrol or East Bay Regional Parks.

2. All other requests will be referred to the Unit Commander for scheduling.

3. To facilitate a quick response by Communications personnel, a copy of the Air Support Unit's schedule will be forwarded monthly to the Sheriff's Office Dispatch Center.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.2
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Flights Leaving Contra Costa County	

I. POLICY.

A. Flights leaving the jurisdictional boundaries of Contra Costa County (out of county requests) require the specific approval of the Unit Commander or in his / her absence, the Watch Commander, prior to the flight. Approved out of county flights will adhere to this policy.

II. GENERAL.

A. It may periodically become necessary to conduct flights outside Contra Costa County. Out of county flights can be conducted for reasons such as, but not limited to:

1. Missions approved by the Unit Commander
2. Maintenance Flights
3. Honor guard, dignitary, and/or formation flights
4. Training evolutions and interagency coordination

B. PROCEDURES.

1. The Unit Commander or Watch Commander will review the nature of the out of county request and confirm with Sheriff's Office Dispatch there are no Sheriff's Office "priority calls" pending.
2. The following information must be obtained by the Unit Commander or Watch Commander prior to approving an out of county request:
   a. Name of agency requesting support.
   b. Name of person making the request and phone number.
   c. Details of incident requiring air support.
   d. Verbal certification from the requesting agency that the flight is necessary due to imminent threat to life and property.

3. The Unit Commander or Watch Commander will verbally advise dispatch the approval of the out of county flight.

4. Upon approval to fly out of the county, the Tactical Flight Officer will advise Sheriff's Office dispatch their flight destination and the name of the agency dispatch the air crew will be communicating with.

5. Upon return into Contra Costa County, the Tactical Flight Officer will re-establish contact with Sheriff's Office Dispatch via radio.

6. All authorized out of county requests, in which the flight actually crossed jurisdictional boundaries, shall be documented in a Sheriff's Office report (Outside Assist).

B. EXCEPTIONS.

1. If flight is incidental to an ongoing Contra Costa County operation (for example, a search or pursuit begun in Contra Costa County and expanded into a neighboring county).

2. Surveillance operations frequently cover many jurisdictions. In these cases, the Unit Commander or Watch Commander will be advised of the general location prior to the flight.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.3
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Mission Priorities	

I. POLICY.

A. Simultaneous requests for air support shall be prioritized for service. The following priorities shall be applied in resolving response conflicts:

1. Protection and / or saving of human life
2. Protection of property, valuable resources, and critical infrastructure
3. Other missions

B. Office of the Sheriff aircraft are not to be used to conduct personal business or for personal use.

II. GENERAL.

A. PRIORITIZATION.

1. Calls for air support assistance shall be prioritized as follows (listed in order of importance):
   a. Search and rescue of innocent victims.
      - Juveniles
      - Elderly
      - Life threatening medical emergencies
      - Life threatening rescue missions
2. In progress calls involving a threat to the safety of any person
3. Searches for fleeing criminal suspects
4. Crime in progress calls
5. Initial fire suppression missions
6. Surveillance of criminal suspects
7. Traffic control operations

8. Photo or evidence documentation flights
9. Other non-emergency requests to support other government agencies
10. If time and circumstances permit, the Air Support Unit Supervisor will resolve prioritization conflicts.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.4
	RELATED ORDERS: FAA Regulation 91.103	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Pre-Flight Responsibilities	

I. POLICY.

A. Thorough pre-flight planning and inspections are critical to safe flight operations and response to missions. Scheduled air crew members shall conduct flight preparations so the aircraft is ready for departure within thirty (30) minutes from the start of the shift.

B. The flight crew will consider all operational safety factors at the beginning of each shift and complete a Flight Risk Assessment Tool (FRAT) form, which will be filed with the daily activity log and submitted to the Unit Supervisor.

II. PROCEDURES.

A. AIR CREW RESPONSIBILITIES.

1. Pilot.

a. Prior to all flights, the pilot is responsible for ensuring the following tasks are completed.

- The aircraft is in airworthy condition.
- A pre-flight inspection in accordance with manufacturer's operations manuals has been conducted and each crew member visually checks the aircraft prior to flight.
- The aircraft status board, appropriate log books, and discrepancies have been reviewed.
- Complete a Flight Risk Short Form, ensuring conditions from the daily FRAT have not changed.

2. Tactical Flight Officer.

a. The T.F.O. shall conduct a final walk-around inspection of the aircraft before each flight, immediately prior to take-off.

b. The T.F.O. shall walk completely around the aircraft to ensure that all tie-downs are removed, all cowlings, panels and baggage doors are closed and latched, the fuel cap is installed and no obvious problems exist.

c. T.F.O.'s shall be responsible for ensuring the inspection of all rescue and firefighting equipment is completed.

3. Flight Rescue Technicians

a. FRT's shall be responsible for inspecting all rescue and firefighting equipment.

B. PHYSICAL (SELF) ASSESSMENT.

1. Pre-flight begins with the air crew making a self-assessment of their physical condition (refer to Safety – Medical Factors section).

2. If unable to perform flight duties, the Unit Supervisor will be notified.

C. AIRCRAFT / EQUIPMENT INSPECTION

1. The pilot and T.F.O. shall conduct a visual and physical inspection of the aircraft, as noted above.

2. All special equipment, excluding the Nightsun, will be tested prior to flight.

3. The Air Support Unit should utilize the use of a pre-flight and equipment checklist.

4. If, in the course of the pre-flight inspection, any mechanical discrepancy is found, the discrepancy shall be evaluated and addressed immediately.

5. All flight crew members shall conduct a visual and physical inspection of their flight vests, harnesses, and other worn equipment.

D. PRE-FLGIHT PLANNING.

1. The pilot(s) shall familiarize themselves with all available information concerning the flight.

a. Charts.

- Proper and up-to-date charts will be maintained and reviewed by the Pilots.
- For flights outside of Contra Costa County, the Pilot shall have the proper chart in the aircraft.

b. Any Temporary Flight Restrictions (T.F.R.'s).

E. WEATHER

1. At the beginning of each tour of duty, the pilot shall obtain a full weather briefing from a trusted and reliable source or application. The pilot will ensure that he or she gathers enough information to become familiar with the weather situation existing throughout the area of operation or flight plan.

2. Subsequent to the original weather briefing, the pilot will obtain, if necessary, sufficient weather information to ensure that the original briefing stays valid or current. The frequency of these additional weather checks will be determined by the severity of existing or forecasted weather.

3. Weather minimums for helicopters and fixed-wing aircraft are contained in the listed sections of this manual.

F. PASSENGER BRIEFING.

1. All passengers and temporary air crew will be properly briefed prior to approaching the aircraft.

2. The briefing will be conducted by a Tactical Flight Officer or Unit Supervisor. The briefing will cover the following:

   a. Approaching and departing the aircraft (hazards of tail and main rotor blades).

   b. Proper door opening, closing, and locking procedures.

   c. Procedures for proper egress / ingress of the cockpit.

   e. Use of seat belts.

   f. Use of headsets.

   g. Emergency exit procedures.

   h. Over water procedures, (if applicable: donning / doffing and inflating life jackets, aircraft ditching procedures, use of portable breathing apparatus).

   i. Estimated length of flight.

   j. Location of the fire extinguisher inside the aircraft.

   l. No smoking in or near the aircraft.

3. The briefing will be conducted using the passenger ride-along form and video.

4. The passenger and crew member conducting the briefing will sign the form.

5. The form will not be carried in the aircraft, unless the passenger is picked up somewhere other than the Air Support Unit's office. In these cases, the briefing must still take place and the form returned to the office, when practical.

6. Completed forms will be kept on file (hard copy or electronic) for a period of three years.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.5
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Post-Flight Responsibilities	

I. POLICY.

A. Thorough post-flight procedures and inspections are critical to safe flight operations and mission readiness. The Office of the Sheriff's aircraft shall always be ready for immediate launch.

II. PROCEDURES.

A. AIR CREW RESPONSIBILITIES.

1. Pilot.

   a. Will ensure the aircraft is re-fueled or has enough fuel for the following launch.

   b. All fluid level gauges will be checked.

   c. Overall inspection for damage, defects, or oil leaks.

   d. Any flight restricting condition to the aircraft shall be reported to the Unit Supervisor and the contract maintenance provider as soon as possible. The pilot is responsible to ensure all discrepancies of the appropriate aircraft's maintenance discrepancy log are recorded accurately.

   e. Necessary entries will be made into the aircraft flight log.

2. Tactical Flight Officer.

   a. The T.F.O. will conduct a walk around inspection of the aircraft immediately after shut-down to ascertain if any damage occurred during the flight.

   b. Appropriate flight report will be completed after each flight.

   c. Flight vests and helmets are to be removed from the aircraft after each flight.

   d. All rescue and firefighting equipment shall be made ready for the following flight.

B. FLIGHT ACTIVITY REPORTING.

1. All flight activities will be documented on a Daily Activity Report.

2. Individual activities will be documented on the appropriate form and e-mailed to the Unit Sergeant, Unit Commander, Division Commander, and Assistant Sheriff at the end of each tour of duty.

3. Electronic copies of the above are to be stored at the Air Support Unit Office and / or with the Unit Commander.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.6
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Helicopter Refueling	

I. REFUELING PROCEDURES.

A. The pilot is responsible for having the proper type and amount of fuel on board the aircraft at all times. The pilot is also responsible for refueling operations.

B. Prior to refueling, aircraft engines will be shut down, as will all electrical equipment in the aircraft.

1. EXCEPTION. During lifesaving requests or operations critical time may be saved by refueling the aircraft while it is running, also known as "hot fueling."

C. No maintenance work will be performed during refueling.

D. No smoking is permitted within 50 feet of the aircraft.

E. The pilot will assure the proper grade of fuel and lubricants are put into the aircraft.

F. If possible, the pilot should personally observe refueling operations.

G. A small amount of fuel will be drained from all sumps after refueling to ensure the proper fuel was pumped into the aircraft and to check for contamination. Fuel filler caps will be checked to make sure they are secure once per shift at pre-flight.

H. Only those Tactical Flight Officers who have been trained to re-fuel the aircraft at the airport Operations Base (Concord Jet) are authorized to refuel at this location only.

I. The Tactical Flight Officer is responsible for driving the fuel tender truck, if necessary.

II. HOT-FUELING PROCEDURES.

A. Refueling an aircraft is inherently dangerous for all involved in this procedure. Unless a clearly, articulated emergency exists, aircraft shall not be refueled with the engine running, rotors under power, or with electrical switches on, commonly referred to as "hot fueling." If an Office of the Sheriff aircraft must be "hot fueled," the following procedures shall be strictly adhered to:

1. The aircraft pilot shall remain at the flight controls at all times during the refueling operation.
2. The aircraft shall be reduced to flight idle.
3. Only trained Tactical Flight Officers shall conduct the actual refueling and bonding/grounding of the helicopter. The TFO shall wear appropriate safety equipment, which shall consist at a minimum of gloves and protective clothing (Nomex flight suit).
4. If available, a second flight crew member shall be equipped with a fire extinguisher and shall monitor the refueling operations.
5. All persons not directly involved with the refueling operations, including any passengers, shall be kept clear of the area.

B. In the event of a fire or other emergency during hot fueling, the pilot shall perform an emergency shutdown of the aircraft and immediately disembark. Refueling shall be immediately halted.

III. PAYMENT PROCEDURES.

A. Refueling will normally take place at [redacted]
The Unit Commander is responsible for checking the accuracy of fuel invoices and payments.

B. Commercial credit cards have been issued to the Air Support Unit to pay for fuel and oil. Each Office of the Sheriff aircraft has been issued its own fuel card and are to be kept in the aircraft.

C. If planned operations or flights necessitate refueling at another airport, the pilot shall be given the commercial credit card by the Tactical Flight Officer. The card and any receipts will be submitted to the Unit Supervisor and forwarded to the Unit Commander immediately upon return.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	**AIR SUPPORT**	**NUMBER:** **Section 5.7**
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 **REVISION DATE:** **06/01/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Operational Procedures**	**SUBJECT:** **Minimum Crew Requirements**	

I. POLICY.

A. During normal flight operations, the minimum crew for the Air Support Unit's S.T.A.R.R. helicopters shall be [redacted]

II. GENERAL.

A. [redacted]

1. [redacted]

a. [redacted]

- [redacted].
- [redacted]
- [redacted].
- [redacted]
- [redacted]
- [redacted]
- [redacted]

2. [redacted]

B. [redacted].

1. [redacted]

a. [redacted]

C. [redacted]

1. [redacted]

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.8
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Emergency or Precautionary Landings	

I. POLICY.

A. The primary concern of any in-flight emergency incident or precautionary landing is survival of the air crew and preventing injury to persons on the ground.

B. Subsequent to an Air Support Unit aircraft involved accident / mishap / incident, Air Support Unit personnel must accomplish the following as expeditiously as possible:

1. Rescue and care of the air crew and other involved persons.
2. Protection of the scene and department equipment.
3. Acquisition and preservation of evidence needed for a thorough investigation.
4. Immediate notification to the chain of command and assigned investigative personnel.

II. DEFINITIONS.

A. AIRCRAFT ACCIDENT. An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any persons suffers death or serious injury, or in which the aircraft receives substantial damage.

B. AIRCRAFT INCIDENT. An occurrence other than an accident associated with the operation of an aircraft, which affects or could affect the safety of operations.

C. FATAL INJURY. An injury which results in death within 30 days of the accident.

D. SERIOUS INJURY. Any injury which:

1. Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received.

2. Results in a fracture of any bone except simple fractures of fingers, toes, or nose.

3. Causes severe hemorrhages, nerve, muscle or tendon damage.

4. Involves any internal organ.

5. Involves second or third degree burns or any burns affecting more than five percent of the body surface.

E. MINOR INJURY. Any injury not classified as fatal or serious.

F. SUBSTANTIAL DAMAGE. Damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component.

III. PROCEDURES.

A. PRECAUTIONARY LANDINGS WITH NO INJURY AND / OR MAJOR PROPERTY DAMAGE.

1. Immediately notify Dispatch and give the location of the landing.

2. Request sufficient police personnel to maintain security in the landing area.

3. Request notification of the Unit Commander and / or Watch Commander.

4. If the landing is a result of mechanical problems, survey the extent of the problem and advise Dispatch as soon as practical, indicating if additional notification or assistance is needed.

5. If the problem can be corrected at the landing site, those personnel assigned to the aircraft at the time of the landing shall remain with the aircraft until the necessary repairs are made.

6. If the problem is of a nature necessitating the removal of the aircraft by another vehicle, assigned personnel shall remain with the aircraft to provide assistance in the loading of the aircraft onto the vehicle provided.

7. The Unit Commander and Unit Supervisor shall coordinate repair / removal with the crew and /or the contract maintenance provider.

8. As soon as practical after the landing, the pilot and onboard air crew shall submit a detailed memo to the Unit Commander. The report shall contain:

a. The reason for the landing.

b. The name of the owner or agents of the property on which the landing was conducted.

c. The extent of damage sustained to any property, shrubbery, etc.

d. The names and addresses of any witnesses to the landing, including any statements taken.

B. EMERGENCY / PRECAUTIONARY LANDINGS WITH PERSONAL INJURY AND / OR MAJOR PROPERTY DAMAGE.

1. Air crew responsibilities.

a. Immediately notify Dispatch and request assistance / medical.

b. Render first aid to injured persons.

c. Request notification of the Unit Commander, Watch Commander, Area Commander, and / or jurisdictional law enforcement agency.

d. Survey the damage to the aircraft and / or any other property.

e. Notify Dispatch as soon as practical indicating the extent of injury or damage.

f. Request the Federal Aviation Administration (FAA) and National Transportation Safety Board (NTSB) be notified of the incident.

g. If possible, the air crew shall preserve and secure the aircraft wreckage.

h. Prior to the arrival of the FAA and NTSB, personnel shall ensure the aircraft and its contents are moved or disturbed only to the extent necessary to:

- Remove persons injured or trapped.
- Protect the public from injury.
- Protect the wreckage from further damage.

i. Provide any additional assistance or information requested by the FAA and NTSB personnel on the scene.

j. The pilot and air crew shall submit a detailed memo to the Unit Commander.

2. The Unit Commander will respond to the scene and coordinate accident investigation efforts.

III. NOTIFICATIONS.

A. MANDATORY NOTIFICATIONS

1. The following circumstances require immediate notification to the FAA, per Federal Aviation Regulations 830.5.

a. Flight control system malfunction or failure.

b. Inability of any required flight air crew member to perform normal flight duties as a result of injury or illness sustained during course of employment as a crew member.

c. Failure of structural components of a turbine engine excluding compressor and turbine blades and vanes.

d. In-flight fire.

e. Aircraft collision in flight.

f. Damage to property, other than the aircraft, estimated to exceed $25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less.

g. Release of all or a portion of a propeller blade from an aircraft, excluding release caused solely by ground contact.

h. A complete loss of information, excluding flickering, from more than 50 percent of an aircraft's cockpit displays known as:

- Electronic Flight Instrument System (EFIS) displays.
- Engine Indication and Crew Alerting System (EICAS) displays.
- Electronic Centralized Aircraft Monitor (ECAM) displays.
- Other displays of this type, which generally include primary flight displays (PFD), primary navigation display (PND), and other integrated displays.

i. Airborne Collision and Avoidance Systems (ACAS) resolution advisories issued when an aircraft is being operated on an instrument flight rules flight plan and compliance with the advisory is necessary to avert substantial risk of collision between two or more aircraft.

j. Damage to helicopter tail or main rotor blades, including ground damage, that requires major repair or replacement of the blade(s).

2. The following information is to be given during FAA notification, per Federal Aviation Regulations 830.6:

a. Type, nationality, and registration marks of the aircraft.

b. Name of owner, and operator of the aircraft.

c. Name of the Pilot in Command.

d. Date and time of the accident.

e. Last point of departure and point of intended landing of the aircraft.

f. Position of the aircraft with reference to some easily defined geographical point.

h. Number of persons aboard, number killed, and number of seriously injured.

i. Nature of the accident, the weather and the extent of damage to the aircraft, if known.

j. A description of any explosives, radioactive materials, or other dangerous articles carried.

III. POST INCIDENT / ACCIDENT PROCEDURES.

A. FLIGHT STATUS OF PILOT AND AIR CREW MEMBERS.

1. After an accident or incident, the pilot and / or air crew members may be temporarily removed from flight duty by the Unit Commander, Division Captain, Assistant Sheriff, Undersheriff, or Sheriff.

2. Such removal will not affect pay status.

3. A post-accident / incident flight evaluation and physical may be required prior to reinstatement to flight duty.

4. Critical incident stress management support shall be made available to all affected by the accident / incident.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.9
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Crew Resource Management and Flight Crew Responsibilities	

I. POLICY.

A. Standard aviation procedures and guidelines will be used by flight crew members during flight to enhance safety and operations while performing assigned duties in the aircraft.

II. FLIGHT CREW RESPONSIBILITIES DURING FLIGHT.

A. PILOT.

1. The pilot is directly responsible for and is the final authority over the operation of the aircraft.
2. Pilots have absolute authority to reject a flight or mission based on weather, aircraft limitation, physical condition, etc. No member of the Office of the Sheriff, regardless of rank, can order a pilot to make or complete a flight when, in the opinion of the pilot, it cannot be done safely.
3. Pilots are responsible for compliance with unit standard operating procedures, FAA regulations, and the aircraft operating manual.
4. Pilots shall handle radio communications with air traffic control, other aircraft, and ground law enforcement / fire personnel during rescues and firefighting missions.
5. Pilots shall be responsive to the requests of the Tactical Flight Officer in order to accomplish the law enforcement and rescue missions.

B. TACTICAL FLIGHT OFFICER (T.F.O.).

1. T.F.O.'s are responsible for the law enforcement operational aspects of the flight.
2. [redacted]

3. The T.F.O. shall remain alert for suspicious persons or activities on the ground and coordinate an appropriate response by ground units or make notification to dispatch.

4. The T.F.O. shall monitor law enforcement radio groups for calls where air support would be beneficial.

II. CREW RESOURCE MANAGEMENT (C.R.M.).

A. C.R.M. CONCEPT.

1. The Crew Resource Management concept and communication will assist in achieving and maintaining safe flight operations and unit culture.

2. The pilot, T.F.O. and F.R.T.'s will work together to form the aircrew which will ultimately accomplish mission objectives.

3. In the interest of safety, the pilot, T.F.O. and F.R.T.'s must be comfortable with any decision made while working as a crew. This begins when deciding whether to accept a mission and continues throughout the mission. If there is a serious concern on the part of either the pilot, T.F.O. and / or F.R.T., the mission shall not be flown.

4. Concerns on the part of either crew member should be immediately expressed to the other members. Communication is key. Concerns about a mission can sometimes be put to rest with a simple explanation.

5. All crew members have the right and the responsibility to question the pilot whenever they do not understand something or are uncomfortable with certain procedures, weather, flight pattern, etc. The pilot shall honestly answer any questions posed to him / her and not feel as though he is being challenged or doubted. In the event that explanations are refused, not completely understood, or concerns not addressed, then it is incumbent on the flight crew member(s) to contact the Unit Supervisor and / or the Unit Commander for a satisfactory explanation.

6. All crew members have a "go" or "no go" voice prior and /or during each flight or operation.

B. COMPONENTS OF C.R.M.

1. Each of the following is a component part of C.R.M.

a. Good judgement.

b. Good decision-making.

c. Good and positive communication and interpersonal relationships.

- Direct assistance.
- Announce actions.
- Offer assistance.
- Make acknowledgements.
- Be explicit to avoid confusion.

d. Common sense.

C. ROLE OF UNIT'S SAFETY OFFICER (UNIT SUPERVISOR).

1. Periodically monitor the Air Support Unit's C.R.M. training to ensure compatibility with current aviation standards, procedures, and technologies.

2. Periodically monitoring the Air Support Unit's C.R.M. practices to verify conformity with Unit policy.

3. Maintaining and distributing current information related to C.R.M.

4. As requested and needed, provide C.R.M. training.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 5.10
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operational Procedures	SUBJECT: Constitutional Aspects of Aerial Searches	

I. POLICY.

A. Aerial searches, to include FLIR searches for various suspected criminal activities (i.e. marijuana grow houses), are considered a "search" and therefore come under the protection of the Fourth Amendment to the U.S. Constitution. Requests for such searches should be assessed independently of each other and all members of the Air Support Unit are responsible for being familiar to existing case laws and exercising best judgement to ensure there are no search and seizure violations while carrying out an Office of the Sheriff air support mission.

II. GENERAL.

A. Aerial searches to inspect activity on the ground may, under some circumstances, intrude into a person's reasonable expectation of privacy, and therefore, come under the protection of the Fourth Amendment to the U.S. Constitution.

B. The Supreme Court has cautioned against assuming that compliance with FAA regulations will automatically satisfy Fourth Amendment requirements. Instead, the courts will determine whether the police aircraft is in the public airways at an altitude at which member of the public regularly travel. Other considerations include:

1. Type of property; open field versus curtilage.
2. Frequency of other aircraft flights; whether or not routine flights are conducted over the area.
3. Steps taken to conceal property and activity from aerial observation; actions taken by property owner to ensure privacy.
4. Location of observer (lawful altitude); the Supreme Court has held that 400 feet AGL is acceptable.

C. As a result of the case law, aerial searches will be conducted at an altitude of at least 400 feet AGL. The altitude of the aircraft may be lower, depending on the needs of the mission and the scope of the search.

III. PROCEDURES.

A UNIT SUPERVISOR RESPONSIBILITIES.

1. Requests for surveillance and / or aerial searches pursuant to a search warrant, shall be forwarded to the Unit Supervisor for review and approval. In the absence of the Unit Supervisors, the Unit Commander can review and approve such requests.

2. A copy of the search warrant shall be obtained and review by the Unit Supervisor or Unit Commander for accuracy and validity.

3. Out of county aerial searches, pursuant to a search warrant, must be approved by the Division Commander.

B. FLIGHT CREW RESPONSIBILITIES.

1. Surveillance and / or searches pursuant to a search warrant will normally be scheduled with much advance notice as possible to allow the Air Support Unit to make appropriate arrangements for extended fuel, fresh flight crews, appropriate aeronautical charts, etc.

2. If applicable, all flight crew members involved in the aerial search must review and acknowledge the validity of the search warrant.

3. All aerial searches pursuant to a search warrant shall be documented in an Office of the Sheriff's report.

4. Flight crew members must make all reasonable efforts not to "warm up" the FLIR camera over property or areas suspected of criminal activity.

5. Any deliberate acts to obtain probable cause using the FLIR equipment in violation of the Fourth Amendment shall be addressed using the corrective counseling system or discipline.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.1
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Radio Call Signs	

I. POLICY.

A. Pursuant to a letter of agreement between the Office of the Sheriff, the Federal Aviation Administration, and the local airports, the helicopter call signs are "S.T.A.R.R. ONE" and "S.T.A.R.R. THREE".

B. The aircraft will communicate with police and / or fire dispatch using the appropriate call sign.

C. The aircraft may be assigned a different call sign during formation flights or fly-overs.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.2
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Flight Limitations	

I. POLICY.

A. All helicopter operations will be conducted in accordance with the Air Support Unit's standard operating and procedures, FAA regulations, and aircraft operating manual guidelines.

II. DEFINITIONS.

A. Instrument Meteorological Conditions (IMC). An aviation flight category that describes weather conditions that require a pilot to fly primarily by reference to instruments, and therefore under instrument flight rules (IFR), rather than by outside visual references under visual flight rules (VFR).

B. Above Ground Level (AGL). Height measured with respect to the underlying ground surface. This is as opposed to altitude / elevation above mean sea level (AMSL).

C. FAR 91-119A. Pilots must operate at an altitude that permits an emergency landing in the event of power unit failure without undue hazard to persons or property on the surface. There are no published minimums.

D. FAR 91-119D. Helicopters may be operated at less than the minimums prescribed for fixed wing aircraft if the operation is conducted without hazard to persons or property on the surface.

III. GENERAL.

A. WEATHER.

1. [redacted]

2. [redacted]

3. [redacted]

[redacted]

4. [redacted]

5. [redacted]

6. [redacted]

7. [redacted]

B. [redacted].

1. [redacted]

2. [redacted]

3. [redacted]

   a. [redacted]

   b. [redacted]

4. [redacted]

5. [redacted]

6. [redacted]

7. [redacted]

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.3
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Landing and Ground Safety	

I. POLICY.

A. The landing of the S.T.A.R.R. helicopters requires the undivided attention of the Pilot and the assistance from the air crew members. While there are no specific procedures that will cover all landings, these general guidelines shall be used to minimize potential risks of significant injuries, or deaths, and damage to the aircraft.

B. The pilot is responsible for operation of the aircraft on the ground and in the air.

II. GENERAL.

A. AIRCRAFT TOWING / GROUND HANDLING.

1. A minimum of two people will be used for all towing operations into and out of the operations base hangar or authorized landing zones.

2. Only authorized Air Support Unit personnel trained in towing the helicopter shall tow the aircraft.

3. Only authorized Air Support Unit personnel trained in use of the all-terrain vehicle (ATV) may use the vehicle to tow the helicopters.

2. The pilot or Tactical Flight Officer will ensure that no items are attached to the aircraft prior to movement.

3. The pilot or Tactical Flight Officer will ensure that adequate clearance exists between hangar doors and the aircraft

3. The aircraft will be “tailed-in” into the hangar facility and “nosed-out” due to the rotor design.

B. GROUND SAFETY.

1. The pilot and flight officer must be constantly aware of dangers to ground personnel from spinning main and tail rotors.

2. The pilot should, when possible, plan to position the helicopter in a manner that isolates the tail rotor and shall clear the tail rotor prior to turning the aircraft.

3. During ground operations when the helicopter is running and the blades are turning, the Tactical Flight Officer or Flight Rescue Technicians may exit the helicopter to ensure the aircraft is guarded.

4. The pilot will not depart the helicopter while the main rotor is turning, unless the pilot elects to stand outside the aircraft and warn people to stay away until the rotors stop.

5. The pilot will not leave any unauthorized persons in charge of the helicopter controls while the engine is running. If it is necessary for the Pilot to leave the aircraft, the engine will be shut down and control frictions set.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.4
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Off-Airport Landings	

I. POLICY.

A. Landing a helicopter anywhere other than an airport or heliport presents unique challenges to the pilot. Not only is there the possibility of rotor blades striking an unseen object close to the ground, but the crew has no control over people who may feel compelled to approach the aircraft. There are also concerns and fears from the public and others who object to aircraft noise. Therefore, off-airport landings will be conducted only when operationally necessary. The decision to land rests with the pilot. If called to account for the decision, the pilot must be able to clearly articulate the operational necessity of the off-airport landing.

II. PROCEDURE.

A. PLANNED OPERATIONS.

1. Secure permission from Unit Supervisor, Unit Commander or Watch Commander.
2. If possible, a marked police car will be requested to secure the landing zone.
3. A high reconnaissance will be required prior to landing to determine suitability of the proposed landing area.
   a. The high reconnaissance determines the location of potential hazards, such as:
      - Wires
      - Towers
      - Power lines
      - Telephone / electric poles
      - Other ground hazards (surface, size, slope, etc.)
   b. The high reconnaissance is utilized to:

- Determine wind direction
- Determine type of approach necessary (normal / steep)
- Locate approach / departure paths

c. The high reconnaissance should always be conducted at an altitude high enough to allow for successful forced landing, should an emergency occur.

4. A low reconnaissance will be performed while the aircraft is on final approach to the landing site.

   a. The low reconnaissance is utilized to confirm information gained during the high reconnaissance and continued to landing.

   b. If, during the low reconnaissance, a successful landing appears questionable, perform a "go-around" prior to loss of translational lift.

5. Never land in an area from which a take-off cannot be performed.

   a. Ground reconnaissance is performed prior to landing. It is utilized to determine the suitability of the ground area for ground operations.

   b. The ground reconnaissance supplements information gained by both the high and low reconnaissance and helps decide the best course of action to take in executing the take-off and departure.

6. Landing zone considerations:

   a. Size

   b. Obstructions

   c. Surface or terrain

   d. Location

   e. Crowd control

B. EXCEPTIONS.

1. The following are authorized landing sites:

   a. Any airport.

   b. Remote locations when an investigation or a mission requires a landing such as:

      - Short-haul
      - Firefighting
      - Water rescue operations
      - Skid riding insertions / deployments
      - Tactical team operations

   c. Private or public property for static display. Prior permission and authorization to land must be obtained from property owner and the Unit Supervisor, to include Cal-Trans (if applicable).

d. Any location when providing emergency services where the site is free of obstructions and precautions have been taken to prevent personal injury or property damage.

e. Any location when conducting training with a Tactical Flight Officer. The air crew shall ensure the site is free of obstructions, and that precautions have been taken to prevent personal injury or property damage.

2. The flight crew shall exercise sound judgment and follow procedures outlined in this manual during such operations.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.5
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Over Water Operations	

I. POLICY.

A. Except for actual water rescue missions or low altitude search and rescue missions, all over-water operations are to be conducted so that the aircraft can fly at an altitude and speed that will allow for autorotation to a suitable landing area in the event of a mechanical failure.

II. GENERAL.

A. AIR CREW AND PASSENGERS EQUIPMENT

1. During over-water operations, all personnel onboard an Office of the Sheriff's helicopter must wear the following equipment:

   a. An approved personal floatation device.

   b. A "spare air" or HEED breathing device.

   c. An Emergency Position Indicator Radio Beacon (EPIRB).

B. FLIGHTS.

1. If an aircrew must transit a large waterway (SF Bay, etc.) the crew should consider higher altitudes or deviation from a direct route across the bay and cross at or near a bridge.

2. While conducting over-water operations the pilot will have his radio frequency on the nearest open airport control tower. The Tactical Flight Officer will have his radio channel on the nearest Sheriff's Office channel.

3. For over-water operations that exceed (10) ten minutes, the TFO will advise dispatch of their status.

4. A pilot may deviate from the above when operational necessity dictates. The aircraft must return to minimum altitudes as soon as practical. Further, the pilot must be able to articulate the operational necessity if called upon to do so.

C. TRAINING.

1. Annual water egress / survival training shall be conducted and all crew members will be evaluated by the Unit Commander or Unit Supervisor. Included in the training shall be a water dunker course.

2. The training will be documented in the Unit Training Log and kept at the Air Support Unit's office.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.6
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Pursuit Flights	

I. POLICY.

A. The S.T.A.R.R. helicopter's involvement in vehicle and foot pursuits shall be in accordance with existing CCCSO pursuit policy and procedures.

B. The S.T.A.R.R. helicopters will respond to vehicle pursuits on a priority basis.

II. PROCEDURES.

A. AIR CREW RESPONSIBILITIES.

1. The role of the air crew during a vehicle or foot pursuit is to assist and coordinate field unit activities and response.

2. The air crew is responsible for monitoring and broadcasting pursuit information, unless the field supervisor requests ground units maintain the responsibility. The following should be broadcasted by the air crew:

   a. Traffic hazards.

   b. Suspect's movements.

   c. Actions of the suspect(s).

   d. Any other pertinent information.

3. The air crew shall videotape the pursuit for evidentiary, tactical and training purposes.

4. Overall control of the pursuit shall remain with the primary ground unit and field supervisor.

5. For the benefit of the involved officers, the air crew may re-broadcast transmissions from supervisors, the Watch Commander or Dispatch regarding dropping off, discontinuing or limiting the pursuit.

B. S.T.A.R.R. HELICOPTER PURSUIT NON-AUTHORITY.

1. The S.T.A.R.R. helicopters cannot assume the role of primary pursuit vehicle because aircraft are not recognized as emergency vehicle under

Section 165, Section 17004 of the California Vehicle Code, which states in part that public employees are not liable for civil damages while operating authorized emergency vehicles in the line of duty, or when in immediate pursuit of an actual or suspected violator of the law.

C. TERMINATION OF PURSUIT.

1. If pursuing units discontinue a pursuit, or if a supervisor terminates a pursuit for any reason, the air crew may, at the discretion of a supervisor or in the best judgment of the Tactical Flight Officer, continue tracking (i.e. monitoring) the suspect or vehicle from the air.

2. The air crew may follow the suspect vehicle until such time that they believe the suspect may be apprehended without engaging in another vehicle pursuit.

D. INVOLVEMENT OF OTHER AGENCY AIRCRAFT.

1. In the event another agency aircraft becomes involved in the pursuit, the pilot or Tactical Flight Officer shall initiate radio contact and confirm primary authority or transfer of the pursuit coverage to the other agency prior to continuing or departing from the pursuit.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.7
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Searchlight Operations	

I. POLICY.

A. Caution shall be exercised so that officers on the ground will not be illuminated unnecessarily.

B. Caution shall be exercised so that automobiles will not be illuminated, which might temporarily blind the operator.

C. Citizens and residences will not be illuminated indiscriminately. There must be some indication of suspicious or criminal activity prior to illuminating them.

D. The Tactical Flight Officer shall ask or suggest to personnel on the ground if the use of the spotlight would be beneficial during the incident.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 6.8
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Helicopter Operations	SUBJECT: Operations Involving Medevac Helicopters	

I. POLICY.

A. At scenes where Medevac helicopters (REACH, CAL STAR, CHP), are also called to evacuate injured persons, the Pilot of Contra Costa County aircraft will contact the Medevac pilot using the aircraft radio. This is essential to coordinate the response of both aircraft and assure safe operations.

B. If the Medevac aircraft cannot be contacted, Contra Costa County aircraft will leave the area until the medevac aircraft has departed from the scene.

II. GENERAL.

A. EMERGENCY MEDICAL TRANSPORT MISSIONS

1. Office of the Sheriff Air Support Unit crew members (TFO's) receive only basic first aid instruction and training, and the aircraft are equipped with only basic first aid kits. Therefore, transportation to the hospital of critically injured patients is generally prohibited.

2. Under the most extreme lifesaving cases may the air crew request for onboard transport of a critically injured patient (child, law enforcement personnel) to a local hospital, and only if there is an authorized Con-Fire Captain Paramedic assigned to the air crew.

3. Onboard transportation flights of injured persons are authorized in rescue situations requiring relatively short flights from scenes where rescue personnel have limited access and only if there is an authorized Con-Fire Captain Paramedic or SAR member (FRT's) assigned to the air crew.

   a. Under these circumstances, the air crew should coordinate their actions with other rescue / medical personnel and make arrangements to transfer care of the patient to qualified emergency medical personnel as soon as possible.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 7.1
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Aircraft Operations	SUBJECT: Short-Haul Rescues	

I. POLICY.

A. The Office of the Sheriff's S.T.A.R.R. helicopters will respond when requested to perform a short-haul rescue or long-line operation. Procedural guidelines should always be followed for consistency, familiarity, and standardization.

II. DEFINITIONS.

A. HELICOPTER LONG-LINE. Helicopter vertical reference technique for the movement and placement of external cargo. Example: Bambi Bucket, cargo nets, live persons (HEC's).

B. SHORT-HAUL RESCUES. The term "short-haul" refers to moving one or more persons from one location to another while suspended on the end of a rope beneath the helicopter. The purpose of the technique is to insert or extract from remote locations, areas of restricted access, or from the water which are otherwise unreachable via conventional transportation means or the life of the victim(s) are in imminent danger.

C. HUMAN EXTERNAL CARGO (H.E.C.). The transport of a person or persons at the end of a helicopter's long line, or outside of the helicopter's interior cabin (skid-riding).

D. JETTISON. To discard the external cargo load from helicopter. HEC's ARE TO BE CONISDERED NON-JETTISONABLE.

E. TACTICAL FLIGHT OFFICER (T.F.O.) / CREW CHIEF. Deputy Sheriffs assigned to the Air Support Unit and who have successfully completed T.F.O. training. The T.F.O. assigned to the front seat of the aircraft is the designated Crew Chief when other rescue personnel are assigned to the unit. The T.F.O. must complete the minimum requirements for short-haul rescues before they can be appointed to Crew Chief. The Crew Chief oversees the rescue evolution.

F. FLIGHT RESCUE TECHNICIANS (F.R.T.). Selected firefighters and Search and Rescue personnel who have successfully completed the minimum requirements for short-haul rescues / skid riding insertions and are approved to augment the air rescue crew during short-haul missions.

III. STATEMENT OF RISK.

A. Helicopter short-haul insertion, extraction and rescue techniques involve specialized training and skills and should only be performed under the supervision of qualified, experienced Flight Rescue Technicians (F.R.T.'s) and pilots. Short-haul techniques require careful risk management and assessment prior to and during the application of these practices. It is imperative that the S.T.A.R.R. helicopters and equipment used in short-haul insertion, extraction, and rescue are capable, mechanically air worthy and maintained in a constant state of readiness as prescribed by the manufacturer.

B. Failure to adhere to the approved short-haul guidelines within this manual may lead to serious injury and/or death.

IV. GENERAL.

A. APPLICATIONS OF THE SHORT-HAUL MISSION.

1. Search and rescue insertion, victim extraction or evacuation, law enforcement tactical operations, high-rise structural fires and insertion of firefighters are all viable applications of the static short-haul.

   a. Short-haul rescues are often the quickest, safest, and most efficient method of victim extraction or evacuation in remote locations or areas with restricted access.

   b. Only trained flight air rescue crew members shall perform any inspection, hook up, or rigging of rescue gear and short-haul equipment on the helicopter.

   c. Prior to any short-haul rescue mission, the pilot and air crew shall perform three manual and three electrical release cargo hook checks.

   d. No Human External Cargo (H.E.C.'s) shall be transported without the use of an approved portable secondary device (ARS Heli-Bridle) or approved secondary mechanical belly hook installed on the aircraft.

   e. The pilot and the flight crew shall have the ultimate responsibility to determine whether a safe rescue can be performed. This decision will be based on a variety of factors and known facts including, but not limited to: weather conditions, ambient light, artificial light, terrain, obstacles, pilot or air crew expertise, and the capabilities of the aircraft and/or rescue equipment.

   f. The Unit Supervisor and the Unit Commander or Watch Commander shall be notified.

   g. It is the responsibility of the air rescue crew to find safe, effective and reasonable alternatives prior to using short-haul tactics. These alternatives may include the use of ground rescuers or landing near the victim and approaching by foot.

   h. The pilot and air rescue crew shall make every effort to limit the amount of time the helicopter is hovering.

   i. The pilot and air rescue crew shall make every effort to limit the time that a rescuer or victim is suspended from the helicopter.

V. PROCEDURAL GUIDELINES

A. PRE-FLIGHT

1. All rescue gear, ropes, and Heli-Bridle are to be inspected by either a trained T.F.O. or F.R.T. Damaged equipment shall be documented and removed from service until thoroughly inspected, repaired, or replaced by the manufacturer.
2. The rescue equipment will be stowed in a ready to deploy manner.
3. Helicopter load calculation (Form FC 67) will be completed by a TFO or qualified Con-Fire personnel. The completed form shall be reviewed, initialed, and filed by the pilot.

B. RESCUE CALL OUT

1. Flight Restrictions. Short-haul and long-line operations shall only be conducted from ½ hour before official sunrise until ½ hour after official sunset.
2. Mission Reconnaissance Flight. Coordination between the pilot, Crew Chief, and FRT's is essential for the safe and efficient completion of short-haul missions. The Crew Chief will assist the pilot with navigation and hazards to include other aircraft, wires, and blade clearance. The pilot and Crew Chief must evaluate and select short-haul insertion and extraction sites, as well as possible staging areas. The FRT's may also assist with site selection. Short-haul insertion and extraction sites should be evaluated for the following:
    a. Proximity to incident; if insertion / extraction site is not at the incident site
    b. Approximate size
    c. Slope
    d. Rotor clearance
    e. Weather conditions
    f. Ground / aerial hazards
    g. Approach and departure routes
    h. Non-incident personnel in the area
3. A "hover check" to determine available aircraft power will be performed and all information necessary to make a "Go / No Go" decision will be gathered. Landing areas suitable for rigging the aircraft will be approved by the pilot.
4. Mission Briefing. A briefing shall be provided by the appropriate incident manager(s), Unit Supervisor, and/or Crew Chief prior to short-haul operation and must include the pilot, the Flight Rescue Technicians, and all persons involved in the operation. As a minimum, the following shall be addressed during the mission briefing:
    a. Risk assessment
    b. Nature of the mission
    c. Location
    d. Terrain

e. Weather conditions

f. Landing areas

g. Individual responsibilities

h. Choice of rescue equipment to be utilized

i. Cargo letdown procedures, if applicable

j. Hazards

k. Safety considerations

l. Emergency procedures

m. Situational awareness review

n. Determine "Go / No Go" status

5. Risk assessment is an ongoing process, to be applied throughout the entire operation. Life threatening emergencies as determined by the pilot, Crew Chief, Unit Supervisor, and/or Incident Manager may prompt deviation from these procedural guidelines. Although the entire air rescue crew should work together to develop a response and rescue plan, the Crew Chief or onboard Unit Supervisor oversee the rescue evolution.

6. Personnel and Helicopter Equipment Checks

   a. Personnel Safety Check

      - Individuals will check themselves and their partner before operations commence. Inspections will be done from head to toe. Inspections should cover helmets, eye protection, harness, gloves, and any other necessary equipment and hazards such as open pouches, loose straps and equipment.

   b. Helicopter Equipment Check. The pilot, Crew Chief, and FRT's shall complete the following before operations commence:

      - Remove all cargo not essential to the mission
      - Short-haul or long-line rope correctly attached to primary hook and Heli-Bridle
      - Secure all seatbelts
      - Secure all loose equipment inside the helicopter
      - Remove and secure the helicopter door(s)
      - Ensure all radios are operational and on correct frequencies
        - A radio check should be done to establish communications between the aircraft, the Crew Chief, FRT's, and ground crewmembers, if necessary.

   c. Three (3) manual and three (3) electrical cargo hook checks are to be performed by the pilot and T.F.O. or F.R.T. The pilot will receive confirmation after each hook check.

7. Rescuer Duties During Insertion.

    a. If rescuers are inserted in pairs, one rescuer should be responsible for communications with the pilot (hand, head, and/or verbal)

    b. Short-haulers remain a safe distance from helicopter.

    c. Helicopter lifts and establishes a hover

    d. After pilot receives the “up” signal, the pilot lifts the rescuers and flies to the incident site

    e. Prior to insertion, the pilot will do a final power assurance check

    f. Rescuers continue to communicate with the pilot until point of insertion (hand, head, and/or verbal)

    g. Rescuers will disconnect from the short-haul rope after deeming safe to do so

8. Rescuer Duties During Extraction.

    a. Maintain communication with the pilot

    b. Communicate any situation changes

    c. Move unnecessary people away

    d. Move victim or rescuers to a more desired extraction site (if needed)

    e. Request delivery of the short haul line from the pilot

    f. Rescuers and/or victim attach to short-haul rope

    g. Upon receiving the “up” signal, the pilot lifts rescuers, clears obstacles, and flies to landing area for victim transfer to awaiting medical personnel

    h. Repeat all steps until all rescuers are accounted for and the rescue mission has been completed or stopped

9. Debrief.

    a. Provide feedback to involved personnel

    b. Identify areas of concern for follow up

    c. Reinforce lessons learned

    d. Complete an After-Action Report

C. DOCUMENTATION.

1. The Crew Chief will draw a DR and document the rescue mission or long-line operation, whether or not the operation was completed. The documentation shall include the following:

    a. Nature of the call-out

    b. Names of air rescue crew members involved in the mission, to include designated roles

    c. How long the mission took (time of dispatch to conclusion of rescue)

d. Names of medical personnel and medical unit number receiving victim, if possible

e. If the mission was not completed or called off, the reasons for the call off will be documented

2. A Patient Care Report (PCR) may be completed by the TFO or FRT, if necessary. The PCR shall be filed at the Air Support Unit office in a locked drawer.

3. An Unusual Incident Report (UIR) will be completed and distributed after every rescue.

VI. SHORT-HAUL AND RESCUE EQUIPMENT.

A. All short-haul / long-line equipment and rescue gear must be approved by the Unit Commander before being purchased and placed into service.

1. All equipment used in short-haul operations shall be rated to meet he industry standard (NFPA/IHRA)

2. Class II or Class III harnesses are approved

3. All carabiners (steel and aluminum) must have a minimum rating of 30 kilonewtons (kN); 1kN = 224.8 lbs.

4. Carabiners must be either 2 stage or 3 stage locking type

5. All rescue gear and equipment should be rated for a minimum 10:1 safety margin

B. The short-haul rope will be constructed of synthetic material which may include nylon, polyester or high molecular weight polyethylene (eg. Spectra or Dyneema). Cordage will be single strand or greater and of low-stretch/no stretch, kernmantle, or braid-on-braid construction. The designated rope used for HEC shall not be used for long-line operations. All ropes designated for long-line cargo shall not be used for HEC short-haul operations.

C. The Heli-Bridle will be inspected daily. The Heli-Bridle will be retired after 5 years from the date of manufacture.

VII. MAINTENANCE

A. The Air Support Unit Commander or Unit Supervisor will maintain records of inspection, maintenance and use of all the short-haul rescue equipment.

1. Records will be retained for the life of the rescue equipment, or as long it is in use and should contain the following information:

a. Identification number issued by the manufacturer

b. Date of last inspection and signature of individual who performed it

c. Maintenance performed, including the date and location where it occurred, and the signature and certificate type of the person who did the work

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 7.2
	RELATED ORDERS: MOU between the Office of the Sheriff and Consolidated Fire Department	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Aircraft Operations	SUBJECT: Fire Suppression Operations - "Bambi Bucket"	

I. POLICY

A. S.T.A.R.R. helicopters may respond as an initial strike fire-fighting asset to battle wildland and grass fires at the request of a local or state fire agency when such fire presents a threat to people or structures. The Unit Supervisor and Unit Commander, or Watch Commander, shall be advised of these operations. Procedural guidelines should always be followed.

II. PROCEDURAL GUIDELINES

A. PRE-FLIGHT

1. All firefighting equipment is to be inspected by either a trained TFO or FRT. Damaged equipment shall be documented and removed from service until repaired or replaced.

2. The Bambi Bucket will be stowed in a ready to deploy manner during the designated fire season.

3. Helicopter load calculations (Form FC 67) will be completed by a TFO, pilot, or qualified Con-Fire personnel. The completed form shall be reviewed, initialed, and filed by the pilot.

B. FIRE SUPPRESSION CALL OUTS

1. Flight Restrictions. Bambi Bucket fire suppression operations and long-line operations shall be conducted no earlier than ½ hour before official sunrise and no later than ½ hour after official sunset.

2. Mission Reconnaissance Flight. Coordination between the pilot, Crew Chief, FRT's, and responding fire personnel is essential for the safe and effective completion of firefighting missions. The Crew Chief will assist the pilot with navigation and hazards to include other aircraft, wires, and blade clearance. The pilot and Crew Chief must evaluate and select water sources, as well as possible staging areas. The FRT's may also assist with site selection. Water sources and staging areas should be evaluated for the following:

a. Proximity to fire

b. Approximate size

c. Slope

d. Rotor clearance

e. Wind condition

f. Ground / aerial hazards

g. Approach and departure routes

h. Non-mission personnel in the area

3. A “hover check” to determine available power will be performed and all information necessary to make a “Go / No Go” decision will be gathered. Landing areas suitable for rigging the aircraft will be approved by the pilot.

4. Mission Briefing. A briefing shall be provided by the appropriate incident manager(s), Unit Supervisor, fire agency personnel, and/or Crew Chief prior to any firefighting operations and must include the pilot, the Flight Rescue Technicians, and all persons involved in the operation.

5. Helicopter Equipment Check. The pilot, Crew Chief, and FRT’s shall complete the following before firefighting operations commence:

   a. Remove all cargo not essential to the mission

   b. Bambi Bucket correctly attached to the helicopter

   c. Secure all seatbelts

   d. Secure all loose equipment inside the helicopter

   e. Remove and secure helicopter doors

   f. All radios operational and on correct frequencies. A radio check should be done to establish communications between the aircraft, the Crew Chief, FRT’s, and the appropriate fire agencies involved

6. Three (3) manual and three (3) electrical cargo hook checks are to be performed by the pilot and TFO or FRT. The pilot will receive confirmation after each hook check.

7. Execution of Water Drops

   a. Pilot fills Bambi Bucket from water source and conducts one practice water drop to ensure proper function of the Bambi Bucket

   b. Pilot communicates with ground or aerial fire personnel for water drop placement provided they are on scene

   c. Pilot should evaluate the water drop placement in proximity to personnel on the ground, vehicles, structures, or other hazards

   d. The pilot will have the final determination if it is safe to release the water from the Bambi Bucket

   e. After the release of the water, the pilot should continue with these steps until the fire has been extinguished or instructed otherwise

8. Debrief. A debrief should be conducted following any training exercise or actual mission.

   a. Provide feedback to involved personnel

   b. Identify areas of concern for follow up and improvements

   c. Reinforce lessons learned

C. DOCUMENTATION

1. The Crew Chief will draw a DR and document the firefighting operation, regardless if the operation was completed or not. The documentation shall include the following:

   a. Nature of the call out

   b. Names of the fire agencies involved

   c. Names of the air rescue crew members involved in the mission, to include designated roles

   d. How long the mission took; time of dispatch to conclusion of the water drops

   e. If the mission was not completed or called off, the reason(s) for the call off will be documented

2. An Unusual Incident Report (UIR) and an After-Action Report (AAR) will be completed at the conclusion of every firefighting operation.

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 7.3
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Aircraft Operations	SUBJECT: Armed Suspect / Anti-Sniper Details	

I. POLICY.

A. The Office of the Sheriff's aircraft will respond when requested for surveillance or search operations involving a known armed (firearm) suspect. Special considerations on flight patterns will be made by the pilot for the safety of the air crew and aircraft, which may include requesting the assistance and response of a fixed-wing aircraft.

II. GENERAL.

A. [redacted]

1. [redacted]

2. [redacted]

B. [redacted]

1. [redacted]

Contra Costa County **Office of the Sheriff** Marine Services Unit – Air Support Policy and Procedure	**AIR SUPPORT**	**NUMBER:** **Section 7.4**
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 **REVISION DATE:** **06/01/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Special Aircraft Operations**	**SUBJECT:** **Special Weapons and Tactics (SWAT) Operations**	

I. POLICY.

A. [redacted]

II. GENERAL.

A. [redacted]

1. [redacted]
2. [redacted]
3. [redacted]
   a. [redacted]
   b. [redacted]
   c. [redacted]
   d. [redacted]
4. [redacted]

B. [redacted]

1. [redacted]

b. [redacted]

c. [redacted]

d. [redacted]

e. [redacted]

f. [redacted]

g. [redacted]

h. [redacted]

i. [redacted]

j. [redacted]

k. [redacted]

l. [redacted]

m. [redacted]

n. [redacted]

C. [redacted]

1. [redacted]

a. [redacted]

- [redacted]
- [redacted]
- [redacted]

- [redacted]

2. [redacted]

D. [redacted]

1. [redacted]

Contra Costa County Office of the Sheriff Marine Services Unit – Air Support Policy and Procedure	AIR SUPPORT	NUMBER: Section 7.5
	RELATED ORDERS:	
ISSUE DATE: 06/01/2017 REVISION DATE: 06/01/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Aircraft Operations	SUBJECT: Formation Flights	

I. POLICY.

A. Formation flights involving Office of the Sheriff aircraft may be conducted for special events if previously approved by the Unit Commander. If the formation flight is out of county, the Division Commander must authorize the flight.

II. PROCEDURES.

A. Formation flights include two or more aircraft of the same class flying in a common direction at a safe distance.

B. Fixed wing aircraft shall not be involved in a helicopter formation.

C. All formation flights shall be coordinated on the ground prior to the flight with all pilots involved in attendance (briefing).

D. The Pilot-In-Command of the lead aircraft shall be identified as the Flight Leader.

E. The Flight Leader shall be responsible for conducting a pre-flight briefing during which assignments and "chock" position of each craft in the flight shall be assigned.

1. The Unit Supervisor shall review and approve all formation flight operation plans.

F. The type of formation, call signs, radio frequencies, assembly areas, and landing zones shall be established during the pre-flight briefing.

1. A radio in all aircraft involved in formation flights shall be tuned to a common frequency at all times during the course of the flight mission.

G. A Tactical Flight Officer capable of monitoring the aircraft instruments, aircraft position and generally assisting the Pilot-In-Command is highly recommended for each aircraft involved in the formation flight.

1. In all cases, Office of the Sheriff aircraft participating in a formation flight shall have, at least, a pilot and a Tactical Flight Officer on board.

H. All pilots in the formation shall be responsible for maintaining visual contact with other aircraft in the formation, and to maintain proper separation and interval.

I. Formation flights with non-departmental aircraft shall not be conducted without the specific authorization of the Division Commander.



CIVIL UNIT MANUAL

CONTRA COSTA COUNTY
OFFICE OF THE SHERIFF
FIELD OPERATIONS BUREAU
INVESTIGATION DIVISION
2019



Introduction

This manual is intended to direct Civil Unit employees in their specific functions. It is to be used in conjunction with the Sheriff's Policy and Procedure Manual, as well as the State Sheriff's Association Civil Procedural Manual, and all applicable Federal and State Laws. Any employee discovering a conflict between any of these directives will immediately bring this to the Civil Manager or Civil Supervisor's attention for resolution.



FIELD OPERATIONS BUREAU

CIVIL UNIT OPERATIONS

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OFFICE OF THE SHERIFF

CIVIL UNIT

CIVIL UNIT MISSION STATEMENT

Our mission is to maintain a professional and efficient organization reflecting not only the overall mission of the Office of the Sheriff but a specific dedication to the timely and responsive movement of the Civil process.

OUR UNIT VALUES

- **Dedication**
- **Honesty**
- **Integrity**
- **Professionalism**
- **Respect**
- **Sensitivity**
- **Trust**

CONTRA COSTA COUNTY **NUMBER 2-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **CLERICAL STAFF JOB DESCRIPTION/DUTIES**

GENERAL INFORMATION: Clerical staff assigned to the Civil Unit clerical detail work under the supervision of the Unit Manager, Sergeant, and Clerical Supervisor. Civil clerical staff is responsible for dealing with the receipt, logging, billing, tracking, storage, and filing of civil process.

The clerical staff must become knowledgeable with sections of the Civil Code of Procedure and the Sheriff's Procedural Manual. Cross Training is a necessity in a unit of this size. To facilitate cross-training, task assignments are rotated at the discretion of the Unit Manager.

Good communication skills are necessary to convey information both verbally and in writing to the Courts, attorneys, and to the general public.

PROCEDURE 1 Clerical Supervisor

The Clerical Supervisor duties include, but are not limited to, the following:

- Provide supervision for all clerks to include employee evaluations, training and time off approval.
- Process Purchasing and Requisitions. Place orders when supplies are low, including typing of requisition when there is no open purchase order.
- Pay incoming bills through accounts payable.
- Prepare written responses to inquiries on cases.
- Relief coverage for all clerical assignments as needed.
- Process/return NSF checks.
- Assist Unit Lieutenant/Sergeant as directed.
- Process:
  - Claims of Exemption
  - Releases
  - Third-party claims
  - Sale of Property
  - Bankruptcies
  - Unusual writs
  - Writs of Sale
  - Writs of attachment
  - Personal and Real property levies
  - Vehicles sales

- Provide supervision and direction for S.A.V.E.S. volunteers
- Maintain safeguards over cash-receiving and depositing of monies.
- Participate in Civil Users Group

PROCEDURE 2 The below-listed tasks are the responsibility of the Clerical staff. These tasks will be assigned to specific Clerks at the discretion of the Unit Manager, Sergeant, or Clerical Supervisor. The intent is to promote Cross Training. A category may be assigned to one clerk in its entirety or distributed across multiple clerks to promote efficiency.

Reception

- Receive new process over the counter from the public (registered process servers, attorneys, other Sheriff's agencies, etc.)
- Field incoming calls
- Check voice mail and return calls
- Sort US Mail and County Mail and distribute appropriately
- Post monies under executions
- Label new file folders
- Process writ returns

Input

- Enter new file information for earnings withholding orders, bank levies, third-party levies, keepers, and other Civil processes into the computer.
- Receive keeper monies from Deputies, verify and sign off on Deputies receipts
- Verify information on the Memorandums of Costs and Credits and input the information into the system. **Note** - The employer must also be informed of this information.
- Post-trip tickets and verify the information on the Proof of Service the following day. Send out Proof of Service to the appropriate Court and defendant.
- Assemble and organize Civil Process for field service.
- Provide relief and back up to reception as needed for the phones and counter.

Evictions

- Schedule evictions for West, East, Central and Central/East
- Input new eviction process
- Assemble eviction papers for field Deputies, plaintiff/agent/attorney, and tenants in possession
- Process eviction calls to include:

  Tenants - claims of right of possession, legal aid, etc.
  Plaintiff - eviction procedures, times of scheduled evictions

Courts - stays, hearing date and times, date of eviction, claim of rights
Deputies - Field questions

- Print out Notice to Vacate and Evictions Trip Tickets
- File eviction papers by date of eviction
- Writ of Possession (Real Property) writ returns

Accounting

- Responsible for disbursement of monies under Writ of Execution
- Prepare disbursement checks for payment and/or refund from a Warrant Proof Listing from confirmation of applicable information
- Balance all Civil Units Clerical receipts, charges, deposit each day
- Reconcile all daily receipts, charges, and previous days' disbursement checks against computerized reports.
- Prepare deposit permits and deposit receipts/cash daily with the County Treasurer.
- Maintain cash receipt, charge, cash disbursement, and management summary registers.
- Maintain petty cash refund, form sales, and assessment fee logs.
- Maintain cash receipt books
- Process all voided, canceled, lost, or stale dated warrants following County guidelines.
- Record service fees on files where Proof of Service by a Registered Process Server was never received. Close files, as appropriate, and return files to respective Court.
- Assist other clerical activities as necessary or directed

CONTRA COSTA COUNTY **NUMBER 3-1**
INVESTIGATION DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **CIVIL DEPUTY JOB DESCRIPTION/DUTIES**

GENERAL INFORMATION: Civil deputies work under the supervision of the Civil Unit Manager and Sergeant. Civil deputies are responsible for dealing with a myriad of technical tasks unique to civil law enforcement.

The civil deputy must attain knowledge of the Civil Code, Civil Code of Procedures, sections relative to the civil procedure contained in the Government Code, and the Sheriff's Procedural Manual.

The civil deputy must have the ability to interpret the applicable civil law and possess good communication skills necessary to convey information both verbally and in writing to attorneys and the public; must be willing to work flexible hours and have the ability to review, organize and formulate a route plan for service of civil documents.

DUTIES: The Civil Unit Deputies duties include but are not limited to:

- Preparation and service of various civil processes; attach, levy, and sell both real and personal property; seize business assets and install keepers; serve notices to vacate and complete restoration of real property for evictions.
- Serve civil and criminal warrants of arrest and warrants of attachment.
- Execute auto levies.
- Conduct real and personal property sales.
- Execute bank levies.
- Plan, organize, and execute keeper levies.
- Serve Earnings Withholding orders, both personal service and certified mailing.
- Transport and book prisoners.
- Book prisoners at county facilities.

- Schedule office time, to include answering telephone messages, daily routing of documents to be served.
- Extradition matters.
- Inquiries in PIN, NCIC, DMV.
- Provide training to newly assigned employees when assigned to do so.
- Schedule activities to ensure all assignments are completed in a timely manner.
- Serve TRO’s
- Travel overnight to out of state locations
- Fly armed with inmates
- Prepare rendition documents, schedule and attend court appearances related to renditions, file Penal Code 1551.1 charges as needed.
- Other duties as assigned.

CONTRA COSTA COUNTY **NUMBER 4-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **CIVIL UNIT PERSONNEL DRESS CODE**

POLICY: Civil Unit personnel shall dress neatly and in good taste in keeping with the standards established by the Office of the Sheriff.

REFERENCE: DEPARTMENT MANUAL 1.07.21

GENERAL INFORMATION: DEPUTIES

A. Evictions

1. Deputies will wear the standard Class “C or D” uniform. This attire will be clearly marked and identify participants as Sheriff’s Office employees.

2. An optional uniform specific to the Civil Unit may consist of a Long or Short-sleeved black polo with black BDU pants.

3. If assistance is required, the uniformed deputy is readily recognizable, lessening the chance for confusion on the part of the cover officer, and increasing the safety of all concerned.

4. [redacted]

B. Service of Process

1. Deputies may wear the prescribed standard uniforms Class B, C, or D during the Service of Process.

2. The optional uniform may consist of the short or long sleeve black Polo shirt and Tan Utility pants.

3. [redacted]

4. Deputies may wear civilian attire as per the Department manual with the prior permission of the unit supervisor.

C. Extraditions

[redacted]

Special attention must be paid to the clothing restrictions in place at any custody facility deputies may visit during their travels.

CLERICAL EMPLOYEES

A. Clerical/Civilian employees will wear appropriate traditional business attire as specified in Department Manual 1.07.21. Clerical Uniform – Options are allowed as provided in the Department policy with the approval of the unit manager.

CONTRA COSTA COUNTY **NUMBER 5-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **DOCUMENT MANAGEMENT**

GENERAL INFORMATION: Documents received for service must be handled in a manner that promotes a smooth transition, without unnecessary delay, between the Sheriff's Civil Unit, the various courts of jurisdiction, and between plaintiffs and defendants. All Civil Unit personnel are responsible for ensuring the timely service of the Civil process.

Documents for service will be received at the Civil Unit office where they are checked to ensure they are “Plain on their face,” and can lawfully be served. They are time and date stamped. They will then be entered into the computer system, printed, and sent to field staff for service.

PROCEDURE 1 The documents will be distributed to the appropriate distribution box in the Deputies office. The Civil Supervisor will ensure the logging of **ALL** service of process attempts promptly. Service of process attempts may be made based upon current workload, as well as the area of the County the specific Deputy or team is working.

CONTRA COSTA COUNTY **NUMBER 6-1**
INVESTIGATION DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **CELLULAR TELEPHONES**

POLICY: Cellular telephones are provided to assist employees in conducting county business when business cannot be conducted via normal telephone systems.

REFERENCE: Department Manual 1.07.54 & 1.07.57

GENERAL INFORMATION: Cellular telephones are provided for use in conducting County business only. Employees shall follow these guidelines when using this telephone system;

PROCEDURE 1 CELLULAR TELEPHONE USAGE

A. Employees will use cellular telephones in accordance with the listed policy.

B. Telephone usage by the driver of a vehicle is not authorized except for official, priority business.

C. Operator information or 411 calls are authorized only in business-related matters and should be avoided when possible.

D. The Civil Unit Manager will review all Bureau monthly telephone bills.

E. Employees are responsible for reporting and/or correcting any problems identified in assigned equipment.

CONTRA COSTA COUNTY **NUMBER 7-1**
INVESTIGATION DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **COMMUNICATION EQUIPMENT AND RADIO PROCEDURES**

REFERENCE: Department Manual 1. 07.51

GENERAL INFORMATION: Sworn personnel assigned to field activities will be assigned vehicle and portable radios. These radios will provide immediate communication throughout the County.

PROCEDURE 1 Field personnel will sign on with their call sign before working in the field. Throughout the day, personnel will keep dispatch advised of all changes in status and locations, as well as the end of their assigned shift. Department radio procedures will be followed at all times.

PROCEDURE 2 Employees are responsible for reporting and/or correcting any problems identified in assigned equipment.

CONTRA COSTA COUNTY **NUMBER 8-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **BUSINESS LEVY**

POLICY: Business levies will be processed expediently to ensure timely collection of judgments.

GENERAL INFORMATION: Business is normally seized or levied upon by service of either a writ of execution, possession, or a writ of attachment issued by a court with jurisdiction over the matter.

The time limits and property to be seized will be explained in the letter of instructions attached to the writ.

PROCEDURE 1 **INSTALLATION OF KEEPER PERSONNEL**

A. Upon receiving the levy packet, the civil deputy will completely familiarize themselves with the written instructions of the judgment creditor or his attorney.

B. A "keeper list" has been established and is maintained at the civil office. When scheduling keeper personnel, the civil deputy will contact persons from this list.

Deputies should attempt to use all persons on the list and avoid using specific individuals exclusively.

C. When keeper personnel has committed to a job, the civil deputy will notify them when and where to meet the installing deputy, advise them of the nature of the business and give any advance instructions necessary for the smooth operation of the levy.

Keeper personnel is never permitted to enter the business prior to the arrival of the installing deputy.

D. The civil deputy will notify the supervisor in charge of the civil unit prior to the levy by giving him a photocopy of the trip ticket. Include in the notification the name of the keeper(s), time of levy, and the telephone number of the business, if known. Deputy will obtain current pay off from clerical staff, including all interest accrued to date.

E. Upon entering the business, the civil deputy will locate the owner or person apparently in charge. The deputy will introduce himself, advise the owner/agent of the levy, ask for and inspect the business license to ensure that the levy can proceed. NOTE - Should there be a discrepancy of ownership between the State License and the Levy Instructions, the State License takes precedence.

While the deputy is involved in the above actions, the keeper should be instructed to watch the cash register to ensure that monies are not removed as the levy is being made.

F. Till Tap: A Till Tap is a request to levy on cash-on-hand **only**. If instructed, pursuant to a Writ of Execution, the Levying Officer may seize and remove all cash from a place of business without placing a Keeper, per C.C.P. section 700.030.

PROCEDURE 2 **MAINTAINING THE LEVY**

GENERAL INFORMATION: The keeper acts as the Sheriff's representative in maintaining the levy and securing the property attached. They must maintain personal, physical custody and control of the assets at all times or the levy may be lost, and the Sheriff may become liable to the plaintiff for damages. It is imperative that the keeper remains on the premises at all times until relieved or released.

A. A keeper's log is required for every job, even if the levy is paid off immediately. The time the keeper is installed will be noted, and the correct times of each keeper when they are going on or off duty. The log will be used to note all unusual circumstances occurring during a shift, information regarding the progress of the levy, and special instructions from the installing deputy or the supervisor of the civil unit. The log will be signed by the keeper at the end of each shift.

B. All of the defendant's property on the premises, unless specifically excluded, is under levy. No stock or merchandise is allowed to leave unless paid for in full, and the money paid over to the keeper. Persons other than the defendant, claiming ownership of property on the premises, will be referred to the installing deputy or the supervisor in charge of the civil unit. Nothing will be released without approval.

C. At the installation of the keeper, cash and checks on the premises will be counted. The business will be allowed to operate out of this "bank." The amount of the "bank" will be determined by the type of business and the volume of transactions at the business. Excess

monies will be removed from the store, a receipt issued, and the monies given to the civil clerical section for deposit.

D. Unless otherwise instructed, all sales are to be cash or check. Credit sales will not be permitted.

E. Mail addressed to and received by the business (defendant/debtor) becomes the property of the business upon delivery by the U.S. Postal Service. Mail may be seized and opened by the Deputy/keeper. Any monies or checks made payable to the business may be taken and applied to the judgment. Caution must be used in opening only the mail addressed to the business and seized only those items made payable to the defendant/debtor.

F. Incoming goods may not be paid for with funds on the premises or from the "bank"; however, the defendant may accept deliveries if he wishes to pay for them "out of Pocket" or if the delivering firm is willing to extend credit. The defendant may elect to refuse delivery. Once delivery has been accepted, those items become part of the assets under levy.

PROCEDURE 3 **RELEASE OF LEVY**

GENERAL INFORMATION: All instructions to release the levy will come from the creditor, creditors attorney, or the civil unit. Instructions to release, other than written instructions, will be verified by a telephone call to the creditor or his attorney. You may release on verbal instructions, but instruct the creditor to immediately forward written instructions to the civil Unit office. (Immediately fax, then mail hard copy)

PROCEDURE 4 **AFTER HOURS KEEPER LEVY**

GENERAL INFORMATION: The installation of keepers occasionally requires the keeper to work after the installing deputy's shift has ended. Keeper levies sometimes extend into a weekend when there are no civil deputies on duty. This section is intended to address these circumstances and establish a guideline to follow when such matters arise.

A. When installing keeper levies, the civil deputy will make every effort to minimize the need for overtime.

B. During the changing of shift for keeper personnel, the installing deputy will only be present when there are monies seized and receipts to be issued or when the complex nature of the levy requires the deputy to be present.

The installing deputy will coordinate the shift change with each keeper prior to conducting the levy. Keepers will relieve each other without the installing deputy being present.

CONTRA COSTA COUNTY **NUMBER 9-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **BENCH WARRANTS**

GENERAL INFORMATION: Due to Detention Facility overcrowding and the difficulty of housing Civil prisoners, a system of "Agreement to Appear" Citations is used to assure the defendant is aware of the Court's order and to encourage the closure of the process without the use of Jail.

To encourage appearance in the Court, the initial effort should be made to collect cash bail. If this is not possible, the “Agreement to appear” citation form will be used.

PROCEDURE 1: Deputy:

Check with the courts in the local area to determine the correct time Civil Bench Warrants are heard.

A. Fill out "Agreement to Appear" form. (Attached)

B. Have the defendant sign form.

C. Give the defendant the yellow copy.

D. Return white and pink copies with the trip ticket to clerical staff.

PROCEDURE 2: Clerical:

Check trip ticket to ensure it is properly filled out and send down to Clerical with white and pink copies of "Agreement to Appear" attached.

A. Enter into the computer as served by citation.

B. Pull original warrant from the Civil file.

C. Send the white copy of "Agreement to Appear." original warrant and original (white) Report of Service return to the issuing court.

Send the yellow copy of the Report of Service return to the plaintiff/judgment creditor.

File the pink copy of "Agreement to Appear." the pink copy of the Report of Service return and the trip ticket into the folder with the letter of instructions.

CONTRA COSTA COUNTY **NUMBER 10-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **EVICTIONS**

POLICY: The Office of the Sheriff will ensure rapid enforcement of the Judgement for Possession of Real Property, Writ of Possession. Enforcement will be performed in a timely and professional manner.

REFERENCE: CCP 712.010, 712.020, 1174,1174.3, 715.030, 715.040
CC 1984-1988

GENERAL INFORMATION: DOCUMENTS

A. A judgment for possession of real property may be enforced by a Writ of Possession of Real Property issued pursuant to CCP 712.010.

B. The appropriate Writ shall be reviewed to confirm the content meets the requirements of CCP 712.020. The Writ shall be directed to Contra Costa County Sheriff.

C. Adequate instructions shall be provided by the requester and contain the signature of attorney or party without an attorney. An instruction sheet will be available for use to provide the required information.

D. The above-listed documents will be provided along with the appropriate fee for posting eviction and removing occupants and putting a person in possession, as provided by GC 26733.5.

PROCEDURE 1 **RECEIVING**

A. The above-listed documents shall be received at the front window. The receiving personnel will review documents for completeness.

1. An estimated week of service will be provided to the requester.

2. If requested, the requester will be provided a Date/Time stamp on a copy of the writ.

3. The receiving personnel will place their initials in the upper right corner of the instructions.

4. The new file will be placed in the “Eviction” file for processing.

PROCEDURE 2 **<u>PROCESSING</u>**

A. The following document will be received to initiate the eviction process. The documents will be reviewed to confirm compliance with applicable laws.

1. Writ of Possession Real Property.

2. Instruction to the Sheriff (initialed by the receiving clerk)

3. Proper payment received.

B. Eviction clerk will create a file in Teleosoft with the above-listed documents and creates the below-listed service packets and their respective content.

1. Notice to Vacate
    a. Trip ticket
    b. Notice to Vacate (personal service)
    c. Notice to Vacate (posting)
    d. Claim of Right of Possession (if not previously served)
    e. Copy of Writ of Possession

2. Mailing to Debtor
    a. Notice to Vacate (signed by eviction clerk)
    b. Claim of Right of Possession (if not previously served)
    c. Copy of Writ of Possession

3. Mailing to Plaintiff
    a. Eviction Information for Property
    b. Eviction Procedures letter

4. Notice of Restoration
    a. Trip ticket
    b. Eviction Restoration Notice (w/copies)
    c. No Trespass postings (w/copies)

C. The returned trip tickets will be scanned into Teleosoft, and the writ returned to the court if applicable.

PROCEDURE 3. **TRIP TICKET - PERSONAL SERVICE/POSTING PROPERTY**

A. The deputy will be responsible for completing the trip ticket attached to the process. The following information will be entered by the deputy on the trip ticket.

1. How served. Personal or posted

2. Name and title of the person served

3. Where served or posted

4. Date and time process served or posted.

5. Name of deputy (signature) and employee number.

B. In the event the property is posted, the deputy will mark the boxes "post." and return the trip ticket to the Eviction Clerk. The eviction clerk is required to mail a copy of the process posted, to the location of the posted property.

C. The eviction clerk will do the necessary mailings as required by Code.

D. The eviction clerk has notified, by mail, the property owner/agents of the eviction. The notice mailed gives specific instructions for the property owner/agents to follow regarding the lock-out date. It is the responsibility of the Deputies to notify the agent/owner, by phone, the specific time and date to meet with the deputies at the location.

PROCEDURE 4 **EXECUTION OF THE WRIT**

A. The deputy shall serve a copy of the Writ of Possession of Real Property and Claim of Right to Possession form on one occupant of the property by:

1. Leaving a copy with the occupant personally.

2. In the occupant's absence, with a person of suitable age and discretion found upon the property when service is attempted, who is either an employee or agent of the occupant or a member of the household.

B. If unable to serve the occupant, the deputy shall execute the Writ by posting a copy of the Writ in a conspicuous place on the property and serving a copy on the judgment debtor. Service shall be made

personally or by mail. The provisions of CCP 684.120 extending time do not apply to the five-day period specified in this subdivision.

C. If the judgment debtor, members of the judgment debtor's household, or any occupant holding under the judgment debtor, do not vacate the property within five days, the deputy shall remove the occupants and place the judgment creditor in possession.

PROCEDURE 5 **RESTORATION OF REAL PROPERTY TO PROPERTY OWNER/AGENT**

A. Upon completion of the "Notice To Vacate," the eviction clerk will have notified the property owner/agent of the steps necessary to meet with the deputy to obtain possession of the property. This is the "Restoration" phase.

B. The deputies will meet with the property owner/agent at the time specified to restore the property to the judgment creditor. [redacted]

C. Contact and entry will be attempted at the main entrance to the location. If no response and the main entrance is secured, deputies may make reasonable attempts to locate an alternative unsecured entrance. Deputies shall not make entrance through anything other than a doorway. No one else may enter the location for any purpose prior to the Deputies rendering the location safe.

The agent/owner on scene may, at their discretion and effort, force entry to the location, which might require the use of a locksmith. Deputies are not to assist in the breaching of any entry point unless exigent circumstances exist or approval of the unit supervisor. It is the agent/owner responsibility for gaining entry into the location.

D. The deputy may not remove any person who claims a right to possession accruing prior to the commencement of the unlawful detainer action and who is not named in the writ. The claim must be presented prior to restoring the property and be properly completed. Time will not be provided to cure deficiencies in the claim.

E. Once the deputies have gained entry, they will ensure the location is vacated. After the deputies are satisfied that the location is vacated, they will turn the possession of the property over to the property owner/agent. The property owner/agent will sign the restoration (eviction form) papers. Owner/agent shall not make entry or be allowed into the location prior to deputies rendering the location safe.

F. In the event, the premises are not clear, and no lawful “Claim of Right to Possession” is received, the deputy will remove the occupants from the location.

G. The deputy will be responsible for completing the trip ticket attached to the process. The following information will be entered on the trip ticket.

1. Served

2. Where served

3. Date and time process served

4. Names of person property returned to

5. Signature of deputy and employee number.

H. The deputy will return the completed trip tickets for “Restoration” to the eviction clerk for final postings.

In any event where a preponderance of the evidence identifies the owner or any agent for the owner has entered the location prior to restoration by the Sheriff. The Owner is considered to have “self-restored” the property. No further action will be taken by the Sheriff. No paperwork indicating the Sheriff participated in the action will be provided.

PROCEDURE 6 CLAIM OF RIGHT TO POSSESSION (CCP1174.3)

A. Unless a prejudgment claim of right to possession has been served upon occupants in accordance with CCP 415.46 any occupant not named in the judgment for possession who occupied the premises on the date of the filing of the action may object to enforcement of the judgment against the occupant, by filing a “Claim of Right to Possession”.

B. This section applies to any Writ of Possession of Real Property. The levying deputy shall accept possession claims on commercial property as well as residential property.

C. This procedure **DOES NOT APPLY** when the Writ of Possession contains a statement that the writ applies to all tenants, subtenants, if any, named claimants if any, and any other occupants of the premises. This exclusion applies when a Summons, Complaint, and “PREJUDGMENT CLAIM OF RIGHT TO POSSESSION” was

effected on the occupants of the premises. {CCP 415.46, 715.010a, and 1174.3(a)}

D. The "Claim of Right to Possession" may only be made by a person 18 years of age or older, and who occupied the premises on or before the date the unlawful detainer (eviction) action was filed.

E. A claim may be filed at any time after service or posting of the writ of possession, up to and including the time at which the levying deputy returns to affect the eviction of those named in the writ of possession. A claim of right to possession is effected by the claimant "presenting a completed claim form in person, with identification, ***before the date of eviction*** at the Office of the Sheriff, OR at the ***premises at the time of eviction***.

F. Filing the claim shall constitute a general appearance for which a fee shall be collected as provided in the Government Code. The fee amount is established by local rule of court and collected by the court, not the sheriff.

PROCEDURE 7. <u>ACCEPTING THE CLAIM OF RIGHT TO POSSESSION BY THE FIELD DEPUTY</u>

A. Upon receipt of a claim in the field, the deputy will indicate the date and time of its receipt. When the deputy returns to the office, he will give the Eviction Clerk the original claim.

B. The eviction clerk will deliver the original to the issuing court, provide a copy to the claimant, and notify the plaintiff.

C. When the deputy accepts the claim, the deputy will **STOP THE EVICTION**. No further action will be taken at this time.

PROCEDURE 8. <u>ACCEPTING THE CLAIM OF RIGHT TO POSSESSION WHEN PRESENTED AT THE OFFICE OF THE SHERIFF, CIVIL UNIT</u>

A. Upon receipt of a claim at the Civil Office, the person accepting the claim will first check with the eviction clerk to ensure that the claim has been filed in a timely manner. To clarify the term timely manner, the person accepting the claim will check the **date of eviction.** The date of eviction is checked to ensure that the **Claim of Possession is delivered before the date of eviction.** Should the claim be presented on the **Same Day as the Eviction**, the claim cannot be accepted.

B. After checking the claim, and ensuring that the claim is made in a timely manner, the clerk will accept receipt of the claim indicating the date and time of its receipt and deliver the original to the issuing court, provide a copy or receipt to the claimant and notify the plaintiff.

C. The court will set a hearing to be held on the fifth day after the filing is completed. The court will notify the claimant and the plaintiff of the hearing date.

D. After the claim has been accepted, **DO NOTHING FURTHER WITH THE EVICTION UNTIL FURTHER ORDERED BY THE COURT**

PROCEDURE 9 CLAIM DENIED

A. If the claim is denied or, upon hearing, the court determines that there are no valid claims, the court shall order the deputy to proceed with enforcement of the original writ of possession as deemed amended to include the claimant.

B. Upon receipt of the court's order, the levying officer will enforce the writ against any occupant or occupants within a reasonable time not to exceed five days.

PROCEDURE 10 DISPOSITION OF PERSONAL PROPERTY

A. The disposition of personal property remaining on the real property after eviction restoration becomes the responsibility of the Property owner/Agent. The property owner/agent is to dispose of the property, as outlined in Chapter 5 of the Civil Code.

PROCEDURE 11 EXECUTION OF A WRIT OF POSSESSION/REAL PROPERTY BY A REGISTERED PROCESS SERVER

A. In the event the levying deputy does not execute the writ within three days (exclusive of Saturday, Sunday, and legal holidays), a registered process server may execute the writ of possession of real property as provided in CCP 715.020.

B. If the writ is not executed within such time, the levying deputy will upon request give the writ to the judgment creditor or a registered process server designated by the judgment creditor.

C. Within five days after executing the writ, the registered process server shall file with the levying deputy all of the following:

1. The writ of possession of real property.

2. An affidavit of the registered process server stating the manner the writ was executed.

3. Proof of service of the writ.

4. Instructions in writing, as required by CCP 687.010.

D. The levying deputy shall perform all other duties under the writ and shall return the writ to the court.

CONTRA COSTA COUNTY **NUMBER 11-1**
INVESTIGATION DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **EARNING WITHHOLDING ORDER (EWO)**

POLICY: Service of civil documents shall be completed in a manner consistent with the Civil Code of Procedure and the Sheriff's Civil Manual. Service of earnings withholding is the responsibility of personnel assigned to the Civil Unit when accompanied by a fee waiver from the court.

GENERAL INFORMATION: Process received for service will be checked by clerical staff to ensure all documents, instructions, fees, and attachments necessary for the service of process are complete and correct. Clerical staff will receive, input, and process all EWO documents, open case files and route to the Civil Unit sergeant for assignment to field personnel, if a physical process is required.

The Civil Code of Procedure allows Earnings Withholding Orders to be served by either a levying officer or a Registered Process Server (RPS), in the same manner. The exception being an RPS may **NOT** serve by registered mail.

PROCEDURE 1: Unless specifically instructed to serve EWO's by personal service, these documents will be served via certified mail. Employees of the Federal Government, such as Military and USPS, will be served via Certified mail.

PROCEDURE 2: When instructed, and when accompanied by a fee waiver, the levying officer shall affect personal service.

CONTRA COSTA COUNTY **NUMBER 12-1**
INVESTIGATIONS DIVISION **EFFECTIVE 12-17-19**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **EXTRADITIONS**

POLICY: Arrests of fugitives in other States or Countries, who have active Contra Costa County Felony Warrants, will result in the initiation of extradition proceedings within the Sheriff's Civil Unit. The extradition will be completed in an appropriate and timely manner to ensure the fugitives appearance before a local Court and Magistrate.

GENERAL INFORMATION: The process of fugitive extraditions requires certain procedures that are relative by law, record retention, and financial reimbursement.

Extradition personnel must become knowledgeable about these procedures in order to obtain monetary advancement and reimbursement for extraditions.

Extraditions conducted by commercial flights will only be handled by full-time Deputies.

PROCEDURE 1: **DUTIES**

A. Civil deputies will regularly monitor fax machine, voicemails, and emails for incoming extraditions.

B. The Civil Unit Sergeant shall be notified when a subject is in custody in another state on a Contra Costa County Warrant.

C. If a potential extradition is received, the deputy will notify the assigned extradition deputy District Attorney and Civil Unit Sergeant and obtain extradition approval.

D. The deputy will contact the holding agency and confirm approval/authorization paperwork has been completed, a copy of a signed waiver of extradition is received, and the inmate is ready to be transported to Contra Costa County.

E. Deputies will create an extradition folder for a wanted fugitive that will include demand form, any correspondence, extradition authority, signed waiver, and fugitive photo/booking information.

F. [redacted]

G. [redacted]

H. Book/schedule trip using issued procurement credit card. [redacted]

I. Send teletype to TSA to obtain the individual NLETS number for each deputy conducting extradition.

J. Complete a Flying Armed Authorization Form that will be signed by Civil Unit Supervisor, Manager, or Captain.

K. Complete Extradition Advance Request form to secure funds for travel, meals, lodging, etc.

L. Extradition Advance Request Forms are to be submitted to the Civil Lieutenant or designee in cases of their absence. One photocopy is to be made for the Extradition Unit file. The original is to go to the Department Finance Officer for his/her signature, or in his/her absence, the Sheriff, Undersheriff, Bureau Commander or Chief of Management Services.

M. The Extradition Advance Request is to be walked over to the Auditor-Controller's Office for the issuance of a check.

N. The check is to be cashed at the Treasurer's Office or per Treasurer's instructions.

O. If the District Attorney advises the fugitive is not wanted, the deputy will change extradition status of the warrant to California Only and notify County Records/Warrants.

PROCEDURE 2 **POST-EXTRADITION PROCEDURES**

A. Upon completion of an extradition, the following procedures will be carried out in order to ensure reimbursement of funds expended.

B. The deputy will assemble all receipts of expenses arising from the extradition.

1. All unused monies/funds will be returned to the Civil Unit Accounting Clerk, or other designated individual, for deposit

in the County Treasury. The receiving party will provide evidence of the deposit to be placed in the Extradition file.

2. The deputy will complete the "Travel Expense Claim." The claim will be forwarded to the Civil Unit Supervisor within three business days following the receipt of supporting documents.

3. The Extradition folder will be provided to the Civil Unit Supervisor or their designee for further processing.

PROCEDURE 3 **BILLING OF THE STATE FOR REIMBURSEMENT**

A. The Civil Unit Sergeant or their designee will compile those documents required by the state for reimbursement.

1. Documents shall be forwarded to the state in a timely fashion

2. A copy of those documents forwarded to the state will be placed in the Extradition file.

3. A copy of the Travel Expense Claim will be placed in the Civil Unit accounts receivable folder to be matched up with the payment when received.

4. When reimbursement is received, the funds will be deposited into the County Treasury.

PROCEDURE 4 **EXTRADITION (NOT WAIVED)**

A. Forward a certified copy of the complaint and warrant to the asylum state.

B. Upon notification that the subject has refused to waive extradition:

1. Forward notification of custody, refusal of extradition, and a copy of the report to the District Attorney's Office.

2. The District Attorney's Office will request a Fugitive Warrant from the Governor's Office and Agent's Appointment.

C. When the fugitive becomes available for transportation, initiate extradition proceedings as described above.

D. Upon return of the subject:

1. Complete the Agent's Appointment and return it to the Governor's Office.

2. Closeout any necessary forms, as described above.

CONTRA COSTA COUNTY **NUMBER 13-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **RENDITION BILLING**

POLICY: All Rendition proceedings shall be the responsibility of the arresting agency. The Office of the Sheriff, Civil Unit, will process all Sheriff's Office (including all contract cities and CHP) arrests, with timely notification of the fugitive's availability to the agencies outside of California. Other arresting agencies within Contra Costa County may contract with the Office of the Sheriff for rendition services.

GENERAL INFORMATION Office of the Sheriff General Policy 1.06.30 provides specific guidelines for the handling of arrest/bookings for Penal Code 1551.1. This policy addresses the billing of arresting agencies for those services provided under contract. This contract requirement may be waived by the Civil unit manager or his chain of command on a case by case basis.

PROCEDURE 1 **NOTIFICATION OF ARREST**

A. Civil Unit Deputies will monitor e-mail for receipt of the "Civil 1551" report issued and maintained by Technical Services.

B. The Civil Unit Deputy assigned the file will confirm the arresting agency has contracted for the Office of the Sheriff to provide rendition services.

PROCEDURE 2 **BILLING FOR RENDITION**

A. The deputy will create an invoice to the contracting agency. The invoice number will be that individuals file number when created in the "Extradition Log." The deputy will mail one copy to the arresting agency and provide the Civil Unit Sergeant a copy of the invoice.

B. The Civil Unit Sergeant will place a copy of the invoice in the Civil Unit Accounts Receivable folder.

C. When payment is received, the amount will be deposited with the Treasurer, and a copy of the payment will be placed in the Rendition file.

D. The Civil Unit Sergeant will monitor the Civil Unit Accounts Receivable folder and resend any unpaid invoices outstanding for greater than sixty days.

E. Any additional efforts required for the collection of amounts due will be handled by the Civil Unit manager.

PROCEDURE 3 DISPUTED BILLINGS

A. Any disputes as to billing will be submitted in writing to the Office of the Sheriff's Civil Unit Supervisor. If the billing dispute cannot be resolved, it will be forwarded to the Office of the Sheriff's Civil Unit Manager for final written determination.

PROCEDURE 4 RENDITION CONTRACTS (AGREEMENTS)

A. The Civil Unit Sergeant will maintain a file of all signed "Rendition Service Agreement(s)."

B. The Agreements will be for a period of three years unless terminated sooner as provided in the Agreement.

C. The appropriateness of the fee amount will be addressed by Command prior to subsequent renewals of the contract.

CONTRA COSTA COUNTY **NUMBER 14-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **COMPENSATION**

POLICY: The regular and overtime pay for Deputies on Extraditions will fall within the guidelines of FSLA, State law, respective MOU's and the below-listed policy, with precedence in that order.

GENERAL INFORMATION: Extradition details may be scheduled for one or more days, depending on the geographical location where the fugitive is being held pending pick-up by the fugitive unit. The following procedures state the compensation methodology under normal circumstances.

PROCEDURE 1 Personnel assigned to an extradition detail during his/her regular duty shift will be paid at the normal rate of pay for their regular workday hours. Overtime will then be paid for actual time worked above this time. An example would be the team is still driving to, or returning from, the destination when the regular workday hours are exceeded. The necessity for this overtime must be articulated via e-mail to the Unit Supervisor.

PROCEDURE 2 Personnel assigned to an extradition detail traveling by plane will be allotted a full travel day for the outbound portion of the trip. A second travel day will be allotted for the inbound portion of travel. An additional travel day will be provided at the destination for those destinations east of the Mississippi River, Hawaii, and Alaska. This additional travel day may be granted at the discretion of the Civil Unit manager for destinations which present a complicated travel itinerary.

PROCEDURE 3 Personnel assigned to an extradition detail who are on their regular days off, after having worked a full FSLA work week, will receive a maximum of the regular workday hours of overtime pay per day.

PROCEDURE 4 Deputies assigned to extradition details that would normally be two days in duration, but are scheduled for a one-day turn-around, will be paid for the total amount of overtime worked.

PROCEDURE 5 Overtime demands must be accompanied by e-mail stating the reasons, i.e., canceled flight, delayed departure due to weather, mechanical problems, medical needs, etc. Each demand will be evaluated on an individual basis by the Civil Unit Manager or Supervisor.

CONTRA COSTA COUNTY **NUMBER 15-1**
INVESTIGATIONS DIVISION **EFFECTIVE 1-1-18**
CIVIL UNIT
POLICIES AND PROCEDURES

SUBJECT: **VEHICLES**

POLICY: In order to maintain the highest standard of service and utilize the available work hours in the most economical manner, Civil Unit Staff may home garage their assigned vehicles.

REFERENCE: Department Manual 1.07.42 & 1.07.43

GENERAL INFORMATION: **JUSTIFICATION**

The Civil Staff's duties are such that check-out of a County vehicle from the Civil Unit at the start or end of the workday are impractical and uneconomical due to lost efficiency and increased fuel consumption.

The option of home garaging allows the Civil staff to start their day in an assigned area, rather than at the office. Staff can, therefore, make more efficient use of time in the field, i.e., avoiding traffic during congested times and in congested areas, because of planning and direction.

Home garaging also avoids the added travel time to and from the office to pick up a car when necessary to perform other civil functions outside of normal work hours. These include:

- The placement and removal of "Keepers," and response to a keeper's location in case of an unplanned status change.
- The levying of property.
- The service of process after hours.
- Travel to and from airports for the purpose of extraditions after/before hours.

PROCEDURE 1 Deputies will normally begin and end their shifts at the Civil Office to assure maximum coordination and organization of tasks by the Unit Supervisor. Prior approval by a supervisor is necessary for ALL service of process by staff taking place on the way in, or the way home from work.

GENERAL INFORMATION: **GENERAL OPERATIONS**

The Civil Unit has been provided expressed permission from the Field Operations Bureau Assistant Sheriff to operate a marked patrol car. The use of the assigned patrol car will be supervised by the Civil Unit Supervisor. The purpose of the vehicle is to provide easily identified presences while conducting evictions and the service of process.

Contra Costa County

OFFICE OF THE SHERIFF

Support Services Bureau
Coroner's Division Policy and Procedure

2019



Contra Costa County Office of the Sheriff
Coroner's Division Policy and Procedures

Preface

The mission of the Coroner's Division is to inquire into and determine the circumstances, manner and cause of sudden, violent, unusual and unattended deaths that occur in Contra Costa County. Coroner's Division staff shall strive to serve the community in the most responsive, compassionate and professional manner possible.

This manual is a composite of current practices, principles, policies and administrative procedures governing the operation of the Office of the Sheriff Coroner's Division. The policies and procedures listed herein provide the members of the Coroner's Division with a method to achieve an objective and accurately reflect the professional expectations and standards of the Office of the Sheriff.

Every employee assigned to the Coroner's Division is responsible for familiarization with the Sheriff's Policy and Procedures Manual and the Coroner's Division Policy and Procedures Manual. Each employee shall review and understand these manuals as part of his or her initial orientation and again as necessary to remain current.

The Coroner's Division Commander will conduct an annual review of this Manual to ensure best practices reflect current policy and procedures. Suggestions for corrections or additions to this Manual may be submitted directly to the Coroner's Division Commander.

Captain David J. Hartman
Coroner's Division Commander
December 2019

Contra Costa County Office of the Sheriff
Coroner's Division Policy and Procedure

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Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.01
	RELATED ORDERS: Government Code Sections 27471 & 27491 Health and Safety Code Sections 102855 & 108875.	
ISSUE DATE: 06/01/2005 **REVISION DATE: 05/12/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Authority and Responsibilities**	

I. POLICY

A. The primary function of the Coroner's Division is to inquire into and determine the circumstances, manner and cause of all sudden, violent, unusual and unattended deaths that occur in the county. Additionally, the Coroner's Division will determine the extent of inquiry to be made into any death occurring under natural circumstances and falling within the provisions of the Government Code. Coroner's Division staff shall strive to serve the community in the most responsive, compassionate and professional manner possible.

II. DEFINITIONS

A. The Sheriff-Coroner receives his authority and responsibilities from the California Government Code and the California Health and Safety Codes. The following two mandates represent the primary code sections that dictate the duties and responsibilities of the coroner.

1. California Government Code Section 27491
"It shall be duty of the coroner to inquire into and determine the circumstances, manner, and cause of all violent, sudden, or unusual deaths; unattended deaths; deaths related wherein the deceased has not been attended to by a physician in the 20 days before death; deaths related to or following known or suspected either homicide, suicide, or accidental poisoning, criminal abortion."

2. Health and Safety Code Section 102850
The coroner shall investigate all deaths:

   a. Under circumstances as to afford a reasonable ground to suspect that the death was caused by criminal act of another.

   b. During the continued absence of the attending physician and surgeon.

   c. When the attending physician is unable to state the cause of death.

   d. Where suicide is suspected.

   e. Following an injury or an accident.

f. Without medical attendance.

III. PROCEDURE

A. The Coroner, pursuant to California Government Code Section 27491, has the duty to inquire into and determine the circumstances, manner, and cause of all violent, sudden, unusual, or unattended deaths. These are deaths as a result of known of suspected homicide; accidental death, such as from a vehicle accident, drug overdose, drowning, fall, known or suspected suicide, suspected Sudden Infant Death Syndrome or any death that is suspicious. Additionally, the coroner investigates deaths wherein the identification of the decedent is not known and any deaths that are connected with the actions of law enforcement personnel. The coroner will assume jurisdiction when the decedent does not have a physician or if the physician, based on his knowledge of the decedent's medical history, is unable to determine a reasonable cause of death.

B. The primary responsibilities of the Coroner include:

1. **Determine of the cause and manner of death**: The forensic pathologist will review the Coroner's Investigative Report, pictures of the scene and any pertinent medical history. After an autopsy is conducted, toxicology or histology may be requested. The forensic pathologist will determine the cause of death after all the test results are received. The coroner investigator will then review the cause of death, any investigative findings from the agency of jurisdiction and recommend a manner of death. As each case is individually evaluated, an autopsy may not always be required. The forensic pathologist may review the medical records and/or consult with the attending physician to determine the cause of death.

2. **Establish and confirm the decedent's identity:** If the deceased is visually recognizable, the investigator may confirm identity contextually based on photographic identification combined with personal effects, circumstances, body markings and physical descriptions. In cases involving badly disfigured, burned, badly decomposed or unidentified bodies, the investigator will use fingerprints, dental records, radiological and/or DNA comparisons to positively identify the remains.

3. **Safeguard the property of the deceased:** A coroner's investigator can inventory, secure and transport the property to the office for safekeeping. In all suicide cases, involved weapons are made safe and collected as evidence. In cases when no next of kin is located at the scene, the investigator may place the Coroner Seal on the residence, precluding anyone from the entering until legal authority is verified.

4. **Notify the Next of Kin:** Pursuant to Government Code 27471, whenever the coroner takes custody of a dead body he or she shall make a reasonable attempt to locate the family.

5. **Additional roles:**

- Facilitate organ/tissue harvesting.
- Conduct Coroner's Inquests.
- Participate in Death Review Teams.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.02
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 01/01/1990 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Coroner's Division Manual	

I. POLICY

A. The Coroner's Division Manual is a composite of current practices, principles, policies and administrative procedures governing the operation of the Office of the Sheriff Coroner's Division.

II. GENERAL INFORMATION

A. The policy and procedures established within this manual apply only to those members of the Coroner's Division and does not apply to the standard of care, in an evidentiary sense, to criminal or civil proceedings.

III. PROCEDURE

A. REVIEW AND ACCESS

1. Every employee is responsible for familiarization with the Sheriff's Policy and Procedures Manual and the Coroner's Division Policy and Procedures Manual. Each employee shall review and understand these manuals as part of his or her initial orientation and again as necessary to remain current.

2. Each employee shall have access to the Coroner's Division Manual located in the Sheriff's Personnel Administrative Record Keeping System.

Contra Costa County Office of the Sheriff Patrol Division Policy and Procedure	CORONER	NUMBER: 3.03.03
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 04/12/1999 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Chain of Command	

I. POLICY

A. To achieve effective direction, coordination and control, clear lines of authority are established designating who is in command at all times.

II. GUIDELINES

A. Coroner investigators often work without the assistance of direct supervision. When questions arise, the investigator should refer to established law, practice or policy. Additionally, the investigator may contact command personnel to receive direction or clarification.

III. PROCEDURE

A. In the event an investigator requires a supervisory decision or opinion, he or she shall make a reasonable attempt to contact the Coroner's Division sergeant or captain.

B. If the sergeant and the captain are both unavailable, the investigator shall contact the Officer of the Day for direction.

C. If the Officer of the Day is not available, the investigator shall contact the Coroner's Division Senior Deputy.

D. If the Officer of the Day or Senior Coroner Deputy is utilized, the coroner's investigator shall notify the Coroner's Division captain and sergeant by leaving a message on their cell phones.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.04
	RELATED ORDERS: Office of the Sheriff Policy and Procedure Forensic Medical Group Service Agreement	
ISSUE DATE: 06/01/2005 **REVISION DATE: 05/12/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Delineation of Responsibilities**	

I. POLICY

A. Each employee or volunteer working in the Coroner's Division shall be aware of their respective duties and responsibilities. Each person will be given the necessary authority to effectively execute the responsibilities of their assignment or position.

II. GENERAL INFORMATION

A. The Coroner's Office in Contra Costa County consists of ten full-time employees who provide service to the community twenty-four hours a day, seven days a week, twelve months a year. The Coroner's Division utilizes six deputy sheriffs trained as coroner's investigators. Two full-time clerks provide clerical support for the Division. The organizational chart is as follows:

1. 1 Captain
2. 1 Sergeant
3. 6 Deputy Sheriff coroner investigators
4. 1 Per Diem Deputy Sheriff
5. 2 Clerks
6. 1 Contract Forensic Assistant
7. 3 Contract Forensic Pathologist

III. DEFINITION

A. CAPTAIN

1. The functions and responsibilities of the Coroner's Division are commanded by a Captain. As the Division Commander, the Captain administers and develops programs for the successful operation of the Division.
2. These duties include conducting a final review of all investigative reports, organizing and assigning work details within the Division, reviewing personnel performance, administering the annual budget, interacting with the media and other administrative duties as required.

B. SERGEANT

1. The sergeant acts as the Assistant Division Commander and is required to possess a working knowledge of the duties and responsibilities of all employees within his or her span of control.
2. The sergeant's duties include reviewing investigative reports for accuracy, maintaining the Division Inventory, supervision of the coroner investigators, clerical support, volunteers, support personnel and other duties as required.
3. The sergeant will exercise direct command in a reasonable manner that assures the good order, proper discipline and efficiency of the employees.

C. DEPUTY SHERIFF

1. The coroner's investigators determine the manner of death through examination of evidence, scene investigation, interviewing witnesses and doctors, researching the decedent's medical history, autopsies and/or conducting Coroner Inquests.
2. Additionally, the information developed by the crime scene investigators, investigators from law enforcement agencies having jurisdiction over the death, criminalists and fingerprint examiners is used by the coroner's investigator to complete the investigation.
3. The coroner's investigator will remove the deceased from the place of death and transport them to the Central Morgue in cases requiring an examination by a pathologist.
4. The coroner's investigators are responsible for the receipt, collection, documentation and storage of the decedent's personal effects and notification of the legal next of kin.

D. CLERICAL SUPPORT

1. The clerks provide critical support to the Coroner's Division as they prepare death certificates, transcribe autopsy reports, collate and compile mandated statistical information, process invoices and provide general clerical duties associated with the Division.

E. FORENSIC PATHOLOGISTS

1. The Office of the Sheriff contracts with the Forensic Medical Group (FMG) for forensic pathologists and other specialists as needed. The forensic pathologists' primary function is to determine the cause of death.
2. These doctors also participate on County/State mandated death review boards and provide expert testimony at Coroner's Inquests.

F. FORENSIC ASSISTANT

1. For each autopsy, the pathologist works with a forensic assistant who will assist with the procedure.
2. The forensic assistant maintains the autopsy and body storage areas in a clean and orderly manner.
3. The forensic assistant works under the direct supervision of the pathologist and will accomplish the tasks enumerated in the service plan between the pathology services contractor and the Office of the Sheriff.

G. VOLUNTEERS

1. All volunteers working in the Coroner's Office must be a member of S.A.V.E.S. (Sheriff All Volunteer Extended Services).
2. The volunteers can request to work in areas of their interest, to include working in the Autopsy Examination Room assisting the pathologist assistant or working in the front office to assist with clerical functions.

H. VICTIM ASSISTANCE GROUPS

1. Numerous groups provide assistance to families after the death of a family member. The Coroner's Office works closely with several organizations to include:

    a. The Crisis Center, Contra Costa Prescription Drug Abuse Coalition, Suicide Prevention and Stand! Against Domestic Violence.

2. The Coroner's Office provides these groups with statistical information and access to specific files for review provided they have successfully completed a background check and or have been granted access by the supervisor or Division Commander.

I. CONTRACT EMPLOYEES

1. In addition to all SAVES volunteers, all contract employees must successfully complete a background examination before access is allowed within the Coroner's Office and the Central Morgue.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.05
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 08/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Professional Conduct	

I. POLICY

A. Persons working in the Coroner's Division will perform their duties with integrity and honesty. They will conduct themselves in an exemplary manner, both on and off duty, in keeping with the standards of the Office of the Sheriff Policies and Procedures Manual and the Coroner's Division Manual.

II. GENERAL INFORMATION

A. The Coroner's Division offers a unique work environment for personnel. Frequently during an investigation, deputies will become aware of the availability of property or real estate for sale. For example, the investigator may learn that a home, vehicle, or weapons not involved in the death are available for purchase. Because of the unique nature of the interaction with the next of kin, the employee is afforded information about the sale of property not afforded to the public.

III. PROCEDURE

A. While conducting a Coroner's investigation, personnel are not to use information they obtained for personal gain. This policy does not prohibit the employee from purchasing property or real estate once it has become available for purchase to the public and is sold through proper channels.

B. Employees solicited to assist the next of kin either in disposing of property or because of their employment with the Coroner's Office shall explain to the person that they cannot accept a gratuity pursuant to department policy.

C. If solicited to purchase items from the estate involving a Coroner's case, the deputy shall report the solicitation to their Chain of Command.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.06
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 03/17/1999 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Uniform / Dress Code	

I. POLICY

A. Members of the Coroner Division will be appropriately dressed while on duty. Civilian clothing will present a professional image at all times. Uniforms will adhere to Division requirements.

II. GUIDELINES

A. As a representative of the Sheriff-Coroner, personnel shall present themselves in a professional manner at all times. Specific dress guidelines have been established addressing both civilian and uniformed apparel. The Division Commander maintains the authority to modify these requirements when necessary.

III. PROCEDURE

A. The Coroner's Division Uniform (Refer to CCCSO Policy 1.07.21):

1. **Class "D"**

   a. Black, 10"x4" **CORONER** logo with black background and 2 ¾" gold lettering with a 1/8" gold border on the back of the uniform.

   b. 1" x 6 ½" cloth name patch (black with gold lettering) over right front pocket (no patches on sleeves).

2. **Foul Weather Jacket**

   a. Black jacket, (Refer to CCCSO Policy 1.07.21).

      - 10”x4” **CORONER** logo with black background and 2 ¾” gold lettering with a 1/8” gold border on the back of the jacket. 1”x6 1/2” cloth name patch (black with gold lettering) over right front pocket and **CORONER** over left front pocket. (no patches on sleeves).

3. **Specialized Unit Cap**

   a. Black baseball style, 100% wool 1/2” gold embroidered letter CONTRA COSTA SHERIFF in a semi-circle on the front with **CORONER** on the bottom in a straight line.

4. **Class E**

   a. Coroner’s investigators may wear a black polo shirt and tan pants in accordance with CCCSO Policy 1.07.21.

5. **Windbreakers**

   a. Black, nylon, embroidered windbreakers are issued to personnel assigned to the Coroner’s Division and may be worn when performing coroner functions only.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.07
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 07/11/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Written Communication/Publications	

I. POLICY

A. All written and verbal communications will project a professional image, be properly formatted and grammatically correct. The preparation of reports, documents, correspondence, and public presentations will follow a Division standard outline presented in the Department and Coroner Manuals.

II. CORRESPONDENCE

A. All outgoing correspondence, except documents directed to other divisions within the Office of the Sheriff, shall be on approved, current letterhead stationery. No correspondence shall be sent out without the prior approval of the Coroner's Division sergeant or captain.

III. PUBLICATIONS/ FORMS

A. All publications, to include forms and brochures, shall only be authorized by the Division Commander. An investigator shall not author their own forms for use in their investigations.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.08
	RELATED ORDERS: Public Records Act	
ISSUE DATE: 09/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Records Access and Security	

I. POLICY

A. Records or copies of reports can be released only if the requests meet prescribed legal and internal guidelines.

II. GENERAL INFORMATION

A. Request for reports come from law enforcement agencies, next of kin, hospitals, government agencies, insurance companies and interested parties. All requests will be reviewed, and dissemination of the report will be documented. Fees collected, when appropriate, will be receipted and tracked.

III. DEFINITIONS

A. *Coroner's Investigative Report*: This report documents the classification, case number, decedent information, next of kin information, place of death, medical history, injury information and investigation findings. The Autopsy Report, Blood Alcohol Report, Report of Toxicology Examination, Report of Controlled Substances Examination, and Coroner's Findings are included in the Coroner's Investigative Report.

B. *"Need to Know":* Access will be evaluated and approved by the Coroner's Division Commander. Non-assigned persons requesting access to files shall provide the Division Commander with a written request outlining the information sought and the need to know.

C. *Death Certificate:* The death certificates are never released from the Coroner's Office. Copies may be purchased from the Public Health Department, Vital Registration Office, 826 Main Street, Martinez, CA 94553.

IV. PROCEDURE

A. Security of Records

1. Coroner files shall be stored in an area that can be directly accessed and monitored by members of the Coroner's Division.

2. All Coroners' files, to include microfiche files, shall be stored at the Coroner's Office or placed on a redundant server.

B. Accessing Records / Investigative Reports

1. Coroner's reports are public records and may be viewed at the Coroner's Office, or in the presence of Coroner's Office staff without charge.

2. All requests for reports provided verbally or in writing shall be reviewed to confirm validity.

3. Counselor(s) for the Crisis Center can access files only under the direct supervision of Coroner's Division personnel and only after a background investigation has been completed on the counselor and a Confidentiality Agreement signed.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.09
	RELATED ORDERS: Office of the Sheriff Policy and Procedure Civil Code of Procedures Section 129	
ISSUE DATE: 08/12/1998 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Release of Information	

I. POLICY

A. The Coroner's Division shall be a source of information on the cause and manner of death of all Coroner's cases. The investigative staff is encouraged to share scientific and investigative facts with the media, however speculation is not authorized. In high profile cases, the Coroner's Division shall defer to the Press Information Officer (PIO) for communication with the media.

II. GENERAL INFORMATION

A. The Coroner's Division provides a pubic function which requires written records. These records are deemed public records and can be made available to the public via the media.

III. PROCEDURE

A. INFORMATION THAT MAY BE RELEASED

1. Criminal Investigations

a. The media should be directed to contact the involved law enforcement agency for information. Investigators often withhold specific facts about the incident for a variety of reasons.

b. Specific information shall not be released by Coroner's Division personnel without the approval of the primary investigator of the law enforcement agency conducting the criminal investigation.

B. Celebrity/Notorious or High-Profile Deaths

1. Deaths of celebrities or high-profile persons may generate considerable media interest. As soon as such a death becomes known to an investigator, it shall be brought to the attention of the Coroner's Division Commander and/or Assistant Division Commander.

2. The Coroner's Division Commander will ensure the Sheriff's Executive Team (Sheriff, Undersheriff, Assistant Sheriff's) and the Sheriff's PIO have been notified of the death, investigation status, and the cause of death (when issued by the pathologist).

3. Also, in such cases where any initial media inquiries have been met with a response from the Coroner's Division, Sheriff's command staff will be notified as well via the chain of command.

C. Law Enforcement Involved Fatal Incident Protocol Cases (LEIFI):

1. In LEIFI Protocol cases the Coroner's Division shall ensure the following entities will be notified of the official cause of death <u>immediately upon the completion of the pathologist's report</u>:

a. Sheriff's Executive Team (Sheriff, Undersheriff, Assistant Sheriffs), via the chain of command.
b. The Sheriff's PIO
c. The investigating law enforcement agency and agency having jurisdiction over the case.
d. In cases involving the Office of the Sheriff, notifications will be made to the Investigation Division.

2. Staff will complete the LEIFI Protocol Cause of Death notification form, indicating specifically the person who was advised of the cause of death. The form will be placed on the outside of the Coroner's investigation folder.

3. Also, in such cases where any initial media inquiries have been met with a response from the Coroner's Division, Sheriff's command staff will be notified as well via the chain of command.

D. Inquiries by news media and other persons:

a. The name and age of the deceased can be released only after the next of kin has been notified.

b. The city of usual residence for the deceased can be released.

c. The cause of death may only be released after the pathologist has completed the report.

E. All other information may be obtained via a normal written request and after the completed report is signed by the Division Commander.

IV. PHOTOGRAPHS

A. A coroner's photograph includes any photograph, taken by Coroner's Division personnel, their agent(s) and or contractors, of a decedent, death scene or post-mortem examination. Copies of coroner's photographs shall be made only in compliance with Code of Civil Procedures section 129.

B. Pictures of death scenes and of decedents will not be duplicated, reproduced, copied or distributed for any means other than for a law enforcement agency conducting an official investigation related to the photographs or pursuant to a court order.

C. Copies can be made for forensic pathology use or used as a teaching tool for law enforcement personnel only. Pictures of deaths currently under investigation shall not be displayed.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.10
	RELATED ORDERS: People vs. Williams (1959) 174 Cal App. 2nd 364	
ISSUE DATE: 08/12/1998 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Subpoenas and Court Orders	

I. POLICY

A. The Coroner's Office shall supply copies of reports, photos, and x-rays, along with body organs, samples of organs, blood, and tissue slides for court proceeding or medical studies via a properly submitted subpoena, court order, or written authorization.

II. PROCEDURE

A. Subpoenas/Court Orders for Materials/Reports

1. When served a subpoena or court order for copies of reports, photos, x-rays and other medical studies, the investigator or clerk shall first confirm the validity of the court order or subpoena.
2. The coroner's investigator or clerk shall document on the outside of the case file envelope the receipt of the court order or subpoena.
3. The coroner's investigator or clerk shall notify the supervisor and place the document in the case file.

B. Processing requests

1. Coroners Reports

a. The coroner's investigator or clerk shall make a copy of the Investigative Report, all diagnostic reports, the Autopsy Report and the Coroner's Findings and return to the requester pursuant to the subpoena instructions.

2. There is no charge for Coroner's Investigative Reports for government agencies. Subpoenas for coroner's reports made for a civil court require a service fee and a check for $26.00 must accompany the request. The coroner's investigator or clerk shall make a receipt and include the yellow copy with the report. The coroner's investigator or clerk shall attach the check to the white copy of the receipt and place it in the locked receipt box located near the front desk. The coroner's investigator or clerk shall complete the area labeled "COPIES SENT TO" with the appropriate information.

3. Slides

    a. The Forensic Medical Group currently supplies the slides for coroner's cases. In cases involving subpoenas, the coroner's investigator or clerk shall forward the original subpoena to the appropriate Forensic Medical Group representative.

4. Photographs and Dental Photographs

    a. Pictures and dental records may only be obtained through court order or subpoena.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.11
	RELATED ORDERS: Government Code Section 27491.5	
ISSUE DATE: 11/1/19 REVISION DATE: 11/01/19	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Coroner's Fees	

Autopsy

Private Requested Autopsy to determine cause of death only……..$2,995.00
(Includes removal fees. Laboratory costa extra if any)

Body Removal

Body removal fee cost charged to mortuary……$267.00
(Minimum fee required by state law)

Removal Supplies/Equipment

Removal supplies and/or equipment charge to mortuary……..$45.00 to $75.00

Coroner's Reports

Coroner's Report……$26.00 per copy
(Includes Autopsy report and Laboratory results, if any)
Note: No charge for legal next of kin, hospital, medical professionals or government agencies.

Discovery Request

(Compilation of information for non-government agencies)
Support Staff……$32.00 per hour or part thereof plus shipping if any.
(Laboratory Aide, Clerical, Ect.)
Sworn and Technical Staff……$149.00 per hour or part thereof plus shipping if any.
(Sergeant, Deputy Sheriff-Coroner, Criminalist, Fingerprint Examiner or Technician)

Copy of Coroner Photographs and X-Rays

(Per State Law these items are released for criminal prosecution, civil trial, and per court order only)
DVD/CD……$10.00 per disc

Protective Clothing

Autopsy Suite Personal Protective Clothing……$10.00 each

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.12
	RELATED ORDERS: Government Code Section 27491.5	
ISSUE DATE: 06/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Certificate of Death	

I. POLICY

A. A certificate of death will be completed on all coroner cases according to the requirements of the Health Services Department Vital Registration Unit.

II. DEFINITION

A. Government Code 27491.5

"The cause of death appearing on a certificate of death signed by the coroner shall be in conformity with facts ascertained from inquiry, autopsy and other scientific findings. In case of death without medical attendance and without violence, casualty, criminal or undue means, the coroner may, without holding an inquest or autopsy, make the certificate of death from statements of relatives, persons last in attendance, or persons present at the time of death, after due medical consultation and opinion has been given by one qualified and licensed to practice medicine and so recorded in the record of the death, providing such information affords clear grounds to establish the correct medical cause of death within accepted medical practice and within the requirements for accuracy prescribed by the Division of Vital Statistics of the State Department of Health Services. The coroner shall not finally exclude crime, suicide, or accident as a cause of death because of lack of evidence."

III. PROCEDURE

A. A Coroner's Division investigator or clerk will fill in the name, date and time of death and attest information pertaining to the cause, manner and injury information. All other information is completed by the funeral director or mortuary personnel

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.13
	RELATED ORDERS: Government Code Section 27463	
ISSUE DATE: 07/01/1997 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Coroner Register	

I. POLICY

A. The Coroner shall keep an official register of all coroners' cases. The register shall document the information mandated by the Government Code.

II. DEFINITION

A. Government Code Section 27463

The Coroner shall keep an official register labeled "Coroner's Register" with pages numbered, indexed and bound in which the Coroner shall enter:

1. The name and any aliases of the deceased, when known, including such descriptions as may be sufficient for identification and which may, in his discretion, include fingerprint records.

2. A narrative summary of the circumstances leading to and surrounding the death, together with the names and addresses of any witnesses to such event.

3. The property taken from the person or premises of the deceased by the coroner or by any other law enforcement agency.

4. The disposition of any property or monies so taken.

5. Information as to the disposition of the remains.

6. The cause of death, when known, with reference or directions to the detailed medical records upon which decision as to cause of death has been based.

7. Persons notified of the death, together with a notation of any unsuccessful attempts at notification.

B. Government Code Section 27463.5

In lieu of the "coroner's register", the coroner may keep an official file for each deceased person containing all the information required by Section 27463.5. At any time after the completion of the coroner's investigation, and the closing of the particular case involved, the coroner may photograph or microphotograph the contents of the file in accordance with the provisions of Section 26205, and, when the photographs or microphotographs are placed in conveniently accessible files and provision is made for preserving, examining, and using the same, the original file may be destroyed.

III. PROCEDURE

A. Pursuant to Government Code Section 27463 & 27463.5, Coroner's Division personnel shall document the required information in the following manner:

1. An electronic database will be maintained by the Coroner's Division Clerk Specialist. This database shall contain the decedent's name, date of birth, manner of death and type of examination conducted.

2. All other requirements of Government Code Section 27463 are satisfied by the Coroner's Investigative Report. All completed reports shall be scanned into Disc Image and stored indefinitely.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.14
	RELATED ORDERS: Government Code Section 27491.55	
ISSUE DATE: 08/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: Delegation of Jurisdiction	

I. POLICY

A. The jurisdiction of a coroner's case may be delegated to another county or the federal government pursuant to certain conditions provided within Government Code Section 27491.55.

II. DEFINITION

A. Government Code Section 27491.55

1. "In cases where a coroner is required to inquire into a death pursuant to Section 27491, the coroner may delegate his or her jurisdiction over the death to an agency of another county or the federal government when all of the following conditions have been met:

   a. The other agency has either requested the delegation of jurisdiction or has agreed to take jurisdiction at the request of the coroner.

   b. The other agency has the authority to perform the functions being delegated.

   c. When both the coroner and the other agency have a jurisdictional interest or involvement in the death."

III. PROCEDURE

A. DELEGATION OF AUTHORITY

1. Occasionally, another county requests jurisdiction over a case. This usually happens when the decedent incurred an injury that led to their death in another county and the decedent was transported to Contra Costa County for medical treatment.

2. When the Coroner's Office receives a request for release of jurisdiction, the investigator will FAX or email the "Request to Assume Jurisdiction" form to the requesting party.

3. The coroner's investigator will put the coroner's case number on the form prior to sending it.

4. Upon receipt of the completed form, the coroner's investigator will call the agency and advise that jurisdiction is being delegated to them as requested.

5. The coroner's investigator will note in the report delegation of authority was given to the requesting party, how the decedent came to Contra Costa County and justify the transfer of jurisdiction.

6. The "Request to Delegate Jurisdiction" form shall be placed in the Coroner Case File envelope.

B. REQUEST TO ASSUME JURISDICTION FROM ANOTHER COUNTY

1. In those cases whereupon Contra Costa County has a jurisdictional interest or involvement in the death of a person from another county, delegation of jurisdiction can be made pursuant to Government Code Section 27491.55. For example, if a child is pronounced dead at Children's Hospital in Oakland in Alameda County, the Contra Costa County Coroner may request jurisdiction if the investigation reveals that the child sustained fatal injuries while in Contra Costa County.

   a. The coroner's investigator will confirm the death of the individual and advise a supervisor or manager that the law enforcement agency has a true jurisdictional interest and has requested jurisdiction.

   b. The investigator will FAX or e mail a "Request to Assume Jurisdiction" form to the county the death occurred in.

   c. Upon arrival of the transfer of jurisdiction, the coroner's investigator will handle the case in the same manner as if the decedent died in Contra Costa County.

   d. The complete "Request to Assume Jurisdiction" form shall be retained in the case file.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.15
	RELATED ORDERS: Government Code Section 27498 & 27500 Code of Civil Procedure Section 1985 Civil Code 56.10 (b)(8)	
ISSUE DATE: 07/01/2005 **REVISION DATE: 05/12/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Coroner Subpoena**	

I. POLICY

A. Pursuant to Civil Code Section 56.10 (b)(8), the Coroner's Office may issue subpoenas for medical records, documentation, video tapes, or other items which, in the opinion of the coroner's investigator, are necessary to assist in determining the circumstances, manner and cause of death of a decedent.

B. A person may be subpoenaed under authority of Government Code Section 27498 to testify at a Coroner's Inquest if the investigator believes the person has information that could assist in determining the circumstances, manner and cause of death of a decedent.

II. DEFINITION

A. Government Code Section 27498: Subpoena Powers; Witnesses; Records

1. "The coroner may issue subpoenas for witnesses, returnable forthwith or at such time and place as the coroner appoints, which may be served by any competent person. The coroner may also require any such witness to bring with him or her any books, records, documentation, or other things under the control of the witness which, in the opinion of the coroner, are necessary to conduct the inquest and as a further aid in determining the circumstances, manner, and cause of death of the decedent. To enforce the procedures of this section, the coroner may issue subpoenas duces tecum in accordance with Section 1985 of the Code of Civil Procedure."

2. "Any books, records, documents, or other things under the control of a law enforcement agency, subpoenaed pursuant to subdivision (a), shall not themselves be made a part of the record in any coroner's inquest without written consent of the law enforcement agency, when such inquest pertains to a death caused by a police officer."

B. Government Code 27500: Penalty for Failure to Attend

1. "A witness served with subpoena who willfully and without reasonable excuse fails to attend and testify is guilty of a misdemeanor."

III. PROCEDURE

A. SUBPEONA DUCES TECUM

1. The Coroner's Subpoena Duces Tecum is used for medical records, blood samples, urine, x-rays, or other medical items or information.

2. The coroner's investigator will complete a "Coroner's Subpoena" to include the name of the deceased, date of birth, case file number and item(s) requested.

3. The coroner's investigator will attach a copy of the subpoena to the case file

4. Requests for medical records may be faxed.

5. Requests for blood or other items will be served at the hospital in person whenever possible.

B. CORONER'S SUBPOENA

1. The Coroner's Subpoena is issued under authority of Government Code 27498 for mandatory appearance of the person at an inquest. A witness served with a subpoena who willfully and without reasonable excuse fails to attend and testify is guilty of a misdemeanor.

2. The investigator charged with preparing the inquest witness list will serve the subpoena in person when possible.

3. The Coroner's Division sergeant will ensure a copy of the subpoena with proof of service is retained in the case file.

4. Subpoenas for law enforcement personnel are delivered to the agency subpoena clerk.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.16
	RELATED ORDERS: Health and Safety Code Sections 7100,7103,7104 County Interment Allowances	
ISSUE DATE: 07/01/1996 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Administration	SUBJECT: County Interment	

I. POLICY

A. Pursuant to Health and Safety Code Section 7104 (A) and (B), the Coroner's Division shall assume jurisdiction of the disposition of the remains of an indigent or abandoned body.

II. GENERAL INFORMATION

A. A county-subsidized interment may be authorized for those persons who cannot acquire the resources to provide for interment. The annual County Interment Allowance Schedule is provided to the Coroner's Division each fiscal year.

B. Interments may be authorized by the County Hospital, Employment and Human Services Department, the Sheriff-Coroner or Public Administrator. The County Hospital authorizes interment for persons who die at the hospital or clinics and the Employment and Human Services Department authorizes interment for those individuals who were recipients of public assistance at the time of death. The Public Administrator will assume jurisdiction only in cases where the deceased has sufficient assets. All other cases are referred to the Sheriff-Coroner. A thorough investigation will be conducted regarding the status of the decedent's estate and family's ability to pay for the interment.

C. Pursuant to Health and Safety Code Section 7100, the liability for the reasonable cost of interment devolves jointly and severally upon all kin of a decedent, assuming they live in the state of California. Failure of the next of kin to perform this mandated duty is a misdemeanor pursuant to Health and Safety Code Section 7103.

D. Pursuant to Health and Safety Code Section 7104 (A) and (B), the coroner may be required to inter the remains of a decedent when the next of kin cannot be found or lacks sufficient funds.

E. Health and Safety Code Section 7104.1 allows the Coroner to inter the remains of a decedent if, within 30 days after the Coroner notifies or diligently attempts to notify the person responsible for the interment of a decedent's remains which are in the possession of the Coroner, the person fails to inter the remains.

F. If the next of kin fails to contact the Coroner's Office or make arrangements for the decedent's disposition, a certified letter may be sent to the next of kin advising the requirements of Health and Safety Code Section 7104.1 and the scheduled date of cremation. If the next of kin fails to respond by the date scheduled for the cremation, the Coroner may inter the remains in the manner provided for interment of the indigent deceased. The Coroner's Office will explore the possibility of recovering the expenses for the disposition from the next of kin.

G. County policy requires cremation to be the method used for county-authorized dispositions involving resident indigent decedents, unless the county has received actual notice that a decedent objected to cremation on religious grounds, in which case disposition shall be by ground burial.

H. Regardless of the type of disposition, the Coroner's Division will not authorize an indigent interment until the indigent status has been confirmed.

III. DISPOSITION ALLOWANCE

A. Each year the county will determine the maximum allowable amount for the disposition of the indigent deceased. These allowances may be increased only in exceptional circumstances and with the approval of the County Administrator or his designee.

1. **Cremations**

   Funeral or cemetery directors are allowed the annually-established rate for cremation, interment, memorial service, container, body removal and administrative costs for a decedent seven years of age or older and a smaller allowance for a decedent seven years or younger.

2. **Ground Burials for Religious Exceptions**

   Funeral directors are allowed the annually-established rate for interment arrangements to include embalming, suitable clothing, regularly manufactured, cloth-covered and trimmed casket, memorial service,

administrative costs, body removal and ground burial for a decedent three years of age or older and a smaller allowance for a decedent less than three years of age. In the event that all of these services are not provided, the County Administrator shall authorize only a pro-rata share of the maximum allowance.

a. Cemetery operators will be allowed the established rate set annually for a burial plot for a decedent three years of age or older and a smaller allowance for a decedent less than three years of age.

3. **Excess mileage**

Funeral directors who are reasonably required to travel more than fifteen miles round trip to make dispositions shall be allowed the current mileage reimbursement rate for county employees.

4. **Repayment**

Funeral Directors shall explore any resources not reported and shall turn over to the county any monies received for the funeral and/or interment from any other source, including the decedent's family and friends, Social Security benefits, Veterans Administration benefits or life insurance benefits.

5. **Social Services Department's Eligibility Standards**

a. Available Resources

- The decedent's available resources are those immediately available (cash, bank accounts). Available resources in excess of fees allowed for a county-authorized interment render the decedent ineligible for a county-authorized interment.

b. Resources not immediately available

- Resources that are not immediately available (equity in real property, death benefits) are not a disqualifying factor for a county-authorized interment.

IV. PROCEDURE

A. NEXT OF KIN

1. The supervisor or investigator shall advise the next of kin of their responsibility to handle the interment.

2. If the next of kin claims they cannot afford interment and requests county assistance for burial, the supervisor or investigator should indicate that county assistance is only for the indigent dead and the remains will be cremated.

3. The coroner's investigator or supervisor shall provide the next of kin with a "Next of Kin Eligibility Determination Form" to be completed, signed and returned to the Coroner's Office.

4. The coroner's supervisor will review the completed form and determine eligibility for County-authorized interment.

5. After eligibility has been determined, the interment arrangements can be entrusted to a funeral director of the next of kin's choosing. The coroner's investigator or supervisor shall instruct the next of kin to inform the funeral home they have requested a county-authorized cremation.

B. COUNTY CREMATION

1. If the next of kin cannot be located or has abandoned the remains, the Coroner's Office will handle the disposition in its entirety.

2. The investigator or supervisor will complete an Authorization for County Interment form and ensure a copy is retained in the case file. The original and yellow copies are provided to the funeral director selected to perform the cremation.

3. Funeral Director's Responsibility

   a. Upon completion of the disposition, the funeral director shall submit a demand for payment.

   b. The funeral director requesting funds for the county-authorized interment will be responsible for submitting any property or currency obtained from the decedent to the Coroner's Division.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.17
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 06/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Tour of Duty / Autopsy Protocol	

I. POLICY

A. The Coroner's Division performs numerous mandated duties and a wide range of public services. These duties will be performed in a professional manner and include but are not limited to those listed below.

II. PROCEDURE

A. DUTIES

1. The coroner investigator's duties include but are not limited to the following:

- Log on with Sheriff's Dispatch.
- Review new cases for necessary follow-up with 24-hour deputy, i.e. NOK notifications, X-rays, fingerprinting etc.
- Check to confirm the telephones are off voice mail by 7:00am.
- Check voice mail for messages.
- Unlock building and lobby by 0745 hrs.
- Remove vans from Vehicle Sallyport.
- Attend Daily Briefing.
- Answer telephones.
- Respond to public requests at lobby counter.
- Process body and property releases.
- Check and sign in visiting agency representatives.
- Log off at end of shift.

2. The Coroner's Division sergeant's duties include but are not limited to the following:

- Verify Activity Log and morgue body count.
- Check the temperature charts in the morgue and replace as necessary.
- Conduct Daily Briefing.
- Check mail at FOB daily / run mail to FOB.
- Review all new cases for date and time of death accuracy, decedent names and all critical areas of the report required to prepare the death certificate.
- Review and manage the current case load.
- Approve and review indigent cremation applications.
- Update and manage individual unidentified remains case histories as required.

B. DAILY BRIEFING

1. In an effort to conduct the most reliable and productive investigations, the coroner's investigator shall provide the coroner's supervisor and forensic pathologist with a comprehensive daily briefing prior to the post-mortem examination. The briefing will include all relevant facts and physical evidence known to the investigator at the time.

C. ITEMS FOR PATHOLOGIST'S INSPECTION

1. The coroner's investigator shall collect the following items for inspection by the pathologist at the time of autopsy:

   a. Firearms used in suicides and if any part of the firearm may have come into contact with the body of the decedent.

   b. Sharp force implements.

   c. Blunt force objects.

   d. Tools.

   e. Ligatures and bindings.

   f. Clothing or other items which may have caused impressions on the skin.

2. The coroner's investigator will provide photographs, sketches, diagrams or a detailed description of any item that is unavailable at the time of autopsy.

D. AUTOPSY PROTOCOL

1. All persons attending an autopsy are required to sign a Coroner's Office Autopsy Permission Form and complete the Autopsy Viewing Log located in the Autopsy Viewing Room.
2. No Audio or video recording of any autopsy shall be allowed without expressed prior permission of the Coroner's Division Commander and the forensic pathologist.
3. All persons viewing an autopsy must remain inside of the Autopsy Viewing Room.
4. Law enforcement personnel may enter the Autopsy Suite to obtain evidence from the decedent. The extent of their contact with the body will be governed by the forensic pathologist.
5. Personnel authorized to enter the Autopsy Suite are required to wear the provided personal protective equipment and adhere to established safety guidelines in order to minimize exposure to hazards.

E. MEALS/BREAKS

1. Coroner's investigators shall not leave the county for breaks or meals.
2. Coroner's investigators shall advise Sheriff's Dispatch when leaving the building for a break or lunch.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.18
	RELATED ORDERS: Office of the Sheriff Policy and Procedure	
ISSUE DATE: 08/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Classification of Cases	

I. POLICY

A. The coroner is required to inquire into and determine the circumstances, manner and cause of all violent, sudden or unusual deaths, and all other deaths specified in Government Code 27491.

II. GENERAL INFORMATION

A. The coroner shall keep an official Coroner's Register. Refer to Coroner's Manual Section 3.03.12 and Government Code Section 27463 and 27463.5 for specific requirements.

III. PROCEDURE

A. Coroner's cases are processed in the following manner:

1. Coroner's Case

a. A Coroner's Case consists of a Coroner's Investigative Report, an Autopsy Report and any diagnostic test results. The Coroner's Division Commander shall sign the Coroner's Findings page contained within all Coroners' Cases.

2. Inspection only

   a. The pathologist conducts an external inspection of the body, reviews the medical records and the Coroner's Investigative Report, and provides a cause of death. The death certificate is signed by the Division Commander, Assistant Division Commander or authorized deputy on duty.

3. NBI (Cases Not Brought In)

   a. The remains are not brought into the Coroner's Office and, as such, no autopsy is performed. The pathologist determines the cause of death based on review of medical records and the Coroner's Investigative Report. The report number of the responding police agency shall be included in the Coroner's Report. The death certificate is signed by the Division Commander, Assistant Division Commander or authorized deputy on duty.

4. Co-sign

   a. A Co-sign pertains to a non-natural death where the cause of death on the death certificate is provided by the treating/attending physician who has signed the death certificate.

   b. Co-signs may be authorized for non-natural deaths usually the result of accidents (automobile/mechanical) and the person has been hospitalized**.** The coroner's investigator will obtain the approval of the Coroner's Division Commander or Assistant Division Commander prior to classifying a case as a co-sign.

   c. The treating physician will provide the coroner's investigator with a cause of death.

   d. The coroner's investigator will subpoena all medical records.

   e. The coroner's investigator will pick up first drawn blood, if any.

   f. The forensic pathologist will review the medical records and confirm the cause of death. No autopsy is performed.

   g. The injury information and manner of death are entered on the death certificate by the coroner's clerk or coroner's investigator.

h. The Coroner's Division Commander, Assistant Division Commander or authorized investigator will also sign, or "Co-sign" the death certificate.

The forensic pathologist will be available by phone to discuss any cases that may fall into the co-sign category.

5. Non-Forensic

a. A Coroner's Non-Forensic Report will be generated when a death is reported to the Coroner's Office and the coroner's investigator determines that the cause of death is due to a natural cause or causes and, as such, waives or does not assume jurisdiction of the decedent. The coroner's investigator will authorize the decedent's attending physician to state the cause of death and to sign the death certificate.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.20
	RELATED ORDERS: Government Code Section 27491 & 27491.3 Health and Safety Code 102895	
ISSUE DATE: REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Notifications	

I. POLICY

A. Every effort will be made to identify and personally notify the next of kin of a decedent in a timely manner.

II. DEFINITION

A. Order of Notification

1. Order of notification is determined by order of custody control outlined in Health and Safety Code 7100. The Deputy Coroner will not notify all persons of the same degree of kindred, i.e. if the decedent is survived by four siblings, the Coroner's Office is obligated to only notify one.

B. Custody and Duty of Internment Health & Safety 7100

"*Right to Control; Liability, etc.*" The right to control the disposition of the remains of a deceased person, the location and conditions of internment, and arrangements for funeral goods and services to be provided, unless other directions have been given by the decedent pursuant to Section 7100.1, vest in, and the duty of disposition and the liability for the reasonable cost of disposition of the remains develops upon, the following in the order named:

a) An agent under power of attorney for health care who has the right and duty of disposition
b) The competent surviving spouse
c) The sole surviving competent adult child of the decedent, if there are more competent adult children,
d) The surviving competent parent or guardian.
e) The surviving competent adult or persons respectively in the next degree of kindred. If there is more than one surviving competent adult of the same degree of kindred.
f) The public administrator when the deceased has "sufficient assets."

III. PROCEDURE

A. Notification

1. All notifications of coroner's cases, whenever possible, will be done by a coroner investigator. Every effort will be exhausted to identify the next of kin and notify them in person. Notification made over the telephone should be avoided. Exceptions may include situations involving a family member contacting the office to confirm information they have been provided by another source.

2. In all coroners' cases, the coroner's investigator is responsible for ensuring the next of kin is notified. Due to the specific circumstances of the death, Emergency Room personnel, the law enforcement agency having jurisdiction, or a Highway Patrol Officer may have notified the next of kin prior to reporting the death to the coroner. The investigator will in all situations confirm the person notified is the true next of kin as defined in Health and Safety Code 7100. The full name of the person who notified the next of kin will be listed on the coroner's report.

3. Notification in Order of Degree of Kindred:

   a. The first person to be notified is the legally recognized spouse or legally recognized partner (AB 205).

   b. Next degree of kindred is adult children. They are all of equal standing under the law. The first sibling notified meets the notification requirement and the office is not required to notify all persons of equal kindred.

   c. Parents: The investigator is not obligated to notify anyone except the immediate next of kin, therefore one parent will meet the requirement.

   d. Minor child: When the immediate next of kin is a minor child, the legal next of kin will be in order of above as defined by Health and Safety Code Section 7100. For example, if the immediate next of kin is a 15-year-old, the *legal* next of kin to meet the notification requirement would be adult siblings. If all children of the deceased are minors and the deceased is not married, the decedent's parent would be next in the order of notification. The full name of the person who notified the next of kin will be listed in the Coroner's Report.

e. Homicide Victims: The coroner may permit the law enforcement agency investigating a homicide to notify the next of kin for investigative purposes.

IV. RIGHT OF DISPOSITION

1. Health and Safety Code Section 7100 applies to the right of disposition of the body and the manner of internment.

V. OUTSIDE ASSIST REQUEST FOR NOTIFICATION

1. When the coroner's investigator has identified the next of kin does not reside in Contra Costa County or, due to workload, is unable to make the notification in person, assistance from the law enforcement agency assuming jurisdiction where the next of kin resides should be requested. The investigators may teletype the agency requesting assistance and include a copy of the teletype request in the case file. If the law enforcement agency is unable to notify the next of kin, the coroner's investigator shall notify the coroner's supervisor or manager immediately.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.21
	RELATED ORDERS: NONE	
ISSUE DATE: 08/10/1997 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Investigative Reports	

I. POLICY

A. A coroner's case requires a complete, concise and thorough investigative report to be completed in a timely manner. The report consists of a documentation of the classification of death, next of kin information, medical history and an investigative narrative. A Brief Report will be completed when the Coroner's Office has waived jurisdiction and authorized an attending physician to sign a death certificate.

II. PROCEDURE

A. PREPARATION OF CORONER'S REPORT

1. A Coroner's Investigative Report shall include the following sections:

a. The first section includes the classification of death, the identification of the decedent, when and where he or she was last seen alive, the place of death, physical descriptions, addresses where the person lived and the names of other investigative agencies to include case numbers.

b. Next of kin information.

c. Place of death.

d. Medical history.

e. Injury information.

f. The investigative narrative completed by the field investigator.

B. CORONER'S INVESTIGATIVE REPORTS: REQUIRED INFORMATION

1. CORRECT SPELLING OF NAME

a. The investigator should ensure the correct name and spelling of the decedent's name is included on the death certificate.

2. SOCIAL SECURITY NUMBER

a. The investigator should document the decedent's social security number whenever possible. If the case becomes a county cremation, a social security number is necessary to access records from the Social Services Department, the military, and the Social Security Administration.

3. LAW ENFORCEMENT AGENCY INFORMATION

a. The investigator shall obtain and note the name of the investigating officer, the investigative agency, and the agency case number.

4. NEXT OF KIN

a. The investigator shall obtain and document the true name of the next of kin, address and all phone numbers. The investigator shall indicate the next of kin's relationship to the decedent and why he or she is the next of kin. The investigator shall document the name and phone number of the person who notified the next of kin.

5. PLACE OF DEATH

a. If the person died in the hospital, the investigator shall indicate whether it was in the emergency room or if the decedent was an in-patient. The investigator shall document the names, addresses and phone numbers of the person who determined death, notified the Coroner's Office of the death and the person who discovered the decedent.

6. MEDICAL HISTORY

a. The investigator shall obtain the name, address and phone number of the decedent's regular physician, along with pertinent

medical history to assist the pathologist in determining the cause of death.

7. INJURY INFORMATION

a. The investigator shall state whether or not the injury occurred within the city limits and whether or not the injury occurred at work. If the injury occurred at work, the investigator shall notify OSHA and include that information in the investigative report.

8. INVESTIGATIVE REPORT

a. The investigator shall write a thorough, complete and concise report. All reports will be written in the "First Person" i.e.; "I saw a knife" rather than, "A knife was seen."

b. If the first-drawn blood is available, the investigator shall include the dates on the vials in the report narrative.

c. The investigator shall describe the death scene in detail, to include where the body was initially discovered, whether or not it had been moved and by whom, and where it was when you arrived on the scene. If the body was moved, the investigator shall state the reason in the narrative.

d. The investigator shall photograph the scene in detail. Implements of death shall be photographed and taken into custody whenever possible.

e. Supplemental information regarding the case is to be added to the narrative by the investigator receiving the information.

C. PREPARATION OF BRIEF REPORT

1. Should the investigator waive jurisdiction, the investigator will complete a Brief Report and assign the next available case number. The mortuary should refer the certificate of death to the Coroner's Office. The investigator will review the certificate of death and ensure the cause of death is appropriate. The investigator shall assign a case number and transfer the certificate back to the mortuary.

NOTE: The coroner's investigator will not provide a case file number to a mortuary or peace officer at the death scene until the completed death certificate has been reviewed.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.22
	RELATED ORDERS: Government Code Section 27491.2(a)	
ISSUE DATE: 08/10/1997 **REVISION DATE: 11/25/2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Operations**	**SUBJECT:** **Removal of Decedent from Place of Death**	

I. POLICY

A. Decedents removed from their place of death by a coroner's investigator will be transported to the morgue for further investigation.

II. GENERAL INFORMATION

A. After being notified of a case falling under the jurisdiction of the coroner, a coroner's investigator will respond to the scene, conduct an investigation, document the scene and either transport the decedent to the morgue for further examination or release the deceased to the designated funeral home.

III. PROCEDURE

A. REMOVAL FROM PLACE OF DEATH

1. The following steps should be taken when removing a body from the scene or residence:

   a. Notify Sheriff's Dispatch of the incident and location of the removal.

   b. If traffic is causing an extended delay, and the body at the scene is causing a traffic hazard, the investigator can give permission to the law enforcement agency to remove the body to the side of the road.

   c. At the place of death, the investigator will photograph the scene, particularly documenting the position and place of death. No personal property shall be removed from the decedent at the scene.

d. The body will be placed in a yellow (regular) or red (extra large heavy-duty) bag depending on the decedent's size and condition of the body. The body can also be wrapped in sheeting with a blanket placed over the gurney.

e. If the body is unusually large, the investigator shall request assistance from the host law enforcement agency. When the investigator returns to the morgue, he or she may request assistance from County Patrol for help in removing the body from the van.

f. Prior to removal, the deputy will collect all medications and bring them to the morgue with the body.

g. The investigator shall photograph the instrument of death and collect the item(s) for storage in the Coroner's Property Room.

h. If removal is made at an unoccupied residence, the coroner's investigator is responsible for securing the building. If appropriate, a Coroner's Seal is placed on the doors of the residence.

i. If removal is made from a vehicle or the decedent's vehicle is at the place of death, the host law enforcement agency is responsible for securing or towing the vehicle.

j. It is the host law enforcement agency's responsibility to care for any animals at the death scene.

B. TRANSPORTING THE REMAINS

1. The investigator will transport the body directly to the morgue unless required to respond to other needs of the case or to another scene. Other needs of the case may include responding to the hospital to pick up medical records, first drawn blood or taking fingerprints to Central Identification Services (CIS).

2. An investigator may not take a break of any type with a body in the Coroner's vehicle.

3. A Coroner's Division supervisor or manager's approval is required for an investigator to personally notify the next of kin while transporting a decedent's remains.

C. PROCESSING THE REMAINS

1. The door to the vehicle sally port is always to be closed prior to handling a body or remains in the morgue or sally port.

2. The investigator will transfer the body from the gurney to an autopsy table and ensure the feet are always positioned towards the drain plug of the table.

3. The investigator will always weigh the body. If the Department of Motor Vehicle information is unavailable, the investigator will measure the length of the body and document the overall height. The height and weight of the decedent shall be written on the back of the toe tag.

4. The investigator shall always place a toe tag on one of the big toes of the decedent. If toes are not available, place the toe tag on a finger or extremity.

5. The investigator shall photograph the decedent for identification.

6. The investigator shall itemize all of the property on the property form and place the property in a clear plastic bag with the yellow copy stapled to the outside of the bag. Any amount of money exceeding $500.00 shall be witnessed and co-signed by the shift supervisor.

7. The investigator shall store personal property in the designated cabinets in the locked Coroner's Property Room. If personal possessions appear to have significant value, the investigator shall notify the sergeant or manager. Valuable items may be stored in the Division Commander's safe.

8. X-RAYS

   a. All deceased children under three years of age are to be completely X-rayed.

   b. All homicides are to be completely X-rayed. Make sure the markers (left and right) are included on the X-rays.

   c. Decedent victims of fire whose bodies are charred must be X-rayed.

9. All unidentified bodies must be fingerprinted via the Livescan system and the additional physical prints shall be taken to Central Identification as soon as possible.

10. If the body is infested with insects, keep the pouch sealed and store away from other bodies in the cooler.

11. If the decedent is suspected of containing a contagious or communicable disease, the investigator shall place an “Exposure/Bio-Hazard” sticker on the outside of the pouch and note the specific hazard in red ink on the outside of the case file to alert staff of the potential hazard.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.23
	RELATED ORDERS: Government Code Sections 27465, 27466, 27467, & 27491.3	
ISSUE DATE: 03/17/1999 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Collection and Release of Property	

I. POLICY

A. During the investigation of a coroner's case, the coroner's investigator may come into possession of property belonging to the decedent. This property must be collected for safekeeping, secured within a locked building or vehicle, or turned over to the next of kin.

II. GENERAL INFORMATION

A. Except as otherwise provided, any person who searches for or removes any papers, monies, valuable property or weapons constituting the estate of the deceased, from the deceased person, or from the premises prior to the arrival of the coroner without permission of the coroner is guilty of a misdemeanor (Government Code Section 27465).

III. PROCEDURE

A. Collection

1. In the case of any death falling under jurisdiction of the coroner, the coroner shall take charge of all personal effects, valuables, and property of the deceased at the scene of death or related to the injury and hold or safeguard the effects until lawful disposition can be made.

2. Any property or evidence related to the investigation or prosecution of any known or suspected criminal death will be delivered to the applicable law-enforcement agency or district attorney, receipt for which shall be acknowledged in writing.

3. During the investigation of a coroner's case, the decedent's property will be turned over to the next of kin or a representative of the next of kin upon release of the remains. If the property hasn't been released prior to the completion of the investigation, a letter will be mailed to the next of kin indicating any property not claimed within 90 days will either be destroyed or sold at auction. The proceeds of any sale will be turned over to the County General Fund. If no next of kin or representative is available, the investigator will collect and/or secure the decedent's property. The following items will be handled accordingly:

   a. Vehicles

      - Vehicles are normally locked and left at the residence. If the case is a suicide that occurred in a vehicle away from the decedent's residence, the coroner investigator shall ensure the vehicle is towed and secured and notify the next of kin of the vehicle location as soon as possible. The coroner's investigator or the law enforcement agency investigating the suicide may tow and store the vehicle.

   b. Valuables

      - The coroner's investigator will collect and secure valuables which could easily be stolen to include cash and jewelry. The coroner's investigator will complete a property/clothing inventory report, attach one copy to the bag containing the items and place a second copy in the case folder.

   c. Drug and Drug Paraphernalia

      - Drugs and drug paraphernalia will be collected at the death scene by the law enforcement agency having jurisdiction over the case.

   d. Suicide Implements

      - Implements of suicide, other than firearms and medications, will be returned to the next of kin, destroyed, or forwarded to the Sheriff's Property.

   e. Personal Property

      - Personal property will be brought to the Coroner's Office for storage and eventual release to the next of kin or destroyed.

f. Firearms

- The coroner's investigator will note any firearms taken as evidence by the law enforcement agency investigating a crime in the Coroner Investigative Report. Firearms taken by a coroner investigator will be logged on the Firearms Report Form and handled as noted in the Firearms Section of this manual.

g. Medications

- Medications seized pursuant to a coroner's investigation will be brought to the Coroner's Office by the coroner's investigator and handled pursuant to the Medication Section of this Manual.

B. RELEASE OF PROPERTY

1. After the autopsy or inspection, the decedent and any property will be released to the funeral director of choice or to whomever the decedent or legal next of kin has chosen to dispose of the remains.

2. The task of releasing the decedent and any property is a multi-phased procedure that involves checking and completing the forms outlined in Release of Decedent – Coroner's Division Manual Section 3.03.28.

3. Release of property to the next of kin: The next of kin can come to the office to obtain the personal effects of the decedent, provided the body has been released to a funeral home. When releasing property, the investigator shall:

a. Confirm the identity of the legal next of kin.

b. Check the Clothing/Property Inventory Report in the file to verify there is property to be released.

- The clothing inventory is located at the top of the inventory report, and the clothing will usually be bagged and kept with the decedent.
- The property inventory is located on the lower portion of the inventory report, and the property is stored in a file cabinet in the Coroner's Property Room.

4. Retrieve the personal property and confirm the contents with the Inventory Form.

5. Ensure the next of kin signs and dates the certification of receipt for the clothing and the property on the Inventory Form. The investigator making the release will also legibly sign the form.

6. Place the original Property/Clothing Inventory Report in the case file folder and give the yellow copy to the next of kin.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.24
	RELATED ORDERS: Government Code Sections 27491.3	
ISSUE DATE: 06/01/2005 REVISION DATE: 11/25/2019	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Control of Premises / Coroner's Seal	

I. POLICY

A. In any death into which the coroner is required to investigate, the coroner may take charge of all personal effects, valuables, and property of the deceased at the scene of death or related to the inquiry and hold or safeguard the property until lawful disposition can be made.

II. DEFINITIONS

A. Government Code 27491.3

1. "Control of Premises: Where Body Found: In any death into which the coroner is to inquire, the coroner may take charge of all personal effects, valuables and property of the deceased at the scene of death or related to the inquiry and hold or safeguard the property until lawful disposition thereof can be made. The coroner may lock the premises and apply a seal to the door or doors prohibiting entrance to the premises, pending arrival of a legally authorized representative of the deceased."

III. CORONER'S SEAL

A. The use of a Coroner's Seal is described in Government Code Section 27491.3 (a). The seal may be affixed to the door or doors of a decedent's residence stating under authority of the Government Code, the premises are sealed and anyone tampering with the seal or entering the property is subject to prosecution. Deputies shall print their name, date and time on the seal upon application to a door.

IV. PROCEDURE

A. INVESTIGATOR'S RESPONSIBILITY

1. The coroner's investigator, after removing a body from a residence or vehicle, is responsible for ensuring that the residence or vehicle is secured until a legally recognized representative of the decedent is located.

2. The coroner investigator's actions shall not interfere with or impede an investigation being conducted by another law enforcement agency. The death scene investigation may require the removal of the decedent to allow the law enforcement agency to continue to process the scene.

3. The premises are to be secured by the coroner's investigator if there is no next of kin available. If there is no legally authorized representative of the decedent, the coroner's investigator shall secure the premises and place a completed Coroner Seal on the door(s).

4. Unless permitted by law, any person who enters any premises or tampers with or removes any lock or seal is guilty of a misdemeanor.

5. Except as otherwise provided by the Government Code, any person who searches for or removes any papers, moneys, valuable property or weapons constituting the estate of the deceased from the person of the deceased or from the premises, prior to the arrival of the coroner or without the permission of the coroner is guilty of a misdemeanor.

6. The coroner's investigator shall ensure the appropriate law enforcement agency or the investigator properly tows and stores a vehicle when a vehicle is the place of death.

7. Costs arising from the premises being locked or sealed while occupied by property of the deceased may be a proper and legal charge against the estate of the deceased.

8. When the next of kin has been verified, the coroner may give permission for them to remove the Coroner Seal and enter the premises.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.25
	RELATED ORDERS: Government Code Sections 27491 & 27491.3	
ISSUE DATE: 06/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Instrument of Death Collection	

I. POLICY

A. The coroner is responsible for the collection of all instruments of death. Depending on the manner of death, the coroner may physically take possession of the implement of death or transfer custody of the implement of the law enforcement agency with jurisdiction over the criminal investigation.

II. DEFINITION

A. Government Code 27491.3 (a): "In any death into which the coroner is to inquire, the coroner may take charge of any or all personal effects, valuables, and property of the deceased at the scene of death or related to the inquiry and hold or safeguard them until lawful disposition thereof can be made."

B. Government Code 27491.3 (c): "Except as otherwise provided in subdivision (d), any person who searches for or removes any papers, moneys, valuable property or weapons constituting the estate of the deceased for the person of the deceased or from the premises, prior to the arrival of the coroner or without the permission of the coroner, is guilty of a misdemeanor."

III. PROCEDURE

A. The investigator shall take pictures of the instrument of death. Additional photographs should be taken to assist the pathologist in understanding the death scene.

B. The investigating agency may remove items of evidentiary value at the scene with the express permission of the coroner.

C. The coroner's investigator shall be notified by the investigating agency of any property taken off of the decedent or evidence related to the investigation of any known suspected criminal death. The investigator shall document this information in their report.

D. In homicide cases, the investigator may transfer possession of the weapon to the agency having jurisdiction.

E. Firearms used to commit suicide shall be collected by the coroner's investigator pursuant to Government Code 27491.3.

F. All medications used to commit suicide shall be collected by the coroner's investigator pursuant to Government Code 27491.3.

G. The coroner's investigator will ensure the instrument of death (knives, rope, bindings, etc.) is available for examination by the pathologist at the time of the autopsy.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.26
	RELATED ORDERS: Government Code Section 27464	
ISSUE DATE: 06/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Writings of Decedent	

I. POLICY

A. The coroner shall collect all notes, letters or other documents written by the deceased which may tend to indicate an intention by the writer to take his or her life, including directions for disposition of property or disposal of the remains. The coroner shall process all documents with the court if they include directions for the disposition of property or disposal of remains.

II. GENERAL INFORMATION

A. Government Code Section 27464 outlines the handling of writings of the decedent:

1. "Whenever the death of a person shall have been referred to the coroner for investigation, there shall be delivered to the coroner any note, letter, or other document apparently written by the deceased which may tend to indicate an intention by the writer to take her/her life, including directions for disposition of the property or disposal of the remains. A facsimile copy thereof shall be placed in the coroner's records. If an inquest is held, a true copy shall be read into the record and transcribed into the official notes of the official stenographer.

B. Upon completion of legal proceedings arising from the death, the original instrument shall be delivered by the coroner to the addressee or to the legal representative of the estate of the decedent provided, however, that if the instrument purports to be testamentary in nature, it should be filed with the county clerk as provided by law."

III. PROCEDURE

A. SECURING DOCUMENT

1. At the scene of death, writings, letters, notes, or any document apparently written by the deceased which may tend to indicate the deceased took their own life shall be collected by the coroner's investigator.

2. The Last Will and Testament of the deceased shall be collected if it is in plain view. Any suicide note that indicated disposition of property shall be considered a Last Will and Testament.

3. Any object that the deceased wrote on, i.e. sheet, book, diary, shall be collected.

4. If the deceased wrote on an object that cannot be removed, i.e., mirror, furniture, the coroner's investigator shall take pictures of the writings.

B. PROCESSING DOCUMENTS

1. The coroner's investigator will make a copy of all original documents that have been collected.

2. The coroner's investigator shall notify the next of kin that the decedent left a Last Will and Testament or suicide note. The investigator shall advise the next of kin that they will file the Last Will and Testament with the court.

3. Should the next of kin refuse to take possession of a suicide note, the coroner's investigator will document this fact in the investigative report and send the note to the Sheriff's Property Room for destruction.

4. The investigator will take the Last Will and Testament or suicide note indicating any disposition or property to the Superior Court Clerk's Office for filing at no cost.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.27
	RELATED ORDERS: Government Code Sections 27491 & 27491.3	
ISSUE DATE: 09/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Collection and Disposition of Medications	

I. POLICY

A. All medications prescribed to the deceased are to be collected, inventoried and stored in the Coroner's Property Room pending destruction.

II. DEFINITION

A. Medications are defined as any prescription medication issued by a physician.

III. GENERAL INFORMATION

A. As the decedent's medical history is an integral part of a coroner's investigation, the collection of prescribed medications may:

- Indicate past and present medical history.
- Assist the pathologist in forming a more complete picture of the deceased's medical history.
- Provide information regarding the degree of illness, depending on the type and dosage of the medications.
- Indicate possible overdose, reaction or interaction.

IV. PROCEDURE

A. COLLECTION OF MEDICATIONS

1. The coroner's investigator shall collect all medications and all empty containers prescribed to the decedent located at the death scene.

2. The investigator shall count all medications and document the pill amount, dosage and prescribing doctor in the investigative report.

3. The investigator shall distribute four copies of the Medication Inventory Report:

   a. Original stays with the case file folder.

   b. One copy is attached to the pathologist's file.

   c. One copy is attached to the bag containing the medications.

   d. One copy is placed in the Medication Inventory Log located in the Coroner's Property Room.

4. After the medications are inventoried, the coroner's investigator shall place them in the locker designated for medications in the Coroner's Property Room.

B. DISPOSAL OF MEDICATIONS

1. Medications collected on coroner's cases may be retained until the case has been completed.

2. Medications collected regarding deaths that are not coroner's cases are sent to Sheriff's Property for destruction.

3. The Coroner's Assistant Division Commander will ensure the Medication Log accurately reflects the medications currently stored in the Coroner's Property Room on a weekly basis.

4. An assigned coroner's investigator will regularly transport stored medications to Sheriff's Property for destruction.

Contra Costa County **Office of the Sheriff** Coroner Division Policy and Procedure	**CORONER**	**NUMBER: 3.03.28**
	RELATED ORDERS: Government Code Sections 27491 & 27491.3	
ISSUE DATE: 06/01/2005 **REVISION DATE: 11/25/2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Operations**	**SUBJECT:** **Firearms Collection and Processing**	

I. POLICY

A. Firearms used to commit suicide shall be collected by the coroner's investigator and processed through the Property Room. Firearms used as an instrument of death, i.e. accidental death or homicide shall be collected by the law enforcement agency.

II. PROCEDURE

A. COLLECTION OF FIREARMS

1. Firearms used to commit suicide shall be collected at the scene by the responding coroner's investigator.
   a. Photograph the scene
   b. The firearm should be rendered safe
   c. The firearm shall be stored in a secure area

2. The firearm will be entered into CLETS to determine the registered owner of the weapon. If the weapon is not registered, the weapon will be considered the property of the next of kin.

3. The coroner's investigator assigned to firearms is responsible for transporting the weapon to the Sheriff's Property Room and maintaining the chain of evidence.

B. FIREARMS RETENTION/DESTRUCTION

1. Firearms may be retained until the investigation is completed.

2. The weapon (cleared and safe) shall be made available to the pathologist for inspection at the time of the autopsy.

3. All other weapons not used to commit suicide but taken for safe keeping shall be logged as personal property on the Property/Clothing Inventory Report without completing a Firearms Report.

4. Law enforcement agencies that have collected weapons in homicide cases or questionable deaths shall be responsible for those weapons.

5. After 30 days the Property Room will send a Disposition Letter to the next of kin asking for instructions on how to dispose of the weapon.

6. The weapon may be returned to the registered owner or next of kin as part of the estate.

C. The weapon may be destroyed at the written request of the responsible party. The Property Room is responsible for the destruction of all firearms.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.29
	RELATED ORDERS: Government Code Sections 27465, 27466 & 54985(a) County Ordinance No. 2009-10	
ISSUE DATE: 03/17/1999 REVISION DATE: 11/25/2019	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Release of Decedent and Decedent's Property	

I. POLICY

A. After autopsy or inspection, the decedent and his or her property will be released to the funeral director when authorized by the legal next of kin.

II. GENERAL INFORMATION

A. When the autopsy or inspection is complete, the decedent's remains and his or her property are ready for release to the funeral director of choice.

III. PROCDURE

A. The funeral director of choice will be listed on the front of the file folder. The sergeant or investigator will contact the funeral director to inform him that the decedent is ready for removal and advise him of any fees associated with the removal. The front cover of the case folder will state if a removal fee and/or body bag fee applies. The task of releasing the decedent and his or her property is a multi-phased procedure that involves checking and completing the following forms and tasks:

1. Funeral Director of Choice or Authorization to Release Form
2. Certificate of Death
3. Collecting pouch fee
4. Receipt
5. Fingerprints
6. Clothing/Property Inventory Report
7. Case file envelope
8. Physical release of decedent

B. Funeral Director of Choice or Authorization to Release form

1. When the funeral director arrives to take possession of the remains, the coroner's investigator will retrieve the decedent's file folder from the active case file bin. The decedent and his or her property cannot be released to the funeral director without authorization from the next of kin (Funeral Director of Choice Form) or the deceased via a pre-need form. A pre-need form is a document on file with the funeral home that the decedent has completed and signed designating their funeral/burial wishes.

2. The coroner's investigator will obtain a copy of the authorization form from the funeral director and check to make sure it is signed by the legitimate next of kin. **If the authorization is signed by anyone other than the next of kin, the release cannot proceed until the matter is resolved.** If the funeral director doesn't have the authorization form, check the case file as a form may have been faxed or delivered by the next of kin.

3. If the deceased has made prior arrangements (pre-need) with the Neptune Society or the Nautilus Society, the representative from the society who accepts the body must present an Authorization to Release form which must be dated and signed by the deceased.

4. The coroner's investigator will release the decedent's personal property and sign the property sheet. The coroner's investigator shall document the date and times released on both the folder and in the report. The coroner's investigator will indicate whether the removal fee was paid by the funeral director or needs to be billed. If the removal fee was paid, the investigator will write the receipt number in the space provided on the outside of the case file folder.

5. The coroner's investigator will ensure the funeral director dates and initials the top section of the form and legibly signs the form. The coroner's investigator will also ensure the name of the mortuary is legible on the form.

6. The coroner's investigator will indicate:

    a. The decedent was identified.

    b. Fingerprints were or were not obtained.

    c. The next of kin release authorization was obtained.

    d. The pathologist report is in the case file.

7. Certificate of Death

   a. The coroner's investigator will compare the spelling of the name on the death certificate with the name listed on the release presented by the funeral director.

   b. The coroner investigator will ensure line 126 on the death certificate has been signed by the lead investigator or in their absence the Division Commander, Assistant Division Commander or by an appointed investigator.

   c. The coroner's investigator will ensure a copy of the death certificate is included in the case file.

8. Removal Fee Collected

   a. A removal fee will be collected pursuant to County Ordinance No. 2009-10 and Government Code Section 54985(a) unless:

      - The decedent is under 15 years of age.
      - The decedent is the victim of a criminal offense. If the decedent was also involved in a criminal act which contributed to his/her death, a removal fee is required.
      - The deceased and his/her family are indigent.
      - The body was delivered to the Morgue by a funeral director.

9. The coroner's investigator will check the front cover of the case file folder to determine if the removal fee is to be collected. The coroner's investigator will indicate whether or not a fee is required on the file cover.

10. Local funeral directors may be billed on a monthly basis, or they may pay at the time of removal. Out-of-county funeral directors should pay at the time of release. However, after the name, address and phone number of the funeral home has been obtained along with assurance the fee will be remitted in a timely manner, the funeral director may be billed.

11. The Public Administrator is authorized to make a removal without paying the removal fee at the time of release and may credit the Coroner's General Account after settling the deceased's estate.

12. The removal fee is a charge against the decedent's estate. The funeral director pays the fee to the Coroner's Office and then collects the fee from the family of the decedent. At no time will the Coroner's Office refuse to release a decedent to a funeral director after they have presented a signed release from the next of kin. (To withhold a Death certificate

may be a misdemeanor under Section 7053 of the Health and Safety Code.)

C. Pouch

1. The coroner's investigator will check the front of the file folder to determine if a pouch has been issued and collect any pouch fee (dependent on the type of pouch to be replaced) at the time of release.

D. Receipt Book

1. The coroner's investigator will issue a receipt for the removal and pouch fees and provide the yellow copy to the funeral director. The coroner's investigator will attach the white copy to the check or cash and place it in the metal cash box located near the reception clerk's desk and leave the pink copy in the receipt book. The coroner's investigator will write the receipt number on the case file folder as well as on the Coroner's Office Release Form.

E. Fingerprints

1. Fingerprints are the preferred method of identification; however, fingerprints are often unavailable, particularly in badly decomposed bodies. The coroner's investigator will ensure the all fingerprints information is documented in the narrative of the report.

F. Clothing/Property Inventory Report

1. Any clothing is usually bagged and kept with the decedent. The property inventory is located on the lower portion of the inventory report, and the property is stored in the Coroner's Property Room.

2. In the presence of the funeral director, the coroner's investigator will ensure the clothing and property correspond to the items listed on the inventory form and ensure the funeral director signs and dates the certification of receipt on the Property/Clothing Inventory Report. The investigator making the release must legibly sign at the bottom of the form and place the original Property/Clothing Inventory Report in the case file folder and provide the funeral director with the yellow copy.

G. Case File Envelope

1. The coroner's investigator will initial and date the front of the file folder indicating to whom and when the death certificate, body and property were released.

2. If the case is an NBI (not brought in) or Co-sign, the coroner's investigator will indicate on the front of the case file folder that only a death certificate was released.

H. Physical release of the remains to the funeral director

1. The coroner's investigator will direct the funeral director to the vehicle sally port located on the south side of the Central Morgue. The coroner's investigator will close the roll up door once the vehicle is inside.

   The coroner's investigator will match the decedent's name and case number to the toe tag on the decedent and instruct the funeral director to confirm the name on the toe tag.

2. The coroner's investigator will help transfer the decedent from the Coroner's Office autopsy table to the funeral director's gurney. The coroner's investigator will clean the autopsy table with approved disinfecting supplies in the wash area.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.30
	RELATED ORDERS: Government Code Sections 27491 & 27491.3 Health & Safety Code Sections 102855 & 1028875	
ISSUE DATE: 07/12/1999 REVISION DATE: 11/25/2019	CLEARANCE: Office of the Sheriff	
CHAPTER: General Operations	SUBJECT: Tissue / Toxicology / DNA	

I. POLICY

A. After completion of an autopsy, toxicological specimens are to be collected and delivered to the Sheriff's Crime Laboratory or reference laboratory for analysis.

II. PROCEDURE

A. Autopsy

1. During the course of an autopsy, blood, urine and other samples are collected. To comply with legal mandates or when the results of the autopsy fail to visually disclose a medical cause of death, these samples require further testing by an approved forensic laboratory to assist in determining the cause of death.

2. The forensic assistant will provide the clerical staff with a Pathologist's Autopsy Report and, when warranted, a Coroner's Toxicology Request Form for each case.

3. The Pathologist will do all testing needed to provide his or her opinion of the cause of death. If a test is unusual or costly, the test will be approved by the Coroner's Division Commander. If an outside agency requests a test that is not needed to establish the cause of death, the requesting agency will pay for the additional testing.

4. Once the forensic laboratory returns the completed diagnostic test results to the Coroner's Office a coroner's clerk will date stamp the results, enter the results into the Coroner's Database and update the file.

B. DNA COLLECTION

1. DNA samples are collected on all bodies brought in to the Central Morgue.

2. The pathologist's assistant will collect four drops of the decedent's blood for the DNA card on all cases. Exceptions may be made for advanced decomposed remains.

3. The DNA cards are retained indefinitely.

C. FORENSIC ASSISTANT

1. At the beginning of shift, the forensic assistant will retrieve the copies of the Coroner's Investigative Reports, medication logs and medical records for review by the pathologist on duty.

2. The forensic assistant will label the specimen tubes and tissue jars to include the coroner's report number.

3. The forensic assistant will collect four drops of every decedent's blood for the DNA cards.

4. At the direction of the pathologist, the forensic assistant will open or assist in opening the head and chest cavities and collect the necessary blood and tissue samples.

5. The forensic assistant will prepare and deliver toxicology requests at the direction of the pathologist. The forensic assistant will complete the paperwork in accordance to the respective laboratory requirements and submit specimens according to the laboratory procedures.

6. Blood samples are stored in the Coroner's Office freezer for one year and one day. Tissue samples will be fixed in formalin and stored in the storage locker area for one year and one day. Paraffin blocks and slides will be prepared by the pathologist and retained for up to ten years and maintained by the Coroner's Division.

7. All requests for private testing of blood will be made by the legal next kin and they will arrange for the pick-up and transport of the sample by the lab of their choice.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.31
	RELATED ORDERS: Government Code Section 27491.25 CHP Form #302 CVC Section 20011	
ISSUE DATE: 06/01/2005 **REVISION DATE: 05/12/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Operations**	**SUBJECT:** **Motor Vehicle Accident Deaths**	

I. POLICY

A. Deaths involving a decedent driving or riding in a motor vehicle or as a result of being struck by a motor vehicle: The Coroner's Division shall take blood samples from the body of the deceased before it has been prepared for burial and make appropriate related chemical tests to determine the alcohol contents.

B. On or before the tenth day of each month, the Coroner's Division shall report in writing to the Department of Highway Patrol in Sacramento, the death of a person during the preceding calendar month which was the result of an incident involving a motor vehicle, and the circumstances of the incident.

II. GENERAL INFORMATION

A. California Vehicle Code Section 20011 requires every coroner to provide the Department of the California Highway Patrol with motor vehicle death data on or before the tenth day of each month.

B. Government Code Section 27491.25 outlines specific requirements of the coroner in handling Motor Vehicle Deaths:

> "The coroner, or the coroner's appointed deputy, on being notified of a death occurring while the deceased was driving or riding in a motor vehicle, or as a result of the deceased being stuck by a motor vehicle, shall take blood and urine samples from the body of the deceased before it has been prepared for burial and make appropriate related chemical tests to determine the alcoholic contents, if any, of the body. The coroner may perform other chemical tests including, but not limited to, barbituric acid and amphetamine derivative as deemed appropriate.

C. The detailed medical findings, resulting from those examinations that are conducted, shall either be reduced to writing or permanently preserved on recording discs or other similar recording media and shall include all positive and negative findings pertinent to the presence or absence of any alcoholic or other substance content.

D. This section shall not apply to the testing of deceased persons under the age of 15 years, unless the surrounding circumstances indicate the possibility of alcohol, barbituric acid, and amphetamine derivative consumption, nor shall it apply when the death has occurred more than 24 hours after the accident."

III. PROCEDURE

A. BLOOD SAMPLES

1. The forensic assistant will draw a blood sample on all cases meeting the mandated requirement.

2. Blood samples are taken on all decedents over 15 years of age involved in a motor vehicle accident.

3. Drug tests may be performed at the request of the law enforcement agency having jurisdiction.

B. REVIEW OF DATA

1. The coroner's investigator assigned to motor vehicle accident data collection will review the cases from the prior month and compile a list of those cases that involve fatalities as a direct result of an incident involving a motor vehicle.

2. The coroner's investigator will thoroughly review each case to ensure the appropriate toxicology testing has been requested.

3. The coroner's investigator will prepare and submit a monthly Motor Vehicle Fatal Accident Report to the California Highway Patrol.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.32
	RELATED ORDERS: Government Code Sections 27491.3 & 27491.55 Health and Safety Code Section 7050.5 Office of the Sheriff Policy and Procedure Manual California Administration Code Section 342	
ISSUE DATE: 04/02/2000 **REVISION DATE: 05/12/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Special Operations**	**SUBJECT:** **Special Investigations**	

I. POLICY

A. Coroner's investigators are required to investigate all reported sudden, unusual, unexpected and violent deaths that occur in the county. These investigations include but are not limited to industrial deaths, deaths that occur on military bases, aircraft accidents and the disposition of recovered Native American remains.

B. Coroner's investigators shall ensure the special investigations are compliant with applicable statutes and regulations.

II. DEFINITIONS

FAA	Federal Aviation Administration
NTSB	National Transportation Safety Board
OSHA	Occupational Safety and Health Administration

III. PROCEDURE

A. INDUSTRIAL ACCIDENTS

1. Pursuant to California Administrative Code Section 342, the coroner's investigator shall notify OSHA as soon as practical of any death occurring in a place of employment or in connection with employment.
2. The coroner's investigator shall photograph and document the make, model and serial number of any equipment the decedent may have been operating at the time of injury. If practical, the equipment may be taken as evidence.
3. The supervisor shall ensure an expanded toxicology panel is requested for all workplace deaths.

B. MILITARY RESERVATIONS

1. Deaths of military personnel may fall under federal jurisdiction and, as such, the Coroner's Office will delegate jurisdiction pursuant to Government Code Section 27491.55. If the military requests the Coroner's Office to accept jurisdiction or joint jurisdiction, the Coroner's Office will do so in accordance with Sheriff's Office Policy.

C. FEDERAL AVIATION ADMINISTRATION (FAA) AND NATIONAL TRANSPORTATION SAFETY BOARD (NTSB) INCIDENTS

1. Airplane crash fatalities require special handling at the scene. The FAA and the NTSB require the coroner to send tissue samples to the FAA Headquarters in Oklahoma City, Oklahoma for testing.

2. The investigation of airplane crashes falls under the jurisdiction of the FAA and the NTSB. Coroner's investigators shall comply with the following special considerations:

   a. In the event of an aircraft crash or any death falling under the NTSB jurisdiction, the coroner's investigator shall notify the Coroner's Division Assistant Division Commander as soon as possible. The Coroner's Division Assistant Division Commander shall notify the Coroner's Division Commander as soon as possible.

   b. The first responding coroner's investigator will assess the scene and determine the extent of personnel and equipment required to process the scene.

   c. The Coroner's Division Commander or designee will determine whether or not to implement the Mass Fatality Plan.

   d. Prior to responding to the scene of an aircraft crash, the coroner's investigator will confirm that the FAA and the NTSB have been notified.

   e. The coroner's investigator will consult with the FAA investigator prior to removal of the decedent(s). The coroner's investigator will photograph and document the location and position of the decedent(s) prior to removal.

f. The coroner's investigator will not remove aircraft parts or paperwork from the crash scene without permission from the FAA or NTSB representative.

g. The coroner's investigator will obtain a toxicology box from the FAA investigator for each decedent.

h. The forensic assistant will collect the required specimens following the instructions included in the FAA toxicology box.

i. Prior to shipment, the coroner's investigator or supervisor will contact the FAA during normal working hours and obtain their Federal Express shipment number for delivery of the samples.

j. The FAA/NTSB will reimburse the county for the special handling and collection of the tissue and toxicology tests. The clerical staff will prepare an invoice for this service. Any questions concerning billing should be addressed to the FAA/NTSB/Program Assistant/Accounts Payable.

D. NATIVE AMERICAN REMAINS

a. Pursuant to Health and Safety Code Section 7050.5 the following actions must be taken immediately upon discovery of possible Native American remains:

b. The Coroner's Office must determine whether or not the remains are Native American within two working days after being notified by the person responsible for the excavation or discovery.

c. If the remains are determined to be Native American, the Coroner's Assistant Division Commander will ensure the Native American Heritage Commission is notified within 24 hours.

d. The Native American Heritage Commission will immediately notify the person it believes to be the most likely descendent of the deceased Native American for disposition of the remains.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.33
	RELATED ORDERS: Government Code Sections 27491, 27491.3 27521 & 27521.1 Health and Safety Code Sections 7104, 7104.1, 102855 & 102875	
ISSUE DATE: 07/20/1998 **REVISION DATE: 11/25/2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Special Operations**	**SUBJECT:** **Unidentified Human Remains**	

I. POLICY

A. The Coroner's Office will process unidentified bones or human remains as a Coroner's case. The Coroner's Office will provide for interment of unclaimed human remains or cremains as authorized by law.

II. DEFINITIONS

A. Government Code 27521 Unidentified Bodies and Human Remains

1. Any postmortem examination or autopsy conducted at the discretion of a coroner upon an unidentified body or human remains shall be subject to this section.

2. A postmortem examination or autopsy conducted shall include, but shall not be limited to, the following procedures:

   a. Taking all available fingerprints and palm prints.

   b. Dental examination consisting of dental charts and dental X-rays of the deceased person's teeth, which may be conducted on the body or human remains by a qualified dentist as determined by the coroner.

   c. The collection of tissue, including a hair sample, or body or fluid samples for future DNA testing, if necessary.

d. Frontal and lateral facial photographs with the scale indicated.

e. Notation and photographs, with a scale, of significant scars, marks, tattoos, clothing items, or the personal effects found with or near the body.

f. Notations of observations pertinent to the estimation of the time of death.

3. Precise documentation of the location of the remains. The postmortem examination or autopsy of the unidentified body or remains may include full body X-rays.

4. The Coroner shall prepare a final report of investigation in a format established by the Department of Justice. The final report shall list or describe the information collected pursuant to the postmortem examination or autopsy conducted under subdivision (b).

5. The body of an unidentified deceased person may not be cremated or buried until the jaws (maxilla and mandible with teeth) and other tissue samples are retained for future possible use. Unless the coroner has determined that the body of the unidentified deceased person has suffered significant deterioration or decomposition, the jaws shall not be removed until immediately before the body is cremated or buried. The coroner shall retain the jaws and other tissue samples for one year after a positive identification is made, and no civil or criminal challenges are pending, or indefinitely.

6. If the Coroner with the aid of the dental examination and any other identifying findings is unable to establish the identity of the body or human remains, the coroner shall submit dental charts and dental X-rays to the Department of Justice on forms supplied by the Department of Justice within 45 days of the date the body or human remains were discovered.

7. If the Coroner with the aid of the dental examination and other identifying findings is unable to establish the identity of the body or human remains, the coroner shall submit the final report of investigation to the Department of Justice within 180 days of the date the body or human remains were discovered.

B. Government Code 27521.1 Unidentified Bodies and Human Remains: Reporting Death

1. The law enforcement agency investigating the death of an unidentified person shall report the death to the Department of Justice, in a format

acceptable to the Department of Justice, no later than 10 calendar days after the date the body or human remains were discovered.

III. PROCEDURE

A. PROCESSING UNIDENTIFIED BONES OR HUMAN REMIANS

1. The coroner's investigator taking custody of the unidentified bones or human remains will conduct a complete investigation and ensure the bones or remains are properly packaged and identified with the assigned case number.

2. The pathologist may examine the remains to determine if they are human.

3. If the pathologist needs more detailed examination of the remains, the coroner's investigator shall coordinate with the coroner's supervisor to determine which of the available consultants (i.e. forensic dentist, anthropologist, etc.) will be contracted to conduct further examination.

4. The coroner's investigator may send photographs of the remains to the contract anthropologist for assessment.

5. The coroner's investigator will submit a portion of the remains best-suited for DNA comparison to the Department of Justice for analysis. The coroner's investigator will complete a Department of Justice DNA submission form, attach a copy signed by a Department of Justice representative to the case file and document the transaction in the narrative portion of the investigative report.

6. The coroner's investigator will attach detailed photographs of the remains to the case file.

7. The remains will be stored at the Central Morgue for one year.

B. COUNTY INTERMENT OR DIPSOITION OF REMAINS

1. Under certain conditions, it may be necessary for the Coroner's Office to assume jurisdiction of the disposition of unclaimed human remains or identified bones.

    a. County-subsidized interment is authorized for human remains or unidentified bones where no next of kin is located. Interments

may be authorized by the Employment and Human Services Department, Health Services Department, Sheriff-Coroner or Public Administrator.

b. Health and Safety Code 7104 (A) and (B) outline the circumstances under which the coroner may be required to inter the remains, assuming there is no next of kin identified. Pursuant to Health and Safety Code 7104.1, if, within 30 days after the coroner notifies or diligently attempts to notify the person responsible for the interment or inurnment of a decedent's remains, the person fails to inter the remains, the coroner may inter the remains.

c. Cremation is the method of county-authorized disposition for unidentified human remains. After eligibility has been determined, coroner's supervisor will assign a funeral director to dispose of the remains.

d. The coroner's supervisor will complete the Authorization for County Interment form and provide the pink copy to the coroner's clerical staff for filing. The coroner's supervisor will ensure a copy is placed in the decedent's case file and provide the original and yellow copies to the selected funeral director.

e. Upon completion of the disposition, the funeral director shall submit a demand for payment.

C. INTERMENT OF UNCLAIMED CREMAINS

1. Pursuant to Health and Safety Code Section 7104, if the person who has the legal responsibility to inter the cremains of a decedent cannot be located within the state, the person who has custody of the cremains may require the coroner of the county where the decedent resided at the time of death to take possession of the cremains and inter the cremains in the manner authorized by law for the interment of the indigent dead.

2. The person who has custody of the cremains must verify that reasonable diligence was taken to locate the legal next of kin and that the next of kin was unable to be located.

3. The person who has custody of the unclaimed cremains must contact the Coroner's Office and request interment of the cremains by the Coroner's Office.

4. The person who has custody of the cremains must present to the Coroner's Office with written documentation (a copy of a certified or registered letter from the post office), showing the next kin has moved

and left no forwarding address, which must accompany the letter requesting that the coroner take custody of the cremains.

5. In the event the cremains are being held by a commercial business (funeral chapel or mortuary), a copy of the original contract for disposition shall be forwarded to the Coroner's Office, along with the above-mentioned documentation.

6. The coroner's investigator taking custody of the cremains will write a Coroner's Investigative Report for each case received for interment. The cremains will be properly packaged, identified by the assigned case number and stored at the Central Morgue for eventual interment.
7. If a Police agency has custody of cremains, they shall deliver the cremains to the Coroner's Division with a completed police report documenting the circumstances of the cremains and the determination of the next of kin.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.34
	RELATED ORDERS: Government Code Sections 27491, 27491.2 27491.3(c) & 27491.3 (d) County Officer Involved Fatal Incident Protocol	
ISSUE DATE: 06/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Operations	SUBJECT: Officer Involved Protocol	

I. POLICY

A. All deaths involving the actions or inactions of a peace officer, on duty or off, where the Officer Involved Protocol has been invoked, shall be reportable to the Coroner's Office. The Coroner's Division Commander will decide whether or not a Coroner's Inquest will be held to determine the manner of death.

II. PROCEDURE

A. NOTIFICATION

1. The coroner's investigator should obtain an initial summary of the available information including the name of the decedent, location of the body, circumstances of the death and the involved agency.

2. The coroner's investigator will not respond to make the removal until requested by the police agency.

B. DISTURBING THE DEATH SCENE OR BODY

1. Pursuant to Government Code 27491.2, any person who moves or disturbs a dead body without the permission of the coroner is guilty of a misdemeanor. Police officers, fire fighters or paramedics may not move or disturb a body once it is determined the person is deceased. Additionally, any person who searches for or removes any papers, monies, valuable property or weapons constituting the estate of the deceased from the person of the deceased or from the premises, prior to the arrival of the coroner or without the express permission of the coroner, is guilty of a misdemeanor pursuant to Government Code Section 27491.3 (c).

C. SEARCH EXCEPTION

1. Pursuant to Government Code Section 27491.3 (d), a peace officer may search the person and property around a decedent whose death was caused by a traffic accident for the purpose of locating a driver's license or identification card to determine if an anatomical donor card is attached.

D. PHYSICAL EVIDENCE ON THE BODY

1. Prior to the pathologist's inspection, the body shall not be disturbed at the morgue nor its condition altered in any of the following ways:

    a. Movement or removal of clothing.

    b. Movement or removal of any weapon or object.

    c. Collection of hair standards.

    d. Collection of gunshot residue which is associated with wound sites.

    e. Clipping or scraping of fingernails.

    f. Cleaning.

2. Removal of evidence from the body may be necessary for immediate investigative needs and to protect the evidence from loss or contamination.

3. Evidence on the body, such as loose hairs, fibers, vegetation, blood, gunshot residue etc., may be removed from the body without the prior permission of the coroner's office if necessary to protect the evidence. Evidence which can safely be left on the body for later collection at the autopsy shall be left in place for the pathologist's inspection.

E. PHYSICAL EVIDENCE AT THE DEATH SCENE

1. Weapons, wallets, papers, money and valuables which have evidentiary value to may be inspected and collected by the investigating agency without the prior approval of the Coroner's Office. However, these items shall not be removed from the scene without the coroner investigator's approval.

2. Searches for evidence and the removal of items from a decedent's estate which are conducted under authority of a search warrant do not require the approval of the coroner.

F. FINGERPRINTS

1. Fingerprints may be obtained from the decedent without the pathologist's approval if an immediate need exists to identify the decedent provided:

   a. No trauma to the areas of the fingers and hands is detected.

   b. The fingers and hands are photographed prior to fingerprinting.

   c. The hands and fingers have been examined for trace evidence.

G. PHOTOGRAPHS

1. The coroner's investigator shall photograph the body prior to moving the body when possible.

H. INQUESTS

1. Pursuant to the Officer-Involved Fatal Incident Protocol, a Coroner's Inquest will be held at the discretion of the Coroner's Division Commander.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.35
	RELATED ORDERS: Government Code Sections 27491.6, 27491.7, 27491.8, 27492, 27493, 27498, 27499, 27500, 27501, 27502, 27502.2, 27503, 27504, 27504.1, 27511 & 27512	
ISSUE DATE: 07/01/1996 **REVISION DATE: 11/25/2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Special Operations**	**SUBJECT:** **Coroner's Inquest**	

I. POLICY

A. Pursuant to Government Code Section 27491.6 and the Contra Costa County Officer Involved Fatal or Serious Injury Incidents Protocol, the Sheriff-Coroner may choose to conduct a formal inquest into any death that involved law enforcement personnel.

B. "The coroner may, in his discretion, hold an inquest, and he shall hold an inquest if requested to do so by the Attorney General, the District Attorney, the Sheriff, City Prosecutor, City Attorney, or Chief of Police of a city in the county in which such Coroner has jurisdiction. Such inquest shall be held with or without a jury, at the Coroner's discretion, and shall be open to the public".

II. PROCEDURE

A. Preparation for the Coroner's Inquest

1. The Coroner's supervisor or designee will select an appropriate date and time for the Inquest upon receipt of the autopsy report, the toxicology reports, and the investigative reports. The Coroner's supervisor or designee will prepare and submit a list of witnesses to the Division Commander for approval. Copies of the witness list will be provided to the Hearing Officer and the Inquest Recorder.

B. Press Release

1. The Coroner's supervisor or designee will prepare and submit a press release to the Division Commander for approval. The Press Release will contain the name of the decedent, the date, time and location of the Coroner's Inquest. The Division Commander shall notify the decedent's family in writing of the date, time and location of the scheduled Coroner's Inquest.

C. Subpoenas

1. The Coroner's supervisor or designee will prepare and serve subpoenas to all witnesses and retain a record of proof of service.

D. Hearing Officer

1. A hearing officer shall be appointed to conduct the proceedings of the Coroner's Inquest.

E. Inquest Reporter

1. An inquest Reporter shall be hired to record the Coroner's Inquest proceedings and testimony.

F. Jurors

1. The coroner's supervisor or designee will contact the Jury Commissioner's Office to select not less than nine nor more than 15 jurors. The Coroner's supervisor or designee will provide the selected jurors with a brief description of their duties.

2. To assure the hearing officer that the juror will base a verdict on what testimony and evidence are presented at the inquest, the voir dire process is used to eliminate anyone who has close ties with the involved agencies, has read or heard about the case, and any juror who knows the decedent.

G. Verdict of Coroner's jury

1. One Verdict of Coroner's Jury form shall be made for each of the four findings by the jury or hearing officer:

    a. Natural causes
    b. Suicide
    c. Accident
    d. At the hands of another person, other than by accident

2. After all testimony has been completed, the hearing officer will instruct the jury. All witnesses, the hearing officer, the bailiff, etc. shall leave the room prior to the jury deliberations to allow the jurors to determine the verdict of the Inquest.

3. After the jury has determined the verdict, the Coroner's Assistant Division Commander or designee shall verify all of the jurors signed the Verdict of Coroner's Jury form, personally sign the form and deliver the form to the hearing officer. The hearing officer will read the jury's verdict into the court record.

H. Miscellaneous

1. Hearsay testimony is admissible at the discretion of the Hearing Officer. The lead investigator may comment on witnesses, and/or read into the record from witness interviews. The pathologist may comment on the propriety of emergency medical treatment, blood alcohol level, drug levels, etc.

2. Attorneys present may submit questions in writing to the Coroner's supervisor or designee. The hearing officer will decide whether or not to ask the question.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.36
	RELATED ORDERS: Government Code Section 27491.41	
ISSUE DATE: 06/01/205 REVISION DATE: 11/25/2019	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Operations	SUBJECT: Sudden Infant Death Protocol	

I. POLICY

A. The Contra Costa Sheriff-Coroner will utilize the Death Scene and Deputy Coroner Investigation Protocol and International Standardized Autopsy Protocol for Sudden Infant Death Syndrome Investigations. Pursuant to Government Code Section 27491.41, the Coroner's Division Commander shall ensure a complete autopsy is performed on all SIDS cases.

II. DEFINITIONS

1. SIDS: Sudden Infant Death Syndrome.
2. SUID: Sudden Unusual Infant Death.

Both definitions refer to the sudden death of an infant one year of age or younger which is unexpected and a through postmortem examination fails to demonstrate an adequate medical cause of death.

III. GENERAL INFORMATION

A. The unexpected death of children and infants require extensive investigation of the surroundings circumstances, to include detailed questioning of the parents and examination of the residence or place of death at the time of death.

B. Although the death may arouse suspicion of inflicted injury or neglect, and the investigating agency may focus such suspicion on the parents or caregiver, death investigators must balance their investigative duties with the need to be both professional and compassionate towards the grieving family. Coroner's investigators shall work with Health Department, Public Health Nurses and Crisis Center counselors.

C. The death Scene and Deputy Coroner Investigation Protocol (DHS 4439) for investigation of the scene of SIDS deaths has been approved by the California Department of Health Services pursuant to Government Code, Section 27491.41 (enacted in 1989 with the passage of SB 1059). The protocol is used throughout California to assist coroner's investigators and pathologists in establishing the medical cause and manner of death. The coroner's investigator shall comply with the protocol on all infants and children under the age of 12 months who die suddenly and unexpectedly, and the cause of death is not obvious. Certain deaths may be excluded from the protocol, to include deaths obviously due to a recognized trauma.

D. Additionally, the International Standardized Autopsy Protocol is used during an autopsy to assist the pathologist in determining the cause of death of infants and children under the age of 12 months who die suddenly and unexpectedly, and the cause of death is not obvious.

IV. PROCEDURE

A. NOTIFICATION

1. Coroner's investigators will adhere to the following procedures:

    a. Remind hospital staff to not disturb or "warm" the body for the family to hold, remove clothing, cut lockets of hair or disturb any physical evidence on the decedent. Collect any cut off clothing, diapers or blankets.

    b. Advise the investigating agency that you will be responding as soon as possible and remind them to not let the infant or the death scene be disturbed.

    c. If the infant has been transported to the hospital, respond to the location of the decedent prior to the scene of death.

B. RESPONDING TO THE DEATH SCENE

1. The pathologist needs the most accurate depiction of the position the infant was in at the time of death. Additionally, the pathologist may need to inspect the object or materials the decedent was lying on prior to death.

2. Coroner's investigators will adhere to the following procedures:

a. Take measurements of the actual sleeping surface. Note the texture of the sleeping surface and the temperature of the scene.

b. Collect the bedding and any toys or objects that could have a connection to the cause of death.

C. PHOTOGRAPHS

1. In addition to taking relevant photographs of the decedent and death scene, the coroner's investigator may use an approved Coroner's Division doll to recreate the position the decedent was found in. The coroner's investigator shall inspect and photograph the condition of the residence, to include available food and necessities.

D. MEDICATIONS

1. The coroner's investigator will collect all medications and over the counter medications provided to the decedent.

E. REMOVAL

1. The coroner's investigator will wrap the decedent in a blanket and carry the remains to the Coroner's van in a compassionate manner. Exceptions to this procedure must be authorized by the Coroner's Division sergeant or manager prior to the removal. The coroner's investigator will collect all items that accompanied the decedent to the hospital.

F. MEDICAL HISTORY / RECORDS

1. The coroner's investigator will obtain all records of resuscitation attempts, laboratory studies and clinical histories initiated by the transportation paramedic team or Emergency Room medical personnel.

2. The coroner's investigator will obtain all available medical records.

G. AGENCY REPORT

1. The coroner's investigator shall request and obtain a copy of the investigating agency's investigative report. This report can assist the investigator during their investigation and will be provided to the Child

Death Review Team. The investigator shall ensure a copy of the agency report is attached to the coroner's investigative report.

H. REPORTING REQUIREMENTS

1. The coroner's investigator is required to report the SIDS death to the Child Death Review Team by faxing or emailing both the coroner's report and the DHS form 4439. The investigator will also notify Children and Family Services by telephone within 24 hours.

2. The Division Clerk will mail the completed protocol to:

State of California
Department of Health Services
Epidemiology and Evaluation Section
P.O. Box 997420
Sacramento, CA 95899-7420

3. The Division Clerk shall mail the completed Coroner's Notification Card to the California SIDS Program within 24 hours or as soon as possible after the completion of the gross autopsy.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.37
	RELATED ORDERS:	
ISSUE DATE: 04/20/2000 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Operations	SUBJECT: Mass Fatality Management	

I. POLICY

A. A mass fatality event is generally defined as any event that results in more fatalities than can be handled effectively by a jurisdiction using its existing capabilities and resources. Coroner's Division command staff will utilize the Contra Costa Operational Area All Hazards Mass Fatality Plan to effectively manage a mass fatality incident.

II. GENERAL INFORMATION

A. The purpose of the plan is to provide for Operational Area management of mass fatalities. The plan has been prepared in accordance with the standards of the National Incident Management System, the California Standardized Emergency Management System and other Federal and State requirements and standards for emergency response plans applicable as of August 2010.

III. PROCEDURE

A. The Contra Costa Operational Area All Hazards Mass Fatality Plan was prepared for the Bay Area Urban Area Security Initiative with grant funding provided by the Department of Homeland Security. In the event of a Mass Fatality Incident, the Coroner's Division Commander or designee shall implement the plan pursuant to the guidelines provided in the Mass Fatality Activation Levels section.

B. The plan shall be distributed to all Coroner's Division personnel. All members of the Coroner's Division are encouraged to review the plan on a regular basis.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.38
	RELATED ORDERS: Government Code Section 27520	
ISSUE DATE: 06/01/2005 REVISION DATE: 11/25/2019	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Operations	SUBJECT: Private Autopsy	

I. POLICY

A. Pursuant to Government Code Section 27520, the coroner shall perform or cause to be performed an autopsy on a decedent if the surviving spouse requests him to do so in writing. If there is no surviving spouse, the coroner shall perform the autopsy if requested to do so in writing by a surviving child or parent, or if there is no surviving child or parent, by the next of kin of the deceased. The cost of the autopsy shall be borne by the person requesting that it be performed.

II. GENERAL INFORMATION

A. The requesting party must be the legal next of kin with authority to request the procedure and assume the responsibility for all costs involved.

B. The Coroner's Office charges a fee approved by the Board of Supervisors for the autopsy and removal of the decedent. This fee and all other coroner fees shall be reviewed annually by the Division Commander and amended by the Board of Supervisors as required. Additional charges, to include toxicology tests required to determine the cause of death, shall be borne by the person requesting the autopsy.

III. PROCEDURE

A. Full payment of Coroner's Office fees is required at the time of the request for autopsy. Additionally, the following documents shall be submitted by the appropriate next of kin (or representative):

1. A copy of the death certificate signed by the attending physician.
2. A completed Survivor-Requested Autopsy form, with instruction regarding toxicology work to be done and by whom.

B. The coroner's investigator will assign a Coroner's Case File Number and complete a Coroner's Investigative Report, listing the classification as PRIVATE AUTOPSY.

C. Upon completion of the investigation the Coroner's clerk will send the next of kin (or representative) a copy of the Autopsy Report, the Coroner's Investigative Report and any diagnostic reports.

D. The Death Certificate will not be amended if the cause of death remains natural.

E. The Coroner's Division Commander or designee will amend the Death Certificate in those cases where the Coroner's Office assumes jurisdiction of the death. If the cause of death is determined to be other than natural, the fees collected for the autopsy and diagnostic tests will be returned to the requesting party.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.39
	RELATED ORDERS: Government Code Section 27491.44 Health and Safety Code Sections 7150, 7151.15, 7151.20	
ISSUE DATE: 08/18/1999 **REVISION DATE: 11/25/2019**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Special Operations**	**SUBJECT:** **Organ Donation**	

I. POLICY

A. Coroner's Division personnel shall, in accordance with Health and Safety Code Section 7151.15, cooperate with organ procurement organizations to maximize the opportunity to recover anatomical gifts for the purpose of transplantation, therapy, research or education.

II. GENERAL INFORMATION

A. Pursuant to Health and Safety Code Section 7151.20, an organ procurement organization must obtain permission from the coroner before harvesting can be performed. The coroner's investigator shall, whenever possible, provide medical records to a forensic pathologist currently under contract with the Office of the Sheriff to determine transplant feasibility.

B. If an autopsy is required and the forensic pathologist determines that the removal of the organs will not interfere with the investigation, the coroner's investigator will release the organ(s) for removal.

III. PROCEDURE

A. The coroner's investigator should ask the decedent's next of kin, at the time of the death notification, if the decedent was a donor and inform them of their ability to donate viable organs and tissues.

B. The organ procurement organization can provide first drawn blood, vitreous, and medical records prior to and after harvesting of the organs or tissue.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.40
	RELATED ORDERS: Office of the Sheriff Policy and Procedure 1.06.34	
ISSUE DATE: 04/04/2000 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Operations	SUBJECT: Communicable Disease Exposure Prevention & Reporting	

I. POLICY

A. The Coroner's Office bears the responsibility to the public and its employees to increase awareness about risks, methods of transmission, and procedures for handling communicable diseases.

II. GENERAL INFORMATION

A. This policy will supplement Office of the Sheriff Policy & Procedure section 1.06.34.

III. PROCEDURE

A. PROTECTIVE EQUIPMENT

1. All persons entering the Coroner's Office and Central Morgue are required to use universal precautions to avoid possible disease contamination.
2. Only that Personal Protective Equipment provided by the Coroner's Division will be used and shall be properly worn in the Autopsy Examination Room by any person required to come into contact with or be in close proximity with a dead body, body parts and or body fluids. In an effort to prevent cross-contamination, Personal Protective Equipment shall not be worn outside of the Autopsy Examination Room.

B. EXPOSURE REPORTING

1. A coroner's investigator, upon learning a decedent may have had a communicable disease, shall clearly post the particular disease on the decedent's toe tag and in red ink on the outside of the case folder. Persons who believe they have been exposed to a possible communicable disease are required to immediately notify the Coroner's Division Commander or Assistant Division Commander.

2. If the Commander or Assistant Commander are unavailable, anyone who believes they may have been exposed to a communicable disease shall notify an on duty sworn staff member or the Officer of the Day. The person reporting the possible exposure should be advised to immediately contact their physician and seek medical advice. The coroner's supervisor shall immediately notify Risk Management.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.41
	RELATED ORDERS: Government Code Section 27491 Penal Code Sections 11163.3 & 11174.32	
ISSUE DATE: 04/04/1999 **REVISION DATE: 05/12/2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Special Operations**	**SUBJECT:** **Death Review Teams**	

I. POLICY

A. Designated Coroner's Division personnel actively participate with the Child Death Review Team and the Domestic Violence Death Review Team. Additionally, the Coroner's Division provides information and data obtained from Coroner's Investigative Reports authorized for release to approved agencies and entities.

II. GENERAL INFORMATION

A. Pursuant to Penal Code Section 11174.32, the Child Death Review Team was created to ensure that incidents of child abuse or neglect are recognized, and other siblings and non-offending family members receive the appropriate services in cases where a child has expired. The Domestic Violence Death Review Team, established pursuant to Penal Code Section 11163.3, exists to develop recommendations for policies and protocols for community prevention and intervention initiatives to reduce and eradicate the incidence of domestic violence.

B. These Death Review Teams are comprised of representatives from the following agencies and organizations:

1. Sheriff-Coroner
2. District Attorney
3. Probation
4. Department of Family Services
5. Public Health
6. Pediatrics
7. Mental Health
8. Child Advocacy
9. Crisis Center
10. S.T.A.N.D.!

III. PROCEDURE

A. PARTICIPATION

1. The Coroner's Division Commander will provide a designated staff member to participate on the death review teams.

2. The Coroner's Division representative will provide copies of Coroner's Investigative Reports as requested.

B. OUTSIDE AGENCIES

1. The Coroner's Office will assist other approved agencies and entities by providing materials, reports and statistics as requested. Examples of approved agencies and entities include:

    1. Consumer Products Review
    2. Child Crib Consumer Board
    3. Contra Costa Prescription Drug Abuse Prevention Coalition
    4. Cal-OSHA

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.42
	RELATED ORDERS:	
ISSUE DATE: 04/04/1999 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Special Operations	SUBJECT: Tours and Autopsy Viewing	

I. POLICY

A. Guided tours of the Coroner's Office and autopsy viewing may be authorized by the Coroner's Division Commander or Assistant Division Commander for educational purposes.

II. DEFINITIONS

1. Tour: A guided tour of the Coroner's Office and Morgue Facility.

2. Autopsy Viewing: Observing an autopsy performed by a forensic pathologist.

III. PROCEDURE

A. TOURS

1. The Coroner's Division Commander or Assistant Division Commander will approve and schedule all tours. A master schedule of tours and classes is located in the Assistant Division Commander's office.

2. Requests for tours and or autopsy viewing are preferably submitted at least one week prior to the requested tour and or viewing date.

3. The Coroner's Assistant Division Commander will advise the person requesting an autopsy viewing of the $10.00 per participant fee collected prior to the viewing to recover the cost of Personal Protective Equipment required to be worn in the Autopsy Examination Room. There is no fee for law enforcement personnel.

4. The request will list all persons desiring the tour, designate a contact person, provide a phone number, and describe the reason for the tour.

5. The contact person will be advised of the approval or denial of the request.

6. The Assistant Division Commander will assign a Coroner's Office staff member to conduct the tour. This information is to be noted on the original request.

B. Qualifications to Tour or View Autopsy

1. All persons viewing an autopsy must be 18 years of age. A person under 18 years of age may tour the facility but will not have access to the area of the facility where bodies are stored, nor may they view bodies.

   Note: The exception to this policy applies to students participating in the "Every 15 Minutes" program. These students may film their program in the body storage area, however they may not be allowed into the cooler or to view a body.

2. All tours must be of an educational nature. Guests touring the facility must be registered into a class, trade school, or employed in the medical or public safety field.

3. Cameras and recording devices are not allowed to be used during a tour or a viewing in the Central Morgue.

4. All tour guests must sign a confidentiality agreement.

5. Family members of currently housed decedents are not allowed to participate in a tour or view an autopsy.

C. Presenting Tour or Viewing Autopsy

1. The person arranging the tour will report to the front counter. This person will insure all participants sign an Autopsy Viewing Release Form which includes the Confidentiality Agreement. (This requirement applies to law enforcement personnel as well)

2. Persons viewing autopsies are advised not to leave their purses and personal belongings in their vehicles.

3. The fees for autopsy viewing will be paid prior to the viewing. The person arranging the class is exempt from the fee if they do not view an autopsy.

4. Only Coroner Division personnel will conduct the tour of the facility. The forensic pathologist will conduct training as requested.

5. The person arranging the tour will remain on the property throughout the tour or the autopsy viewing.

D. Cancellation of Autopsy Viewing

1. Tours and autopsy viewing may be cancelled due to staffing and caseload constraints.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.43
	RELATED ORDERS: NONE	
ISSUE DATE: 07/01/1999 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Physical Plant & Equipment	SUBJECT: Use of Coroner Equipment and Facility	

I. POLICY

A. The Coroner's Office will make meeting rooms, equipment and vehicles available for use by other Office of the Sheriff personnel.

II. PROCEDURE

A. MEETING ROOMS

1. The briefing area behind the investigator bay and the small conference room may be used to hold meetings by other department personnel with the approval of the Coroner's Division Commander or Assistant Division Commander.

2. Any reservations of these meeting areas shall be communicated to all members of the Coroner's Division.

B. EQUIPMENT

1. Coroner's Division equipment available for use by other department personnel includes:

   a. Generators
   b. Portable Lighting
   c. Command Post
   d. Utility Trailer

2. The Coroner's Division Commander or Assistant Division Commander may authorize the loan of Coroner's Division equipment.

3. The Coroner's Assistant Division Commander shall maintain a log of all equipment checked out to other department personnel.

4. When checking out equipment or vehicles, the supervisor shall conduct a visual check of the condition of the item.

5. When the item or vehicle is returned, the Coroner's Assistant Division Commander shall conduct an inspection of the equipment and note any new damage or missing equipment in a memo addressed to the Division Commander.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.44
	RELATED ORDERS: NONE	
ISSUE DATE: 04/10/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Physical Plant & Equipment	SUBJECT: Building Security	

I. POLICY

A. The Coroner's Office is protected by a variety of security measures to include key locks, electronic access card readers and an alarm system that may be utilized when the building is unoccupied.

II. GENERAL INFRMATION

A. The Forensic Science Building is equipped with an alarm system installed to protect the contents of the building when the building is unoccupied. The alarm system is designed to allow a variety of access for each card holder and provides the identity, time and date of entry for each door accessed. The Coroner's Assistant Division Commander is responsible for maintaining an accurate access card inventory, distributing access cards to new employees and designating the level of access for each employee.

III. EMERGENCY ACCESS

A. [redacted]

B. [redacted]

C. [redacted]

1. [redacted]

2. [redacted]

3. [redacted]

4. [redacted]

D. [redacted]

1. [redacted]

2. [redacted]

IV. PROCEDURE

A. [redacted]

1. [redacted]

2. [redacted]

3. [redacted]

4. [redacted]

B. [redacted]

1. [redacted]

2. [redacted]

C. [redacted]

1. [redacted]

2. [redacted]

D. [redacted]

1. [redacted]

2. [redacted]

E. [redacted]

1. [redacted]

2. [redacted]

3. [redacted]

4. [redacted]

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.45
	RELATED ORDERS: NONE	
ISSUE DATE: 07/01/1999 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Physical Plant & Equipment	SUBJECT: Smoke Alarms	

I. POLICY

A. Coroner's Division personnel will familiarize themselves with the building smoke detection system.

II. PROCEDURE

The Forensic Science Building is protected by a fire and life safety system which automatically alerts the local fire department in the event of an activation. The fire department will contact the Coroner's Office or Sheriff's Dispatch to verify the alarm.

A. Building Door Key for Fire Department

B. A key to the building is located in the key lock box in Sheriff's Dispatch.

C. Location of Smoke Alarm Systems

1. The first panel is located on the first floor wall next to the elevator doors near the Coroner's Office front door. This panel will show the location of the alarm that the main panel must use to reset the system. The second panel is located in the utility room.

D. Fire Extinguisher Locations

1. Five fire extinguishers are located in the following areas:

a. On the first floor at the front interior entrance of the Coroner's Office.

b. Between the hallway doors that separate the garage from the front exterior office/ entrance area near the stairwell.

c. In the rear hallway across from Room 109.

d. In the hallway to the east side entrance to the autopsy room.

e. In the garage utility room near the door.

E. Location of Smoke Detectors

1. The smoke detectors are located in the ceilings throughout the building. When a smoke detector goes into alarm, a small red light will illuminate. The following procedures will assist members of the Coroner's Division in the event of a smoke alarm activation:

a. Locate the utility room control panel or the panel just outside the Coroner's Office entrance door.

b. The area that is in alarm will be illuminated.

c. Proceed to the indicated location and check for any signs of fire. Look for the smoke detector that has been activated and note the location.

d. If no sign of a fire is detected, contact Sheriff's Dispatch and cancel any fire department response.

e. Return to the utility room and turn off the alarm by pressing the button labeled **SILENCE TROUBLE SIGNAL**.

f. Press and hold the reset button for at least three seconds.

g. Check the alarm that was activated to ensure the red light is no longer illuminated.

Contra Costa County Office of the Sheriff Coroner Division Policy and Procedure	CORONER	NUMBER: 3.03.46
	RELATED ORDERS: NONE	
ISSUE DATE: 06/01/2005 REVISION DATE: 05/12/2017	CLEARANCE: Office of the Sheriff	
CHAPTER: Physical Plant & Equipment	SUBJECT: Slug Discharge Plan	

I. POLICY

A. The Coroner Division Commander is required to plan for and prevent the discharge of hazardous materials into the sanitary sewer system.

II. GENERAL INFORMATION

A. Formaldehyde shall be used by the pathologist or pathologist assistant only and restricted to use within the laboratory hood only.

B. Formaldehyde shall be stored in the Labconco laboratory hood. The hood sink drain shall be plugged with the issued stopper. A catch drain is installed under the hood sink to collect and store any formaldehyde overflow until it can be neutralized.

III. SPILL RESPONSE EQUIPMENT

A. **Polyform-F:** Used to dam and gel formaldehyde spilled, of a quantity, which could run into drains.

B. **Formalex:** Used for small spills of formaldehyde.

C. **Mop and bucket:** Used for clean up after neutralized with the above products.

The spill response equipment is located in the autopsy storage room. Neutralization products are in the cabinet marked “Hazardous Spill Material.”

IV. PROCUEDURE

A. SPILL RESPONSE

1. During normal hours of operation, employees shall make regular/routine observations of the use of formaldehyde to ensure safe storage and containment practices are employed. If storage and containment is not evident to the employee, the employee shall investigate to the extent necessary to determine if a spill has occurred.

2. Upon determination that a spill has occurred, the employee shall notify the Coroner's Assistant Division Commander or designee as soon as practical.

3. The extent of the spill shall dictate the appropriate response. The reporting employee shall choose the appropriate response.

4. The reporting employee shall use the appropriate material to neutralize the spill prior to clean up.

5. If possible, the reporting employee shall determine how the spill occurred. All findings and actions taken shall be reported to the Coroner's Assistant Division Commander or designee.

6. The Coroner's Assistant Division Commander or designee shall submit to the Central Contra Costa Sanitary District within five (5) days a detailed written report describing the accidental discharge and the measures taken to prevent similar future occurrences.

7. Residuals from the spill and clean up shall be disposed in the medical waste receptacles marked bio-hazard.

B. NOTIFICATION PROCEDURES

1. In the event of a prohibited discharge into the sewer, the Coroner's Assistant Division Commander shall immediately notify the Central Contra Costa Sanitary District.

2. The notification shall include:

   a. A Coroner's Office contact person and telephone number.

   b. The location and duration of the discharge.

   c. The composition of the substance and its dangerous properties.

   d. The concentration and volume.

   e. All immediate corrective actions taken.

C. EMPLOYEE TRAINING

1. All Coroner Division personnel will review this policy upon initial assignment and each year thereafter while assigned to the Division.

Contra Costa County

OFFICE OF THE SHERIFF

Custody Services Bureau
COURT SECURITY SERVICES
POLICIES AND PROCEDURES

2020



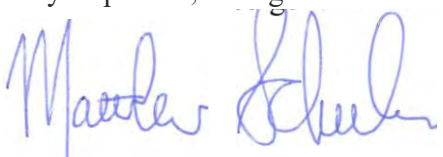
Contra Costa County Office of the Sheriff
Court Security Policy and Procedure

Preface

A well-developed policy and procedure manual is vital to Court Security's efficiency. The Court Security manual is designed to afford every employee a clear insight into the organization and its operations. This manual reflects the policies of the current administration while continuing to represent the needs of both management and non-management employees. It is recognized that the procedures contained within are only as effective as they are applicable and as lasting as they are flexible. Each procedure is written to establish uniformity and describe the order of steps to be followed to resolve a problem or accomplish a given task. It is the responsibility of all employees to acquaint themselves with this manual and use it as a guide in the performance of their daily assignments.

This manual supersedes all, Court Security manuals previously issued by the Office of the Sheriff Contra Costa County. It does not supersede any applicable Federal or State Laws. The manual contains policies and procedures relating to specific functions and associated responsibilities and authority.

The Department Manual, the Custody Services Bureau Manual, County ordinances and regulations, Federal and State laws, written and verbal orders issued by superiors, also governs Court Security employees.



Matthew Schuler, Assistant Sheriff
Custody Services Bureau
December 20, 2019

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Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.01.01
	RELATED ORDERS: Cal Gov Code 26625, 26611, 26625.7	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-11-2013 **REVIEW DATE**: 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Administration	**SUBJECT:** Philosophy / Goals and Objectives	

I) POLICY

A) The Court Security Unit of the Office of the Sheriff Contra Costa County is dedicated to providing the highest level of service to the Superior Courts in Contra Costa County and shall strive to make these courts among the safest and most security conscious in the State of California. References: California Government Code – 26625, 26611

B) The Court Security Unit was created to provide an elevated level of service to the Superior Courts, eliminate duplication of efforts in the areas of civil process and Court Security, and to offer a more cost-effective system in the area of Court Security.

C) Court Security Unit operations will utilize the most advanced and up-to-date methods available in performing its day-to-day tasks.

D) Court Security staff will develop and maintain an attitude of professionalism and dedication to service that is consistent with those of other court related staff.

E) Community input will be received and encouraged in the implementation and adoption of Court Security policies and procedures.

F) Court Security staff will participate in the development and implementation of the Division's goals, objectives, policies and procedures.

G) The philosophies, goals and policies will be consistent with Contra Costa County, and more specifically, the Contra Costa County Office of the Sheriff.

H) The written or electronic document describing the Court Security Unit's philosophy, goals and objectives will be available to Unit personnel, members of the judiciary and the general public without restriction.

I) The written document describing the Court Security Unit's philosophy, goals and policies will be reviewed and/or updated annually.

J) California Government Code 26625.7: *An employee of the Sheriff's Office who desires to transfer into the office of Court Services shall make application through the appropriate division to the Court Security Bureau Assistant Sheriff. That employee, if approved by the Court Security Oversight Committee for transfer to the Court Security Unit, shall execute an agreement to serve in the Court Security Unit for a minimum term of three years.*

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.01.02
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 REVISION DATE: 02-11-2013 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Administration	SUBJECT: Division Facilities and Stations	

I) POLICY

A) To facilitate the service to the courts and the community, the Sheriff's Office Court Security Unit maintains facilities and offices at the various Superior Court locations throughout the County. Personnel assigned to these locations shall adhere to all policies and procedures applicable to Department members.

II) CARE AND MAINTENACE

A) Court Security Unit members assigned to the various facilities in the county court system shall be responsible for the overall care, cleanliness and maintenance of equipment in locations under the care and control of the Sheriff's Office. Janitorial services are provided; however, personnel assigned shall perform those daily tasks necessary to maintain a presentable appearance to the public.

III) INSPECTIONS

A) The assigned Court Security Supervisor shall ensure a Fire Life Inspections is conducted on a monthly basis. The inspection shall be documented the required form and kept on file for three years.

B) The assigned staff shall conduct daily holding cell checks and document their findings on the appropriate form noting any vandalism, malfunctioning equipment, and/or security problems. The cell logs shall be completed in INK. Any mistakes shall be lined out with the initials of the person making the correction. Cell logs will be held for three years.

IV) LOCATION OF FACILITIES

A) The Court Security Unit members shall report for duty at the appropriate assigned facility. The locations for Court Security Unit facilities are as follows:

1) Martinez Courts

(a) Justice Wakefield Taylor Courthouse
725 Court Street Martinez, California 94553

(b) A.F. Bray Courthouse
1020 Ward Street Martinez, California 94553

(c) Peter L. Spinetta Family Law Center
751 Pine Street Martinez, California 94553

(d) Martinez Court Annex
1010 Ward Street Martinez, California 94553

2) Richmond Court

(a) Richmond Courthouse
100-37th Street Richmond, California 94805

3) Pittsburg Court

(a) Richard E. Arnason Justice Center
1000 Center Drive Pittsburg, California 94565

4) Walnut Creek Court

(a) Walnut Creek Courthouse
640 Ygnacio Valley Road Walnut Creek, California 94511

5) Juvenile Courts

(a) Juvenile Hall
202 Glacier Drive Martinez, California 94553

6) Office of the Sheriff Contra Costa County
Court Security Services Office

(a) 815 Court Street,
Martinez, California
94553.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.01.03
	RELATED ORDERS: C.C.C.S.O. Policy 1.04.63, 1.05.48, 1.05.41, 1.05.74, 1.07.21, 1.07.23, 1.07.54	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Administration	**SUBJECT:** Reporting for Duty	

I) POLICY

A) In order to provide efficient, productive service, all Court Security Services personnel shall be punctual in reporting for duty at the time and place designated by their supervisor.

II) PROCEDURE

A) All Court Security personnel will be properly attired in neat and clean uniform, shoes shined and brass polished. All required and necessary equipment shall be carried to include a safety vest per Sheriff's Office Policy and Procedure section: *1.07.23 – Personal Protection Equipment.*

B) Personnel assigned to Court Security shall report to their assigned Court Security Office location at the beginning of their shift. Failure to do so will be neglect of duty, and they will be subject to the Department Corrective Counseling procedure / Personnel Management Regulations.

C) A sergeant may wish to hold muster or roll call before assigned staff go to their respective posts or duty assignments.

D) Personnel shall check their mailbox and Microsoft Outlook e-mail account at least once per shift per CCCSO Policy section: *1.07.54 – E-Mail, Texting, Internet, and Internet Access.*

E) Court Security is not manned 24 hours. Therefore, voice mail is available for staff to leave a message for absences and tardiness. Staff are reminded this does not relieve the employee of his or her responsibility from speaking to an on-duty supervisor after the office opens per Sheriff's Office Policy and Procedure section: *1.04.63 – Sick Leave*

F) When leaving a message on the answering machine, please include the following:

1) Name.
2) Assigned work location.
3) The reason for non-attendance or tardiness.
4) A location/phone number where they can be contacted.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.01.04
	RELATED ORDERS: C.C.C.S.O. Policy: 1.05.41, 1.05.43, 1.05.44	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Administration	**SUBJECT:** Working Conditions & Professional Demeanor	

I) POLICY

A) The Office of the Sheriff has an obligation to provide efficient, productive, and professional service to the public. How employees conduct business and utilize their on- d u t y time is a major factor in meeting this obligation. Therefore, guidelines are established regarding on duty time and conduct. *Sheriff's Office Policy and Procedure Section: 1.05.41 – On-Duty Time.*

II) PROCEDURE

A) The following working conditions will be adhered to by all members of Court Security Services:

1) [redacted] Hours may be adjusted to accommodate court business. Any modification of work hours is to be reported to the Court Security sergeant before the modification. All modifications of work hours and work conditions shall be reported to the Court Security sergeant.

2) In the event, a court will not be in session for the day, or during the morning or afternoon sessions, the bailiff will notify the Court Security sergeant or Operations Deputy as soon as this information is learned.

3) In the event, a bailiff needs to leave the courthouse complex for any reason during working hours, except for lunch period, the Court Security sergeant will be notified upon leaving and returning.

4) Bailiffs are required to remain in attendance of their respective courtrooms at all times when court is in session. Bailiffs shall not wander the halls, or visit with other personnel or civilians when court is in session. When court is in recess, and the bailiff needs to leave his/her assigned court, the bailiff shall notify the court of his/her absence in case his/her presence is required.

5) Court Security personnel will refrain from reading any periodicals, books, newspapers or other literature when court is in session, or when in general view of the public. All books, periodicals, or newspapers, as well as, cell phone and personal electronics shall be kept for off-duty use and will be stored away and out of public view.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.01.05
	RELATED ORDERS: CCCSO 1.06.41	
ISSUE DATE: 01-01-08 **REVISION DATE:** **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Administration	**SUBJECT:** Crime Reports / Writing Format	

I) POLICY

A) The purpose of a written report is to have a permanent record of an incident and the persons involved. The most efficient way to capture and have readily available the information contained in a report is to document incidents on a standard form. This is best accomplished by using the Sheriff's Office Automated Report Writing System (ARS).

II) PROCEDURE

A) To properly track and recover information contained in Court Security Services reports pertaining to incidents occurring at Court Facilities the below procedures shall be followed:

1) When calling Sheriff's Dispatch to obtain a report number, you will be asked for the location of occurrence or where the incident occurred. Give the exact location, as listed below, then ask them to confirm that the location indicates **CRT** area group or city code.

2) Location of Occurrence(s)

(a) Bray
(b) Classic
(c) Family Law Center
(d) D.C.S.S.
(e) Juvenile Hall
(f) Delta Court
(g) Richmond Court
(h) Walnut Creek Court

3) On the INCIDENT Tab, “Beat,” will always be “CT.”

4) On the INCIDENT Tab, “City Code,” will always be “CRT.”

5) On the INCIDENT tab the Disposition shall be one of the following:

(a) Cleared

- Misdemeanors which do not require any more investigation or follow-up.
- Case is ready for Misdemeanor Complaints to forward to the DA for prosecution.

(b) Continued

- Misdemeanors requiring additional investigation or follow up.
- Suspect is usually known.

(c) Suspended

- Misdemeanors with no more investigative leads.
- Suspect is unknown.

(d) Referred

- All felonies
- Found Property
- Missing Persons

6) For all “Judicial Requests” use detail code type 1770

B) The Sheriff has accepted primary law enforcement jurisdiction over the courts and will respond to handle service requests that originate inside the courtroom and their immediate surroundings.

C) Once the situation is stable, a supervisor will determine if the matter shall be referred to the agency having jurisdiction or investigated by Sheriff’s personnel.

D) Sheriff’s personnel may initially handle service requests outside the courthouses.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.01.06
	RELATED ORDERS: 1.04.62, 1.04.71	
ISSUE DATE: 01-01-08 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Administration	**SUBJECT:** Annual Vacation - Sign up	

I) POLICY

A) Employees in permanent positions are entitled to vacations with pay. Vacation accrual and use of vacation time is established for the mutual benefit of the employee and the Office of the Sheriff.
Sheriff's Office Policy and Procedure Section: 1.04.62 – Vacation Accrual and Use.

II) PROCEDURE

A) The Court Security Unit annual vacation sign-up will be posted for all employees to select annual vacations based on their allotted accruals and seniority. Vacation accruals are addressed in Sheriff's Office Policy and Procedure section: *1.04.62 – Vacation Accrual and Use,* and the M.O.U. The order in which employees bid for vacation (seniority) is addressed in Sheriff's Office Policy section: *1.04.71- Seniority (Anniversary dates and Abridged Service)*, and the M.O.U.

B) A list of eligible employees, the available weeks of vacation, and a directive with information on how to sign up is posted throughout the unit before the New Year.

C) Vacation is selected in week blocks. Each week starts on Monday and ends on Sunday. There are *fifty-two** week blocks to select from.

D) Four deputies and one ranger can sign up for the same week

E) There is no "Same as judge" vacation option/preference.

F) Employees shall sign-up in order of seniority and should list their choices in order of preference.

G) Employees should clearly indicate if they are requesting consecutive weeks.

H) Junior employees signing up in advance of senior employees may wish to make several alternative selections in case their first choice is not granted.

I) Employees not signing up in the time allotted shall forfeit his/her opportunity to sign-up and may submit a request in writing at a later date after the completion and posting of the approved vacation list.

J) Reminder, when an employee selects vacation, he/she must have a sufficient amount of vacation accruals acquired at the time the vacation is to be used. (*This information is located on an employee's paycheck stub).* Employees requesting to use other accruals as vacation time must have pre-approval from a supervisor.

K) Employees signing up for annual vacation shall maintain the proper amount of vacation accruals. Failure to maintain proper accruals could result in the employee forfeiting his/her selected week.

L) All employees are responsible for monitoring their vacation accruals. The M.O.U. states the department agrees to schedule vacations to prevent loss of accrued and accruing vacation provided the individual employee **gives 60 calendar days advanced written notice** to the Bureau Assistant Sheriff that he/she is approaching maximum accrual.

*Note: Some annual vacation sign-ups will have fifty-three weeks.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.01.07
	RELATED ORDERS: 1.04.71, M.O.U.	
ISSUE DATE: 01-01-08 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Administration	**SUBJECT:** Personnel Shift Sign Up	

I) POLICY

A) It is the policy of the Court Security Unit to assign personnel to the court facilities based on seniority, personal preferences, Unit need, sound management and the ability for the employee to perform the job.

II) DEFINITIONS

A) Seniority: Determined by the amount of time one has with the Office of the Sheriff. If identical times exist between two or more employees, the following is the order in which the senior person will be determined.

1) Department Seniority
2) Academy Ranking

III) PROCEDURE

A) The Court Security Unit's shift sign-up is posted at all affected work sites approximately one month before shift change.

B) Eligible employees are required to sign up within the specified time or forfeit their seniority ranking.

C) Deputies assigned, as courtroom bailiffs will not be affected by shift sign-up unless they have completed their commitment to their assigned court and are assigned to the security pool before the sign-up closing date.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.01.08
	RELATED ORDERS:	
ISSUE DATE: 12/01/2014 REVISION DATE: 12/10/2014 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Administration	SUBJECT: Court Services Closed Circuit Video System	

I) POLICY

A) The Court Security closed circuit video system was installed to allow Sheriff's Office personnel the ability to monitor the areas in and around the courthouses in Martinez. The video system is designed to enhance the Sheriff's Office security presence and to enable a quicker response to emergency situations.

II) DEFINITIONS

A) Video System – The closed-circuit video system installed in and around the Martinez courthouses.

[redacted] System Administrator – A Sheriff's Office Supervisor, Manager or the Court Facilities Manager with administrative access to the system. [redacted]

C) Level 1 User – A Sheriff's Office employee that can access the camera system, but cannot change camera settings, add or remove users, or "burn" video.

D) Burn Video – Transfer a video file from the system hard drive to an external storage device such as a USB thumb drive, CD, or DVD.

III) PROCEDURE

A) The purpose of the video system is to accurately document the events and actions of disruptive inmates, medical emergencies, and other critical incidents to verify the accuracy of crime reports, jail incident reports, and collection of evidence. Recordings also enhance the ability to review procedures for employee evaluation and training.

B) The video recordings will not be used as a tool by supervisors or management to "remotely supervise" an employee.

C) The video system will be monitored by Sheriff's Office personnel only. The public or people not employed by the Sheriff's Office will not be allowed access to the system.

D) If an outside agency requests a copy of a video from the court security video system, they must submit a written request to the Presiding Judge (or designee) to authorize the release.

IV) SUPERVISOR RESPONSIBLITIES (System Administrator)

A) Supervisors may review video recordings at any time for approved purposes, such as training, reviewing a Deputy's performance, resolving citizen complaints, evidence collection, or during any necessary administrative review. If, after reviewing a recording, a supervisor has developed cause for further inquiry (officer safety, use of proper procedures, or other administrative or operational issues) the recording may be used for such authorized inquiries or investigations.

B) In the event, a video needs to be "burned" to a USB thumb drive or a CD/DVD it must be done from the terminal in the Court Security office.

C) These recordings shall be made for evidentiary, evaluation, or training purposes only. They will not be made available to the public or media unless authorized for release by the Custody Bureau Assistant Sheriff or the Court Security Services Manager.

D) Only a supervisor or manager has the system authorization to burn video to a USB drive or CD/DVD.

V) DEPUTIES AND RANGER RESPONSIBILITES (Level 1 User)

A) Deputies and Rangers will use this camera system only in a way that conforms to Sheriff's Office policies and procedures.

B) Deputies and Rangers at a security post will only display the exterior and corridor cameras. They will not view the interior courtroom cameras at the posts unless directed by a supervisor, or in an emergency.

C) If suspicious activity is observed by a deputy or ranger, they will notify the security desk and a supervisor immediately.

D) At the end of each shift, the closing deputy or ranger is responsible for logging off the workstation and turning off the monitors.

VI) SECURITY DESK DEPUTY RESPONSIBILITIES

A) The desk deputy is a specialty position and is selected by the court security supervisors and Court Services Manager. This deputy receives a higher level of training in the operation of the video system and is authorized to monitor all of the cameras in the system and review video as needed.

1. The Desk Deputy will log on the workstation using the preset Windows login username and password. They will then log on to Prism using their username and password.

2. The Desk Deputy will monitor all of the cameras during their shift. They will be vigilant for suspicious or criminal activity, medical emergencies, disruptive inmate or citizen behavior, or any other activities or situations that may require the attention of Court Services personnel.

3. If an incident occurs, the Desk Deputy will note the time of occurrence and camera location so the video of the incident may be reviewed by the Court Services Manager, supervisor or Court Facilities Manager.

4. During the court's lunch recess, the security desk will not monitor the courtroom cameras.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.02.01
	RELATED ORDERS: C.S.B. 2.11.22, 2.16.03, 2.16.05 Court Security 4.12.03	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-2009 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Courtroom Security Procedures	**SUBJECT:** Handling of Prisoners	

I) POLICY

A) The Court Security Unit realizes that special considerations are to be taken into account by all personnel when dealing with such things as prisoners in court, the handling and care of firearms and other weapons offered as exhibits in court and other special security measures.

II) PROCEDURE

A) Bailiffs and Court Security personnel shall NEVER leave any prisoner alone in the courtroom at any time. If circumstances dictate that the bailiff / deputy must leave the courtroom for any reason, the prisoner must be secured in a court holding cell or another deputy must be summoned to relieve the bailiff.

[redacted]

C) The bailiff may allow the prisoner to sit with his / her attorney in the courtroom for interviews if ordered by the judge.

[redacted]When court is in session, the bailiff shall allow the unrestrained prisoner to sit next to his / her attorney during the proceedings. [redacted]

[redacted]Multiple defendants (one of which is in-custody) in a courtroom shall not be allowed to sit next to each other. Their respective attorney's should be placed in a position to separate the defendants. [redacted]

[redacted]

F) [redacted]

G) Any disciplinary problems with prisoners will be handled pursuant to C.S.B. Policy 2.16.03& 2.16.05 and/or California statute violations pursuant to the California Penal Code.

H) Prisoners / defendants in jury trial will be allowed to dress in "street clothes" (non jail clothing). Prisoners who do not have trial clothing shall make arrangements through their attorney, family, friends, or Friends Outside, etc. Occasionally there are times when the clothing is brought to the courthouse, due to unforeseen problems. This practice is highly discouraged and conflicts with the Custody Services Bureau policy of one for one clothing exchange (CSB 2.11.22).

1) If the clothing is brought to the courthouse, the person delivering the clothing will be advised to take the clothing to the jail for exchange of the prisoners booked clothing.

2) If sending the person to the jail is not an option the deputy will notify a supervisor to review the situation. The guidelines of C.S.B. policy 2.11.22 shall be considered when resolving the situation.

I) If a prisoner's behavior demonstrates the need for restraints, other than for security reasons, they are transported back to the M.D.F. Special restraints, as defined in C.S.B. Policy 2.08.22, will be used on a case-by-case basis with approval of a supervisor (Special restraints do not include leg shackles, handcuffs or waist chain).

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.02.02
	RELATED ORDERS: CCCSO 1.07.31	
ISSUE DATE: 01-01-02 REVISION DATE: 01-01-07 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Courtroom Security Procedures	SUBJECT: Firearms / Weapons - Items of Evidence	

I) POLICY

A) The handling of firearms will be in accordance with established safety practices. Due to the nature of court proceedings some practices and rules may not apply, in such situations common sense and good judgment must prevail.

II) PROCEDURE

A) All firearms produced in court as exhibits of evidence shall be inspected and confirmed to be unloaded before being submitted to the court. All firearms shall be secured in such a fashion as to render them incapable of being fired. Special trigger locks will be available to achieve this.

B) Firearms and ammunition shall not be placed together or allowed to come into close proximity of one another.

C) Bailiffs shall assist the court in the handling of weapons for inspection by the jury and attorneys. Bailiffs will closely monitor all weapons offered as evidence and will assure they are not in a position accessible to the defendant(s), victim(s) or witness(s).

D) Personnel should familiarize themselves with the various types of weapons that could be offered as evidence and have a basic knowledge of their nomenclature. Deputies confronted with a weapon of unknown nomenclature shall call for assistance.

E) AT NO TIME WILL FIREARMS BE LEFT ALONE WITH DELIBERATING JURORS.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.02.03
	RELATED ORDERS: C.S.B. Manual 2.8.29, 2.13.05, 2.08.22	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 06-05-2017 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Courtroom Security Procedures	**SUBJECT:** Security and Control of Prisoners	

I) POLICY

A) The Court Security Unit has established a set of guidelines for the restraint of prisoners. Restraints are often necessary for the safety of deputies, court staff, and the general public. Restraints are also necessary at times to prevent the escape of prisoners. The court has the ultimate deciding authority on the use of such devices.

II) PROCEDURE

A) Prisoners shall not wear restraints in the courtroom. (Exceptions are outlined in this policy).

B) When restraining any prisoner for transporting, the handcuffs will be secured behind the prisoners back and doubled locked. EXCEPTION: When the use of a waist chain sufficiently immobilized the prisoner's hands, the handcuffs may be applied in the front.

C) If a prisoner's behavior demonstrates the need for restraints, other than for security reasons, they are transported back to the MDF. *Special restraints, as defined in C.S.B. Policy 2.08.22*, will be used on a case-by-case basis with the approval of a supervisor (Special restraints do not include leg shackles, handcuffs, or waist chains).

D) When a prisoner is to appear in court whose status necessitates the use of restraints, for any reason, the bailiff shall immediately notify his/her supervisor. The Bailiff or Sheriff's Office representative shall articulate the reason for the use of the restraints to the Judge before the proceedings (People v. Duran, 1976 16 Cal. 3rd 282, United States v. Gomez-Sanchez). The court relies on a showing of "manifest need" and "compelling governmental interest" for the use of restraints inside the courtroom. This can include but is not limited to:

1) Prior escapes

2) Violence or threats of violence towards staff, other prisoners, or victims or witnesses

3) Failure to comply with the requests or instructions of transporting deputies

4) Plans to disrupt proceedings by non-violent means.

E) Upon the approval of the Court, the use of a security chair may be utilized, when justified, on high-risk hearings or trials to prevent the use of visible restraint devices during court proceedings and to maintain control of the prisoner.

F) Pregnant inmates will not be restrained while being transported, pursuant to CSB Policy and Procedure Section: *2.08.29 – Inmate Transports*.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.02.04
	RELATED ORDERS:	
ISSUE DATE: 09-03-2013 **REVISION DATE:** **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Courtroom Security Procedures	**SUBJECT:** Key Control	

I) POLICY

A) To provide Court Security services effectively, personnel will be given direction and authority for the control and issuance of facility keys. Storage, control, and accounting of facility keys shall be strictly observed by all personnel to preserve the integrity of all Court Security facilities.

II) DEFINITIONS

A) Master Key Lock-Box: Contains keys to the facility.

B) Operational Facility Keys: Keys used in the normal day-to-day operation of a courtroom and/or workstation.

C) Controlled Facility Keys: Keys used for specific areas, requiring a higher level of accountability and approval for use by a Shift Supervisor.

D) Electronic Key Card / FOB: Key cards / FOB's used to gain access to secure areas by authorized personnel only, i.e. clerk's office, Judge's Chambers.

III) PROCEDURE

A) Key Control

1) No facility keys shall be issued to persons not assigned to the Court Security Unit. Exceptions would be to those authorized to carry them while working overtime, or any Administrative or Maintenance personnel.

2) Operational Keys and Electronic Key Cards / FOB's issued to personnel, must be returned to a Court Security Unit Supervisor upon reassignment or termination from the Court Security Unit.

3) The Shift Supervisor and/or the Lead Security Deputy shall keep all Master Key Lock-Boxes closed, locked, and controlled.

4) Controlled Facility Keys shall only be used during emergencies or training exercises, and shall be accounted for by the Shift Supervisor.

5) No inmate, under any circumstance, shall be permitted to take possession of any type of facility keys.

6) A master key sheet, listing all facility keys, will be maintained at each individual courthouse [redacted]

[redacted]

B) Operational Facility Keys and Electronic Key Cards/Fob's

1) All personnel assigned to the Court Security Unit shall be issued an Electronic Key Card/FOB.

2) All personnel assigned to the Court Security Unit shall be issued one set of operational facility keys for use at their assigned work location. [redacted]

3) An assigned Court Security Supervisor shall complete a key sign-out form, indicating the assigned keys and Electronic Key Card/Fob issued to any assigned personnel in the Court Security Unit. The recipient must sign the key form.

C) Inventory of Keys

1) The Shift Supervisor and/or the Lead Security Deputy at each Courthouse location shall conduct a daily inventory of all Controlled Facility Keys and non-assigned Operational Facility Keys maintained for overtime use.

2) Any unresolved discrepancy regarding the accountability of inventoried keys, shall be reported to the Shift Supervisor and/or the Facility Commander.

3) During the annual Court Security Unit's evaluation period, assigned Court Security Supervisors will be responsible for completing a key inspection of personnel they supervise.

D) Missing or Lost Keys

1) All Court Security Personnel to whom any type of facility keys have been issued, shall be responsible for such keys. If any employee loses a key or discovers a key to be missing, the loss shall be reported immediately to a Shift Supervisor.

2) If it is determined that the loss of a key occurred outside of any facility, the employee shall submit a written memorandum to the Facility Commander with as much detail as possible.

3) If it is determined that the loss of a key occurred inside any of the facilities, a search of the facility will occur and the employee will submit a written memorandum to the Facility Commander with as much detail as possible.

E) Missing or Lost Electronic Key Cards/Fob's

1) All Court Security Personnel, to whom an Electronic Key Card/FOB has been issued, shall be responsible for such. If any employee loses an Electronic Key Card/FOB or discovers it to be missing, the loss shall be reported immediately to a Shift Supervisor.

2) Upon receiving notification of a lost/missing Electronic Key Card/FOB, the Shift Supervisor will notify Court Facilities at [redacted] for deactivation of the Electronic Key Card/FOB.

F) Broken Keys

1) Broken keys shall be immediately reported to and turned in to the Shift Supervisor for issuance of a duplicate key.

G) Duplication of Keys

1) Unauthorized possession, alteration, marking, manufacturing, or impression making of keys is prohibited.

2) Duplication of keys for inventory and issuance purposes only, shall be controlled by Court Maintenance.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.03.01
	RELATED ORDERS: P.C. 4001 & 4002 W&I 208	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Segregation of Prisoners	**SUBJECT:** Statutory Segregation	

I) POLICY

A) Administrative and statutory segregation is employed as a protective measure to ensure the safety of staff, prisoners, and to maintain security in the division. Segregation of prisoners will not be based on race, color, creed, or national origin.

II) PROCEDURE

A) Law requires minimum segregation of prisoners. True segregation means not only from physical contact but also from visual and audible contact.

B) Persons held as material witnesses or under an order imposing punishment for contempt shall be kept separate from persons charged with a crime, unless the person held in contempt is also pending criminal charges.

C) Persons in-custody for **civil warrants shall be confined separately and distinctly from other prisoners.** All attempts shall be made to keep civil prisoners from "sight and sound" of adult prisoners.

D) Males and females shall be confined separately. (While attending court female and male prisoners will be seated in such a way that does not allow for either party to make physical contact).

E) Juveniles shall NOT be confined with adults (W&I 208). All attempts shall be made to keep juveniles out of sight and sound of adult prisoners. Juveniles are considered those persons under the age of eighteen (18) years.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.03.02
	RELATED ORDERS: C.S.B. 2.09.01	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Segregation of Prisoners	**SUBJECT:** Administrative Segregation	

I) POLICY

A) Administrative Segregation (AD-SEG) is employed as a protective measure to ensure the safety of staff, other prisoners, and to maintain security within the facilities. It shall be the policy of the Court Security Unit to supervise prisoners placed in administrative segregation.

II) PROCEDURE

A) Administrative segregation assists in jail management for the care and control of the unusual prisoner and shall be provided as follows:

B) Complete segregation shall be provided for those prisoners who may cause harm to other prisoners or who may be harmed by other prisoners.

C) Mentally ill persons likely to cause injury to themselves or others and requiring immediate care, treatment or restraint shall be segregated (according to W&I 5150) until transportation to the jail or mental health facility. Such persons shall be transported as soon as possible.

D) Segregation of persons shall not be based on race, creed, color or national origin.

E) Any prisoner known to have any communicable disease shall be segregated from other prisoners. These diseases include but are not limited to, tuberculosis, hepatitis, or any other special medical problem identified.

F) For complete information on segregated prisoners, Court Security personnel shall review the C.S.B. Policy and Procedure Manual starting with chapter 2.09.01.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.04.01
	RELATED ORDERS: CSB Manual 2.08.46, 2.08.49 Court Security Manual 4.01.02	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-05-2014 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Courthouse Holding Cells	**SUBJECT:** Securing / Monitoring Prisoners	

I) POLICY

A) Court Security personnel will be responsible for the security and monitoring of prisoners brought into the Court's Facilities. The coordination between the various assignments of Court Security personnel, as well as, the court staff is essential to ensure security is maintained.

II) PROCEDURE

A) Courthouse holding cells will be used as a temporary place for in-custody defendants awaiting their court hearing or trial.

1) At the beginning of the day and before using the holding cells the assigned floor deputy shall inspect the cells noting any vandalism, malfunctioning equipment, and security problems.

2) These log entries will be in INK documented on the cell-log.

3) All repair requests will be documented on a work order located in the Court Security sergeant's office.

B) When the cells are in use, the assigned floor deputy (or department bailiff) will be responsible for checking holding cells on their assigned floor at least twice an hour (15 minutes for juveniles and some prisoners classified with mental health issues) to ensure the well-being of all prisoners located in the holding cell area.

1) The floor deputy will document the time and location of each security check in INK on the cell log provided for that purpose.

2) At the end of the shift, completed logs will be returned to the Security Office for filing.

C) Securing Weapons

1) When utilizing the holding cells, the deputy shall first secure his or her service weapon, ammunition, etc. in the gun lockers provided.

D) Applying & Removing Restraints

1) On the second and third floors of the Bray courthouse, the security door to the holding cell area shall be secured before removing or applying restraints to any prisoner.

2) It is optional whether the deputy will apply or remove restraints through the porthole of the holding cell door.

E) Holding-Cell Occupancy

1) The number of prisoners allowed in any one cell is based on certain factors, including but not limited to, the size of the cell, the amount of seating, and the amenities within the cell, etc.

2) The holding cells [redacted] are designed to hold a maximum of [redacted] compatible prisoners at one time.

3) The holding cells in the staging area of the [redacted] are designed to hold a combined maximum of [redacted] compatible prisoners at one time.

F) Housing Juveniles

1) Any court holding cell can be designated as a temporary holding place for juvenile defendants awaiting a court hearing or trial.

2) A Juvenile shall not be housed in the same cell area with an adult.

3) The court bailiff or floor deputy shall be responsible for checking any holding cell occupied by a juvenile.

4) The cell will be checked at least once every fifteen (15) minutes at irregular intervals to ensure the well-being of the juvenile.

5) The deputy will document the time and location of each security check on the log provided.

6) In most cases, a deputy will not know a juvenile's housing status at Juvenile Hall. Therefore, deputies shall secure juveniles in individual holding cells.

III) Prison Rape Elimination Act (PREA)

A) The Prison Rape Elimination Act (PREA) was signed into law in 2003 and became effective in December 2012.

B) Court Security Services is committed to providing a safe, humane, and secure

environment free from sexual misconduct and shall maintain a zero tolerance towards all forms of sexual abuse and/or harassment in all its jail holding facilities.

C) The Office of the Sheriff will thoroughly investigate and immediately address all allegations of sexual assault, sexual abuse, and sexual harassment of those in our custody.

D) Reporting of Sexual Abuse/Harassment

1) Inmate and staff shall be permitted to report any sexual assault or sexual harassment to any rank they feel comfortable reporting to.

(a) There is no time limit for filing a "Good Faith" sexual harassment or sexual abuse report.

(b) Inmates making a PREA report deemed to be made in "Bad Faith" shall be subject to disciplinary action.

(c) No disciplinary action can be taken against an inmate if a report of sexual harassment or abuse has been deemed to have been made in "Good Faith," even if the allegation is determined to be unfounded.

2) Any staff member who has cause to believe an inmate has been or may be subjected to an act or threat of sexual abuse or harassment, is required to immediately notify a Court Security supervisor or manager.

3) All staff must accept any report of sexual abuse or sexual harassment whether it is in verbal form or writing and must take the appropriate action.

E) Refer to CSB Policy and Procedure section: *2.08.49 – Prison Rape Elimination Act (PREA)* for definitions, report follow up procedures, and investigation requirements.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.05.01
	RELATED ORDERS: C.S.B. Manual 2.13.10 Court Security Manual 4.01.02	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-13-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Medical & Mental Health	**SUBJECT:** Suicide and Prevention	

I) POLICY

A) Every effort will be made by Court Security personnel to recognize the signs and symptoms of suicidal behavior and to deter or address any potential problems.

II) PROCEDURE

A) Any prisoner may be a suicide threat. Deputies must be aware of this and stay alert when making facility checks.

B) At no time, shall a prisoner, classified as SUI, be allowed to retain any personal items, to include but not limited to, belts, ties, and pencils, which may be used to take his/her own life. These items shall be taken from the prisoner before putting them in the holding cells.

C) Special attention shall be given to any prisoner who is classified (SUI) as suicidal. Such prisoners shall be checked every fifteen (15) minutes, and the deputy shall document this in INK on the cell log provided for that purpose.

D) If a prisoner's behavior demonstrates the need for restraints, other than for security reasons, they are transported back to the M.D.F. *Special restraints, as defined in C.S.B. Policy 2.08.22, will be used on a case-by-case basis with approval of a supervisor* (Special restraints do not include leg shackles, handcuffs or waist chain).

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.05.02
	RELATED ORDERS: C.S.B. Manual 2.13.08	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-13-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Medical & Mental Health	**SUBJECT:** Prisoner Illness or Injury	

I) PROCEDURE

A) If a person becomes ill or injured while in the court facilities, the following procedure will be followed:

1) Minor injuries requiring first aid (i.e., a small cut on the finger requiring a band-aid) will be handled in the facility.

2) If, in the opinion of the deputy, any prisoner who is sufficiently ill or injured may be taken for EMERGENCY treatment or examination. The deputy shall notify the supervisor and may accompany the ambulance used for transportation. The deputy will maintain control of the prisoner until the prisoner is discharged or another deputy relieves him/her. If the prisoner is to be admitted to the hospital, the MDF Custody Sergeant shall be notified and will make arrangements to take over control of the prisoner.

3) All injuries or medical emergencies shall be reported to a Court Security supervisor. The deputy will document the incident using a Sheriff's Office crime report, incident report, or both.

B) First aid kits shall be readily available. A supervisor shall ensure the kits are maintained and re-supplied when requested. It is the responsibility of each deputy/ranger, assigned to a work location, to maintain the proper inventory in the first aid kits

C) Inmates who are authorized to self-medicate per C.S.B. manual policy 2.13.08 will be allowed to possess their medication when in the holding cells.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.05.03
	RELATED ORDERS: C.S.B. Manual 2.08.36, 2.10.04, 2.11.24 C.C.C.S.O. Manual 1.06.62	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Medical & Mental Health	**SUBJECT:** Prisoner (Inmate) Death	

I) POLICY

A) Investigation of police involved fatal or serious injury incidents are often complex and demanding. Such cases often attract considerable public and news media interest. The consequences of the incident can be profound and affect many people. Because of these factors, incidents of this nature shall be fully and fairly investigated. Proper disposition of such cases will be based on all the legally readily available evidence. (*Sheriff's Office Policy and Procedure section: 1.06.62 – Police Involved Fatal or Serious Injury Incidents Policy)*

II) PROCEDURE

A) When a serious death or injury occurs in any of the court facilities the Court Security personnel will follow the Sheriff's Office Officer Involved Protocol procedure listed above in the related orders. Additionally, per the Board of Corrections, procedures B, C, and D (below) must be completed.

B) Any death of a prisoner in the Sheriff's Office custody will cause the Contra Costa County "Officer Involved Fatal Incident" protocol to be invoked.

C) Should a prisoner die while in Sheriff's Office custody, a "Death In-Custody Reporting" form will be submitted along with a written report of all the facts in our possession concerning the death to the Attorney General within ten (10) calendar days.

1) Mail to: Department of Justice
Law Enforcement Information Center
Attn: Death In-Custody Program
4949 Broadway Sacramento CA 95820
Phone: 916-227-3535

D) Should a juvenile die while in Sheriff's Office custody the following will occur:

1) A copy of the report submitted to the Attorney General shall be forwarded to the Board of Corrections within ten (10) calendar days

2) The review team concerning a juvenile death within the court facilities shall include:

(a) The Facility Administrator and/or the Facility Manager
(b) The Health Administrator
(c) The responsible physician and other health care and supervision staff who are relevant to the incident.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.05.04
	RELATED ORDERS: C.S.B. Manual 2.13.02	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Medical & Mental Health	**SUBJECT:** Emergency Response – Court Link & Bray	

I) POLICY

A) A prompt response to acute medical problems will be provided for non-urgent, urgent and emergency situations by means of the appropriate notification system. Court Security personnel will work with the medical staff to provide the best medical care.

II) PROCEDURE

A) Court Link

1) Central Control will dispatch medical personnel for **ALL** medical emergencies occurring in the Court Link.

2) Central Control will dispatch Court Security personnel and Detention personnel for all Code-2 and 11-99 requests occurring in the Court Link.

B) Staging A.F. Bray

1) Court Security will dispatch fire and ambulance for all medical emergencies occurring in the staging area.

2) Court Security will dispatch Court Security personnel for all Code-2 and 11-99 requests occurring in the staging area.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.06.01
	RELATED ORDERS: Penal Code 4532(a)(1) Penal Code 836.6(a), (b), (c) Penal Code 836.3	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-13-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Escapes	**SUBJECT:** Reporting & Notification Responsibility	

I) POLICY

A) Court Security Services shall assume reporting responsibilities for all escapes of persons in physical custody of Court Security employees.

II) PROCEDURE

A) The deputy from whom the escape occurred is responsible for notifying the appropriate personnel and initiating the original escape report. Escape is a serious crime and should be investigated as such. The report shall include certified copies of documents justifying custodial status.

B) If the escape occurs from a deputy not assigned to Court Security, the Court Security sergeant will assign a unit deputy to assist in the preparation of the report.

III) MARTINEZ COURTS

A) The deputy from whom the escape occurred is responsible for broadcasting the escape over the Court Security radio channel advising; description, direction of travel, pending criminal charges, etc., to the Court Security sergeant, all Court Security deputies, and the Operations Deputy. If present, the Court Security sergeant will coordinate with the Operations Deputy to broadcast the logistics of a perimeter and any additional resources needed.

B) The Court Security sergeant is responsible for the notification of the following:

1) Local agency dispatch
2) Unit Assistant Sheriff
3) Under Sheriff via chain of command
4) Sheriff via “Unusual Incident Report”

IV) WALNUT CREEK, RICHMOND, AND PITTSBURG COURTS

A) If the escape occurs while the Court Security sergeant is present, the procedure will be as in the above procedure.

B) If the escape occurs while the Court Security sergeant is not present, the security deputy will be responsible for notifying the following:

1) Local agency dispatch

2) Court Security supervisor

3) The Court Security sergeant will immediately respond to the location to assume the duties listed herein.

4) The security deputy will assume the responsibilities of the supervisor until the supervisor arrives at the court facility.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.06.02
	RELATED ORDERS: Penal Code 836.3 Penal Code 4532(a)(2) Penal Code 836.6(c)	
ISSUE DATE: 01-01-2002 REVISION DATE: 02-13-2013 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Escapes	SUBJECT: Pursuing Escapee	

I) POLICY

A) Court Security Services will use all resources available to aid in the capture of escaped prisoners from its facilities. Prisoners who have a propensity for violence who attempt to escape or successfully escape are individuals who could pose a continuing threat to the public at large. In the event, an escape occurs Court Security personnel will work toward containment of the incident.

II) PROCEDURE

A) Pursuing Deputies

[redacted]

2) All deputies available to pursue the escapee shall report their status to the Court Security Supervisor and Operations Deputy.

B) The Court Security supervisor may assign deputies to the pursuit or to the area of escape to assist in evidence collection, securing the scene, controlling prisoners (if applicable).

C) Duration of Pursuit

1) Pursuing deputies shall terminate pursuit under the following circumstance

(a) When the suspect(s) location is unknown after completing a thorough search of the area.

(b) When directed by a supervisor.

D) Modes of Transportation

1) Limited to the following:

(a) Foot pursuit

(b) Official emergency vehicles.

E) Radio Frequencies



F) Violence Potential

1) When an escape occurs, the concerned facility supervisor will contact the Investigation Division Assistant Sheriff, Unit Assistant Sheriff or Officer of the Day if the following applies:

(a) A deputy is injured

(b) The escapee has displayed propensities toward committing violent crimes.

(c) There is a need for immediate follow-up investigation.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.06.03
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-13-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Escapes	**SUBJECT:** Reviewing Escape	

I) PROCEDURE

A) The concerned Assistant Sheriff shall initiate an investigation of the escape incident to determine if the escape indicates a deficiency in one or more of the following areas:

1) Transportation/custodial procedures.

2) Deputy mental/physical error.

3) Structural weaknesses/deficiencies

B) The concerned Assistant Sheriff shall obtain and review all reports relative to the incident and, if necessary interview all deputies and witnesses. Upon completion, the Assistant Sheriff shall forward the results of his/her investigation to the Undersheriff with recommended policy, procedural or structural changes, or corrective personnel action(s) if necessary.

C) Escapes or attempts are most likely to occur:

1) While in transit between correctional facility and court.

2) When moving through an area open to the public, lobbies, hallways, parking lots, etc.

3) In the courtroom, particularly if a prisoner is dressed in civilian clothes or unrestrained.

4) In any temporary holding area: this includes but not limited to, jury rooms, designated holding facilities that are not jails.

5) Persons ordered into custody by the court pose a high risk of violence or escape.

D) Escapes result from one of two conditions, and either type may include the taking of hostages. They are:

1) Opportunity: Prisoners that are not properly restrained, moved and monitored may escape

2) Planned: Prisoners have the time and may have the motivation to plan their escape. There is the probability of collaboration in this type of escape attempt. All escapes are potentially violent and particularly when an accomplice is involved

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.07.01
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: High-Risk Trials	**SUBJECT:** Planning & Coordination	

I) POLICY

A) Court Security personnel will ensure that high-risk trials are planned, staffed and carried out to protect the safety of the judge, public, court officers and the defendant.

II) PROCEDURE

A) A high-risk trial is one that provokes a strong emotional response from the general public or interested groups. Such a response may threaten the safety of the participants or threaten the integrity of the process.

B) A high-risk trial requires careful and detailed planning.

C) [redacted] The committee will convene before the trial to discuss and plan the implementation of security procedures. Plans will include the amount of security, and any special precautions to be taken for the judge, defendant or jury, and the use of the JPU.

D) Court orders may be necessary to formalize some or all of the security procedures implemented.

E) The Court Security Lieutenant shall have overall responsibility for high-risk trial operations. As a member of the security committee, he/she will help design the operational plan and coordinate the work of all involved entities.

F) The Court Security Sergeant(s) will serve as second in command and day-to-day operations supervisor.

G) Intelligence and Communication

1) As the potential high-risk trial approaches, the Court Security Lieutenant and Sergeant will gather and analyze intelligence data that might affect security.

2) Intelligence results will be reported to the security committee to aid in decisions of security measures.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.08.01
	RELATED ORDERS: Penal Code 76, 71, 171b	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-13-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Judicial Protection Unit	**SUBJECT:** Duties and Composition	

I) POLICY

A) It is the responsibility of the Sheriffs Office, via Court Security Services, to provide for the safety of all participants in the judicial system within Contra Costa County.

1) It is recognized that this responsibility may, under unusual circumstances, extend beyond the normal security provided on a daily basis.

B) Court Security Services will maintain a Judicial Protection Unit (JPU) to provide the additional security under these unusual circumstances.

C) The Judicial Protection Unit will be used to provide additional security, as required, for any threatened judicial officer.

[redacted]

D) <u>Judicial Protection Unit Coordinator</u>

1) The JPU coordinator will be the Court Security Assistant Sheriff.

2) The JPU coordinator will provide administrative support and will obtain command level authorization for the activation of the unit.

3) The coordinator will share responsibility for threat analysis and tactical implementation with the JPU Team Leader.

E) Team Leader

1) The JPU Team Leader will be a Sheriff's Sergeant assigned to the Court Security Unit.

2) The Team Leader will provide direct supervision to team members when the unit is activated.

3) The team leader will share responsibility for the threat analysis and tactical implementation with the JPU coordinator.

4) In the unforeseen absence of the JPU coordinator, the Team Leader will inform the coordinator or his/her supervisor throughout the security detail.

F) Team Members

1) Court Security Services shall recruit and maintain a specialized unit of qualified individuals to be designated as the Judicial Protection Unit.

2) The JPU members will be selected from among those deputies assigned to Court Security Services.

3) Deputies selected for the unit shall be highly motivated, receive specialized training to develop their expertise in the area of executive protection and related subjects, be expected to work well as a team, and have good writing skills.

4) Team members must be available to be moved from their routine assignments for the duration of the protective detail.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.08.02
	RELATED ORDERS:	
ISSUE DATE: 01-01-2002 REVISION DATE: 02-11-2013 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Judicial Protection Unit	SUBJECT: Activation	

I) POLICY

A) It is the responsibility of the Sheriff's Office, via Court Security Services, to provide for the safety of all participants in the judicial system within Contra Costa County. It is recognized that this responsibility may, under unusual circumstances, extend beyond the normal security provided on a daily basis. Court Security Services will maintain a Judicial Protection Unit (JPU) to provide the additional security under these unusual circumstances.

II) PROCEDURE

A) Notification of Threat

1) The Judicial Protection Unit may be activated when a threat is received involving any Superior Court judge or commissioner.

2) In rare instances, the services of the JPU may be extended to other participants in the judicial system.

3) Any Court Security deputy who becomes aware of a threat to any participant in the Court Security system will immediately notify his/her facility sergeant and when appropriate, document the incident on a crime report form.

4) The facility sergeant will make a preliminary evaluation, take any immediate action that may be necessary and notify the JPU coordinator.

B) Threat Assessment

1) The JPU coordinator and team leader will meet with the threatened judge and conduct a threat analysis to determine whether the threat is of a sufficient level to warrant the activation of the unit.

2) During the threat assessment, all available resources will be used, including criminal history and intelligence files, D.O.J. neighboring police departments and the California Highway Patrol.

3) The Judicial Protection Unit will be activated, after the completion of the threat assessment, by the next level of command with the approval of the affected judge.

4) If the threat itself is considered minor by the affected judge, the team leader will assign the incident directly to security personnel for review, investigation, and documentation in a crime report.

C) Advance Preparation

1) When the Judicial Protection Unit is activated; the coordinator or the team leader will reassign as many team members as are necessary from their normal duties to the JPU detail.

2) One or more members will be assigned the task of advanced preparation.

[redacted]

4) Advance preparation will also include the collection of as much information as possible about:

(a) The person(s) making the threat,
(b) History of events leading up to the threat
(c) Responsible(s) criminal record and violence potential.

D) Tactical Implementation

1) The Judicial Protection Unit Coordinator or team leader will provide review all of the information provided by the team member(s) assigned to advance preparation.

2) The JPU coordinator or team leader will then give individual assignments to team members to carry out the protective plan.

3) All team members will be familiar with the advanced preparation report.

4) The coordinator, team leader or designee will have responsibility for the supervision of team members to ensure that the protective detail is carried out as planned.

E) Additional Considerations

1) During the length of a protective detail, the JPU coordinator or team leader will continuously evaluate and make adjustments to the original protective plan.

2) The JPU coordinator or team leader along with the affected judge will continue the threat assessment process throughout the length of the protective detail.

3) When the threat level has dropped to an acceptable level, the protective detail will be terminated.

4) The threatened judge should be contacted periodically after the termination of the protective detail for follow-up and threat assessment.

5) Due to the size and scope of a security detail, the JPU Coordinator could request assistance in the case of fatigue, intelligence, and locations, etc., from within the Sheriff's Office or other police agencies, but only after familiarizing any assisting personnel with the advanced preparation report.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.08.03
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-11-2013 **REVIEW LIGHT:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Judicial Protection Unit	**SUBJECT:** Report Format & Operational Plans	

I) POLICY

A) All information relative to anticipated unusual incidents or high-risk court proceedings must be properly documented, in advance of those occurrences, to ensure that the appropriate planning and preparation takes place. A standard format has been developed to report such information.

II) PROCEDURE

A) The following format will be used when documenting operational plans or anticipated unusual incidents, to assist in the strategic planning of the situations and report those operational steps taken to ensure the security of the event taking place.

1) Heading – The heading will read, "Court Security Services Incident and Operational Plan."

2) Date and Time – Provide the date and time the situation is to occur. If the exact duration is unknown, include estimated time periods.

3) Incident – Describe exactly what is to occur and provide background information.

4) Problem – Provide a statement describing what it is to be accomplished or overcome, the objective of the mission.

5) Operation – Provide a detailed account of how the objective or mission is to be accomplished. Be sure to include personnel, resources, costs and any other pertinent information.

6) Attachment(s) – Attach any information relative to the operational plan.

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.09.01
	RELATED ORDERS:	
ISSUE DATE: 01-01-02 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Response Plan – Medical, Fire, Earthquake	

I) POLICY

A) The emergency response plan provides for general procedures to ensure the safety of employees and the general public. Any questions about the specific operation procedure should be discussed with your supervisor. The plan describes procedures used in the event of emergencies such as medical, fire, and earthquake. An emergency condition can occur without warning, it is important to take steps to prepare for such an occurrence.

II) PROCEDURE

A) Medical

1) If an injury or sudden illness occurs in your area:

(a) Immediately notify the Court Security sergeant via portable radio or by phone. State the location and nature of the problem.

(b) Evaluate the need for emergency response personnel, summon help when necessary and begin first aid procedures if required.

(c) If applicable, document the incident (Medical - 1730) on a crime report form.

2) If an injury to an employee results in hospitalization or death, the supervisor must report the injury to California Division of Industrial Safety and the County Risk Management Division Safety Office.

3) Employees working after hours or on weekends should dial 911 and state the nature of the problem.

B) Fire Alarm

1) If fire or smoke is detected in your area:

(a) Immediately notify the Court Security Supervisor and Operations Deputy via portable radio or telephone.

(b) Advise the location of the fire.

(c) Size and type of fire, if known.

(d) Sheriff's Court Security personnel will respond to the affected area, evaluate the need for emergency response personnel, and summon additional assistance as needed.

(e) Employees working after hours or on weekends should dial 911 and immediately give the following information:

- Address and location of the fire.
- Your name and telephone number.
- Describe the size and type of fire.

(f) Evacuate your immediate area (utilizing the affected courthouse's evacuation procedure) and report to your designated assembly area.

(g) When possible, have someone direct emergency personnel to the affected area.

(h) Do not re-enter the courthouse until directed to do so [redacted]

(i) When a fire alarm sounds, the Operations Deputy, and supervisor will be immediately informed. [redacted]

(j) The Operations Deputy will coordinate with the designated Court Security personnel, and any additional staff necessary, to search the courthouse or building to detect any evidence of fire or smoke.

(k) [redacted] Deputies with prisoners will notify the Operations Deputy of their status and location [redacted]

(l) The Operations Deputy will designate a deputy (preferably the lead deputy assigned to the screening posts) to respond to the fire control panel located at the below locations. The deputy will determine the specific location of the alarm by reading the alarm box display panel and relay this information via radio.

[redacted]

(q) As Court Security personnel have completed their assigned evacuation and search procedures, they will advise their floor team leader and the Operations Deputy via radio of their status.

(r) If there is no evidence of fire or smoke the designated deputy at the fire control panel will advise the supervisor or Operations Deputy. The supervisor or his designee will approve an announcement on the public-address system regarding the status of the courthouse, and whether it is clear to re-enter.

(s) The Operations Deputy will advise the fire department of the status of the alarm.

(t) Other activation points, i.e., smoke detectors, will be reset at the fire control panel.

(u) If an actual fire or smoke is discovered, the current emergency evacuation procedure (see 4.09.04 thru 4.09.08) will be followed.

(v) If applicable, a crime report shall be required to document the incident.

C) **Earthquake**

1) When indoors get under a table, desk or workbench and hold on to heavy pieces of furniture. Stand in an interior doorway, if a desk, workbench or table is not available. Stay away from walls, glass cabinets, and shelves. Be alert to falling plaster, bricks, light fixtures and other objects.

2) As soon as possible, turn off or unplug all electrical office machines and appliances.

3) If directed to do so, calmly evacuate the courthouse and report to the designated assembly area.

4) Do not re-enter the courthouse until directed to do so by the Building Warden.

5) When outdoors, stay outdoors. Get into the open, away from buildings, walls, trees and power lines. Be alert for other objects that could fall.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.09.02
	RELATED ORDERS:	
ISSUE DATE: 01-01-02 REVISION DATE: 02-11-2013 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Emergency Management Plan	SUBJECT: Bomb Threat	

I) POLICY

A) The emergency response plan provides for general procedures to ensure the safety of employees and the general public. Any questions about the specific operation procedure should be discussed with your supervisor. This plan describes procedures used in the event of a bomb threat. An emergency condition can occur without warning. It is important to take steps to prepare for such an occurrence

II) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.09.03
	RELATED ORDERS: Patrol Manual 3.07.08 C.C.C.S.O. Manual 1.06.48	
ISSUE DATE: 01-01-07 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Courthouse Panic Alarms / Martinez	

I) POLICY

A) All courthouse alarms at Superior Courthouses will be handled as emergency situations that may interrupt the normal operations of the courts. Deputies will respond as needed to all alarms as an in-progress situation with due regard for the potential dangers involved. Deputies main concerns will be officer safety, public safety, and courthouse security.

II) PROCEDURE

A) When a duress button is depressed an automated voice, message will be transmitted twice over the Court Security police radio system.

1) The message will advise the specific location of the activation, to include building name and room number or duress button location.

[redacted]

B) Office Operations Responsibilities

1) After the duress message has been broadcast

(a) Determine if the alarm is occurring in a courtroom and call for the assigned deputy's status.

[redacted]

(c) If the courtroom deputy requests assistance, then available deputies shall be dispatched to investigate. The number of deputies shall be determined by the urgency of the incident (i.e., code 2 or 3).

[redacted]

(e) The Operations Deputy will advise all other staff to hold their radio traffic until a status can be obtained.

[redacted]

3) If the alarm is determined to be accidental and the person who activated the alarm is identified, a Court Security sergeant will be advised. If the reason for the accidental/false alarm is unknown, the Court Security supervisor shall request a review of the alarm history at the appropriate control panel located at [redacted] to determine the responsible duress button.

4) When appropriate, the Operations Deputy shall advise court staff when to resume all normal radio traffic.

C) Deputies Responsibilities,

1) If the courthouse and room number transmitted over the radio specifies your location (i.e. courtroom bailiff), you shall immediately advise your status [redacted]

2) Available deputies within proximity of where the alarm has been activated shall advise the Operations Deputy of their intention to respond via radio. [redacted]

3) All other available sworn personnel shall stand by for status [redacted]

4) The responding personnel shall immediately advise of their arrival and their status as soon as possible.

5) If additional personnel are needed, the responding deputies will use the appropriate radio traffic to inform the Operations Deputy about the urgency.

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.09.04
	RELATED ORDERS: Contra Costa County Administrative Bulletin #15	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 10-07-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Evacuation – Martinez (General)	

I) POLICY

A) In order to ensure the safe, secure operation of Superior Court, Court Security Division will accept the responsibility for the emergency evacuation of Superior Court facilities.

II) PROCEDURE

[redacted]

B) All court employees will evacuate the courthouse when directed to do so by their immediate supervisor, the Building Warden, or the Presiding Judge. [redacted]

[redacted]

[redacted]

[redacted]

D) Attempts shall be made to communicate with court staff supervisors for any unaccounted employees. Persons who may need medical treatment should be reported to the Building Warden as soon as possible. The Building Warden will make all necessary notifications. In the event of an evacuation, the designated assembly areas for the Martinez Superior Court facilities are as follows:

[redacted]

E) In any evacuation, all persons should be directed to leave the courthouse by the nearest available exit.

F) It is possible that only one of the listed courthouses would be affected by any evacuation order. In this instance, the Building Warden will determine the most appropriate course of action.

G) Any personnel who requires assistance, or is unable to complete his/her assigned evacuation task should immediately notify the Court Security Unit Operations Deputy or supervisor.

H) As deputies perform their evacuation duties, each deputy will ensure a thorough search and evacuation of his/her zone, so as not to leave anyone inside the courthouse.

I) Not until all areas have been checked and cleared should the courthouse(s) be considered evacuated. [redacted] Upon completion of clearing an assigned area the deputy will notify the Office Operation Deputy who shall be responsible for monitoring the courthouse and advising the Building Warden.

[redacted]

K) The Operations Deputy or a designee will be responsible for documenting the evacuation of the courthouse(s) by completing the "Evacuation Notification Checklist." This checklist does not replace a crime report.

L) Handicap Persons:

1) In the event of a courthouse evacuation, it is the responsibility of the Building Warden and Court Security personnel to identify handicap persons.

2) Once a person has been identified as having a disabling handicap, arrangements will be made to evacuate by the safest and most direct route available.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.09.05
	RELATED ORDERS: Court Security Manual 4.09.04	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 10-18-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Evacuation – Wakefield Taylor Courthouse	

I) PROCEDURE

A) When an evacuation of the Wakefield Taylor courthouse is ordered the following procedures will apply:

1) The lead deputy will make an announcement using the public address system [redacted]

[redacted]

3) Each bailiff will evacuate and secure his/her courtroom. Each bailiff must dismiss and evacuate any sequestered jury to the designated evacuation area.

4) After the courtroom and jury have been evacuated a systematic search and evacuation of the courthouse must be conducted. Court Security personnel working as a team shall ensure all areas of the floor are searched before advising the Operations Deputy it is clear.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

D) Handicapped or (persons in wheel chairs) can be evacuated by placing them in an ordinary chair and carrying them downstairs.

E) All Unassigned Deputies will advise the Operations Deputy when they are available

F) Court Security Rangers - Wakefield courthouse Rangers will position themselves on the exterior of the courthouse near the entrance and exit doors preventing persons from entering the courthouse. [redacted].

G) Court Security Lead Deputy - The Wakefield Lead Deputy will coordinate with the Rangers to have the elevators cleared and brought to the lowest level where they will be turned off until the building is opened. The Lead Deputy may also be called upon to address any problems, which may develop at any of the entrances and exits.

H) The Operations Deputy will complete the evacuation form and make all the appropriate notifications.

I) The Court Security radio channel shall be kept open and used for priority traffic only. This will allow for emergency traffic to be broadcast to the affected parties. If radio use is not an option, then land wire telephones shall be used for priority traffic.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.09.06
	RELATED ORDERS: Court Security Manual 9.08	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 10-18-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Evacuation – A.F. Bray Courthouse	

I) PROCEDURE

A) When evacuation of the A.F. Bray courthouse is ordered, the following procedures will apply:

1) The lead deputy will make an announcement using the public-address system [redacted]

2) Each bailiff will evacuate his/her courtroom. Each bailiff must dismiss and evacuate any sequestered jury to the designated area.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.09.07
	RELATED ORDERS: Court Security Manual 4.09.04	
ISSUE DATE: 01-01-2007 **REVISION DATE:** 10-18-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Evacuation – Peter Spinetta Courthouse	

I) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.09.08
	RELATED ORDERS:	
ISSUE DATE: 01-01-2007 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Evacuation – Court Annex	

I) PROCEDURE

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.09.09
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Emergency Shut-Off's – Wakefield Taylor	

I) POLICY

A) It is the responsibility of all deputies assigned permanently or temporarily to Court Security Services to familiarize themselves with the location and the procedure of the emergency shutoff valves and breakers for the courthouses.

II) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.09.10
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Emergency Shut-Off's – A.F. Bray	

I) POLICY

A) It is the responsibility of all Deputies assigned permanently or temporarily to Superior Court to familiarize themselves with the location and the procedure of the emergency shutoff valves and breakers for the courthouses.

II) PROCEDURE

[redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]

- [redacted]
- [redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.09.11
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Emergency Shut-Offs – Peter Spinetta	

I) POLICY

A) It is the responsibility of all deputies assigned permanently or temporarily to Superior Court to familiarize themselves with the location and the procedure of the emergency shutoff valves and breakers for the courthouses.

II) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.09.12
	RELATED ORDERS: Court Security Policy: 4.09.04	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Emergency Management Plan	**SUBJECT:** Evacuation – 1111 Ward St. & 911 Alhambra Ave.	

I) POLICY

A) 1111 Ward St. and 911 Alhambra Ave. are not courthouses, but fall under the responsibility of Court Security Services. [redacted]

II) PROCEDURE

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.10.01
	RELATED ORDERS: CA Penal Code 171b, 602 (y) Rules of Court 1.150 Contra Costa County Superior Access Policy	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-10-2017 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Objectives & Operating Times	

I) POLICY

A) The Court has ordered that all persons entering the courthouses are required to submit their person and property for weapon/contraband screening. Persons who intentionally avoid submission to the screening and inspection of one's person and accessible property will be denied access - P.C. 602(y).

II) PROCEDURE

A) The primary focus for screening staff is the detection of weapons and prohibited items to ensure the safety of the court staff and the public.

B) The assigned Deputy Sheriff at each screening station is responsible for taking the appropriate action for police services and crimes occurring in and around the screening station.

C) The screening staff has the discretion to forbid items from being brought into the courthouse if they reasonably suspect an item may compromise the security of the building, the safety of the court staff, or the general public.

D) If the screening staff have a question or receive a complaint about whether an item should be allowed in the courthouse, they shall notify a supervisor to receive direction on how to proceed.

E) Examples of prohibited items include, but are not limited to:

1) Firearms/Ammunition
2) Knives (pocket knife, belt buckle knife, etc.)
3) Metal Knuckles

4) Chains including wallet chains
5) Tools (hammer, screwdriver, wrench, etc.)
6) Pepper spray, mace or tear gas
7) Cutting instruments (Scissors, letter opener, box cutter, hatchet, sword, etc.)
8) Handcuffs/handcuff keys
9) Syringes
10) Knitting needles, sewing needles, large safety pins
11) Glass Containers, ice picks, corkscrews and metal eating utensils
12) Lighters, torches, flammable liquids
13) Chemicals/Fertilizers that are corrosive or flammable
14) Explosives
15) Skateboards, golf clubs, and bats
16) Alcohol
17) Illegal drugs or paraphernalia
18) Laser Pointers
19) Graffiti tools – markers, paint, etching tools, etc.
20) Large poster board sheets or signs
21) Cameras or audio recording devices
    (a) Unless the camera or recording device is approved by the courts ADA Coordinator, Presiding Judge, or designee.

F) Belts and footwear are to be removed only after personnel have exhausted less intrusive means of screening.

G) Staff assigned to the weapons screening station shall test the screening equipment before opening the station each day. Staff will ensure all equipment is functioning correctly.

1) Any problems will be reported to a supervisor or the Operations Deputy as soon as possible.

    (a) The Operations Deputy will send an email to Court Facilities describing the problem and requesting a repair.

H) Screening personnel will be responsible for opening the courthouse for the general public each morning.

1) A security check of the courthouse's interior and exterior shall be completed before opening.

2) The A.F. Bray Courthouse, The Spinetta Family Law Center, and The Arnason Justice Center (Pittsburg) will be open at 0730 hours to the public.

3) The Wakefield Taylor, George D. Carroll (Richmond), and The Walnut Creek Superior Courthouse will open at 0800 hours to the public.

I) At 1700 hours, the exterior courthouse doors will be locked by screening personnel.

1) After securing the courthouse doors, an interior security check of the courthouses floors will be completed by the deputy assigned to clear the building.

2) Security personnel checking and clearing the courthouse shall communicate the completion to the Operations Deputy.

3) The post X-ray machines will be turned off and secured. The keys will be returned to the Court Security Office.

J) Case law requires that criminal court proceedings (trials), which are open to the public, remain open. In the event a criminal proceeding continues after 1700 hours, one weapon screening station (post) will remain open until the court concludes its business.

K) Civil court trials and some juvenile court hearings, which are closed to public viewing, will not normally require after-hours weapon screening unless requested by a court official or authorized by a Court Security supervisor.

L) Court officials hearing civil matters may choose to remain in the courthouse after hours with attorneys and their clients without security present. In this event, the judge will be reminded of the delayed police response time and to escort the remaining parties from the courthouse.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.10.02
	RELATED ORDERS: C.C.C.S.O. Policies and Procedures 1.05.83	
ISSUE DATE: 01-01-02 REVISION DATE: 03-01-2017 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Weapons Screening	SUBJECT: Personnel Duties	

I) POLICY

A) Court Security staff assigned to the screening posts are responsible for the detection of weapons, contraband, and enforce applicable laws, to ensure the safety and security of the courthouse and maintain proper decorum.

1) Our policy does not contain an all-inclusive list of prohibited items. The court gives security staff discretion and relies on their good judgment to keep objects from entering the courthouse they believe could pose a threat or security risk.

2) If there is ever a question or complaint about an object that has not been allowed into the building, a Court Security Sergeant will be notified and respond to the screening post.

[redacted]

[redacted]

D) Screening post personnel should never leave their assigned posts unless requested to do so by the security office or a Court Security supervisor.

1) The deputy shall notify the office, before leaving the post.

[redacted]

E) Sheriff's Office personnel who perform weapon-screening functions should keep in mind they are directly in the public eye. Conduct should be professional and appropriate at all times.

F) Personnel should not sit on tables, eat, drink beverages, read personal material, talk on personal cell phones (see also CCCSO policy 1.05.83), or use personal electronics, while at the workstation.

G) Personnel assigned to a straight eight-hour shift may eat at the post.

H) Personnel should never gather around the screening station work area unless assigned to or assisting with security tasks.

I) Demeanor toward the public should always be tactful and courteous. For many court visitors, the screening process is a negative experience, and it may be the only direct contact they have with the Sheriff's Office; therefore, courtesy and tact cannot be overemphasized.

1) The emphasis on courtesy should not distract from the duty at hand. Personnel should constantly remain alert for threats to security and be conscious of officer safety at all times.

II) PROCEDURE

A) Duties of the Deputy Sheriff assigned to screening stations

1) Responsible for the operation of all equipment at each screening station.

2) Responsible for taking the appropriate action for police services and crimes occurring in and around the screening station, as well as, notifying the agency of jurisdiction for crimes outside the courthouse.

3) Law enforcement functions and responsibilities at the screening stations.

B) Duties of the Sheriff's Rangers assigned to the screening stations:

1) Responsible for the detection of weapons and prohibited items entering the courthouse.

2) Responsible for the operation of all equipment at each screening station.

3) Perform tasks related to weapon screening as assigned by the screening deputy.

4) Tasks as assigned by a Court Security Sergeant or the Court Security Services Manager.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.10.03
	RELATED ORDERS: CA Penal Code 171b	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 08-04-2017 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Handling of Weapons	

I) PROCEDURE

A) Screening personnel shall remain alert to the possibility that legal or illegal weapons and/or dangerous devices may be inside items passing through the X-ray machine.

[redacted]

F) When a pat search of a person is warranted, a deputy sheriff shall do it.

1) Sheriff's Rangers will NOT conduct pat searches.

G) When a weapon is confiscated, and/or an arrest is made, it shall be documented in a Sheriff's crime report, and a supervisor will be notified.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.10.04
	RELATED ORDERS: Sheriff's Policy & Procedure 1.06.37, 1.07.13	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-10 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Disposition of Held Items and Found Property	

I) PROCEDURE

A) Common examples of prohibited items include, but are not limited to, any chemical agent, folding knives, fixed blade knives, other stabbing instruments, alcoholic beverages, and firearms, which are legal to possess outside the courthouse.

1) All persons will be encouraged to return any legal weapon, not authorized in the courthouse to their vehicle. Items are NOT to be held at the screening station except in unusual circumstances. Some examples of unusual circumstances are, but not limited to:

(a) The person carrying the item is disabled, and enforcement of the policy would cause undue hardship.

(b) The person claimed they arrived on public transportation and they have no place to secure the item.

B) In those instances where a deputy determines that the property must be held, he/she shall complete a property receipt with the owner's name, address, phone number and date. He/she will have the owner sign the receipt and give the owner the pink copy of the receipt. The rest of the receipt will be affixed to the property. The Deputy accepting the property is responsible for its safe keeping until it is returned to the owner OR secured in a designated storage locker at the worksite.

(a) The owner of the property will be advised failure to claim the property will result in the item(s) being sent to the Sheriff's Office property room for disposition. If the property has not been claimed after two business days, the owner of the property

will be contacted (preferably by the deputy who issued the property receipt). The owner will be told that if the property is not claimed within two business days, it will be forwarded to the property room for disposition. The deputy will note on the attached receipt the date and time the call was made, as well as, who he/she spoke to, i.e., the owner, message machine, or roommate, etc. If the property is still not claimed within two business days the deputy (preferably the deputy who issued the property receipt) will write a found property report (1731) and take the property, property receipt, and completed Sheriff's report to the Court Security Office for disposition.

C) Persons possessing a firearm with a valid Carry Concealed Weapon (CCW) and valid picture identification will be instructed to secure their firearm in their vehicle. If this is not an option, the lead deputy shall:

1) If assigned to the Bray Courthouse, secure their firearm in the provided gun locker.

2) If assigned to the Taylor or Spinetta Courthouse, refer the person to the Court Security office to secure the firearm.

D) Personal items that are routinely unclaimed, found, or given to court security staff shall be handled in the following manner:

1) All paper United States currency that is unclaimed within a reasonable amount of time and no later than the close of business that day shall be secured in a designated storage locker at the worksite and a report shall be written for disposition.

2) Any item of apparent value, which if left unsecured may disappear, shall be secured in a designated storage locker at the worksite and a report shall be written for disposition.

- Apparent value can be subjective. The employee should look at the item objectively. For example a pair of generic sunglasses being left unsecured versus a pair of designer sunglasses. (If unsure always secure).

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.10.05
	RELATED ORDERS: CA Penal Code – See Below Court Security manual 4.10.04	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Disposition of Seized Weapons	

I) PROCEDURE

A) Weapons or other articles, the possession of which anywhere in the state is a crime, shall be confiscated.

1) This will normally include weapons described in penal code section 19200, 20310, 20410, 20510, 20610, 20710, 20910, 21110, 21310, 21510, 21810, 22010, 22210, 22410, 24510, 24310, 24410, 24610, 24710, 30210(a)&(b), 31500, 32310, 33215, 32900, 33215.

B) Weapons or articles that are normally lawful to possess outside the courthouse, but constitutes a felony under penal code section 171(b) if carried into the courthouse will not normally be confiscated.

1) If they are declared or discovered in the course of the weapons screening operation they should be excluded from the courthouse, or if circumstances meet the parameters outlined in 4.10.04, then the item may be temporarily held.

C) Weapons or articles, which are excluded from the courthouse by department policy or court order, will not be confiscated.

1) Individuals will be told to remove the item(s) from the courthouse.

2) Items will only be held if appropriate under 4.10.04.

D) In most cases confiscation of property will not necessitate an arrest.

1) If the type of weapon or contraband presents a threat to safety or security, or the bearer has made an obvious effort to conceal the contraband, or the weapon is illegal, an arrest may be appropriate.

2) Other unusual situations may also warrant an arrest. In the event an arrest is made; a Court Security sergeant will be contacted and the deputy shall document the incident in a crime report.

E) Individuals who have a valid California Concealed Weapons Permit (CCW) are not authorized to carry a firearm in the courthouse facility.

1) Individuals in possession of a firearm with a valid CCW will not be allowed to enter the courthouse.

(a) The individual will be asked to return the weapon to their vehicle.

(b) If this is not possible, they will be escorted to the Court Security office to store their weapon.

2) Persons without a valid CCW, or individuals in possession of an illegal weapon, will be detained and the sergeant shall be notified immediately.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.10.06
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-09 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Special Considerations	

I) PROCEDURE

A) All persons processed through the weapons screening station should be screened carefully.

B) Although some persons may have disabilities or other conditions that make screening procedures difficult, they should be searched using patience, tact, and courtesy.

(a) The Court Security supervisor will be notified of any person requesting access to a court facility at a non-public entrance due to a disability or special condition.

(b) The supervisor will ensure that the individual is searched using a hand-held magnetometer.

(c) Their property will be x-rayed prior to them being allowed access to the affected facility.

C) Persons in wheelchairs and pushing strollers frequently have bags in their possession. These items should not be overlooked when performing the screening process.

D) Persons with pacemakers or other medical devices may occasionally request to be searched by hand or be checked with a hand-held metal detector.

1) Although walking through the metal detectors does not affect the operations of medical devices, it is normally preferable to perform the search as requested.

E) Elderly and non-English speaking persons may also require special attention.

1) Again, a balance between courtesy and caution will usually produce the best results.

F) Any item brought into the courthouse for evidentiary purposes will not be subject to search and/or confiscation.

1) The item must be clearly marked as evidence

2) The item must be in the possession of:

a) Law enforcement

b) District Attorney's Office

c) Public Defender's Office

d) Superior Court Clerk's Office

e) Private Attorney

G) Jury panels being escorted from the Jury Services Room, by court security staff, may enter the Taylor Courthouse through Post-3.

1) Staff shall ensure all jurors are wearing their juror identification cards.

2) Jurors who are unable to ascend the stairs at Post-3 shall be referred to Post-1 where they will be screened unless escorted by security staff.

3) A security staff member assigned to the Bray Courthouse screening shall monitor the jury panel as it crosses Ward Street to ensure no unauthorized person(s) approach the jurors or enter into the jury line.

4) Friends or family of the jurors will NOT be allowed to enter Post-3 and must enter through Post 1 or 2 to be screened.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.10.07
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Exceptions for Bypassing Screening	

I) PROCEDURE

[redacted]

B) Attorneys representing themselves, or entering the building on personal matters, are not exempt from screening.

C) Court staff appearing on personal matters are not exempt and must go through the screening process.

D) **NO PEACE OFFICER** appearing on a personal matter, such as his/her family law case or filing papers shall be permitted to carry **ANY** weapon in a courthouse and must go through the screening process.

1) They shall be asked to secure their weapon(s) in their vehicle.

2) If this is not an option, the peace officer will be referred to the Court Security Office to have the weapon(s) secured by the Operations Deputy or designee.

a) Due to an unforeseen scenario, the court security supervisor may authorize the securing of firearms at the post gun lockers, if available.

E) Individuals who are members of foreign consulates are subject to search but, their diplomatic pouches are exempt and will not be allowed in without approval by a supervisor. State Department's Operation Center 24/7 phone number is 202-647-1512.

F) The Superior Courts in conjunction with the Office of the Sheriff of Contra Costa County reserve the right to revoke anyone's "exempt status" for bypassing screening.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.10.08
	RELATED ORDERS: California Rules of Court 1.150 Court Security manual 4.15.01	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Recording Equipment in Court	

I) POLICY

A) The Judicial Council of California approved a rule permitting television, radio and photographic coverage of state court proceedings effective July 1, 1984, under certain conditions. Court Security personnel will ensure the rule is followed.

II) PROCEDURE

A) California Rules of Court: 1.150 replaces rule 980 through 980.3 dated before July 1, 1984. The new rule will incorporate the following provisions:

1) *Courtroom photography and recording is permitted, subject to the consent of the trial judge and any restrictions the court might impose in the order to protect the rights of the litigants, preserve the dignity of the court and prevent disruption of the proceedings. ("Court"- means the courtroom at issue, the courthouse, and its entrances and exits). The Presiding Judge authorizes courthouse photography and recording.*

B) All restrictions found in experimental rule 980.2 (1.150) apply. The experimental rule is before July 1, 1984.

C) A provision of the rule effective July 1, 1984, provides that the clerk must promptly inform the parties when a request is made for film or electronic media coverage.

D) Perimeter screening personnel will not allow cameras and recording devices to enter the courthouse.

1) Court Security personnel confronted with anyone attempting to enter the courthouse with any items listed in the above definitions will do the following:

(a) Ask the person(s) their destination (courtroom).

(b) Ask the person if they have submitted a request to the bench officer of the courtroom.

(c) Absent a court order; the screening station will contact the court bailiff to determine if the device has been approved and inquire about the order.

(d) Screening personnel will ensure these approved devices are thoroughly examined and x-rayed before allowing them into the courthouse

(e) If you are unsure, call a Court Security supervisor.

E) EXCEPTIONS

1) Personal cell phones with audio and photographic recording abilities are allowed in the courthouse, although persons using their cell phone in a manner, which violates this policy will have their cell confiscated while the incident is investigated.

2) It is incumbent upon all Court Security staff working within the courthouses to monitor any person using a recording device (i.e. cell phone) in violation of this policy to take action.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.10.09
	RELATED ORDERS: California Rules of Court 1.150	
ISSUE DATE: 01-01-2007 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Weapons Screening	**SUBJECT:** Post 6 & 7 Alarmed Doors	

I) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.11.01
	RELATED ORDERS: California Gov Code 26625, 26611 CA Penal Code 1093, 1122 Court Security manual 4.14.01 - 4.14.09	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Bailiff	**SUBJECT:** General Duties	

I) POLICY

A) Court Security Services recognizes the need for a set of guidelines for Court Security personnel to do an effective job in the performance of their tasks. This general guideline of rules and procedures is by no means all-inclusive of every task. Court Security personnel should consult the specific operations orders (Department Bailiff Protocol) for their work locations for a more specific description of duties at each location. (References: *California Government Code –26625, 26611)*

II) PROCEDURE

A) One area that encompasses a considerable share of the Sheriff's responsibility is Court Security. This service provides direct support and direction for the County Superior Courts. In as much as all sworn personnel could, at any time, be called upon to work Court Security Services, these procedures are not limited to bailiffs and other personnel assigned to Court Security Services. All sworn personnel should make themselves aware of the provisions contained herein.

B) Deputy Sheriffs are assigned to each of the Superior Courts in Contra Costa County pursuant to section 26625 of the California Government Code. Courtroom security personnel are charged with the following responsibilities:

1) Preserving courtroom order.

2) The protection of judicial officials and the general public.

3) Care and custody of prisoners.

4) Care and custody of jurors (refer to sections 4.14.01 – 4.14.09).

5) Other duties that may be assigned by a Court Security supervisor.

6) Annually reviewing and updating the courtrooms "Bailiff Protocol" procedures as needed.

[redacted]

C) Reading of personal periodicals and personal business conducted on electronic communication devices to include phone calls, tablets, text messaging, computers, etc., except during emergency situations, should not interfere with normal duties or disturb the work environment and is prohibited.

D) Before any court session, there are duties a bailiff will be required to complete to ensure the proper operation of the courtroom. The bailiff will follow the guidelines below to ensure his/her courtroom is ready for the court calendar:

1) Inspect courtroom for suspicious containers, any recognizable explosive devices, narcotics, and contraband. All suspicious packages should be dealt with the utmost caution.

2) Check and report to Facility Maintenance any mechanical failures within the courtroom, which includes:

(a) Electrical

(b) Plumbing

(c) Heating and ventilation systems.

- If any of these issues arise, the bailiff will notify the Operations Deputy or a supervisor.

- The Operations Deputy will notify Court Facilities via email describing the location and type of problem.

3) Check and refill water containers and re-supply bench and counsel tables with disposable cups.

4) Turn on public address system.

5) Check and restock diagram paper and marking pens for use in witness testimony.

6) Review court calendar.

(a) Ascertain unusual or high profile cases on the calendar.

(b) Request the court take the person out of order thus removing

potential threat.

(c) Coordinate with the Operations Deputy to ensure in-custody cases are posted for transport to the courtroom at the appropriate time.

7) Communicate with the Operations Deputy or supervisor any security concerns. The bailiff should educate him or herself as to the anticipated problem and be able to articulate why the problem may cause a security concern.

8) When the courtroom is opened to the public, request all persons present be seated. Be alert to any suspicious or unusual persons present in court. If needed contact these persons before starting court. THINK SECURITY.

a) If a large group of spectators is gathered the bailiff should caution them as to their expected conduct while in the courtroom. Any anticipated problems should be reported to a Court Security supervisor.

E) All bailiffs will communicate with the courtroom clerks regarding the inspection of mail and packages delivered to the courtroom.

1) The bailiffs will communicate with the court clerk regarding mail inspection procedures regardless if the clerks/bailiffs are permanently assigned to that courtroom.

2) The court clerk should inspect the mail and parcels delivered to the courtroom. It is imperative that each bailiff discusses with the assigned clerk the importance of reporting any item of mail believed to be suspicious.

[redacted]

(e) Any suspicious package should be immediately reported to a Court Security supervisor.

F) Ensure that all appropriate court paperwork, as it relates to in-custody prisoners (defendants), is completed and accompanies the prisoner to the jail.

1) This paperwork includes but is not limited to:

(a) Any documents that change the status of the prisoner (i.e., sentenced time, bail reduction, release from custody, etc.). This paperwork is in addition to a court card or head card, and is authored by the court and sent to the jail to update a prisoner's custody file.

G) Bailiff's should be aware there are two types of jury instructions.

1) CALJIC (Criminal) and BAJI (Civil).

2) The judge may request his/her bailiff to assist the court clerk in preparing the jury instructions.

3) The judge may request the instructions, which go to the jury, be prepared in a certain way. Always ask if you are unsure.

H) In-custody defendants who are representing themselves. (Pro-per).

1) Before the start of the hearing, the bailiff should confer with the judge (and counsel) to discuss security issues.

[redacted]

4) Any security concerns should be referred to a Court Security supervisor.

I) All Court ordered, "Book and Release," should be referred to the Custody Alternative Facility. Persons referred shall be advised to call for an appointment before arrival. (They will no longer be referred to the MDF).

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.11.02
	RELATED ORDERS: California Gov Code 26625, 26611 Court Security manual 4.02.01, 4.11.14	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-10 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Bailiff	**SUBJECT:** In Session Duties	

PROCEDURE

I) Court Security personnel shall enforce and follow the guidelines below to maintain the proper court decorum while court is in session.

A) Persons entering the courtroom shall not be allowed to:

1) Use tobacco products (smoke cigarettes, chew, dip, or snuff)

2) Use E-cigarettes

3) Use Marijuana

4) Use any illegal drugs or consume alcohol

5) Bring in food or drinks (other than water)

6) Socialize

7) Sleep

8) Read newspapers, books, or magazines

9) Enter the court with bare feet

10) All electronic equipment such as cell phones, tablets, and laptops, shall be turned off.

11) Wear any headgear (i.e. hats, earphones, sunglasses without a prescription).

12) Wear clothing, which causes a distraction and disrupts the courtroom proceedings.

1) Those persons may return when properly attired for court.

B) When courtroom security personnel observe a violation of courtroom regulations, the deputy or ranger shall attempt to resolve the violation in a courteous, diplomatic manner.

1) If such violation requires action by the bailiff or other court security personnel, the violation shall be communicated to the offending person in a private, discreet manner not to disrupt the court.

2) In the event, the person becomes argumentative or disruptive; t h e y will be asked to leave the courtroom.

1) Depending on the circumstances, the person may be asked to wait outside until their case is called.

2) The bailiff will then call the person back into the courtroom if they can follow the courtroom rules.

C) Individuals with small children or babies who cannot be controlled will be asked to wait outside the courtroom until their matter is called.

D) In the event, a bailiff has questions regarding any courtroom procedures, which conflict with security, they shall notify a Court Security supervisor.

E) During trials, especially jury trials, Court Security personnel will refrain from unofficial contact with attorneys, witnesses, or jurors, which might convey the impression of partiality. Personnel shall refrain from:

1) Commenting on the evidence, orders, judgments, verdicts, or the conduct of attorneys, witnesses, and jurors.

2) It is the duty of Court Security personnel to appear nonpartisan, regardless of personal opinion.

3) Court Security personnel shall try to remain free of facial expression, which could be construed as an opinion.

F) When a witness is called to testify, the bailiff shall notify the witness to come forward and will direct him/her to the witness stand.

[redacted]

[redacted]

G) Depending on the proceeding before the court, the bailiff may be seated or remain standing. In either case, the bailiff will stay alert and observe the courtroom for any situation that may arise.

H) When a prisoner(s) is present, the bailiff shall take a position to prevent an escape.

[redacted]

I) The bailiff shall be aware of exhibits offered as evidence.

1) The bailiff may assist the clerk in marking and posting exhibits as long as it doesn't diminish the security level in the courtroom, i.e. in-custody prisoner.

J) When the courtroom is open to the public court security staff is prohibited from reading personal periodicals conducting personal business on electronic communication devices to include phone calls, text messaging, computers, etc.

K) Deputies allowing prisoners to be seated at the witness stand shall familiarize themselves with Court Security manual policy number 4.14.11.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.11.03
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Bailiff	**SUBJECT:** Court Crier	

I) PROCEDURE

A) The deputy in attendance upon the court shall act as crier thereof. He/she shall call the parties and witnesses and all other persons to appear before the court, and make the proclamation of the opening of the court and any other matter under its direction.

B) There is no statutory manner in which the bailiff shall open the court. The customary opening for the court is**: "Please rise, Department** *(Dept #)* **of the Superior Court of the State of California in and for the County of Contra Costa is now session. The Honorable (*Full name*) judge presiding, (***after the judge takes the bench***), please be seated."**

C) As a general rule, with the approval of the judge, an informal opening is used after recesses and for the afternoon session. An informal opening usually consists of: **"Remain seated and come to order" or "Court is again (or now) in session" or "Please rise, be seated and come to order."**

D) When in doubt ask the judge what his/her preference is.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.12.01
	RELATED ORDERS: Court Security Man. 4.13.03, 4.02.03, 4.12.02, 03. C.S.B. Manual 2.08.39, 2.08.29, 2.13.12 Penal Code 6030(f) Title 15 (1029)	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Prisoner Transportation	**SUBJECT:** General Duties & Martinez Specific	

I) POLICY

A) When transporting prisoners to and from court, Court Security personnel will employ practices and procedures, which guard against escape, ensure the safety and well-being of prisoners, staff, and the public.

II) PROCEDURE

A) DEFINITIONS:

1) Courts Holding: The holding cells in Transportation (MDF)

2) Courtroom Security Booth: The transparent enclosure located in the arraignment courtrooms where in-custody prisoners are secured for short hearings.

3) Court Link: The enclosed corridor, which connects the A.F. Bray Superior courthouse with the Martinez Detention Facility. This is used for the transportation of prisoners to and from the Martinez Superior Courts.

4) Staging Area: The holding area at the north end of the court link, on the first floor of the A.F. Bray courthouse. This is used to house prisoners awaiting their court appearances.

5) Bailiff: The Deputy who is temporarily or permanently assigned to a courtroom.

6) Floor Deputy: A floor deputy is usually assigned to each floor, during in-custody hearings, at the Superior Court Buildings in Martinez. Their duties are as follows:

(a) The transportation of in-custody prisoners to and from court.

(b) Responding to emergencies.

(c) Providing relief to bailiffs and or screening personnel.

(d) Other duties as assigned.

B) Court Security Service deputies will pick up prisoners for court at the Martinez Detention Facility Transportation / Courts holding area.

1) Court Security will not normally escort inmates from their living modules.

(a) EXCEPTION: Some Ad-Seg prisoners are not held in Transportation and may need to be picked up and returned to their assigned module

2) Court Security will not normally "dress-out" Martinez Detention Facility prisoners for jury trials.

(a) EXCEPTION: Some Ad-Seg prisoners are not held in Transportation and may need to be dressed out for jury trials. Court Security deputies shall coordinate with the Transportation Unit to determine if the prisoner has been, or will need to be, dressed so as not to delay the court.

C) Court Security deputies will ensure that all appropriate paperwork (i.e., court card, head card and necessary court appearance paperwork) is obtained before transporting the prisoner(s) to and from the court.

D) Court Security Unit deputies will ensure that all prisoners are searched before leaving and when returning to the MDF in accordance with Custody Service Bureau Policies and Procedures manual section 2.08.39. All prisoners will be secured with handcuffs (per Court Security Unit manual procedure 4.02.03) before transporting.

E) For prisoners with special medical or physical considerations (such as crutches or arm casts), which prohibit the use of handcuffs, leg shackles and waist chains will be used. Prisoners will not be transported to courts outside the Martinez Detention Facility unrestrained.



G) Any prisoner transported individually will be handcuffed behind their back or with the use of a waist chain.

H) Protective Custody (PC) and Administrative Segregation (Ad-Seg.) prisoners

will be transported and housed separately. At no time is an Ad Seg. or PC prisoner to be handcuffed on the chain with compatible prisoners.

I) Whenever it is necessary to transport a prisoner through a public area, Court Security deputies will use extreme caution to ensure personal safety, the safety of the public, and the safety of the prisoner.

J) Any unusual conditions or transportation problems should be reported immediately to a Court Security supervisor.

K) Court Security deputies are expected to be attentive at all times. Each deputy is expected to understand and demonstrate good officer safety. The Prisoner should lead, guided by voice commands. Maintain a position of advantage, gun-side away and do not hold onto prisoner unless situations demand it. Carrying and/or drinking beverages or eating is prohibited while escorting prisoners.

L) Reading of personal periodicals and personal business conducted on electronic communication devices to include phone calls, text messaging, computers, etc., except during emergency situations, should not interfere with normal duties and/or disturb the work environment and therefore prohibited.

M) Check with the court bailiff before transportation to a courtroom.

[redacted]

O) To minimize confrontations, request the public clear the courtroom before moving an in-custody prisoner from a jury trial.

[redacted]Under normal circumstances, prisoners and new remands being seen in courthouses other than the Bray and Court Annex will enter and exit the Martinez Detention Facility [redacted]

Q) Newly remanded prisoners will be escorted directly to the jail intake area, where the Court Security deputy will complete all necessary booking paperwork.

R) Prisoners (Defendants) who are released on their charges are still considered a prisoner until the completion of C.S.B. Policy section: *2.11.11-Inmate Release Process.* Prisoners shall not be released from the courtroom. All prisoners (Defendants) shall be transported back to the jail in the same manner in which

they arrived in court per Court Security Policy section: *4.02.03 – Security and Control of Prisoners*.

S) JUVENILE TRANSPORTATION: When a juvenile is being transported the Court Security deputy(s) shall be mindful of adult prisoner(s) throughout the security hallways and holding cell areas and shall make every attempt not to allow contact between juvenile and adult prisoner(s). No juvenile shall be housed in the staging area without approval from a supervisor.

T) Deputies shall familiarize themselves with Court Security Policy section: *4.13.03-Juvenile Arraignments and Hearings.*

[redacted]

V) When Juvenile Hall Transportation brings a prisoner through the A.F. Bray Courthouse [redacted] the Lead Deputy, assigned Bailiff, or Floor Deputy shall escort Juvenile Hall personnel with the prisoner to the designated courtroom. The procedure shall be done in reverse when the juvenile matter has concluded.

W) In addition to being pat searched, prisoners shall be scanned for metal objects concealed upon their person by using a hand-held metal detector. This secondary screening process is an extra layer of protection to locate weapons or contraband from entering the courtroom or jail.

X) Each court shall designate a "wanding area" which allows the deputy easy access and ability to wand the prisoner before entering the courtroom and then when being returned to courts holding or the satellite court jails.

[redacted]

III) PREGNANT PRISONERS

A) The deputy shall confirm all pregnancy claims through jail medical staff.

1) Pregnant prisoners with a history of violence, escapes, etc., may only be restrained after the approval of medical staff and a Court Security Supervisor.

B) If medical staff cannot confirm the prisoner is pregnant the deputy shall:

1) Notify a supervisor before transporting

2) Complete an I.R. before the end of the shift.

C) Unrestrained pregnant prisoners shall be transported separately.

D) Deputy's transporting unrestrained pregnant prisoners shall maintain control of the prisoner by holding the prisoner's upper arm.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.12.02
	RELATED ORDERS: C.S.B. Manual 2.08.46 Court Security Manual 4.12.01	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 03-15-2018 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Prisoner Transportation	**SUBJECT:** A.F. Bray 2nd & 3rd Floors	

I) PROCEDURE

A) Court Security deputies who are transporting prisoners to courts located within the A.F. Bray courthouse will secure their firearms, ammunition, and batons, etc. in the provided gun lockers per C.S.B. Policy and Procedure section - *2.08.46 – Control of Weapons and Armory Equipment.*

[redacted]

D) If a juvenile is being transported, the Court Security deputy should be mindful of the adult prisoner(s) throughout the courthouse and holding cell areas and shall make every attempt to minimize contact between juvenile and adult prisoners.

E) When picking up and returning prisoners, deputies will follow the procedures outlined in the Court Security Manual section: *4.12.01 – General Duties – Martinez Specific*

[redacted]

Q) Prisoners shall be returned to the MDF utilizing the reverse of this procedure.

R) The floor deputy and bailiff are responsible for notifying the Operations Deputy when a prisoner has completed their hearing.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.12.03
	RELATED ORDERS: CSB Manual Policy 2.08.46, 2.08.39 Court Security manual 4.12.01, 4.12.02, 4.02.01	
ISSUE DATE: 01-01-2008 **REVISION DATE:** 01-01-10 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Prisoner Transportation	**SUBJECT:** Spinetta and Taylor Courthouses	

I) PROCEDURE

[redacted]

B) All prisoner(s) shall be restrained with leg shackles and waist chains.

C) Any prisoner administratively segregated (Ad-Seg) by the Jail's Classification Unit shall be moved in the most security conscious manner available.

D) Physically impaired prisoners will be transported in the most security conscious manner available.

E) Pregnant inmates, known to be pregnant, in labor, or immediately following delivery, will not be restrained by the use of leg chains, waist chains, or handcuffed behind their body while being transported. C.S.B. Policy and Procedure section: *2.08.29 – Inmate Transports.*

[redacted]

G) The deputy will enter the court link and proceed to the MDF courts holding to pick up the prisoner(s) and any accompanying documents. The prisoner(s) will be secured as described above in Procedure 1 A thru C and searched per C.S.B. policy 2.08.39.

H) The deputy will escort the prisoner [redacted]

[redacted]

[redacted]

L) The prisoner(s) shall be called out once it appears safe to do so.

[redacted]

2) The floor deputy should communicate with bailiffs who have prisoners in their courtroom if they intend on leaving.

[redacted]

R) The judge or bailiff has ordered otherwise. Prisoners shall be returned to the MDF utilizing the reverse of this procedure. The floor deputy and bailiff are responsible for notifying the Operations Deputy when a prisoner has completed their hearing and left the courthouse.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.12.04
	RELATED ORDERS: Court Security Manual 4.13.03, 4.02.03, 4.12.02, 4.12.03 C.S.B. Manual 2.08.39, 2.08.29	
ISSUE DATE: 01-01-2010 **REVISION DATE:** 01-01-2010 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Superior Court Prisoner Transportation	**SUBJECT:** Taylor Courthouse Post Three Entrance / Exit	

I) PROCEDURE

A) The Post-3 entrance/exit door is designated as an emergency exit only with a few exceptions detailed in this procedure.

B) Security staff at Post-2 shall monitor the movement of persons entering and exiting Post-3.

C) Post-2 security staff may have to slow or stop screening until persons can safely enter /exit Post-3.

D) Persons entering and exiting Post-3 shall do so under the following conditions:

1) The public may only exit Post-3 during emergencies. [redacted]

[redacted]

1) The transport deputy shall notify the bailiff of their pending arrival.

[redacted]

H) Emergency response or Evacuation

1) During an emergency (courtroom alarm, request for assistance, etc.) security staff at Post 2 shall stop all screening procedures.

2) Post 2 will monitor Post 3 to allow security personnel to enter or exit.

II) INSTALLED EQUIPMENT FEATURES

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.13.01
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-2008 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Arraignment Courts	**SUBJECT:** Annex Courtrooms	

I) PROCEDURE

A) There are two deputies (Podium and bailiff) assigned to each of these courtrooms. These deputies will become familiar with and comply with the procedures of the court. Each court may operate slightly different. Below are some general guidelines:

B) Podium Deputy Responsibilities

[redacted]

[redacted]

10) Persons approaching the security booth shall check with Court Security personnel.

11) Court Security personnel shall monitor all persons near the security booth to ensure safety and security are maintained.

12) The podium deputy will coordinate the classification status (i.e. Ad-Seg, PC, etc.) of prisoners before bringing them into the security booth.

13) The podium deputy will convey any security concerns to the courtroom bailiff and work closely with the bailiff to keep the criminal calendar moving in the most efficient and security conscious manner.

14) As prisoners conclude their court business, the deputy will return the prisoner to the court holding sally port and advise Transportation.

15) Ensure all paperwork and head cards are returned to Transportation.

[redacted]Courtroom Calendar Guideline

1) [redacted]

a) Conduct a security check of courtroom security booth and sally ports A & B or C & D depending on which courtroom.

b) Pick up the in-custody list, alpha list and court cards from sally port.

c) Write in in-custody warrants on attorney sign in sheet and make out the in-custody worksheet.

d) Obtain Public Defender (PD) acceptance forms and arraignment cards from the bailiff and advise if any interpreter is needed.

e) Start coordinating with the bailiff and courtroom District Attorney the in- custody matters for the day (a.m.).

f) Contact Transportation and have them load the needed prisoners into the A or B sally port.

2) [redacted]

a) Coordinate in-custody appearances in court with the bailiff, District Attorney, and Defense Attorneys.

b) Load the requested prisoners into the security booth.

c) Coordinate with the bailiff and complete appropriate paperwork i.e. probation orders, arraignment cards, PD referrals, sex/drug registration, CAF and EHD forms, etc.

3) [redacted]

a) Repeat procedure for morning calendar and record stats.

D) Courtroom Preliminary Hearing Guideline

1) [redacted]

a) Conduct security check of courtroom security booth and sally ports C & D.

b) Pick up the in-custody list from sally port C or D and make six copies.

c) Start coordinating with the bailiff the in-custody matters for the day.

d) Contact Transportation and have them load the needed prisoners into the sally port(s).

2) [redacted]

a) Coordinate in-custody appearances in court with the bailiff and Defense Attorney's and load the security booth.

b) As needed, in each case, obtain and complete appropriate paperwork (same as above).

3) [redacted]

a) Repeat procedures for the morning calendar

E) Courtroom Bailiff Responsibilities

1) The courtroom bailiff will focus on the activities of the persons in the gallery and out-of-custody matters.

2) If the court is in session after 1630 hours, the courtroom bailiff will deliver a copy of the calendar to the MDF.

3) Update prisoner court cards and complete necessary court paperwork.

4) Work closely with the podium deputy to keep the criminal calendar moving in the most efficient and security conscious manner.

5) Coordinate and communicate with the podium deputy the classification status (i.e. Ad-Seg, PC, etc.) of prisoners before bringing them into the security booth.

6) Convey any security concerns to the podium deputy and work closely with the deputy to keep the criminal calendar moving in the most efficient and security conscious manner.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.13.02
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Arraignment Courts	**SUBJECT:** Courtroom Remand	

I) PROCEDURE

A) When a defendant is remanded the bailiff, or podium deputy will handcuff the individual behind his/her back and perform a search for weapons and contraband.

B) The bailiff or designee will complete all appropriate MDF booking paperwork.

1) Booking authority
2) Pre-booking medical questionnaire
3) Property receipt

C) The remanded prisoner will be kept separate from the prisoners in the security booth until the appropriate time to transport.

D) The bailiff or podium deputy will coordinate with Transportation or the Operations Deputy to transport the prisoner to the MDF intake area.

E) All paperwork for the booking process will be given to the booking deputies.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.13.03
	RELATED ORDERS: W&I 700 Title 15 Court Security Manual 2.08.46, 4.01.02	
ISSUE DATE: 01-01-2008 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Arraignment Courts	**SUBJECT:** Juvenile Arraignments / Hearings	

I) PROCEDURE

A) Juveniles transported by the Sheriff's Office Transportation Unit are brought to the courthouses for arraignment or hearings, most of which are conducted in the arraignment courtrooms in the Court Annex

B) When the juvenile arrives, the Operations Deputy receives a call from Transportation who will forward the information to the court bailiff hearing the matter.

C) If the court is not ready to hear the juvenile's case, the juvenile will be temporarily housed on the second or third floor of the A.F. Bray courthouse.

D) The floor deputy where the juvenile is to be temporarily housed, will pick up the juvenile from Transportation and take him/her to the appropriate holding cell (preferably on the west side).

1) If the floor deputy is unavailable to assist in the transport procedure, then any available deputy may be called upon to assist.

2) A Court Security supervisor shall be notified if the transport of the Juvenile is being delayed.

E) The floor deputy will communicate with the Operations Deputy concerning the transport to ensure the movement through the court link, staging area and security elevator is conducted in a way that minimizes the chances of the juvenile coming within "sight or sound" of an adult prisoner.

F) When the juvenile is placed into a court holding cell the floor deputy will make the appropriate cell-log entry in INK and continue to monitor the juvenile every 15 minutes while he/she is housed in the cell.

G) The floor deputy will be responsible for ensuring the other courtroom bailiffs on the floor are aware there is a juvenile housed in a cell.

1) The placement of signs advising of a juvenile's presence should be posted.

H) When the bailiff or assigned podium deputy of the court hearing the juveniles case is ready for the juvenile, they shall notify the Operations Deputy who will coordinate with the floor deputy where the juvenile is temporarily being housed to ready the juvenile for transport.

1) The podium deputy will ensure the courtroom security booth is empty of any in-custody adult prisoners, with the exception of an adult co-defendant.

[redacted]

I) The floor deputy will assist if called upon to collect the juvenile, make the appropriate cell-log entry, and coordinate with the podium deputy to transport the juvenile to the Court Annex.

J) All in-custody juveniles being transported to the Court Annex for hearings will have [redacted] escort the juvenile from the security elevator to the Court Annex and back.

K) All Court Security personnel involved in the transport, to include the bailiff and Operations Deputy, shall be mindful of the dangers of moving in-custody prisoners through public areas and shall communicate via radio when any potential problem arises needing immediate attention.

L) The bailiff will prepare his/her courtroom for the pending arrival or departure of the juvenile, by accessing any potential problems (i.e. victim's, witnesses, etc.) and the least confrontational route for the transporting deputies to enter and exit the courtroom. The bailiff may make a request of the persons seated in the gallery to remain seated until the juvenile prisoner has left the courtroom.

M) The juvenile shall be returned to his/her holding cell in the reverse order, unless Transportation is ready to take the juvenile back to Juvenile Hall.

N) If the court is ready to hear the juvenile's case when the juvenile arrives, the podium deputy of the court hearing the juvenile's case will respond to Transportation and take custody of the juvenile.

O) The podium deputy will coordinate with the Operations Deputy for any available deputy to assist with moving the juvenile through the public hallway to the Court Annex.

P) After completion of the hearing the juvenile shall be taken to a holding cell, unless Transportation is ready to take the juvenile back to Juvenile Hall.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.13.04
	RELATED ORDERS: C.S.B. Manual 2.08.17, 2.08.18, 2.08.46 Court Security Manual 4.13.02, 4.01.02	
ISSUE DATE: 01-01-2008 REVISION DATE: 01-01-08 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Arraignment Courts	SUBJECT: Staging Deputy Duties (AF Bray)	

I) PROCEDURE

A) DEFINITIONS:

1) MDF Courts Holding: The holding cells in Transportation (M.D.F.)

2) Courtroom Security Booth: The transparent enclosure located in the arraignment courtrooms where in-custody prisoners are secured for hearings.

3) Court Link: The enclosed corridor, which connects the A.F. Bray Superior courthouse to the (MDF), is used for the transportation of prisoners to and from the Superior Courts.

4) Staging Area: The holding area at the north end of the court link on the first floor of the A.F. Bray courthouse. This is used to temporarily house prisoners in holding cells awaiting their court appearances.

5) Podium Deputy: Also known as the Calendar Deputy, is assigned to the arraignment courtrooms to maintain the calendars and attorney sign-in. The podium deputy coordinates with the staging deputy and bailiff providing the names of the prisoners to be brought to the staging area holding cells, advising when to bring prisoners into court, and when to return the prisoner(s) to courts holding.

[redacted]

[redacted]

E) The staging deputy will receive a list from the podium deputy of all prisoners being transported to court. If applicable, the list should include any special prisoner housing considerations such as, administratively segregated prisoners.

F) The podium deputy, if needed, may accompany the staging deputy to the Martinez Detention Facility courts holding area to pick-up and transport the optimum number of prisoners needed for court or staging.

[redacted]

H) Court Security deputies will enter MDF courts holding using the court link, which connects staging to courts holding by an enclosed corridor.

I) Upon returning to staging, prisoner restraints shall be removed and they may be taken directly into the courtroom security booth depending on the direction of the podium deputy and/or bailiff.

[redacted]

K) Prisoner classifications [redacted] shall be reviewed before filling the security booth or removing restraints. The special classified prisoners will have an effect on the number of prisoners allowed in the security booth at one time.

L) Deputies shall be conscious of CSB policies concerning male and female contact when seating male and female prisoners in the security booth. A good rule to follow is to allow enough space to minimize the opportunity for contact, i.e. one seat width.

[redacted]

N) The staging deputy will coordinate with the podium deputy in moving the now unrestrained prisoners from the staging area to and from the courtroom by using the sally port located between the staging area and the courtroom security booth.

[redacted]

P) The staging deputy will remove any prisoners, upon request of the podium deputy or bailiff, from the security booth who have completed their court appearance and return the prisoners to staging awaiting the completion of their court paperwork.

Q) The staging deputy will coordinate with the podium deputy and/or bailiff when to return the completed prisoners with paperwork to the MDF courts holding area and collect any additional prisoners and paperwork awaiting their court appearance.

R) If prisoners are present in the security booth at the time an out-of-custody subject is remanded into custody, take care not to intermingle the newly arrested / remanded subject with the prisoners in the security booth. The proper booking paperwork shall be completed prior to moving the newly remanded prisoner to the MDF intake area (see 4.13.02).

S) The staging deputy will coordinate with the podium deputy when to transport any "special handling prisoners" i.e., administratively segregated prisoners

T) The staging deputy will maintain a cell log of all prisoners and conduct cell checks twice an hour for adults and every 15 minutes for juveniles or SUI. The log shall be turned in to the Court Security Office at the end of each workday. When staging is no longer being used, it will be indicated on the cell log. A safety cell check will be conducted and noted in INK on the cell log at the beginning of each days use and checked prior to leaving.

U) NO JUVENILE SHALL BE HOUSED IN STAGING WITH AN ADULT. A SUPERVISOR MUST APPROVE HOUSING A JUVENILE IN STAGING.

V) The staging area may be <u>temporarily used</u> to hold a prisoner(s) <u>without a staging deputy</u> with prior approval from a supervisor.

W) Deputies transporting prisoners will ensure that all P.C. and Ad Seg prisoners being brought to court / staging or returned to MDF Courts Holding are placed in the proper room.

X) The staging deputy may be called upon to assist in collecting a juvenile prisoner from the second or third floor of the Bray courthouse for the arraignment courts located in the Court Annex. If so,

1) The staging deputy will ascend to the floor and remove the juvenile from the holding cell and return to the first floor.

1. The staging deputy will either hand off the juvenile to other transport deputies waiting in the public hallway on the first floor, or:

2. Collect his/her firearm from the gun locker and assist in transporting the juvenile southward through the public hallway into the Court Annex.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.13.05
	RELATED ORDERS: Court Security Manual 4.13.02, 4.13.04	
ISSUE DATE: 01-01-02 REVISION DATE: 01-01-08 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Arraignment Courts	SUBJECT: Podium / Bailiff Duties (A.F. Bray)	

I) PROCEDURE

A) The deputies assigned to this arraignment department will become familiar with and comply with the procedures, which include the staging deputy duties (4.13.04). The following is a general outline and subject to change:

1) The podium deputy will coordinate with the courtroom bailiff to maintain the calendars and attorney sign-in.

2) The podium deputy will also coordinate with the staging deputy and bailiff providing the names of the prisoners to be brought to the staging area holding cells, advising when to bring prisoners into court, and when to return the prisoners to courts holding.

3) The podium deputy will also ensure the paperwork and head cards are given to the transport deputy to ensure they return with the prisoner to the MDF.

4) The podium deputy will check the head and court cards on all prisoners being transported to and from court.

(a) Any prisoners who are scheduled for court at the same time that need to be separated, [redacted] This information will be shared between the Court Security personnel and court staff if necessary.

[redacted]

6) Deputies shall be conscious of CSB policies concerning male and female contact when seating male and female prisoners in the Security Booth.

(a) A good rule to follow is to allow enough space to minimize the opportunity for contact, i.e. one seat width.

B) Courtroom Calendar Guideline:

1) [redacted]

(a) Obtain daily alpha lists from the M.D.F. Conduct security check of staging area and Court Security booth.

(b) Receive and review calendar.

(c) Compile a in-custody worksheet for morning appearances.

(d) If applicable, assist the staging deputy with in-custodies being bought to the staging holding cell area.

2) [redacted]

(a) Coordinate in-custody appearances with the calendar DA, court clerk, and defense attorneys.

(b) As needed in each case, obtain, and complete appropriate paperwork, i.e. probation orders, arraignment cards, sex or drug registration forms, EHD or CAF forms etc.

3) [redacted]

(a) Repeat procedures for morning calendar.

(b) ***Out of custody remands**: handcuff subject, search and inventory property, and place person in booth. Complete proper booking paperwork and advise intake via phone that a remand is en-route. (See 4.13.02 / 4.20.01)

C) Bailiff Duties

1) In the arraignment courtrooms the bailiff should also focus on the activities of the public citizens in the gallery and out-of-custody defendants / matters.

2) If court is in session after 1630 hours the courtroom bailiff will deliver a copy of the calendar to the MDF.

3) The bailiff may need to update prisoner court cards and complete necessary court paperwork.

4) The bailiff will work closely with the podium deputy to keep the criminal calendar moving in the most efficient and security conscious manner.

5) The bailiff will coordinate and communicate with the podium deputy the classification status (i.e. Ad-Seg, PC, etc.) of prisoners prior to bringing them into the security booth.

6) The bailiff will convey any security concerns to the podium deputy and work closely with the deputy to keep the criminal calendar moving in the most efficient and security conscious manner.

D) Podium Deputy (Juvenile defendats)

1) The podium deputy may be called upon to assist in collecting a juvenile prisoner from the second or third floor of the Bray courthouse for the arraignment courts located in the Court Annex.

2) The podium deputy will ascend to the floor and remove the juvenile from the holding cell and return to the first floor.

3) The podium deputy will hand off the juvenile to other transport deputies waiting in the public hallway on the first floor.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.14.01
	RELATED ORDERS: Civil Code of Procedure 613 California Penal Code 167,1121, 1119	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** Jurors	

I) POLICY

A) All juries are the responsibility of the courtroom bailiff. When a defendant chooses a trial by jury, the jury is selected, and the bailiff cares for the needs of the jury until the judge dismisses the jury.

II) PROCEDURE

A) Consideration of jurors is very important. It should be remembered that jurors make a personal sacrifice to give their time to assist the courts and the community; hence, they are entitled to every consideration and courtesy.

B) At each recess, the jurors should be allowed to leave the courtroom before the spectators.

C) Sworn jurors who are on a break, lunch, or retired for the day are restricted from talking to anyone (including other jurors) about the court case they have been assigned to hear.

D) When bringing the jury into the courtroom, the bailiff shall announce to the spectators and counsel the jury is entering.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.14.02
	RELATED ORDERS: Court Security manual 4.11.02	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** Obtaining a Jury	

I) PROCEDURE

A) The court clerk or bailiff will telephone Jury Services and advise them how many jurors are needed and what time they are needed

1) Jury panels are assembled in the Jury Assembly Room (#1010) on the first floor of the A.F. Bray Courthouse.

B) When the bailiff or designee makes contact with Jury Services they will be provided with the following paperwork:

1) A packet of completed questionnaires (one from each prospective juror in the panel).

2) Six lists containing just the names of prospective jurors and one containing both the names and addresses of the prospective jurors.

C) When the jury panel is assembled the bailiff shall:

1) Introduce themselves and the department they are assigned.

2) Explain any courtroom etiquette (i.e., wearing sunglasses, hats, use of cell phones, or reading of newspapers, etc.) in the courtroom.

3) Inform the jury of their destination if they are separated.

D) Upon the arrival of the jury panel to the courtroom, the bailiff will work with the court staff on where to seat the jurors.

E) All jury paperwork shall be given to the court clerk who will disseminate it to the appropriate parties.

F) During the jury selection, as jurors are challenged or excused for cause, direct them to return to Jury Services (Rm. #1007).

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.14.03
	RELATED ORDERS: Civil Code Procedure 613	
ISSUE DATE: 01-01-2002 REVISION DATE: 01-01-08 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Jury Trials	SUBJECT: Care of the Jury During Trial	

I) PROCEDURE

A) At the beginning each day and after breaks, when the judge is ready, he/she will ask that the jury is brought in.

B) Before bringing in the jury, the bailiff should check to see:

1) All participants (i.e. Council, witness, the defendant, etc.) in the trial are present and ready.

2) All jurors are present and accounted for outside the courtroom.

3) The court clerk and court reporter are present and ready.

C) If the Defendant is in-custody, the bailiff shall make arrangements to have a deputy standby while the jury is collected and brought into the courtroom.

1) If another deputy is not available to assist in a timely manner, the bailiff will coordinate with the judge or court clerk for someone else to collect the jury.

D) The bailiff shall escort the jury out of the courtroom at all recesses.

1) Names and seat numbers of each juror should be noted on the jury seating form.

2) The Bailiff will ensure that each juror returns to his/her respective seat each time court reconvenes.

[redacted]

E) The bailiff shall refrain from idle chit chat with any juror(s), especially about the trial or law.

F) He/she shall not offer opinions or answer questions regarding the trial except as directed by the judge.

G) Extreme care must be taken not to prejudice the jury in any way by actions, expressions or statements.

H) Care should be taken to avoid becoming overly friendly with the jurors. A professional demeanor shall be demonstrated at ALL times.

I) Any juror with a question for the court should be directed to submit it in writing through the bailiff to the judge.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.14.04
	RELATED ORDERS:	
ISSUE DATE: 01-01-2002 REVISION DATE: 01-01-08 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Jury Trials	SUBJECT: Care of the Jury After Closing Arguments	

I) PROCEDURE

A) Before closing arguments, the bailiff will locate an available Jury Deliberation Room nearest the courtroom.

B) The Bailiff will reserve the room by putting a sign on the door reading, "RESERVED."

1) In the A.F. Bray Courthouse, these signs are located in the on the jury deliberation doors

2) In the Wakefield Taylor courthouse, the signs are kept in the bailiff's desk

C) Ensure there are writing tablets, pencils, cups, and fresh water in the jury room.

D) Set and test the jury room "bailiff call buzzer" and light.

E) Cellular telephones will be collected from the jurors and held for safe keeping at the judge's direction.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.14.05
	RELATED ORDERS: CA Penal Code 1119	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trial's	**SUBJECT:** Viewing of Crime Scene by Jury	

I) PROCEDURE

A) California Penal Code section 1119 reads: *When, in the opinion of the court, it is proper that the jury should view the place in which the offense is charged to have been committed, or in which any other material fact occurred, or any personal property which has been referred to in the evidence and cannot conveniently be brought into the courtroom, it may order the jury to be conducted, in body, in the custody of the Sheriff or Marshal, as the case may, to the place or such property, which must be shown to them by a person appointed by the court for that purpose; and the officer must be sworn to suffer no person to speak or communicate with the jury, nor to do so himself, on any subject connected with the trial, and to return them to the court without unnecessary delay, or at a specified time."*

B) The bailiff, upon the request of the judge or a sergeant, can arrange for transportation of the jury if necessary. The bailiff will coordinate with the counsel who requested and was granted the viewing.

C) In civil cases, when it is necessary to hire a bus, the bus driver shall be advised that the attorney(s) will pay for transportation, and shall be given the number and title of the case and the attorney's card, if available.

D) In criminal cases, the court pays for transportation costs, if necessary.

1) The bailiff shall notify Court Administration who will make arrangements for transportation.

2) County vehicles should be employed when possible.

3) If a private conveyance is utilized, the driver shall be given the title and number of the case and shall direct that the bill is sent to the Superior Clerk of Contra Costa County.

E) When the judge grants an in-custody defendant to be transported to a viewing location the following steps will be followed:

1) The judge and counsel will be apprised of Court Security concerning how prisoners will be restrained when outside the detention facility (i.e. leg shackles, handcuffs, or waist chain).

[redacted]

G) A Court Security supervisor will be advised and assist in any security contingency plan.

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.14.06
	RELATED ORDERS: CA Penal Code 167, 243.7, 95 Civil code of Procedure 613	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** Interfering / Tampering with a Jury	

I) PROCEDURE

A) Section 167 of the California Penal Code reads: *Every person who, by means whatsoever, willingly and knowingly, and without knowledge and consent of the jury, records or attempts to record all or part of the proceedings of any jury trial while such jury is deliberating or voting, or listens to or observes, the proceedings of any jury trial of which he is not a member while such jury is deliberating or voting is guilty of a misdemeanor. This section is not intended to prohibit the taking of notes by a trial juror in connection with or solely for the purpose of assisting him in the performance of his duties as such a juror.*

B) Section 613 of the Civil Code of Procedure states in part; *Unless by order of the court, the Officer having them under his charge must not suffer any communication to be made to them, or make any himself, and he must not, before their verdict is rendered, communicate to any person the state of their deliberation, or the verdict agreed upon.*

C) Section 95 of the California Penal Code reads: *Every person who corruptly attempts to influence a juror, or any person summoned or drawn as a juror, or chosen as an arbitrator or umpire or appointed referee, in respect to his or her verdict in, or decision of, any cause or proceeding, pending or about to be brought before him or her, is punishable by a fine not exceeding ten thousand dollars ($10,000) or by imprisonment in the state prison, if it is by means of any of the following:*

1) *Any oral or written communication with him or her except in the regular course of proceedings.*
2) *Any book, paper, or instrument exhibited, otherwise than in the regular course of proceedings.*
3) *Any threat, intimidation, persuasion, or entreaty.*
4) *Any promise, of assurance of any pecuniary or other advantage.*

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.14.07
	RELATED ORDERS: CA Penal Code 1121	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** Authorization of Bailiffs Oath	

I) PROCEDURE

A) The oath is authorized by Section 1121 of the California penal code.

B) The bailiff is sworn just before the jury retires for deliberation.

C) Bailiffs must be available at all times during jury deliberation.

1) If the bailiff must be absent from their court, the bailiff shall notify another court bailiff to monitor the bailiff call buzzer until the bailiff can return.

2) If applicable, the trial judge may swear in another bailiff to monitor the deliberating jury.

D) Any questions from the jury about the case must be in writing and answered by the judge.

1) The request must be dated and signed by the presiding juror.

E) Do not discuss or talk about the case to a juror or near any juror.

F) The jury room is locked with the jury inside to keep outsiders from going in.

1) If there is an emergency, the jurors can unlock the door from the inside.

2) Advise them the door must remain locked and to call if they need a break.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.14.08
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** Preparing the Jury for Deliberation	

I) PROCEDURE

A) Take the jurors to the jury room once the judge has given the case to them for deliberation.

1) Jurors are allowed to take, without the permission of the judge, their notes from the trial.

2) With the permission of the judge, exhibits admitted into evidence may be taken into the jury room.

3) In criminal cases, the Jury Instructions may be taken to the jury room upon the request of the jury and with the permission of the judge.

B) Change the "reserved" sign on the jury room door to a "Jury Deliberating" sign.

C) Give the jury a demonstration of the bailiff call buzzer.

D) Bailiffs are prohibited by law to give advice or instruct the jury.

1) A safe rule to follow is to submit all requests from the jury to the judge in writing.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.14.09
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** Jury Verdict	

I) PROCEDURE

A) When the jury has reached a verdict, the bailiff will return to the court and advise the judge.

B) Civil Cases

1) Contact the attorneys and parties and assemble them in the courtroom with the court staff before returning the jury to the court to deliver the verdict.

C) Criminal Cases

1) If a defendant is in custody, contact the floor deputy or Operations Deputy.
2) Request the defendant be returned to the courtroom due to the jury reaching a verdict.
3) After attorneys, the defendant(s), and court staff are present in court, bring in the jury.
4) The reading of a verdict can be an emotional time. If the bailiff shall notify the Court Security supervisor.
5) With in-custody defendants, the conclusion of the verdict being read, the bailiff will notify the MDF, Classification Unit, and Court Security supervisor concerning the outcome.
6) All verdicts of "Death," must be reported to Custody Administrative Services (CAS).

D) Jury Dismissed

1) After a verdict has been read, or a "hung" jury is declared, the judge will dismiss the jury.

2) Persons who are viewing the trial from the gallery will be reminded proper etiquette is to remain seated until the jury has left the courtroom.

E) It is not uncommon during a high-profile trial for the jury or judge to request an escort for jurors when leaving the courthouse. The bailiff shall coordinate with their judge and Court Security Supervisor their needs to successfully achieve this request.

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.14.10
	RELATED ORDERS: None	
ISSUE DATE: 01-01-09 REVISION DATE: 01-01-09 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Jury Trials	SUBJECT: Grand Jury	

I) PROCEDURE

A) Criminal Grand Jury

1) The District Attorney's Office coordinates with the Presiding Judge to impanel a criminal Grand Jury.

2) The assigned courtroom bailiff collects the potential juror members from Jury Services.

3) Once the criminal Grand Jury has been seated the process of reviewing evidence and testimony is put on by the District Attorney's Office out of the presence of a judge.

4) The Grand Jury may use a room in the courthouse or a room located at the District Attorney's Office (900 Ward Street Martinez).

5) With no security concerns raised by the District Attorney, there is no need for the presence of a deputy during this period.

   (a) A deputy may be present when a prisoner is called to testify unless the DA arranges to have the prisoner released to his custody by the use of a DA Investigator.

6) ALL court security staff shall recognize that testimony and evidence exhibited during the Grand Jury indictment process are confidential and shall not be discussed with anyone.

7) The location where the Grand Jury is seated and its members are also confidential.

8) Security personnel assigned to collect the panel shall make every effort not to disclose the juror's identity to the public at large.

9) Additionally, the selection of the jurors, as well as, any subsequent findings by the Grand Jury is NOT OPEN TO THE PUBLIC.

10) Court Security personnel shall not post any signs to indicate where the Grand Jury is seated.

11) Persons requesting any information about the Grand Jury shall be directed to the District Attorney's Office.

12) When the District Attorney has completed the hearing process, the Grand Jury members are assembled in a courtroom where the assigned Judge will hear the findings.

(a) A deputy will be assigned to ensure the security and integrity of the process.

B) Civil Grand Jury

1) The Civil Grand Jury is composed of 19 citizens independent of administrators, politicians, and legislators.

2) Citizens volunteer up to one year and make recommendations that improve city and county services and save taxpayers money.

3) Candidates are processed through an application reviewed by the Martinez Superior Courts.

4) Court Security personnel are rarely if ever used for a Civil Grand Jury.

5) Persons inquiring about the Civil Grand Jury shall be referred to Jury Services.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.14.11
	RELATED ORDERS: People vs. Lorenzo Stevens Ct.App.1/4A112197 Alameda County Super. Ct. No. C148565	
ISSUE DATE: 03-11-09 **REVISION DATE:** 2-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Jury Trials	**SUBJECT:** In Custody Witnesses / Defendant's Testifying	

I) POLICY

A) Court Security Services recognizes the need for a set of guidelines for Court Security personnel to do an effective job in the performance of their tasks. This general guideline of rules and procedures is by no means all inclusive of every task. Court Security personnel should consult the specific operations orders (Department Bailiff Protocol) for their work locations for a more specific description of duties at each location**.**

II) PROCEDURE

A) In-custody (I/C) prosecution or defense witnesses pose an additional security issue for the courtroom Bailiff.

[redacted]

B) The Bailiff shall obtain a date and time as to when the additional prisoner will be summoned to court and inform the Security Office to allow for sufficient personnel.

C) Although it is Court Security's preference to have the additional deputy positioned [redacted], the Court's preference may cause a reassessment as where to place the security personnel.

1) To assist the Court in making a sound security decision, bailiffs should educate the Court using the criteria listed below:

(a) The witness's behavior while incarcerated.

(b) The witness's criminal history.

(c) Is the witness hostile to the proceedings?

(d) The witness's housing status [redacted]

D) The above criteria shall also be reviewed for when an I/C defendant testifies.

[redacted]

3) The Court's preference may cause a reassessment of where to place the security personnel.

4) The Bailiff shall assume the agreed upon position in proximity to the Defendant while they testify.

E) Any security concerns shall be brought to the attention of a supervisor.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.15.01
	RELATED ORDERS: CA Penal Code 166 California Rule of Court 1.150 Court Security manual 4.10.08	
ISSUE DATE: 01-01-02 REVISION DATE: 01-01-08 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Media	SUBJECT: Coverage of Court Proceedings	

I) POLICY

A) The Judicial Council of California approved a rule permitting television, radio and photographic coverage of state court proceedings effective since July 1, 1984, under certain conditions. Court Security personnel will ensure the rule is followed.

II) PROCEDURE

A) Personal Recording Devices

1) When approval is granted by the trial judge, inconspicuous personal recording devices may be used by persons in a courtroom to make sound recordings as personal notes of the proceedings.

2) A person proposing to use a recording device shall inform the court in advance.

3) The recordings shall not be used for any purpose other than as personal notes.

B) Other Photographing, Recording or Broadcasting

1) Any other photographing, recording or broadcasting of court proceedings is prohibited unless specifically authorized by the court.

C) Unauthorized Use

1) Any unauthorized use of photographs, recordings or transmissions made under this rule is an unlawful interference with the proceedings of the court (PC 166(a)(4)).

D) Film or Electronic Media Coverage

1) Any recording or broadcasting of court proceedings by the media using television, radio, photographic or recording equipment.

E) Media or Media Agency

1) Any person or organization engaged in news gathering or reporting and includes any newspaper, radio or television station or network, news service, magazine, trade paper, in-house publication, professional journal or other news reporting or news gathering agency.

F) Media Coverage

1) Film or electronic media coverage is permitted only on written order of the court.

2) The court may refuse, limit or terminate film or electronic media coverage in the interest of justice to protect the rights of the parties and the dignity of the court, or assure the orderly conduct of the proceedings.

3) This rule does not otherwise limit or restrict the right of the media to cover and report court proceedings.

G) Request for Order

1) A request for an order shall be filed, on an approved form by the Judicial Council, in a reasonable time before the portion of the proceeding to be covered.

2) The clerk shall promptly inform the parties of the request.

3) Unless the order states otherwise, it does not apply to proceedings that are continued except for normal recesses, weekends and holidays.

H) Prohibited Coverage

1) Proceedings held in chambers, proceedings closed to the public and jury selections shall not be photographed, recorded or broadcast.

2) Conferences between an attorney and client, witness or aid, between attorneys or between counsel and the court at the bench shall not be recorded or received by sound equipment.

3) Close-up photography of jurors is prohibited.

I) Pooling

1) If more than one media agency wishes to cover a proceeding, they shall file a statement of agreements.

2) If they are unable to agree, the court may deny film or electronic media coverage by that type of media agency.

J) Equipment and Personnel

1) The court may require media personnel to demonstrate that proposed equipment complies with this rule.

2) The court may specify the placement of media personnel and equipment to permit reasonable coverage without disruption of the proceedings.

K) Unless the court, in its discretion and for good cause, orders otherwise the following guidelines shall be used for media coverage of court proceedings:

1) One television camera and one still photographer, with not more than two cameras and four lenses, are permitted.

2) Equipment shall not produce distracting sound or light. Signal lights or devices to show when equipment is operating shall not be visible.

(a) Motorized drives, moving lights, flash attachments or sudden lighting changes shall not be used.

3) Existing courtroom sound and lighting systems shall be used without modification.

(a) An order granting permission to modify existing systems is deemed to require that modifications be installed, maintained and removed without public expense.

(b) Microphones and wiring shall be unobtrusively located in places approved by the court and shall be operated by one person.

4) Operators shall not move equipment or enter or leave the courtroom while the court is in session, or otherwise cause a distraction.

5) Equipment and clothing shall not bear the insignia or markings of a media agency.

L) Perimeter screening personnel will NOT allow cameras and recording devices to enter the courthouse (*California Rules of Court section: 1.150*).

M) Screening personnel confronted with anyone attempting to enter the courthouse with any items listed in the above definitions will do the following:

1) Ask the person(s) their destination.

2) Ask the person if they have submitted a request to the bench officer of the courtroom.

3) Absent a court order; the screening station will contact the court bailiff to determine if the device has been approved and inquire about the order.

4) Screening personnel will ensure these approved devices are thoroughly examined and x-rayed before allowing them into the courthouse.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.16.01
	RELATED ORDERS: Court Security Manual 4.01.02	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Richmond Courthouse (Specific)	**SUBJECT:** Jailer Duties	

I) PROCEDURE

A) Opens outside gun locker at the start of the day.

B) Inspects vehicle sally port area daily for weapons/contraband.

C) Inspects holding cells and jail areas for weapons, contraband, mechanical problems or damage. Reports problems/damage, if any, to the facility manager. Ensures that cells are supplied with toilet paper.

D) Receive daily in-custody list from the criminal clerk [redacted]

E) Coordinate any problems or special transportation needs with MDF Transportation.

F) Receive prisoners and documents with Sheriff's Transportation. Assists Transportation Deputy with the loading and unloading of prisoners.

G) Search all incoming prisoners with the assistance of the Transportation Deputy.

H) Separate prisoners by classification and determine where the prisoners will be housed while at the facility.

I) Removes prisoners from holding cells when needed in court. Returns prisoners to the holding cells at the conclusion of their court appearances.

J) Provide inmate lunches.

K) Receive court documents about prisoners and give them to Sheriff's Transportation Deputy.

L) Receives and searches court-remanded prisoners, completes all booking forms and controls prisoner property. Maintain a property log and retains copies of property receipts and booking forms.

M) Maintain daily and monthly prisoner logs.

N) Check prisoners twice an hour and document this in INK on the log.

O) Approve entrance into the security areas.

P) Notifies facility sergeant of any medical problems or housing compatibility issues with prisoners, any emergency situations, and any escapes or escape attempts.

Q) Inspect the holding cells for new damage (i.e., graffiti) when removing prisoners for transportation.

R) Prepare incident and crime reports involving Prisoner rules or statute violations.

S) Oversee prisoner/attorney interviews.

[redacted]

U) Secure the facility vehicle in the vehicle sally port at the end of the day.

V) Related Security Procedures

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.16.02
	RELATED ORDERS: Court Security Manual 4.01.02	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Richmond Courthouse (Specific)	**SUBJECT:** Prisoner Movement	

I) POLICY

A) Court Security Unit personnel will employ practices and procedures, which guard against escape, ensure the safety and well-being of prisoners, staff, and the public while transporting prisoners to and from Superior Court.

II) PROCEDURE

[redacted]

[redacted]

[redacted]

III) Juvenile - Transportation

A) In the event an in-custody matter is heard at this facility, the Juvenile Hall Transportation Unit will remain with the juvenile and transport the juvenile to court until the hearing is over.

B) There may be a parent who is in custody at one of the Sheriff's detention facilities.

1) In such instances, the bailiff and/or security deputy is responsible for transporting an in-custody parent up to the court proceeding.

2) If additional security assistance is needed, contact the court security office and the appropriate supervisor.

C) If a juvenile is remanded into custody, the bailiff will handcuff the juvenile and escort him/her to the second floor holding cell.

1) Additionally, the bailiff will:

(a) Search the juvenile and complete necessary paperwork.

(b) Coordinate transportation with Juvenile Hall.

(c) Begin a log to document the arrest. Log entries will be made in INK to include *fifteen (15)* minute cells checks, the time placed in the cell, the time released to Juvenile Hall transportation, etc.

IV) Security Issues

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.16.03
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Richmond Courthouse (Specific)	**SUBJECT:** Security Deputy	

I) PROCEDURE

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.16.04
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Richmond Courthouse (Specific)	**SUBJECT:** Alarm Procedure	

I) POLICY

A) All courthouse alarms at Superior Courthouses will be handled as emergency situations that may interrupt the normal operations of the courts. Deputies will respond as needed to all alarms as an in-progress situation with due regard for the potential dangers involved. Deputies main concerns will be officer safety, public safety and courthouse security.

II) PROCEDURE

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.16.05
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 10-18-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Richmond Courthouse (Specific)	**SUBJECT:** Evacuation	

I) POLICY

A) To ensure the safe, secure operation of Superior Court, Court Security Services will accept the responsibility for the emergency evacuation of Superior Court Facilities.

II) PROCEDURE

[redacted]

B) Upon the decision to evacuate, each deputy's area of responsibility is outlined below.

C) As deputies perform their evacuation duties, each deputy will ensure a thorough search and evacuation of his/her zone.

[redacted]

E) Bailiff Responsibilities

1) Give the order to evacuate the courthouse.

2) Secure the courtroom doors.

3) Return and secure any inmates to the first-floor jail.

4) Evacuate any sequestered jury.

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.16.06
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-2008 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Richmond Courthouse (Specific)	**SUBJECT:** Emergency Shut-Offs	

I) POLICY

A) It is the responsibility of all deputies assigned permanently or temporarily to Richmond Court to familiarize themselves with the location and the procedure of the emergency gas shutoff valve for the courts.

II) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.17.01
	RELATED ORDERS: C.S.B. Manual 2.08.17, 2.12.01 Minimum Jail Standards 1055, 1056, 1038, 1219 Court Security Manual 4.01.02	
ISSUE DATE: 01-01-02 REVISION DATE: 11-04-10 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Pittsburg Courthouse (Specific)	SUBJECT: Jailer Duties	

I) PROCEDURE

A) There are [redacted] security/jailer deputies assigned to this facility. These deputies will become familiar with and comply with the following:

B) Inspect holding cells for weapons, contraband, mechanical problems and/or damage.

1) Reports problems/damage, if any, to facility manager. Ensure that cells are supplied with toilet paper.

C) Inspect vehicle sally port area daily for weapons/contraband.

D) Receive master calendars from court clerks' office.

E) Receive daily in-custody list, via JMS.

1) Checks this list against the master calendar to determine the type of proceeding, the time scheduled, and the accuracy of the transport list.

F) Coordinate any problems or special transportation needs Sheriff's Transportation.

G) Receive prisoners and exchange documents with Sheriff's Transportation. Assist Transportation Deputy with the loading and unloading of prisoners.

H) Search all incoming prisoners.

I) Separate prisoners by classification and determine where the prisoners will be housed while at the facility.

J) Provide prisoner lunches.

K) Move prisoners in and out of Holding Cells as needed by the bailiffs.

L) Receive court documents pertaining to prisoners and provide document(s) to Sheriff's Transportation Deputy.

M) If available the Security Deputies will receive / search court-remanded prisoners and complete all booking forms. Security Floor Deputies will control prisoner property and maintain a property log and retain copies of property receipts and booking forms.

N) Maintain daily and monthly prisoner logs.

1) All logs shall be completed in INK. No pencil or whiteout will be used.

O) Check prisoners every thirty minutes and document this in INK on the log.

P) Approve entrance to security areas.

Q) Notify Court Security Sergeant of any medical problems with prisoners, any emergency situations, and any escapes or escape attempts.

R) Prepare incident and crime reports involving prisoner rules and/or statute violations.

S) Oversee prisoner/attorney interviews.

T) Related Security Procedures

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER**: 4.17.02
	RELATED ORDERS: C.S.B. Manual 2.08.29 Court Security Manual	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 02-11-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Pittsburg Courthouse (Specific)	**SUBJECT:** Prisoner Movement	

I) POLICY

A) Court Security personnel will employ practices and procedures, which guard against escape, ensure the safety and wellbeing of prisoners, staff and the public while transporting prisoners to and from Superior Court.

II) PROCEDURE

A) Upon arrival/departure, prisoners will be handcuffed using a waist chain. Both hands will be secured to the chain.

B) Prisoners appearing in the arraignment court do not need to be handcuffed while inside the courtroom security booth.

C) When a prisoner is to appear in court whose status necessitates the use of restraints for any reason, the bailiff will explain the full reason for the use of the restraints to the judge prior to the proceedings. The court will then make an appropriate decision on the use of restraining devices in court.

D) The assigned Floor/Security Deputy will transport prisoner's to/from the jail area and to/from the Courtrooms.

1) If the Floor Deputy is unavailable, the Courtroom Bailiff will assume transport responsibilities.

E) Inmates will complete any courtroom paperwork unless, for safety reasons, he/she is unable to do so.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.17.03
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 11-05-10 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Pittsburg Courthouse (Specific)	**SUBJECT:** Alarm Procedure	

I) POLICY

A) All courthouse alarms at Superior Courthouses will be handled as emergency situations that may interrupt the normal operations of the courts. Deputies will respond as needed to all alarms as an in-progress situation with due regard for the potential dangers involved. Deputies main concerns will be officer safety, public safety and courthouse security.

II) PROCEDURE

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.17.04
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 10-18-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Pittsburg Courthouse (Specific)	**SUBJECT:** Evacuation Procedure	

I) **POLICY**

A) In order to ensure the safe, secure operation of Superior Court, Court Security Unit will accept the responsibility for the emergency evacuation of Superior Court Facilities.

II) **PROCEDURE**

[redacted]

[redacted]



Note: The Assistant Sheriff shall be notified as soon as possible.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.17.05
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-11 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Pittsburg Courthouse (Specific)	**SUBJECT:** Emergency Shut-Offs	

I) POLICY

A) It is the responsibility of all deputies assigned permanently or temporarily to Pittsburg Court to familiarize themselves with the location and the procedure of the emergency gas shutoff valve for the courts.

II) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.18.01
	RELATED ORDERS: C.S.B. manual 2.08.17, 2.12.01 Minimum Jail Standards 1055, 1056, 1058, 1219 Court Security Manual 4.01.02	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 08-08-17 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Walnut Creek Courthouse (Specific)	**SUBJECT:** Jailer Duties	

I) PROCEDURE

A) Inspect holding cells for weapons, contraband, mechanical problems, and damage. Reports problems or damage, if any, to the facility manager. Ensure that cells are supplied with toilet paper.

B) Inspect vehicle sally port area daily for weapons/contraband.

C) Check all monitors and electrical doors to ensure proper working condition.

D) Receive master calendars from court clerks' office.

E) Receive daily in-custody list, via fax or e-mail, from MDF Transportation and Juvenile Probation. Check this list against the master calendar to determine the type of proceeding, the time scheduled, and the accuracy of the transport list.

F) Coordinate any problems or special transportation needs with MDF Transportation and Juvenile Probation.

G) Monitor the staff parking area until prisoners arrive.

H) Receive prisoners and exchange documents with Sheriff's Transportation. Assist Transportation Deputy with the loading and unloading of prisoners.

I) Coordinate the escorting of Juvenile prisoners with Juvenile Probation. It may be necessary to transport a Juvenile prisoner from the sally port to the second-floor holding area while the Probation Officer secures their weapon(s).

J) Search all incoming adult prisoners.

K) Separate prisoners by classification and determine where prisoners will be housed while at the facility.

L) Provide adult prisoners their lunches.

M) Move restrained prisoners in and out of court as directed by the bailiffs.

N) Receive court documents pertaining to prisoners and provide documents to Sheriff's Transportation Deputy.

O) Receive/search court-remanded adult and juvenile prisoners, complete all booking forms, and control prisoner property. Maintain a property log and retains copies of property receipts and booking forms.

P) Complete a "Contra Costa Court Security Screening From" medical questionnaire for all adult remands.

Q) Maintain daily and monthly prisoner logs. Logs shall be completed in INK.

R) Checks prisoners twice per hour. All checks will be noted in INK on the log.

S) Notify Court Security sergeant of any medical problems with prisoners, any emergency situations, and any escapes or escape attempts.

T) Prepares incident and crime reports involving prisoner rule violations or statute violations.

U) Attorneys will not be allowed entrance into the second-floor security area under any circumstance.

V) No guns, ammunition or batons are allowed within the upstairs holding area.

W) Security sally port cage will remain closed except when prisoners are arriving or departing.

II) Juvenile Transport Procedure

A) All Juveniles will be housed on the second-floor security hallway, seated in the chairs until their matter is ready in court.

B) The jailer or floor deputy will communicate with Juvenile Probation concerning the transport to ensure the movement through the security area is conducted in a way that minimizes the chances of the juvenile coming within "sight or sound" of an adult prisoner.

C) When the court hearing the juvenile's case is ready for the juvenile, they shall notify the jailer who will coordinate with the floor deputy and juvenile probation to ready the juvenile prisoner for court.

D) The bailiff will ensure the courtroom is empty of any in-custody adult prisoners, except an adult co-defendant.

E) The floor deputy or jailer will assist if called upon to collect the juvenile and coordinate with juvenile probation to escort the juvenile back to the holding area.

F) All Court Security personnel involved in the juvenile transport, to include the bailiff, shall be mindful of the dangers of moving in-custody prisoners through the public areas and shall communicate via radio when any potential problem arises needing immediate attention.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	C.S.B.	NUMBER: 4.18.02
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 REVISION DATE: 01-01-08 REVIEW DATE: 12-18-2019	CLEARANCE: Court Security	
CHAPTER: Walnut Creek Courthouse (Specific)	SUBJECT: Prisoner Movement	

I) POLICY

A) Court Security personnel will employ practices and procedures, which guard against escape, ensure the safety and well-being of prisoners, staff, and the public while transporting prisoners to and from Superior Court.

II) PROCEDURE

A) Upon arrival/departure, prisoners will be handcuffed using a waist chain. Both hands will be secured to the chain.

B) Prisoners appearing for arraignment shall be restrained unless ordered otherwise by the judge.

C) When a prisoner is to appear in court whose status necessitates the use of restraints for any reason, the bailiff will explain the full reason for the use of the restraints to the judge before the proceedings. The court will then make an appropriate decision on the use of restraining devices in court.

D) The courtroom bailiff will transport prisoners from the jail area to his/her courtroom.

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.18.03
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Walnut Creek Courthouse (Specific)	**SUBJECT:** Alarm Procedure	

I) POLICY

A) All courthouse alarms at Superior Courthouses will be handled as emergency situations that may interrupt the normal operations of the courts. Deputies will respond as needed to all alarms as an in-progress situation with due regard for the potential dangers involved. Deputies main concerns will be officer safety, public safety, and courthouse security.

II) PROCEDURE

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.18.04
	RELATED ORDERS: None	
ISSUE DATE: 01-01-2002 **REVISION DATE:** 01-01-08 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Walnut Creek Courthouse (Specific)	**SUBJECT:** Emergency Shut-Off's	

I) POLICY

A) It is the responsibility of all deputies assigned permanently or temporarily to Walnut Creek Court to familiarize themselves with the location and the procedure of the emergency gas shutoff valve for the courts.

II) PROCEDURE

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.18.05
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 8-2-2017 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Walnut Creek Courthouse (Specific)	**SUBJECT:** Evacuation	

I) POLICY

A) In order to ensure the safe, secure operation of Superior Court, Court Security Unit will accept the responsibility for the emergency evacuation of Superior Court Facilities.

II) PROCEDURE

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.19.01
	RELATED ORDERS: None	
ISSUE DATE: 01-01-02 **REVISION DATE:** 01-01-2013 **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Juvenile Hall Court	**SUBJECT:** Juvenile Hall Bailiff Duties	

I) PROCEDURE

A) The Juvenile Court bailiff is governed by the general rules, regulations and procedures as outlined in Chapter 11 of this manual. The only variance is in the specific duties of the bailiff.

B) Most court proceedings held at the Juvenile Hall location involve in-custody W&I 600 cases (criminal in nature).

C) The Juvenile Courtroom should be kept clear of spectators. Only persons with a direct interest in the case such as family members, attorneys, social workers, victims, etc., may be present in the courtroom.

D) The bailiff should not allow family visitation within the courtroom as it interferes with the security of the courtroom.

E) Transportation (Juvenile Hall)

1) In-custody juveniles will be brought into the courtroom by the bailiff.

2) Parties appearing in court who are not in-custody will be screened and directed to the courtroom by the screening deputy.

3) If a juvenile is remanded into custody, the bailiff will take the minor to Juvenile Hall transportation staff for processing.

F) Security Issues

1) All persons entering the Juvenile Hall courtroom will do so via perimeter screening. Lockers are available to secure purses, backpacks and other property for safe keeping while attending court proceedings.

2) In the event the bailiff needs immediate assistance the following options are available:

3) The bailiff is equipped with a portable radio.

[redacted]

G) Evacuation Procedures

[redacted]

Contra Costa County Office of the Sheriff Court Security Policy and Procedure	**C.S.B.**	**NUMBER:** 4.20.01
	RELATED ORDERS: Court Security Policies - 4.03.01, 4.12.01, 4.13.02, 4.13.04, 4.13.05, 4.16.01, 4.16.02, 4.17.01, 4.18.01, 4.20.01	
ISSUE DATE: 05-29-2013 **REVISION DATE:** **REVIEW DATE:** 12-18-2019	**CLEARANCE:** **Court Security**	
CHAPTER: Court Remands / Arrests	**SUBJECT:** Procedure Court Remands /Arrests	

I) POLICY

A) Court Security Services will employ practices and procedures for the administrative and statutory segregation of remanded inmates (civil and criminal) as to ensure the safety of the inmates and maintain security.

II) PROCEDURE

A) In the event a bailiff is instructed by the judge to take an inmate into custody (remand), the following applies:

1) Immediately detain, handcuff, and search the inmate incident to arrest and notify a Court Security supervisor.

2) Complete the necessary paperwork

(a) Booking authority

(b) Medical Screening form

(c) Property Receipt

3) Advise a Court Security Supervisor and Medical/Mental Health staff of any issues raised from the Court Security screening form.

(a) This form will be given to the intake nurse.

4) In Martinez, the bailiff or security deputy will walk the inmate to the MDF or arrange for appropriate transportation to the MDF or CCCRMC.

(a) The Court Security Screening form will not be completed if the inmate is taken directly to MDF.

(b) In the event the MDF is in "lock-down" status (i.e. protocol), the will be held in a Martinez court holding cell and the screening form will be completed.

(c) If the remand take place at a satellite court or juvenile hall, notify a Court Security supervisor and medical/mental health staff of any issued raised on the screening form.

(d) The bailiff will arrange for appropriate transportation to MDF or CCCRMC.

5) All remanded inmates will be segregated from in-custody inmates until they are processed and classified at the MDF.

B) In the event of a of a Civil Remand, the following procedure will be followed:

1) Immediately detain, handcuff, and search the inmate.

2) Notify a Court Security supervisor immediately of the civil status.

3) Notify MDF intake of the imminent arrival of the CIVIL remand.

4) Complete the necessary paperwork

(a) Booking Authority

(b) Court Security screening form

(c) Property receipt

5) Advise a Court Security supervisor and Medical or Mental Health staff of any issues raised on the screening form.

(a) This form will be given to the intake nurse.

6) In Martinez, the bailiff or security deputy will walk the inmate to MDF or arrange for appropriate transportation to either MDF or CCCRMC.

(a) The Court Security screening form will not be completed if the inmate is taken directly to the MDF.

(b) In the event the jail in "lock-down" (i.e. protocol) and the inmate will be held in a Martinez court holding cell, the screening form will be completed.

C) In the event a deputy makes an arrest (Warrant or On-View) the following procedure applies:

1) Immediately detain, handcuff, and search the inmate incident to arrest and notify a Court Security supervisor.

2) Complete the necessary paperwork

(a) Booking authority

(b) Medical Screening form

(c) Property Receipt

(d) Bail Schedule (felony on-view)

(e) Probable Cause Declaration in ARIES (all on-view arrests)

3) Advise a Court Security Supervisor and Medical/Mental Health staff of any issues raised from the Court Security screening form.

(a) This form will be given to the intake nurse.

4) In Martinez, the bailiff or security deputy will walk the inmate to the MDF or arrange for appropriate transportation to the MDF or CCCRMC.

(a) The Court Security Screening form will not be completed if the inmate is taken directly to MDF.

(b) In the event the MDF is in "lock-down" status (i.e. protocol), the will be held in a Martinez court holding cell and the screening form will be completed.

(c) If the remand take place at a satellite court or juvenile hall, notify a Court Security supervisor and medical/mental health staff of any issued raised on the screening form.

(d) The bailiff will arrange for appropriate transportation to MDF or CCCRMC.

5) All remanded inmates will be segregated from in-custody inmates until they are processed and classified at the MDF.

D) Inmate Property and Storage

1) All property received by the arresting deputy shall be retained in accordance with CSB Policy and Procedure 2.11.20.

Contra Costa County

Office of the Sheriff



Custody Services Bureau

Detention Divison Policy and Procedure

Revised December 12, 2019

Vision and Mission

Vision

In an unpredictable and constantly changing world, where communities and families expect safety and security, we must continually strive to be the states premier Law Enforcement Agency recognized for our responsiveness and integrity.

Exhibiting dynamic leadership, pride and competence, we will attract and develop the state's finest professionals, committed to multidimensional police services and sincere community partnerships tailored to maintain a decisive advantage over the criminal element.

Mission

The Office of the Sheriff works in partnership with our diverse community to safeguard the lives, rights and property of the people we serve. With unwavering dedication we provide innovative professional law enforcement services to our community. We accomplish this mission by maintaining our Core Values while always conducting ourselves with the highest ethical standards.

- David O. Livingston, Sheriff

Contra Costa County Office of the Sheriff
Custody Services Bureau Policy and Procedure

Preface

This Manual is a composite of the current practices, policies and administrative procedures governing the operation of the Custody Services Bureau.

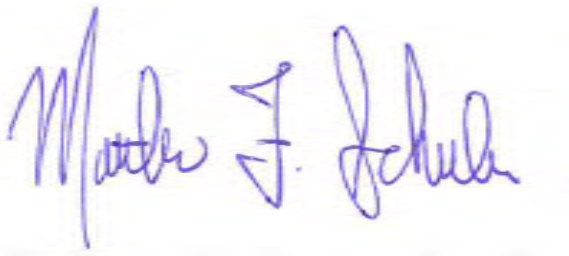
This Manual has been designed to provide a clear understanding and insight into the organization and its operations. The policies and procedures listed herein are meant to serve as positive guidelines for members of the Bureau.

This Manual supersedes all Policy Manuals and procedural memorandums previously issued by the Custody Service Bureau. It does not supercede any applicable State/Federal Laws.

Failure to follow policies leads to confusion, decreases the public's confidence in law enforcement, and reduces our ability to operate as a cohesive unit. It is the responsibility of all employees to thoroughly acquaint themselves with this Manual and use it as a guide in the performance of their daily assignments.

Many of the directives contained within this Manual must change as current law and regulations change. In that regard, it is my hope that members of the Bureau will put forth their ideas so that the Manual may be kept up-to-date and progress with time.

Suggestions for corrections or additions to this Manual may be submitted to the Custody Services Bureau's Administrative Unit



Matthew F. Schuler, Assistant
Sheriff Custody Services Bureau
December 12, 2019

Contra Costa County Office of the Sheriff
Custody Services Bureau Policy and Procedure

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Contra Costa County Office of the Sheriff
Custody Services Bureau Policy and Procedure

Glossary

AGENCY MISSION STATEMENT:

The Office of the Sheriff exists to serve the community. The protection of people and their property is our primary responsibility. Honor, Courage, Commitment, Leadership and Teamwork shall be the core values employed as we serve the citizens of Contra Costa County.

ADMINISTRATIVE SEGREGATION:

The administrative separation of an inmate(s) from the general population. Seg inmates are those who have been determined by classification to be prone to assault staff or other inmates, or are likely to need protection from other inmates, or prone to escape, or who continue to show complete disregard for established rules and regulations. Administrative Segregation Inmates can be high profile cases, or are placed in Seg for the security of the facility, and who are not currently in disciplinary isolation.

[redacted]

COMMISSARY:

Goods, articles and supplies purchased by inmates.

COMMUNICABLE DISEASE:

A respiratory, blood borne, or other infectious disease.

CONTRACT PERSONNEL:

Any person working in Detention Division who is not employed by the Sheriff's Office, but who are working on site, via contractual agreement. (GSD, Teachers, Medical, Mental Health, Chaplains, Library, Etc.)

CONTRABAND:

Any item that is not issued by the facility in which the inmate is being housed, or has been issued by the facility or purchased through commissary but is not being used for it's intended purpose, is a threat to the security of the facility, is in excess, or is no longer in it's original form.

COUNTS:

FACILITY COUNT:

Any count that occurs to determine inmate or arrestee status and location within or assigned to a particular facility.

FORMAL COUNT:

Any count that requires the inmate or arrestee to clearly present themselves in a manner that allows the deputy to verify and match their identity to the Inmate Management Head card.

INFORMAL COUNT:

Any count that occurs in order to verify and account for the number of inmates physically present in any given area. Inmate Management Head cards will be required to match an inmate with the area they are specifically assigned.

SHIFT CHANGE COUNT:

Any count that occurs in order to verify the appropriate number of head cards and inmates physically assigned and present to a specific area.

SPECIAL COUNT:

Any count that occurs due to an exigent circumstance and is ordered by the Facility Commander or his/her designee.

CORRECTIVE COUNSELING SYSTEM:

A method of training and counseling employees in an effort to improve behavior and performance without a negative effect of lasting disciplinary measures. It consists of three phases, or levels, with procedures and policies for administration developed within the Office of the Sheriff.

CORRESPONDENCE:

PRIVILEGED CORRESPONDENCE:

Mail between an inmate and attorneys, legal aid services, other agencies providing legal services to inmates, or para-professionals having a bona-fide association with such agencies; attorneys, judges, and clerks of federal, state and local courts; or public officials and their authorized representatives acting in their official

capacities; and the Facility Commander and higher ranking Sheriff's Office officials.

JAIL MAIL:

Correspondence between inmates housed in a Contra Costa County Sheriff's Detention Facility.

LEGAL MAIL:

Correspondence between an inmate and his/her attorney, the court or other legal agency.

DIPLOMATIC REPRESENTATIVE:

An official representative of a government who conducts relations with another individual, official or government.

DISABILITY:

INDIVIDUALS WITH DISABILITIES:

The ADA covers individuals who have a physical or mental impairment that substantially limits one or more major life activities, who have a record of such impairment, or who are regarded as having such impairment.

Temporary conditions are generally not covered by the ADA. Certain other conditions are expressly excluded from coverage of the ADA. These excluded conditions include pedophilia, homosexuality, transsexuality, or current users of illegal drugs or alcohol.

ELIGIBLE INDIVIDUALS:

Covered individuals are entitled to an equal opportunity to participate in programs, services or activities offered by the Detention Division. Persons with disabilities may be refused participation in services, programs or activities of the division if there is a compelling reason for such refusal. One compelling reason may be a threat to the disabled individual or others. The threat must be direct and not speculative.

MAJOR LIFE ACTIVITIES:

Basic functions that the average person can perform with little or no difficulty.

DISCIPLINE:

FORMAL DISCIPLINE:

A process that occurs in response to a written incident report and formal disciplinary hearing. Major rules violations and repetitive minor violations require formal discipline.

INFORMAL DISCIPLINE:

An immediate, corrective action taken by facility staff to correct the inmate's behavior without resulting in a loss of privileges to the inmate. Verbal counseling or reprimand, extra work detail, or removal from a work assignment without losing work credits are actions that can be taken without a written incident report. Single, minor rules violations may be handled through informal discipline.

MINOR VIOLATIONS:

Rules violations that *are not* likely to affect the health or safety of other inmates, or staff, or affect the security of the facility.

MAJOR VIOLATIONS:

Rules violations that *are* likely to affect the health or safety of other inmates or staff, or are likely to affect the security of the facility.

DISTURBANCES:

DISTURBANCE/RIOT:

Any tumultuous acts by inmates to cause willful disorder and confusion.

MINOR DISTURBANCE:

A disturbance, involving a minimal number of inmates, which can easily be controlled when immediately acted upon.

MAJOR DISTURBANCE:

A disturbance, involving numerous inmates, where the situation is out of control.

HUNGER STRIKE:

An act, of one or more inmates, refusing to eat as a protest for or against a cause or demand.

HOSTAGE:

Any person held against his/her will by another person for the purpose of escape, monetary gain or any reason that may place another person in danger of losing life or suffering serious bodily injury.

HOSTAGE EVENT:

An act of hostage taking behavior wherein the police have located the hostage taker and his victim, and a siege develops or has developed.

DIVISION SPECIFIC FORMS:

Any form utilized at the Division level and not intended for general departmental usage.

DUTY ASSIGNMENTS:

DUTY HOURS:

Schedules ranging from eight (8) to twelve and one half (12.5) hour shifts are available at Martinez Detention Facility, West County Detention Facility and Marsh Creek Detention Facility. Shift and duty hours vary based on job classification and assignment.

FIXED POSITIONS:

Any position that must be filled twenty-four (24) hours or less a day, seven (7) days or less a week, fifty-two (52) weeks or less a year and requires relief for meals, breaks, days off, vacation, sick leave, military leave, industrial leave, administrative leave and training.

NON-FIXED POSITIONS:

Any position that does not require relief for any time off.

EMERGENCY REQUESTS:

CODE ONE ASSISTANCE REQUEST:

A non-urgent, request handled by telephone or intercom system. Response is at the convenience of facility operations.

CODE TWO ASSISTANCE REQUEST:

An urgent, non-emergency request handled by telephone, intercom or radio. Response is immediate and controlled.

CODE THREE ASSISTANCE REQUEST:

An urgent and emergency request for assistance handled via any form of communication. Emergency response is required.

11-99 OFFICER NEEDS ASSISTANCE:

An emergency request for assistance handled via any form of communication. Staff members are directly involved in the incident. Response is maximized and immediate.

10-33 ALARM:

An activation of a radio duress alarm, panic/duress alarm or scan pen alarm. Emergency response is required.

RADIO DURESS ALARM:

An alarm function built directly into a portable radio unit that transmits an identifier and a duress alarm signal to Central Control.

PANIC/DURESS ALARM:

A wall mounted unit which, when depressed, transmits an alarm signal to a specific control point.

SCAN PEN ALARM:

A portable, spring-loaded mechanical device which, when activated, transmits a signal to at least one scan sensor unit located throughout the facility. Activation of a scan sensor unit transmits an alarm to Central Control with general location information.

CODE ONE MEDICAL ASSISTANCE REQUEST:

A non-urgent medical/mental health problem to include, but not limited to the following:

- An injury not immediately threatening to life or limb
- Severe back pain without obvious injury or paralysis
- Sudden headache but without history of head trauma or loss of
- Consciousness
- The individual gives history of mental problems but is not experiencing any symptoms

CODE TWO MEDICAL ASSISTANCE REQUEST:

An urgent problem to include, but not limited to the following:

- An acute injury with head trauma to include temporary loss of consciousness
- Suspected seizure but patient breathing
- An individual suffering severe hallucinations
- An individual threatening to commit suicide

CODE THREE MEDICAL ASSISTANCE REQUEST:

A medical emergency to include, but not limited to the following:

- An individual in the act of committing suicide
- Uncontrolled bleeding
- Any individual unconscious/unresponsive
- Cardiopulmonary arrest/severe chest pains

EMPLOYEE:

All terms referring to persons employed, such as personnel, staff, or employee, apply to all persons unless a job classification is specifically mentioned.

FACILITY COMMANDER:

A Lieutenant Level position under the direction of the Division Captain that is responsible for the overall operation of a detention facility or bureau. Synonymous with Facility Manager.

FACILITY MANAGER:

A Lieutenant Level position under the direction of the Division Captain that is responsible for the overall operation of a detention facility or bureau. Synonymous with Facility Commander.

FOREIGN NATIONAL:

Any person not having United States citizenship.

GOAL:

A relatively broad statement of the end or result that one intends to ultimately achieve. A goal usually requires a relatively long time span to achieve and, whenever possible should be stated in a way that permits measure of its achievement.

GENDER:

The use of the masculine gender in any procedure includes the female gender when applicable.

HAZARDOUS MATERIALS:

FLAMMABLE MATERIALS:

Liquids with a flash point below 100°F.

TOXIC MATERIALS:

Substances that through chemical reaction or mixture can produce possible injury or harm to the body by entering through the skin, digestive tract, or respiratory tract (e.g., zinc chromate paint, ammonia, chlorine, antifreeze, herbicides, pesticides).

CAUSTIC MATERIALS:

Substances that can destroy or eat away by chemical reaction (e.g., lye, caustic soda, sulfuric acid).

HAZARDOUS WASTE:

A waste or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may either:

Cause, or significantly contribute to, an increase in serious irreversible or incapacitating reversible illnesses.

Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

INFECTIOUS WASTE:

Infectious waste is considered to be the following:

Laboratory wastes include cultures of etiologic agents that pose a substantial threat to health, due to their volume and virulence.

Pathologic specimens, including human or animal tissues, blood elements, excreta and secretions that contain etiologic agents, and attendant disposable fomites.

Equipment, instruments, utensils, food containers and other disposable materials that are likely to transmit etiologic agents from the rooms of inmates that have been isolated because of suspected or diagnosed communicable disease.

Human dialysis waste material including arterial lines and dialyzed membranes.

Any other material that in the determination of the facility medical staff, presents a significant danger of infection because it is contaminated with, or may reasonably be expected to be contaminated with, etiologic agents.

ETIOLOGIC AGENTS:

A type of microorganism, helmink, or virus that causes, or significantly contributes to, the cause of increased morbidity or mortality of human beings.

INDIGENT INMATE:

An inmate is considered to be indigent when they do not have enough money on their inmate account to purchase one (1) book of ten (10) stamps.

ITR:

An acronym that refers to areas associated with facility Intake, Transfer and Release of arrestees and/or inmates.

JUVENILE:

Anyone who has not reached the age of 18 on or before the date of incarceration.

KEYS:

CONTROLLED KEYS:

Key(s) for specific areas requiring a higher level of security than facility staff keys, and/or accountability, requiring Shift Supervisor approval to check out from the designated control point.

CONTROL POINT:

An area that specifically manages security and special duty keys for check in/out.

FACILITY STAFF KEY (S):

Keys allowing staff entry into locker room areas, specifically identified work stations/areas, fire equipment boxes, staff dining areas, and all common areas not accessible to inmates.

SECURITY KEY:

Any facility key allowing access to a secure inmate area and which, if lost or duplicated by inmates or others, would jeopardize the security of the facility, facility property, employees, visitors, or inmates, or directly or indirectly facilitate an escape.

SPECIAL DUTY KEYS:

Key(s) for special duty offices not authorized for general access, i.e., Classification, Administration, etc.

LOGS:

OBSERVATION LOG:

The form utilized to document the direct visual observation of a specified inmate.

SEPARATION LOG:

An observation log utilized to document the direct visual observation of an inmate in administrative segregation, disciplinary Isolation or protective custody. Entries shall be made utilizing JMS Inmate History.

MANUAL:

A collection of material designated and organized for use as a reference guide that explains the functions and operations of a specific section department.

MAY:

"May" is permissible.

MEAL:

A meal (breakfast, lunch or dinner), will consist of items outlined in the Food Services Menu.

NOTARY PUBLIC:

A person legally empowered to witness and certify documents and to take affidavits and depositions.

OBJECTIVE:

An end result that one intends to attain in order to achieve partial fulfillment of a goal. An objective is a sub-goal or an element of a goal and therefore, requires a shorter time to accomplish than does a goal. Goals and objectives should be both measurable and attainable.

ORGANIZATIONAL CHART:

An illustrated chart displaying chain of command and level of responsibility. Positions are placed under each line of authority and are represented by a box symbol having lines of delineation to give direction to the position.

PANIC/DURESS ALARM:

A wall-mounted plate with a black push-button switch or red push button panel, which when activated, transmits an alarm signal to Central Control.

POLICY:

A broad statement of agency and/or divisional principles. It is the framework for the development of procedures.

PROCEDURE:

A guideline for carrying out the agency's and/or divisions activities

PROTOCOL:

A detailed list of procedures administratively approved, to be followed for providing specific crisis services.

PRO-PER:

IN PROPRIA PERSONA:

In one's own person. For the purpose of this section, an inmate is in Propria Persona or Pro Se Status only if acknowledged by a court to be appearing in a specific criminal action without counsel.

LEGAL REPRESENTATIVE:

Attorneys, legal aid officers or assistants to the inmate's attorney of record.

LEGAL MAIL:

Confidential correspondence between inmates and local, state and federal courts, any member of the State Bar or holder of public office and/or the State Board of Corrections.

SHERIFF'S REPRESENTATIVE:

For purposes of this section, The Sheriff's representative for all inquires regarding the facility or the ability to carry out various court orders will be considered to be the Facility Administrator or his/her representative.

RELATED ORDERS:

References to other material or resources that directly relate to that specific policy section:

MJS:	Minimum Jail Standards
PC:	California Penal Code
CVC:	California Vehicle Code
CCCSO:	Sheriff's Office Policy and Procedure Manual
Patrol:	Sheriff's Office Patrol Manual
CSB:	Sheriff's Office Custody Services Bureau Manual

SCAN PEN TRANSMITTER:

A silver colored mechanical device, similar in size and shape to a ballpoint pen, which when depressed, transmits an alarm signal to central control.

SEARCHES:

STRIP SEARCH:

A visual inspection of an inmate's underclothing, unclothed body, breasts, buttocks, or genitalia after the inmate arranges or removes (partially or fully) his or her clothing.

VISUAL BODY CAVITY SEARCH:

A visual inspection of an inmate's stomach, rectal cavity, or vagina. It may involve the unclothed inmate bending at the waist, squatting, or lifting or spreading breasts, buttocks, or genitalia to allow visual inspection of an inmate's stomach, rectal cavity, or vagina. The mouth is not considered a body cavity for these purposes.

PHYSICAL BODY CAVITY SEARCH:

A visual body cavity search of an inmate plus a physical intrusion, manually or by instrument, into an inmate's stomach, rectal cavity, or vagina.

CLOTHED PAT SEARCH:

A tactile, visual, and/or scanner inspection of an inmate's clothing (including hats, wigs, coats, pockets, socks and footwear), personal effects, hair, mouth, or ears. The inspection may include requiring the inmate to remove footwear, socks, hats, wigs, gloves, and outerwear (coats, jackets, sweatshirts, sweaters). The inspection may include requiring the inmate to turn his or her pockets inside out.

SEXUALLY EXPLICIT MATERIAL:

Material that shows the frontal nudity of either gender, including the exposed female breast(s) and/or the genetalia of either gender. *(CCR 3006 (c) (17(a))*. Sexually explicit material can either be from professional publications or personal photos or drawing that have been collected from various sources.

SHALL/WILL:

"Shall" and "Will" are mandatory.

SIGNATURE:

The identification of a party in written and legible form.

SMOKE/SMOKING:

The carrying or holding of a lighted pipe, cigar or cigarette or any other lighted smoking equipment of any kind.

SUBPOENA DUCES TECUM:

A subpoena which, in addition to the usual clauses, requiring the attendance of the witness in court to testify, contains clauses directing him/her to produce at the same time for use as evidence in the litigation, certain described books, papers, records, and documents."

TOBACCO PRODUCTS:

Includes, but is not limited to cigarettes, cigars, pipes, chewing tobacco and any smoking material.

TRANSMITTAL MAIL:

Mail between Contra Costa County departments that are transported by County employees.

VISITOR:

Any person not regularly assigned to Detention Division in either a full or part-time position.

Contra Costa County Office of the Sheriff
Custody Services Bureau Policy and Procedure

Section One-Administration

Contents

Chapter One	**Administration, Organization and Management**
Chapter Two	**Fiscal Management**
Chapter Three	**Personnel**
Chapter Four	**Training and Standards**

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 06-14-12 **REVIEW DATE:** 03-07-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Assignment of Custody Services Bureau Assistant Sheriff	

I. POLICY

A. It shall be the policy of the Custody Services Bureau to have a single administrator who is responsible for the administration, control and management and to whom all employees or units of management are responsible.

B. The administrator will hold the rank of Assistant Sheriff and shall be appointed as the Assistant Sheriff of the Custody Services Bureau by the Sheriff.

II. PROCEDURE

A. AUTHORITY AND RESPONSIBILITIES

1. The Custody Services Bureau Assistant Sheriff shall be assigned by the Sheriff to take charge of and administer a division, section, or other office.

    a. The Custody Services Bureau Assistant Sheriff shall have the primary responsibility and authority for the efficient and lawful administration of operations, staff assignments, program developments, personnel supervision, maintenance and auxiliary inmate services.

    b. The Custody Services Bureau Assistant Sheriff is subordinate only to the Sheriff, Undersheriff and any other Bureau authority as established by Sheriff's Office Policy.

    c. Statistics on inmate population.

    d. Facility budget.

    e. Facility problems and plans to resolve them.

2. It shall be incumbent upon the Custody Services Bureau Assistant Sheriff to respond promptly to all lawful requests from federal, state and local legislative and executive bodies for information pertinent to the detention facility.

3. Only the Custody Services Bureau Assistant Sheriff or designee will authorize the use of facility classrooms, conference rooms, or other accommodations for activities that are non-operational in nature.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.02
	RELATED ORDERS: CCCSO Policy 1.03.51; 1.03.52 MJS Section 1027 CSB 2.08.49	
ISSUE DATE: 07-01-04 **REVISION DATE:** 06-23-17 **REVIEW DATE:** 03-26-19	**CLEARANCE:** CUSTODY	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Organization and Staffing Charts	

I. POLICY

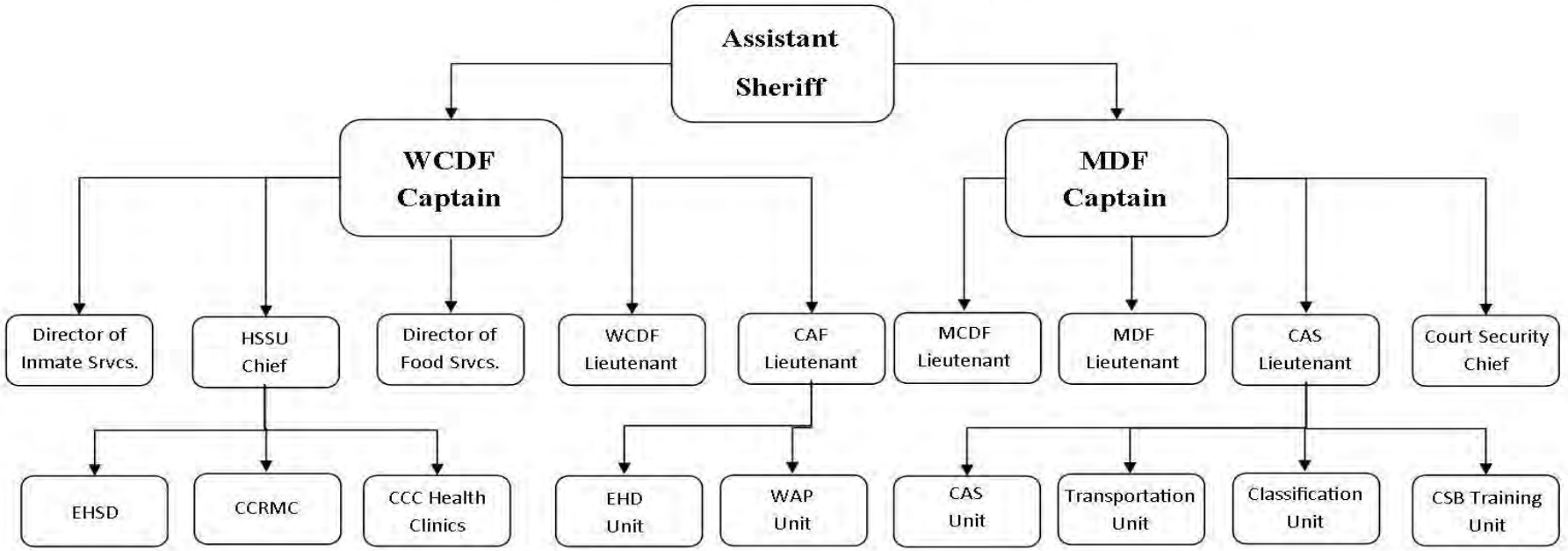
The Custody Services Bureau is one of three Bureaus within the Office of the Sheriff. The Bureau has been structured to effectively manage the units and personnel that are assigned to it. The purpose of the organizational chart is to identify the relationships and relative ranks of the units within the Bureau.

II. PROCEDURE

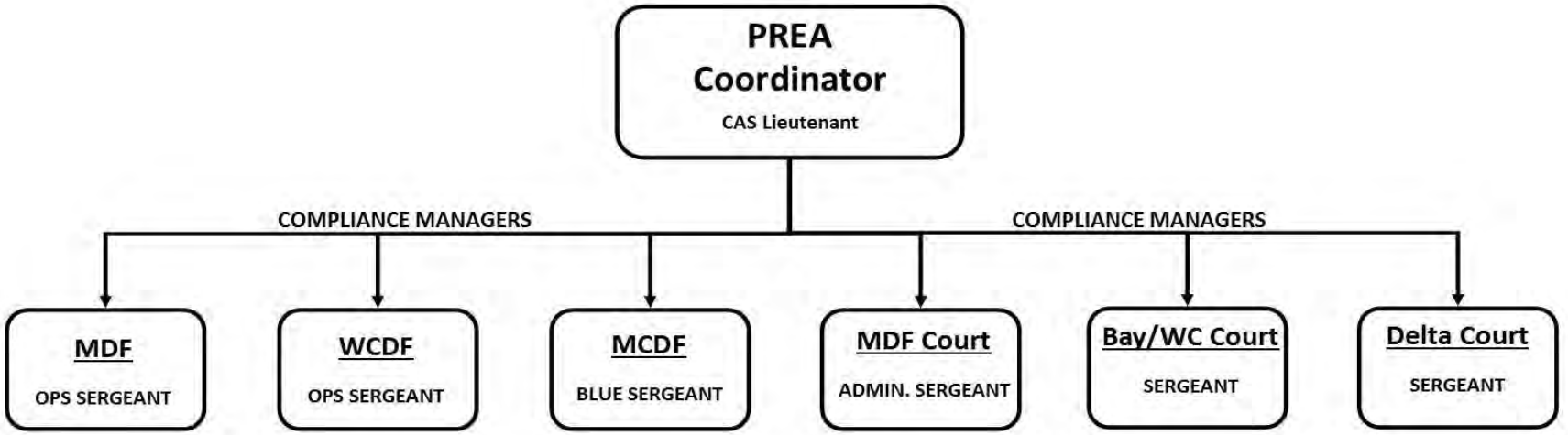
A. The Custody Administrative Services Lieutenant is responsible for maintaining the CSB Monthly Staffing Report. The CAS lieutenant will monitor staffing levels to ensure the safety and security of the facility staff and inmates

1. The continual monitoring of staffing levels will ensure that there is adequate inmate supervision for the bureau's attempts to prevent and detect sexual abuse and sexual harassment.

CSB Organizational Chart



CSB PREA Organizational Chart



Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.03
	RELATED ORDERS: MJS 1029	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-07-06 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** CSB Policy and Procedure Manual	

I. POLICY

A. Every effort will be made to construct this manual to conform to the definitions and terms as outlined in the CSB Glossary in order to maintain grammatical consistency.

B. This manual will contain a complete and up-to-date alphabetical key word index.

II. DEFINITIONS

A. CROSS REFERENCE: A reference from one part of this manual to another, which provides additional information.

B. KEY WORD INDEX: An alphabetized listing of fundamental words used as a guide to facilitate locating a subject.

III. PROCEDURE

A. When policy and procedures are written or revised, the author and/or reviewer(s) will ensure they comply with this construction.

B. When a policy and procedure is written and/or revised, it will be the responsibility of Custody Administrative Services to ensure the index and key word index is also changed.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.04
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:**	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** CSB Policy and Procedure Manual Layout	

I. POLICY

A. The Custody Services Bureau will maintain a policy and procedural manual that is consistent in formatting and layout.

B. Certain formatting steps must be taken throughout the manual in order to prevent computer formatting and conversion errors from occurring.

II. PROCEDURE

A. PAGE SETUP

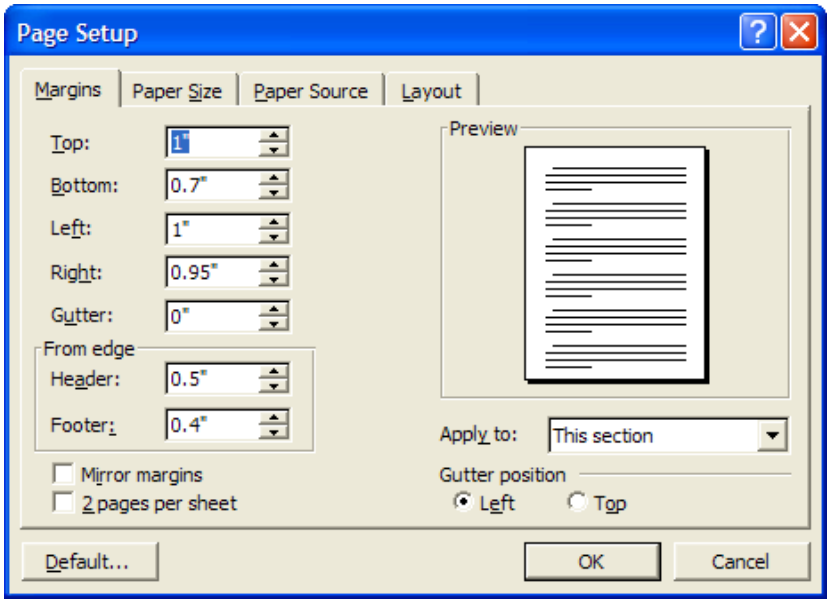
1. Manual page formatting shall be offset from the center in order for all material to be easily viewed when placed in large binders.

2. With the document selected:

a. Click on “File”

b. Click on “Page Setup”

c. Adjust the Page Setup options to reflect the following:



B. NUMBER AND BULLET FORMATTING

1. Outline numbering and bulleting shall be used in place of tab or indentation formatting.

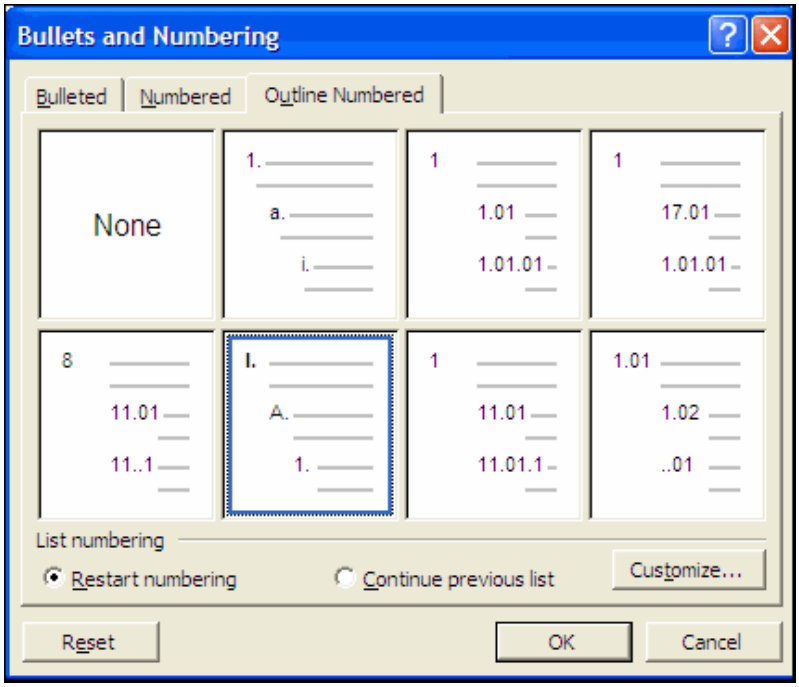
2. With the document selected, select all text that requires formatting.

   a. Click on “Format”

   b. Click on Bullets and Numbering

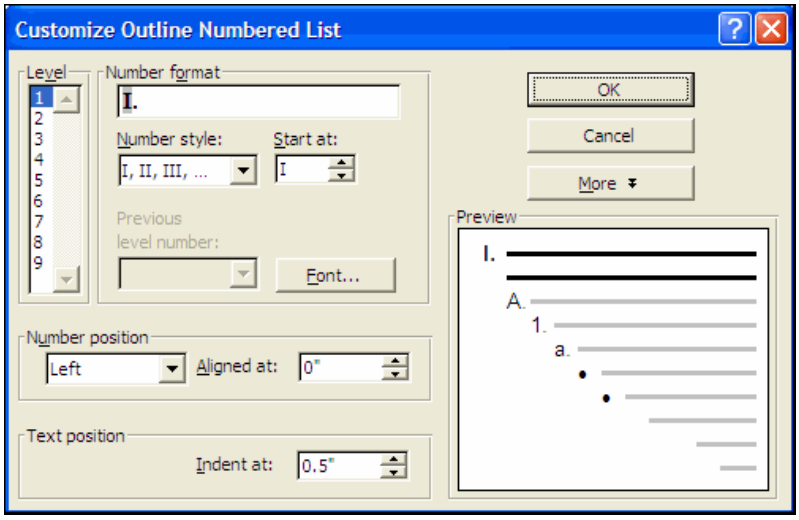
   c. Adjust the formatting options to reflect the following:

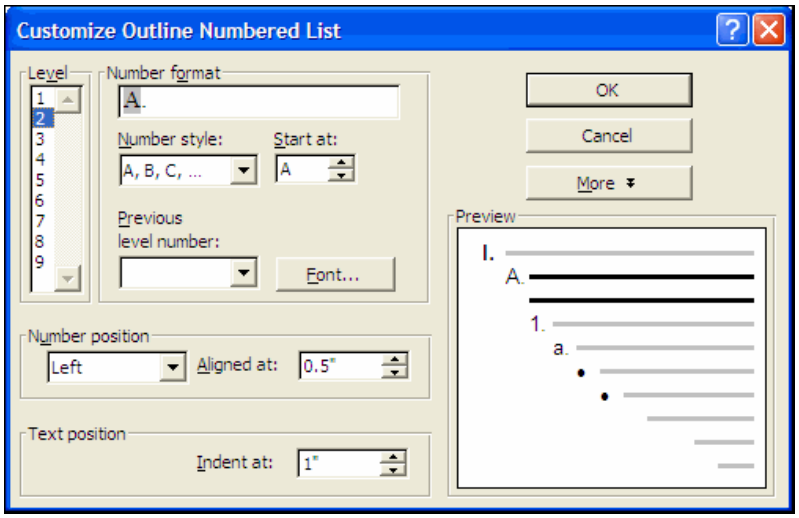
   - Select the Outline Numbered box that most closely resembles current formatting:

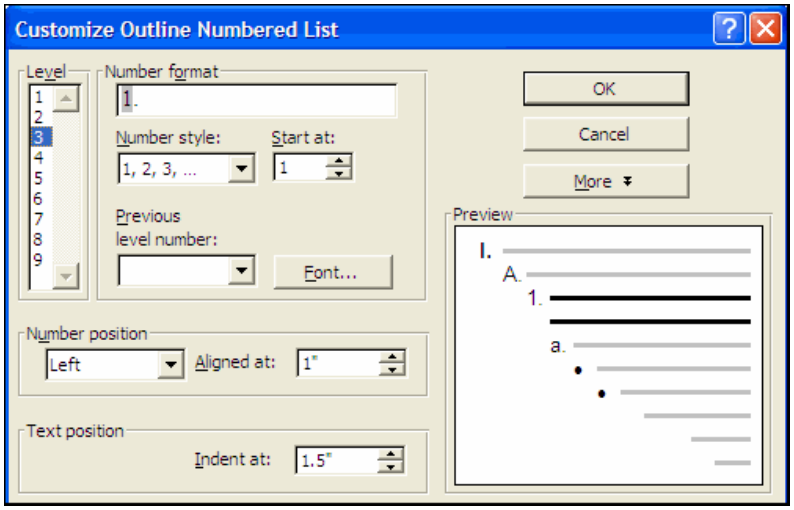


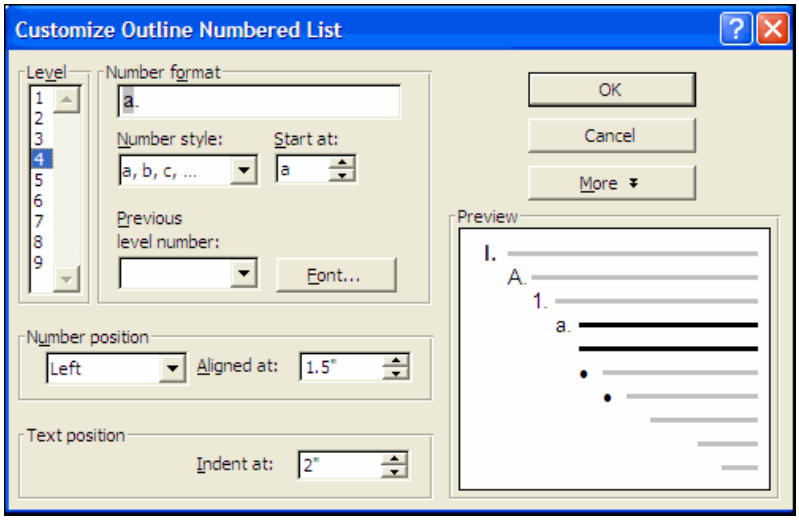
   - Select “Customize…” from the Bullets and Numbering menu.

- Adjust the “Customize Outline Numbered List” formatting to reflect the following for each “Level”:





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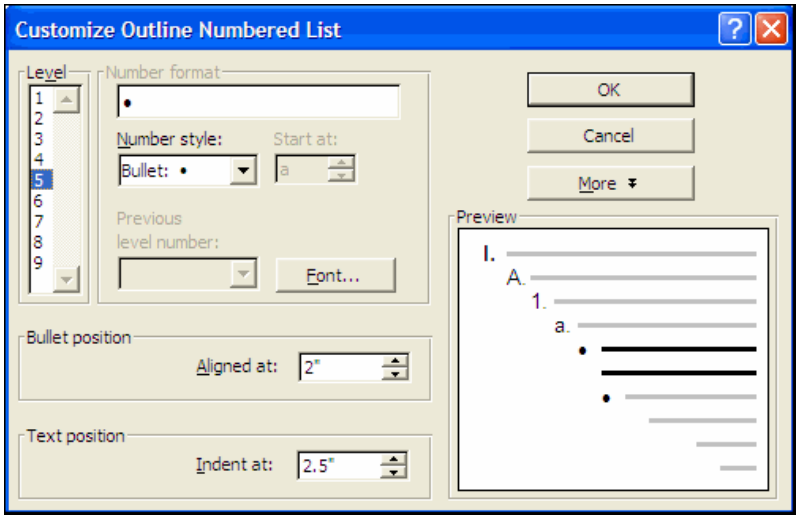
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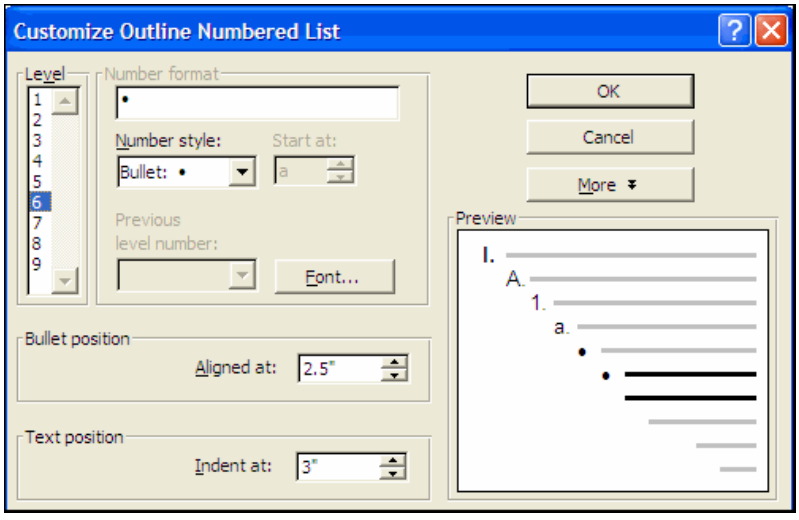
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C. FONT FORMATTING

1. Font formatting shall be as follows:

a. Chapter Title Header

- Times New Roman
- Size 12
- Bold for all Subheadings
- Regular for all other text

b. Section Text

- Times New Roman
- Size 11
- Bold for all headers with Capital Roman Numerals preceding text (i.e. POLICY, DEFINITIONS, etc.)
- Regular for all other text

D. CHAPTER TITLE HEADER

1. All sections in the title header shall appear as follows:

Contra Costa County **Office of the Sheriff** **CSB Policy and Procedure**	**DETENTION**	**NUMBER:**
	RELATED ORDERS:	
ISSUE DATE: **REVISION DATE:** **REVIEW DATE:**	**CLEARANCE:**	
CHAPTER:	**SUBJECT:**	

a. Related Orders should be listed in the following order:

- MJS
- PC
- CVC

- CCCSO Policy
- Patrol Policy
- CSB Policy
- Other references as necessary
- Font size may be reduced in order to accommodate larger lists or related orders.

b. Clearance refers to the type of viewing access that is permitted.

- All sections required by law to be available for public viewing shall be marked “Public”.
- All others shall be marked “Custody”

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.05
	RELATED ORDERS: MJS 1029	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-04-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** CSB Policy and Procedure Manual Review and Dissemination	

I. POLICY

A. A manual containing policies and procedures will be developed and maintained, that expresses the philosophies, goals, policies, facility security and control procedures, and all operational procedures specific to Martinez Detention Facility, West County Detention Facility and Marsh Creek Detention Facility.

B. This manual will specify how policies and procedures are to be implemented and be accessible to all employees and, where applicable, to the general public.

C. All new and revised policies and procedures will be disseminated to designated staff, volunteers and where appropriate, to inmates prior to implementation.

D. Employees assigned to Martinez Detention Facility, West County Detention Facility and Marsh Creek Detention Facility will participate in the formulation of policies, procedures and programs.

E. Related community agencies that the Detention Division has contact with may participate in policy and procedure development, coordinated planning and interagency consultation.

II. DEFINITIONS

A. POLICY: A broad statement of agency and/or divisional principles. It is the framework for the development of procedures.

B. PROCEDURE: A guideline for carrying out the agency's and/or divisions activities.

C. MANUAL: A collection of material designated and organized for use as a reference guide that explains the functions and operations of a specific section department.

III. PROCEDURE

A. POLICY AND PROCEDURE DEVELOPMENT/REVIEW AND APPROVAL

1. All employees, volunteers, related community agencies and inmates will be encouraged to actively participate in the development and revision of policies and procedures at Martinez Detention Facility, West County Detention Facility and Marsh Creek Detention Facility.

2. Facility personnel may contact their Facility Commander, in writing, via the chain of command, with suggestions and/or problems with policies and procedures.

3. Inmates may forward their suggestions regarding policy and procedure development by means of an inmate request form. Those suggestions found to be applicable will be forwarded, in memorandum format, to the Facility Commander with a recommendation.

4. Personnel assigned to create, review, or revise policies and procedures will randomly meet with facility personnel, volunteers and inmates to seek opinions and ideas regarding the effectiveness of the policies and procedures.

5. The Facility Commander will review policy and procedure suggestions submitted by facility personnel on a continuous basis. Both positive and negative aspects will be evaluated. The Facility Commander will forward draft revision requests to Custody Administrative Services.

6. To facilitate the creation of policy revisions, copies of manual sections can be obtained from Custody Administrative Services on computer disk.

7. Custody Administrative Services will be responsible for reviewing all newly created or revised policies and procedures to ensure compliance with federal, state and local mandates, as well as continued compliance with Board of Corrections standards.

8. The final draft proposal will be presented to the Custody Services Bureau Assistant Sheriff and Division Captains for review and approval.

9. Once approved, Custody Administrative Services will disseminate the policy and procedure throughout the agency.

B. REVISIONS

1. Information to be omitted from a current policy will be lined through. This can be done on a hard copy of the policy or on a computer file of the policy.

2. Information added to the current policy can be hand written on a hard copy of the policy indicating where it will be inserted.

3. If a computer file of the policy section is used, the new information will be identified by italicized print.

4. The revised policy section will be accompanied with a memo/e-mail indicating

the reason for the policy change. It must include any legal justification for the change.

5. Custody Administrative Services will omit the lined through material and change the italicized to the correct font after the revisions are approved by the Bureau Assistant Sheriff.

C. DISSEMINATION

1. The Facility Commander or designee will be responsible for ensuring that every member is made aware of the material contained in the Policy and Procedures Manual, including all subsequent changes that are made to them.

2. The CSB Policy and Procedure Manual will be accessible at all major posts as indicated on the manual distribution list. Additionally, the CSB Policy and Procedure Public Information Manual will be made accessible to the public.

3. Policies and procedures relating to the security of the facility will not be disseminated to inmates or the public.

4. All new or revised policies and procedures will be distributed to all major posts, staff and volunteers when applicable.

5. All approved revisions will be posted on facility line up boards and read at line-ups.

6. The Facility Commander or his/her designee will obtain a signed acknowledgment from all members stating they have seen and understand the information provided.

7. The signed acknowledgments will be kept on a Training Roster. The roster will state the date and time the information was provided to the member and shall be maintained by Custody Administrative Services.

8. All facility manuals, manual distribution lists and manual updates will be maintained and distributed by Custody Administrative Services.

9. When appropriate, new or revised policies and procedures will be made available to inmates prior to implementation.

D. ORGANIZATION OF MANUALS

1. Policies and procedures will be contained in a manual.

2. The Policy and Procedure Manual will contain an alphabetized Keyword Index.

3. The Policy and Procedure Manual will be numbered by chapter and section.

4. The Policy and Procedure Manuals will be divided into chapters as directly related to agency policy and procedure issuance.

5. The Policy and Procedure Manuals will be separate from all other manuals and readily available to all affected members as a reference and guideline.

E. ANNUAL REVIEW OF POLICIES AND PROCEDURES

1. It shall be the responsibility of Custody Administrative Services to conduct an biannual review of the Policy and Procedure Manuals by April of each year, or more often as the need arises.

2. This review will include an assessment of facility operations to ensure they are in compliance with published policies, procedures and applicable Board of Corrections standards. Policies and procedures that need to be revised, deleted, or added will be addressed.

3. Custody Administrative Services will submit a report to the Bureau Assistant Sheriff via the chain of command. This report will include the following information:

    a. A general statement of the adequacy of policies and procedures.

    b. A specific listing of any problem areas.

    c. Proposals for revision.

4. Custody Administrative Services shall maintain copies of all canceled or rewritten policies and procedures, or other changes in the method of operations and include the date the change occurred.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.06
	RELATED ORDERS: MJS 1062, 1063, 1067, 1073	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-17-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Facility Meetings and Communication	

I. POLICY

A. In order to maintain an effective system of communication within the Custody Services Bureau, there will be regular meetings between the Bureau Assistant Sheriff, Detention Division Captains, Facility Commanders and CSB Managers.

B. Such meetings are to be conducted at least monthly, with formal documentation of the proceedings.

II. PROCEDURE

A. All members are encouraged to support the exchange of information.

B. The chain of command will be used whenever appropriate and available methods of communication should be utilized.

C. In order to enhance the staff communication process, staff meetings will occur as follows:

1. BUREAU STAFF MEETINGS

   a. These meetings chaired by the Custody Services Bureau Assistant Sheriff are held bi-weekly or more often as needed.

   b. All designated staff members are required to attend.

   c. During these meetings, information is exchanged regarding the status of the Division, along with the dissemination of information obtained in Executive Management and Departmental Staff Meetings. Special project updates are provided to all staff in attendance. Discussions regarding current policies, procedures and practices are also conducted.

   d. Formal documentation of these meetings will be maintained.

2. SUPERVISORY STAFF MEETINGS

a. These meetings, chaired by the Facility Commander, are held at least quarterly or more often as needed.

b. During these meetings, information from the Executive, and Divisional Staff Meetings is disseminated. Duties are delegated, and daily facility business is to be discussed.

c. Formal documentation of these meetings will be maintained.

3. SHIFT BRIEFINGS

a. The Shift Sergeant conducts daily briefings.

b. Briefings will consist of the reading of post assignments, orders, policies and procedures, training, personnel inspections, special recognition of personnel and the relaying of pertinent information.

c. All briefings shall reinforce job responsibility, coordination of work efforts and the importance of communication.

d. All staff information shall be communicated in a timely fashion, with the exchange of information encouraged.

e. It shall be the responsibility of the shift supervisor, to invite members of specialized and support components from both within and out of the Sheriff's Office and outside entities to attend shift briefings for the purpose of exchanging information and improving the job performance of involved personnel.

4. OTHER MEETINGS

a. In an effort to keep lines of communication open with criminal justice and service agencies, facility liaisons will be assigned to attend regularly scheduled meetings for the purpose of gathering, exchanging and standardizing information.

b. Facility personnel assigned to liaison positions within the Detention Division will attend the following meetings in addition to others as necessary:

- County Parole
- Medical/Mental Health
- Inmate Welfare Fund
- Department Safety Meeting
- Board of Corrections
- Training Advisory Committee

c. During these meetings, contractual agreements along with operational issues will be discussed if applicable. Each participant will be given the opportunity to present matters of interest.

d. Meeting minutes will be recorded and disseminated to the proper personnel when appropriate.

D. INMATE COMMUNICATION

1. All inmates incarcerated at Martinez Detention Facility, West County Detention Facility, and the Marsh Creek Detention Facility have access to the following methods of communication:

   a. Direct verbal contact with facility personnel

   b. Inmate Request Slips

   c. Grievances

   d. Mail

   e. Telephones

   f. Visiting

   g. Medical/Mental Health Triage phones

   h. Telephones

   i. Interviews

2. Facility personnel will attempt to answer all inmate questions using all available resources.

   a. Staff will provide the inmate with the necessary document(s) or forms to assist them with their request in the event they are unable to properly assist the inmate.

3. All documents received from inmates will be processed without delay and forwarded to the appropriate section of the facility for processing.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-18-19 **REVIEW DATE:** 03-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Memorandums	

I. POLICY

A. Custody Services Bureau Memorandums shall be used to communicate proposals, notifications and directives to all custody staff members in a timely manner.

B. Memorandums must be certified by the final author's initials in order to be considered valid.

C. All memorandums regarding proposals, temporary directives or procedural revisions or review of existing CSB policy must be forwarded to Custody Administrative Services.

D. Memorandums shall not be used to direct permanent policy change without any other supporting documentation (i.e. revised policy section, etc.)

II. PROCEDURE

A. Memorandums may be used for the following:

1. General communications
2. Proposals
3. Notifications
4. Letters of Interest
5. Temporary directives or procedural revisions
6. Review of current policy

B. Proposals, Notifications and Letters of Interest shall be routed to the author's direct supervisor and intended recipient.

1. The author must initial the memorandum by their printed name to certify the document.

2. The author of any policy or procedural proposal shall route one (1) copy directly to CAS for review.

C. Memorandums directing CSB temporary directives or procedural revisions or review of current policy may be issued by the following:

1. CSB Assistant Sheriff

2. Detention Division Captain

3. MDF or WCDF Custody Administrative Services Lieutenant

4. Facility Commander

D. Other custody staff members may author the memorandum under the name of the authorizing command staff member.

1. The author shall place their name directly beneath the command staff members name as a “by” line.

2. The authorizing command staff member must initial the memorandum by their printed name to certify the document.

E. Temporary Directives or procedural revisions shall include an expiration date on the last line of the memo (no more than thirty (30) days in length) and shall be routed to the following prior to distribution and/or placement on the custody staff lineup board:

1. Detention Division Captain

2. Facility Commander

3. Custody Administrative Services

F. Memorandums directing permanent policy change shall not take effect until one or more of the following has occurred:

1. Changes are reflected in the appropriate CSB Policy and Procedures Chapter and Section.

2. Changes and/or revisions are placed in CSB Policy and Procedures Revision Appendix/Folder.

3. A copy of the memorandum is placed in the CAS hardcopy archive files.

G. Memorandums shall be formatted as follows:

1. Use the “Justify” option to Line-up the margins.

2. The narrative font shall be Arial and the pica type shall be 12.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.08
	RELATED ORDERS: MJS 1045 P.C. 13000 CCCSO 1.06.78	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Resources for Public Information	

I. POLICY

A. Facility information shall be shared with the community, with facility access being granted to accredited news media representatives, when appropriate.

II. PROCEDURE

A. The Facility Commander, or his/her designee, shall allow bonafide media representatives, specialists in the field of Administration of Justice, Criminal Justice and the public, access to facility information.

B. Accredited news media representatives may have access to detention facilities.

C. Community personnel must properly identify themselves pursuant to CSB Policy and Procedure 2.08.03, CSB Visitor and Photo Badges.

D. The Facility Commander may grant college/university personnel access to the facility for their specified program or internship.

E. The Facility Commander or his/her designee shall provide information to the public and representatives of the media consistent with the preservation of inmate's rights to privacy and maintenance of facility security.

F. The Facility Commander, or his/her designee, shall allow access to the facility to accredited news media representatives consistent with the preservation of inmate privacy and maintenance of security.

G. Release of information to the public/news media will be in accordance with CCCSO Policy and Procedure Section 1.06.78

H. Requests regarding personnel matters or internal affairs investigations shall be directed to Professional Standards.

I. Requests regarding information on established Divisional policies or procedures will be

referred to the appropriate Division Captain.

J. The public and news media are, by law, entitled to certain information about arrests, crimes and crime reports. The following may be released:

1. Full name, and occupation of adult arrestees

2. Current booking photo of arrestee

    a. Refer to CCCSO Policy 1.06.71 and 1.06.79 for additional guidelines regarding release of booking photographs.

3. The arrestee's physical description, including date of birth, sex, height, weight, eye color and hair.

4. The agency location, time and date of arrest. The time and date of booking, bail, current holding facility, or time and manner of release.

    a. Release information will be provided only after an individual has been released.

5. Factual circumstances surrounding the arrest must be obtained from the arresting agency.

6. The arrestee's charges, including outstanding warrants from other jurisdictions, parole or probation holds.

7. Transfer dates and court dates may only be released to those agencies authorized in accordance with 13000 P.C.

    a. Courts of the State

    b. Peace Officers

    c. District Attorneys of the State

    d. Prosecuting City Attorneys

    e. Probation Officers

    f. Parole Officers

K. The public and news media are entitled to the following information about investigations, but must obtain it from the arresting agency. In the event the arresting agency is the Office of the Sheriff, inquiries will be referred to Investigations Division.

1. Time, circumstances and location of all investigations.

2. Time and nature of actions taken.

3. Time, date and location of occurrence.

4. Time and date of the report.

5. The name, age, and current address of adult victims. Information regarding juvenile victims will not be released.

    a. Exception: For crimes of 261 PC, 264 PC, 264.1 PC, 273a PC, 273d PC, 273.5 PC, 286 PC, 288 PC, 288a PC, or 289 PC, the following shall apply:

        - The address of the victim shall not be disclosed.

        - The name may be withheld at the victim's request, or at the request of the victim's parent or guardian if the victim is a minor.

        - Victims of any of the above crimes may request that information, circumstances and related incidents to the crime(s) be withheld from the public.

6. The factual circumstances surrounding the crime or incident.

7. The general description of any injuries, weapons, and property involved.

L. The public and news media are, by law, entitled to certain information about facility operations. Information about facility security will not be released.

1. Facility visitors will be allowed to review the Public Information Manual located in the facility lobby. Visitors may not remove any information from the binder and shall remain under direct supervision while viewing the binder.

2. The contents of the Public Information Manual will be consistent with Title 15, Section 1045 and reviewed on an annual basis.

3. All requests for copies of documents contained in the Public Information Manual must be submitted in writing.

    a. Requests for Martinez Detention Facility documents will be directed to the Custody Administrative Services Sergeant assigned to that facility.

    b. Requests for West County Detention Facility documents will be directed to the Custody Administrative Services Sergeant assigned to that facility.

    c. Requests for Marsh Creek Detention Facility documents will be directed to the Facility Commander.

4. Requests for copies of documents must include the section number of the policy and procedure. Requesters will be informed they can research the desired policy and procedure section at the facility.

M. INMATE VIEWING OF CSB POLICY AND PROCEDURES

1. The following policies/procedures will be made available for inmate or general public review:

   a. Contra Costa County Detention Division rules and procedures affecting inmates as specified in Title 15, Section 1045:

      - Public Information Plan
      - Inmate Education
      - Visiting
      - Correspondence
      - Library Services
      - Exercise and Recreation
      - Books, Newspapers and Periodicals
      - Access to Telephones
      - Access to Courts and Counsel
      - Inmate Orientation
      - Individual/Family Service Programs
      - Voting
      - Religious Observances
      - Inmate Grievances
      - Rules and Disciplinary Penalties
      - Plan for Inmate Discipline
      - Forms of Discipline
      - Limitations on Discipline
      - Responsibility for Health Care Services

   b. Title 15 Board of Corrections Regulations (not Title 15 Guidelines) are available upon request to inmates or the public.

      - Anyone requesting copies of Title 15 and Title 24 documents will be referred to the Board of Corrections.

c. Staff will make every effort to obtain and furnish information, as authorized in this policy, in a timely manner.

N. INMATE REQUESTS FOR NEWS MEDIA INTERVIEWS

1. An inmate requesting an interview with the news media will submit an "Inmate Request Form" to the Detention Division Captain/designee prior to the requested date/time of the interview.

2. Inmate interviews will not be subject to auditory monitoring. Visual supervision may be maintained to ensure the safety of the media representative and the security of the facility.

3. The Division Captain/designee will select the appropriate location to be used for the interview. All interviews will be conducted during normal weekday business hours unless the Detention Division Captain/designee approves prior arrangements.

O. NEWS MEDIA REQUEST FOR INMATE INTERVIEWS

1. Representatives of the news media may request to interview an inmate. The request may be made in writing or by telephone to the Detention Division Captain/designee within a reasonable period of time prior to the requested time for the interview.

2. The request will normally be approved or disapproved by the Detention Division Captain/designee within a reasonable time depending upon the security conditions required.

3. After the request is received from the news media for an interview, the inmate will be notified of the interview request. The inmate must agree to be interviewed and sign a consent form before the request will be considered. The form will be placed in the inmate's booking.

P. INMATE/MEDIA CONSENT/AGREEMENT

1. An interview with an inmate or use of video, film or audio equipment may be denied for any of the following reasons:

a. The news media representative, or the news organization they represent, does not agree to the conditions established by this policy or Department policy.

b. The inmate is physically or mentally unable to participate. This will be supported by a medical statement from Medical/Mental Health staff, with a copy being placed in the inmate's booking, stating the reason for the denial.

c. If the inmate is a juvenile (under 18) the Division Captain/designee will notify the representative of the news media of the inmate's status as a juvenile, and that a court order must be obtained for the interview.

d. The interview, in the opinion of the Division Captain/designee, would endanger the health and safety of the interviewer, or would cause serious unrest or disturb the good order of the Facility.

2. When media representatives visit a Facility, photographs of programs, activities and interviews may be taken. Inmates have the right to privacy. They will not be photographed (still, movie or video), or recorded without their consent.

3. A written consent must be obtained from the inmate(s) prior to photographing or recording them. The Release of Information/Interview authorization form (DET 009 FRM) will be completed and placed in the inmate's booking.

4. Due to special security concerns regarding interviews, an inmate in segregation, overnight housing, or hospital status may be restricted from participating in an interview. All such cases must receive the approval of the Detention Division Captain/designee.

Q. INMATE/MEDIA INTERVIEW

1. Prior to any Facility visit for an interview by news media representatives, the lobby receptionist will advise the Shift Supervisor of the visit.

a. The Shift Supervisor will:

- Check the inmate's booking to determine if the inmate has consented to the interview and what (if any) equipment may be used by the media representative.

- Give the media representative a "Media Agreement" and have the media representative complete the form (DET 041 FRM).

- Separate the form, placing the original (white) copy in the inmate's booking and give the (yellow) copy to the media representative after the media representative has completed the form.

- Notify the receptionist that the media representative is clear to proceed with the interview.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.09
	RELATED ORDERS: CCR 6250-6257	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Public Disclosure of Sheriff's Office Contracts Relating to Detention Division	

I. POLICY

A. To make available for public inspection, all Sheriff's Office contracts within the Detention Division.

II. PROCEDURE

A. The Custody Services Bureau Assistant Sheriff may allow a member of the public access to Sheriff's Office contracts relating to the Detention Division.

B. Requests for access to Detention contracts shall be made in writing to the Custody Services Bureau Assistant Sheriff.

C. The Custody Services Bureau Assistant Sheriff will review and respond to all requests in a timely manner.

Release of any contract information shall be in accordance with the California Code of Regulations Sections 6250 - 6257.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.10
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-18-19 **REVIEW DATE:** 3-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Monthly Detention Report	

I. POLICY

A. The Custody Services Bureau will ensure that inmate population statistical data is accurately recorded.

B. It is the responsibility of the CAS Lieutenant to compile, record and report all inmate population statistical data. This data shall include, but not be limited to, records on admission, processing, and the release of inmates.

II. PROCEDURE

A. Information contained in the daily record shall be used to provide the necessary numbers for producing statistical reports.

B. Statistical information will be broken down into the following categories:

1. Male/Female.

2. Sentenced/Unsentenced.

C. The statistical information shall be compiled from each facility.

1. Population Analysis:

a. Inmates booked.

b. Inmates released

c. Average daily count

- MDF Female count will be confirmed by contacting the M Module Housing Unit Deputy.

2. Events Processed:

a. Overtime

b. Escapes

c. Batteries requiring medical attention

- Inmate to staff
- Inmate to inmate

D. All reports shall be compiled daily, with a monthly and year-end recapitulation.

1. Completed Daily Status Reports are forwarded to Detention Administration via the Classification Unit.

E. All monthly and yearly recapitulations shall be distributed to CSB Command Staff for use in compiling agency statistics.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.11
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-01-11 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Division Specific Forms	

I. POLICY

A. The Custody Administrative Services Lieutenant shall maintain a current listing of all forms. They shall be reviewed on an annual basis to ensure that they are accurate and appropriate for their intended function.

II. DEFINITIONS

A. DIVISION SPECIFIC FORMS: Any form utilized at the Division level and not intended for general departmental usage.

III. PROCEDURE

A. Custody Administrative Services shall maintain a current list of all Division specific forms in use.

B. The Custody Administrative Services Lieutenant shall be responsible for the ongoing maintenance of the Division specific forms list.

C. Division specific forms must be reviewed and approved by the CSB Assistant Sheriff prior to implementation and use. New forms submitted for such review shall include the following:

1. An explanation of the need for the form.

2. A description of how to complete and route the form.

3. A description of who is responsible for completion and review of the form and how often or when it is required to be completed.

4. A description of filing location and retention requirements.

D. The Custody Administrative Services Lieutenant shall review the list on an annual basis to ensure that the forms are accurate and appropriate for their intended function and that duplicate forms are not in use.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.12
	RELATED ORDERS: MJS 1029, 1032 P.C. 849, 853.6	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Minimum Jail Standards Compliance	

I. POLICY

A. It will be the policy of this division, to abide by the standards set forth in Minimum Jail Standards 1029.

B. The Custody Services Bureau Assistant Sheriff, acting through designated personnel, shall develop and publish a manual of Policy and Procedures for the jail facilities.

C. This manual shall be made available to all employees and shall be updated at least annually.

II. PROCEDURE

A. The manual for the jail facilities shall provide for, but not be limited to the following:

1. Table of organization, including channels of communications.

2. Inspections and operation reviews by the Facility Commander and Division Management staff.

3. Policy on use of force and restraint equipment.

4. Procedure and criteria for screening newly received prisoners for release, per 849(b)(2) PC and 853.6 PC and any other such processes as the Facility Commander is empowered to use.

5. Security and control including physical count of inmates, searches of the facilities and inmates, contraband control and key control.

6. Emergency procedures including:

   a. Fire suppression preplan as required by Minimum Jail Standards 1032.

   b. Escapes, disturbances and the taking of hostages.

c. Civil disturbance.

d. Natural disasters.

e. Periodic testing of emergency equipment.

f. Storage, issue and use of weapons, ammunition, chemical agents and related security devices.

7. Suicide prevention.

8. Segregation of inmates.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.13
	RELATED ORDERS: P.C. 1326, 13332	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Subpoena Duces Tecum	

I. POLICY

A. The Custodian of Records will respond to all Subpoena DUCES TECUM requests in a timely manner.

B. The Custodian of Records will immediately contact the requesting party of the Subpoena DUCES TECUM in the event the record cannot be produced within the time requested.

II. DEFINITION

A. SUBPOENA DUCES TECUM: A subpoena which, in addition to the usual clauses, requiring the attendance of the witness in court to testify, contains clauses directing him/her to produce at the same time for use as evidence in the litigation, certain described books, papers, records, and documents."

B. CUSTODIAN OF RECORDS: The Custody Administrative Services Sergeant shall serve as the Custodian of Records unless designated otherwise by the Detention Division Captain.

III. PROCEDURE

A. The Custodian of Records will handle all subpoenas regardless of how the subpoena is addressed.

1. Exception: Subpoenas requesting information from Health Services must be delivered or mailed directly to the Director of Health Services.

B. EXAMINATION, COPIES AND FILING

1. The Custodian of Records will examine the subpoena to determine the exact documents requested.

2. The record in question shall be photocopied.

a. One copy shall be stamped indicating a true copy under the penalty of

perjury, signed by the Custodian of Records, sealed in an envelope (with copy of subpoena affixed), and forwarded to the court and department of jurisdiction.

b. A second copy, along with a copy of the subpoena, shall be retained by the Custodian of Records as confirmation of what records were forwarded.

- This copy will also serve, as a back up if the Custodian of Records is later required to appear on the case.

C. ORIGINAL DOCUMENTS

1. Original documents shall never be forwarded.

a. If originals are needed, the Custodian of Records shall appear in court with originals and certified copies for submission.

b. Original records shall never be turned over, unless ordered to do so by a judge.

D. CLARIFICATION

1. If the subpoena appears vague and ambiguous, a call to the requesting attorney to clear matters is suggested; noting the date and time of the call, and clarification requested.

E. DISTRICT ATTORNEY

1. When a subpoena is received from a defense attorney, the district attorney handling the case shall be notified.

a. If the district attorney requests a copy of the information going to the defense attorney, the request will be complied with.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.14
	RELATED ORDERS: ADA 1992, Title II CSB Policy 2.08.49	
ISSUE DATE: 07-01-04 **REVISION DATE: 8-18-17** **REVIEW DATE:** 03-26-19	**CLEARANCE:** CUSTODY	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Americans with Disabilities Act	

I. POLICY

A. The policies and procedures established by the Detention Division shall not discriminate against any person protected by the Americans with Disabilities Act in the provision of services, programs and activities administered for program beneficiaries and participants.

B. This protection also extends to employees, visitors, volunteers, contractors and any citizen having legitimate business within the Detention Division.

II. DEFINITIONS

A. INDIVIDUALS WITH DISABILITIES

1. The ADA covers individuals who have a physical or mental impairment that substantially limits one or more major life activities, who have a record of such impairment, or who are regarded as having such impairment.

2. Temporary conditions, such as current users of illegal drugs or alcohol, are generally not covered by the ADA.

B. ELIGIBLE INDIVIDUALS

1. Covered individuals are entitled to an equal opportunity to participate in programs, services or activities offered by the Detention Division.

2. Persons with disabilities may be refused participation in services, programs or activities of the division if there is a compelling reason for such refusal.

   a. One compelling reason may be a threat to the disabled individual or others. The threat must be direct and not speculative.

C. MAJOR LIFE ACTIVITIES

1. Basic functions that the average person can perform with little or no difficulty.

III. PROCEDURE

A. ACCOMMODATING DISABLED INDIVIDUALS

1. Disabled individuals who are eligible to participate in services, programs and activities, but require reasonable accommodations to participate fully, should request the accommodation(s) through their supervisor or employer.

2. Inmates who require reasonable accommodations must request them through the appropriate unit, i.e., Schools, Medical, Mental Health, Classification etc.

   a. This will be accomplished through the Inmate Triage phone or an Inmate Request form.

   b. Staff will assist those individuals that are unable to access this system due to their disability.

3. Visitors who need reasonable accommodations may request them through staff assigned to visitation or in advance, through the Facility Commander, or his/her designee.

4. Volunteers may request reasonable accommodations through the Inmate Services, Facility Commander, or his/her designee.

5. The appropriate personnel shall promptly review all requests. If the eligible individual's participation in the service, program, or activity would fundamentally alter the nature of the service, program, or activity, or if the Facility Commander or his/her designee can document that the eligible individual's participation would pose a direct threat to others, the individual does not need to be accommodated.

B. BOOKING/PROCESSING

1. Arrested subjects who appear to meet the criteria of a disabled individual for the purposes of A.D.A. will be held in such a way to ensure their safety. If Booking staff have questions about the subject's condition or needs, health care personnel should be consulted immediately.

   a. During intake, arrested persons with an apparent physical impairment will be immediately brought to the attention of medical staff.

   b. All persons confined to a wheelchair shall be placed in a holding cell designated for the physically impaired, pursuant to CSB Policy and Procedure 2.11.04, Acceptance of Physically Impaired Inmates.

   c. Orientation materials, including PREA, will be available for inmates in audio, visual, and tactile formats, to ensure all forms of disabilities are accommodated while orienting inmates to the facilities and PREA.

d. For additional information regarding Booking procedures, refer to CSB Policy and Procedures 2.11.02, Introduction to Intake and 2.11.03, Intake Procedure.

C. INITIAL MEDICAL/MENTAL HEALTH SCREENING

1. Medical staff shall screen all inmates entering into the facility for medical and mental health issues, notifying Booking staff of those inmates meeting the "disabled individual" criteria.

   a. Medical staff will inform booking staff of any special needs the inmate(s) may have.

2. Upon notification of any special needs, booking staff will make all reasonable efforts to provide the noted accommodations.

3. Following the medical screening, if special needs are identified and/or special housing is indicated, the remaining processing will be completed immediately. The inmate will then be moved to the identified housing location without unnecessary delay.

4. In the event that "reasonable accommodations" cannot be made for the inmate(s), the Shift Sergeant shall be notified immediately.

5. For further information about the initial medical screening of inmates, refer to CSB Policy and Procedure 2.11.04, Acceptance of Physically Impaired Inmates and 2.13.03, Inmate Medical/Health Appraisal Screening.

D. CLASSIFICATION

1. All inmates will be classified in accordance with Chapter 12 of this manual.

   a. An inmate(s) disability shall be considered during the classification process.

2. Inmates with disabilities should be housed in general population and in designated cells unless such a housing assignment would jeopardize their safety or the safety of staff.

   a. Any special housing for disabled inmates will be considered on a case-by-case analysis of the inmate's needs and facility security.

   b. For further information about classification procedures, refer to CSB Policy and Procedure Manual Section 2.12 "Classification."

E. PROGRAM ELIGIBILITY CRITERIA

1. All inmate services, programs and activities, will develop and make available to inmates, a list of basic eligibility requirements.

   a. These requirements will relate directly to the program's mission and goals.

b. If physical requirements are included as part of the service, program, or activity's eligibility requirements, the material needs to clearly identify the purpose of these physical requirements as set forth.

c. Refer to the CSB Policy and Procedure Manual Section 2.18 "Inmate Services and Programs", for information regarding services, programs and activities provided to inmates.

2. All services, programs and activities offered by volunteers will also include volunteer eligibility criteria.

a. If there are disqualifying physical disabilities for volunteers, such criteria will be directly linked to the services, programs, or activities, mission and goals and any threat to others posed by the volunteer's participation.

b. Any physically limiting eligibility criteria are documented as having relevance to the volunteer position.

c. Exclusion of disabled volunteers will be evaluated on a case-by-case basis and will be approved by the Inmate Services Manager and the Facility Commander.

d. To every extent possible, consistent with facility safety and eligibility requirements, disabled volunteers will be accommodated.

F. INMATE PROGRAMS AND SERVICES:

1. Inmates with disabilities for the purposes of A.D.A. will be afforded access to all services, programs, and activities for which they meet eligibility criteria; except if their participation would pose a documented direct threat to themselves, others or if their participation would fundamentally alter the program.

2. Inmates needing reasonable accommodation to participate in services, programs, or activities for which they are eligible will notify the Inmate Services Manager via an Inmate Request form.

a. The Inmate Service Manager will make the necessary arrangements for the accommodation unless the accommodation poses an undue hardship (cost) or an administrative burden for the agency.

b. Most accommodations will not meet those thresholds and would require substantial justification prior to this being used as a reason to not provide the accommodation.

c. The Inmate Services Manager shall consult with the Facility Commander in all cases where questions arise as to granting reasonable accommodations for inmates.

d. Refer to Section 2.18, "Inmate Services and Programs" of the Policy and Procedure Manual for information regarding services, programs and activities provided to inmates.

G. INMATE GRIEVANCE AND DISCIPLINARY PROCESS

1. If a disabled inmate, as defined by A.D.A. is the subject of a disciplinary process that could deprive them of any privilege or right afforded by the Constitution, case law, or administrative procedure, the Custody Sergeant will ensure that the inmate understands the charges against them and is able to mount a credible defense of the charges.

    a. If the inmate in question is hearing impaired or deaf, appropriate arrangements will be made so that the inmate completely understands all phases of the disciplinary process.

    b. If the inmate in question is developmentally disabled or mentally ill, the Custody Sergeant may make whatever accommodations they think necessary for the inmate to understand and defend the charges.

    c. Refer to CSB Policy and Procedure 2.16.03, Inmate Discipline for additional information.

    d. If a disabled inmate, as defined by A.D.A. wishes to grieve an issue, staff will fully assist the inmate in understanding the grievance process and in completing the process. This is especially true if the inmate requires assistance in writing or if the inmate is mentally ill or developmentally disabled.

    e. Refer to CSB Policy and Procedure 2.16.04, Inmate Grievances for additional information.

H. ACCESS TO TELECOMMUNICATION DEVICES FOR THE DEAF (T.D.D.)

1. Supplies of T.D.D. phone units are available for use by inmates, attorneys, staff, and the public upon request. Refer to Policy and Procedure 2.17.08, Inmate Access to Telephones for procedures for accessing T.D.D. phone units.

I. VISITATION

1. All disabled visitors will be afforded the same visiting privileges as non-disabled visitors. Staff will make accommodations for those individuals in need of this service.

2. Visiting rooms shall be equipped and made available to handle disabled visitors. Refer to CSB Policy and Procedure 2.17.02, Inmate General Visiting Rules for additional information.

J. FACILITY ACCESS

1. The County of Contra Costa is responsible for ensuring that all county-owned detention facilities are accessible to staff, inmates, visitors, volunteers and the public. The Office of the Sheriff, in conjunction with the Detention Division will assist the County in evaluating the accessibility of facilities and in providing any corrective actions that might be necessary to ensure access is maintained.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.01.15
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Administration, Organization and Management	**SUBJECT:** Facility Space and Equipment Review	

I. POLICY

A. The Facility Commander will review space and equipment requirements at least annually, report any deficiencies to the Detention Captains and plan with the Captains for the effective use of space and equipment.

II. PROCEDURE

A. The Facility Commander will review space and equipment requirements with his/her management staff and any other appropriate staff members at least annually and submit the following to the Detention Captains:

1. Equipment deficiencies and needs in the annual budget request, with plans for their effective use.

2. Space deficiencies, needs and recommendations for their effective use.

3. Recommendations for reassignment of existing space and equipment.

B. As part of the space and equipment review, the Facility Commander or his/her designee shall prepare an inmate population projection plan designed to anticipate the future needs of the facility.

1. The plan will be submitted to the Sheriff, via the chain of command, at the end of each fiscal year.

2. The plan should extend for at least five (5) years into the future and include the following information:

a. Expectations as to whether the inmate population will increase, decrease, or remain the same at the facility.

b. Five (5) year staffing needs.

c. Five (5) year effects on all areas of operations.

d. Five (5) year action plan to meet the changing needs of the facility.

3. Additionally, the Facility Commander shall ensure that there is a contingency plan to provide for the projected population trend. At a minimum, the plan should include the following:

a. Staffing requirements.

b. Physical plant needs.

c. Budget projections

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 04-02-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Introduction to Accounting	

I. POLICY

A. Accounting practices will be utilized to ensure the safe keeping of Inmate Trust Funds and all other facility funds.

B. Account Clerks are to provide support to the Detention facilities of the Sheriff.

II. PROCEDURES

A. Accounting is responsible for auditing the following accounts and procedures:

1. Shift Work
2. Indigent Inmate Mail
3. Engraving Shop Invoices
4. Bail
5. Commissary
6. Inmate Trust Account
7. Damaged Property Checks
8. Inmate Transportation Vouchers
9. Inmate Request Slips
10. Meals and Miscellaneous Deposits
11. Purchase Orders
12. Warrant Requests

13. Procurement Cards

14. Outstanding Balances Report

15. Record Retention

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.02
	RELATED ORDERS: MJS 1042	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-29-13 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Inmate Fund Accounts	

I. POLICY

A. All inmate funds accounts held by the facility are trust funds and cannot be co-mingled with other funds. These funds shall be controlled in accordance with the following:

B. All funds shall be accounted for, controlled and monitored by a system of generally accepted trust accounting practices and procedures.

C. All transactions of funds in an inmate's account shall require a receipt.

D. All funds collected on each shift shall be placed in an officially designated and secure location.

E. All procedures will be reviewed annually and updated as needed.

F. All procedures will conform to Sheriff's Office policies and procedures.

II. PROCEDURES

A. ACCEPTABLE FUNDS FOR INMATES

1. Money orders and Cashiers checks made out to the inmate.

2. Funds received via Postal Mail in the following circumstances:

   a. Money orders

   b. Cashiers checks

3. Funds can be received via Canteen Services by the following methods:

   a. Kiosks located in the lobby at Martinez and West County Detention Facilities

b. Telephone with credit or debit card at 1-866-394-0460

c. Web site at www.SmartDeposit.com

B. RECEIPTING FUNDS FOR INMATES AT INTAKE

1. The Booking Deputy counts the funds and enters amount in JMS as part of the pre-booking process.

2. The Booking Deputy then seals the receipts and funds in a plastic bag and places it into the Intake safe.

3. The Release Clerk retrieves the sealed bags from the Intake safe and brings the sealed bags to the Release desk to be opened. The Release Clerk will verify the money to the receipt. If it is correct, the Release Clerk will enter the funds into JMS and approve the transactions in JMS.

4. If the Release Clerk finds a discrepancy between the money and the receipt immediately notify the Intake Deputy.

5. Unresolved discrepancies will be reported to the shift supervisor and noted in the shift work.

6. If additional funds are found on an Inmate an additional note will be entered into JMS in Intake and placed in the Intake safe. The Release Clerk will then verify the funds against a JMS receipt.

C. RECEIPTING FUNDS FOR INMATES RECEIVED VIA POSTAL MAIL

1. Remove the funds from the envelope.

2. In JMS, click on the FUND MANAGEMENT module. Next, click on the Fund Management tab. Click on the Deposit tab at the top of the page. In the Account Selection, To Account, click Find to locate the correct inmate through Booking Search. Verify the name of the inmate, and if correct, click on Select Booking, which populates the account fields. Select check from right tab. Check box, and enter check information. Enter information in yellow highlighted fields (Deposit reason - Booking Deposit; Type – Money Order of Registered Check; Check #; Check amount; Check date). Click Save/Receipt. Click the Print button, on the bottom right. Once print screen options appear, request two (2) copies and click Print.

3. The printer will print two receipts. Give one receipt to the Release clerk with the funds to be locked up and the other receipt is to be given to the Inmate.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.03
	RELATED ORDERS: MJS 1042	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-25-19 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Stale Dated Checks	

I. POLICY

A. Accounting is responsible for processing stale dated checks.

II. PROCEDURE

A. STALE DATED CHECKS

1. Every check issued to an inmate upon release or other wise has printed on it "VOID AFTER SIX MONTHS". This notice serves as the notice required under the Government Code Section 26642, "Disposition of Unclaimed Property".

2. Monthly: Accounting will generate two reports from the Funds Management Module of the Jail Management System (JMS) - Check Register Dates Report and Check Register Details Report. These reports include database of all checks not cashed that are six months or more from the date of issue.

3. From this check register list in Funds Management, Accounting will enter the date funds are database to be transferred to the Auditor's Office.

4. Select the option "Mark Stale" on each stale dated check that is listed on the Check Register Details Report.

5. [redacted]

6. [redacted]

7. [redacted]

8. Post the check as a deposit to Electronic Deposit Permit and deliver the check to the Auditors Office with a copy of the check, check register details and copy of the receipt from the Electronic Deposit Permit.

9. Accounting will maintain a filing system of the stale date checks to be accessed when research is needed.

B. STALE DATED CHECK REPLACEMENT

1. Within a two-year period if an Inmate or former Inmate requests replacement for a stale dated check they will be directed to Accounting.

2. Accounting will research in the JMS database, the in Funds database, and in the file system for Stale dated checks.

3. If it is determined that the Inmate's check has never been cashed nor replaced, Accounting will send the inmate a form from the Auditor's office titled "Request for Replacement of Outdated Warrant". If the check is lost or destroyed a "Lost – Destroyed Warrant Certificate" (also from the Auditor's office) will be sent to the inmate to be filled out by the inmate and returned to Accounting.

4. When the form is returned a copy will be made and placed in the appropriate Stale dated check file and the original will be mailed inter-office to the Auditor-Controller.

5. The Auditor-Controller will then request a check from the Accounts Payable division. The check will then be forward to Accounting where a copy will be made and placed in the Stale Dated check file along with the form.

6. Accounting will mail the check to the inmate's address listed on the form.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.04
	RELATED ORDERS: MJS 1042	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-29-13 **REVIEW DATE:** 01-07-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Stop Payments-Checks to Inmates	

I. POLICY

A. Accounting is responsible for processing the stop payment that is placed on the inmate's check and issuing a replacement check.

II. PROCEDURE

A. ISSUING A STOP PAYMENT ON AN INMATE'S CHECK

1. Former Inmates requesting a stop payment for a check that was issued to them at the time of release or for a Commissary refund will be directed to Accounting.

2. Accounting will research the information given to them by the Inmate and determine if a check was issued and if it had cleared the bank.

3. If Accounting determines that the check has not been cashed, the Inmate will be notified a fee of $30.00 will be charged to them for placing a stop payment.

4. This stop payment fee will be taken out of the amount of the money owed to the Inmate and the Inmate will be issued a check for the balance.

5. [redacted]

6. A waiting period of three working days will be in effect from the fax date. Then in JMS we will void the original check transaction, and reissue two checks, one for $30.00 stop payment fee and one for the balance.

7. The $30.00 fee check will be issued to the Sheriff's Department and deposited on a Deposit permit to Fund/Org 2590 and Sub Acct 2310.

   a. **Note:** by depositing the $30.00 to this Fund and Org it offsets the Stop payment fee charged on the billing statement to maintain this account.

8. The balance check will be either sent to the former inmate or held at the Front Window for pick up.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.05
	RELATED ORDERS: MJS 1042	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 1-31-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Inmate Fund Discrepancies	

I. POLICY

A. Accounting is responsible for auditing Inmate funds.

II. PROCEDURE

A. AUDIT OF INMATES CASH ACCOUNTS

1. The Accounting Unit is responsible for auditing the Shift work sent to Accounting from the Release area of Operations.

2. In the audit process as soon as a discrepancy is found, an email or memo and a phone call will be directed to the Clerical Supervisor for investigation and copied to the Facility Commander.

3. The findings will be put with the shift work and will be noted on the Audit log along with the copy of the findings to be reported to the Sheriff's Fiscal Officer.

4. Each Facility Accounting personnel will provide the Account Clerk Supervisor a monthly report of all discrepancies.

5. If the inmate is out of custody with additional funds a collection letter will be sent to the last known address, followed by a phone call to demand payment or payment plan.

6. If the Inmate is in the custody of CAF the CAF staff member handling the case will be notified to demand payment from the Inmate.

7. The amount will be set up in the JMS historical account for the Inmate till the amount is received from the Inmate or the Inmate comes back into custody with funds, at that time the funds will be taken from the Inmate to be applied to the Historical account.

8. The maximum amount of time an amount will be left in history will be 2 years. After the 2 years a relief of shortage process will start to replace the funds.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.06
	RELATED ORDERS: MJS 1042	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Release Clerk Responsibilities	

I. POLICY

A. Release Clerks are responsible for the proper handling and security of inmate funds.

II. PROCEDURE

A. GENERAL INFORMATION

1. Release clerks are responsible for balancing their shift work and only the Release clerks are authorized to have access to the cash drawer.

2. The cash drawers and check drawers are to be kept closed, locked, and the key secured.

3. **No change will be made out of the Cash drawer at anytime**.

4. **No monies will be used for balancing which are not documented by a computer transaction**.

5. After receiving receipted cash, checks or money orders, the Release clerk will verify the amount against the JMS receipt using the Funds Approval screen in JMS. Any discrepancies will be brought to the attention of who processed the receipt for explanation and investigation.

6. Release clerks are not allowed to view the prior shift's Release clerk's shift work.

7. The completed shift work package is to be placed in a secured drawer at the end of each shift

8. Release clerks are responsible for voiding incorrect transactions.

9. If the Release clerk is running low on change it is possible to order change through Westamerica Bank by way of Accounting. The process is as follows:

   a. A request from the Clerical Supervisor (MCDF Senior Clerk) in the form of

an email to the Account Clerk Supervisor including the type of change needed and amounts.

b. The Account Clerk Supervisor will reply to the email to confirm receipt of the request.

c. The Account Clerk Supervisor will phone in the request to WestAmerica Bank.

d. The WestAmerica Bank teller will deduct the funds from the Inmate Trust Account, pull together the requested change and place it in a bag to be picked up by Loomis.

e. Loomis will deliver the change the next morning when picking up the deposits (MCDF request will be delivered to MDF).

f. Loomis will request the Clerical Supervisor's (in the case of MCDF, MDF Clerical Supervisor will sign) signature on the receipt for the change.

g. The receipt for change will then be forwarded to Accounting, and a copy will be included with the shift work. (in the case of MCDF, MDF clerical supervisor will place the change in a locked blue bag to be taken to MCDF by transportation).

h. The cash drawer will be over the amount of change requested. Please have the Release clerk (MCDF Senior Clerk) deposit the overage making the appropriate notes.

Note: When urgent, Sworn or Accounting staff can go to the bank to get change.

B. CASH DRAWER COUNT IN

1. Prepare Shift Balance Report.

2. Circle which Facility: MDF WCDF MCDF

3. Circle which count: IN OUT RECOUNT

4. Write in date: _____ and circle which shift: D S G

5. Write in time: _____

6. Write in beginning check #:_____

7. Write in your initials:_____

8. Count the number of each denomination. Write the number in the right column. Multiply this number by the denomination and write the amount in the $ AMOUNT column.

9. Add all amounts and write in the total. It should be $1000 but simply report what you count.

10. If over or short, write the amount in the AMT.OVER/SHORT column.

11. Place this report in the shift work drawer.

C. REGULARLY DURING THE SHIFT

1. Keep all DEP and if applicable the INTK receipts in transaction number order according to the Cash Drawer Balancing Report or Funds Approval Screen.

2. Keep all FRLW CASH receipts in transaction number order and make certain all receipts are signed by Inmate and Sergeant.

3. Keep all FRLW CHECK receipts in transaction number order and make certain all receipts are signed by Inmate and Sergeant.

4. Keep all WITH CHECK receipts in transaction number order.

5. Keep all FRLW and WITH check stubs in numerical order.

6. Keep both cash drawers locked when you are not there.

7. Keep the cash drawer key with you at all times.

8. Keep the check cabinet locked at all times.

9. Check and remove DEP money from front drawer as necessary.

10. Clear all transactions from Approval Screen repeatedly throughout the shift.

11. If funds are check or money order, endorse with stamp.

12. Count the money attached to each receipt, one at a time and approve each transaction as you count it.

13. If the money does not match the receipt, advise a Supervisor and then create a new DEP transaction. In the notes field use the following format: To replace voided transaction #_____ - money did not match receipt - was $_____ but shb $_____ - advised _____. Screen print your void notes, attach to the voided transaction and have the Supervisor sign off.

14. Write the following information across the face of the voided receipt: VOID - See corrected trans. #_____@.

15. Void the transaction in the Funds Approval screen indicating the following in the notes field: example (Money doesn't match receipt - was $_____ but shb $_____) - notified Supervisor_____ - See corrected transaction #_____. (VOID PROCEDURE)

D. JMS STEPS TO COUNTING OUT

1. Call Intake and/or Front Window to stop all transactions.

2. Open Funds Approval Screen and clear all remaining transactions. If you have INTK transactions on your screen and not yet in Release, call Intake to send receipts and money immediately through tube. If you have DEP transactions on your screen but do not have the receipts and money do a final check of the front window money drawer.

3. After clearing all transactions, exit the screen and go back into it again to make sure nothing else is there. Clear whatever shows up. Screen print a blank Funds Approval Screen for your shift work package, making sure the date and time appear on print out.

4. Print the Cash Drawer Balancing Report, enter the starting balance from the Count In Report.

5. Print the Check Register Report using the Start and End time from the Cash Drawer Balancing Report.

6. Call Intake and/or Front Window to begin receipting money again.

E. RECOUNT SHIFT BALANCE REPORT

1. Pull all but $1,000.00 from drawer if applicable.

2. Recount the drawer and prepare the RECOUNT REPORT.

3. Circle which Facility: MDF WCDF MCDF

4. Circle: RECOUNT

5. Write in date: _____ and circle which shift: D S G

6. Write in time: _____

7. Write in your initials:_____

8. Count the number of bills for each denomination and insert in the RIGHT column.

9. Multiply the denomination by the RIGHT column figure and insert in the $ AMOUNT column.

10. Add up the $ AMOUNT column and insert in TOTAL column.

11. The total should be $1,000.00 if applicable. If not, count again. Please note: There might be occasions were you might not have $1,000.00 due to releases and shortage of cash being received at the facility.

    a. NOTE: IF THE COUNT IN DRAWER REMAINS UNTOUCHED AND THEREFORE UNCHANGED, YOU MAY SO STATE ON THE COUNT IN REPORT TO AVOID HAVING TO PREPARE A RECOUNT REPORT.

F. END OF SHIFT DRAWER COUNT (COUNT OUT):

1. Prepare Shift Balance Report.

2. Circle which Facility: MDF WCDF MCDF

3. Circle which count: IN OUT RECOUNT

4. Write in date: _____ and circle which shift: D S G

5. Write in time: _____

6. Write in beginning check #:_____

7. Write in last check # used:_____

8. Write in your initials:_____

9. Make a copy of the checks (check-in) and money orders. Run a tape and attach the white copy to the top of the stack. Attach the yellow copy to the photocopies of the check/money orders.

10. Write the total amount of checks/money orders in the $ AMOUNT column on the Shift Balance Report. Set aside checks/money orders and photocopies for now.

11. Count the number of each denomination in drawer.

12. Write the number in the left column.

13. Multiply the left column # by the denomination and write the amount in the $ AMOUNT column.

14. Add up each total in the $ Amount column. Put this number in the TOTAL column.

15. Staple the white tape to the upper left back side of the Count Out report.

16. The yellow copy of this tape should be stapled to the back of the blue deposit slip.

17. Ignore the $1,000.00 or cross out if applicable.

18. Put the number in the TOTAL COLUMN (SEE #14) in the AMT. TO DEPOSIT column.

19. Write in the amount shown on the final page of the JMS Cash Drawer Balancing Report in the AMT. JMS REPORT column.

20. If the amounts do not match, write in the difference on the final line and circle if over or short.

21. Document what you are able to determine about the overage/shortage using the Trouble Shooting Check List.

22. (See #8 under Trouble Shooting) and include it with your shift work.

G. PREPARE DEPOSIT

1. Count the currency and stack from the bottom up beginning with the largest denomination:

    a. Hundreds

    b. Fifties

    c. Twenties

    d. Tens

    e. Fives

    f. Ones

2. Run tape of currency and coin.

3. Put all loose Coin to be deposited in a small plastic bag.

4. Staple the white tape to the upper left back side of the Count-Out Shift Balance Report.

5. Staple the yellow copy of the tape to the back of the yellow deposit slip.

6. Rubber band this tape to the top of the stack of money.

7. Prepare the deposit slip.

8. Write in the date.

9. Write in your shift/initials (example DS/PF) in the top left corner.

10. Write in the total currency.

11. Write in the total coin.

12. Write in the total money order/checks and below that write (see attached list).

13. Write in the total deposit in both boxes at bottom of slip.

14. Write the Plastic Security Bag number on the deposit slip.

15. Remove the top 2 copies of the deposit slip (white and yellow).

16. Paper clip the yellow copy of the deposit slip to the front, top, right side of the Count-Out Shift Balance Report.

17. The white copy of the deposit slips is rubber banded to the top of the cash and

checks/money orders.

18. On the Plastic Security Bag put your name, shift, date, and total amount to deposit. Fill the rip off tab completely, but do not rip off the tag.

19. Put the money, tape and deposit slips in the security bag, seal bag and drop in safe.

H. OUT GOING RELEASE CHECKS

1. The checks are pre-stacked in reverse numerical order. Place them in the printer drawer the same way making sure they continue to run in consecutive order.

2. When printing a check, make sure the computer check number is the same as the actual check number.

I. CHECK REGISTER

1. Print the Check Register (same date and time as Cash Drawer Balancing Report).

2. Stack check stubs in numerical order.

3. Compare check stubs to register for accuracy (check numbers and amounts).

4. If a check number is wrong on the register, draw a line through the number and write the correct number right next to it.

   a. **NOTE:** IF THE CHECK NUMBER IS INCORRECT EMAIL OR FAX ACCOUNTING (925-646-4641) ADD THE CORRECT CHECK NUMBERS AND AMOUNTS. IF THE TRANSACTION DOES NOT PRINT THE CHECK VOID THE TRANSACTION AND REDO THE CHECK. MANUAL CHECKS ARE NOT ALLOWED

5. Paper clip the check stubs to the register in numerical order.

6. Place the check register with the attached check stubs, in the shift work package behind the money order/check copies.

J. ASSEMBLE SHIFT WORK PACKAGE FROM TOP TO BOTTOM

1. The top sheet is the Count Out Shift Balance Report.

2. Staple the $ AMOUNT tape to the back left side of the Count Out Shift Balance Report.

3. Staple the yellow copy of the deposit tape and the yellow copy of the $ AMOUNT tape to the back of the yellow deposit slip.

4. Paper clip the yellow deposit slip to the front of the Count Out Shift Balance Report.

5. Next, the troubleshooting notes if applicable.

6. Next, is the Cash Drawer Balancing Report.

7. Next, are the copies of the money orders and checks (check-in).

8. Next, is the Check Register, with check stubs paper clipped.

9. Next, is the Recount Shift Balance Report.

10. Next, is the Count-In Shift Balance Report.

11. Next are the Dep and Intk receipts in transaction number order.

12. Next are the signed Frlw Cash receipts in transaction number order.

13. Next are the signed Frlw and With Check receipts in transaction number order.

14. Rubber band the package flat. Please do not fold or bend. Place in the locked shift work drawer.

K. TROUBLESHOOTING

1. If the money does not match the report, check the first receipt and the last receipt to make sure they are on your report.

2. If the money still does not balance to the report, look at each check receipt to see if fund type check was selected instead of check-in. Check is wrong and will not show on the Cash Drawer Balancing Report.

3. If the money still does not match the report, compare all receipts to the report to see if something is missing.

4. If the money still does not balance, you may have a duplicate transaction on your report. If this is the case, void the duplicate.

5. Compare the dollar amount on the yellow deposit slip to the printed amount on the Dep transaction receipt.

6. Compare the dollar amount on checks and money orders to the dollar amount on the transaction receipts.

7. If all of the above steps do not resolve the difference, recount the money.

8. If the money still does not balance to the report, fill out the Trouble Shooting Check List to document the steps you took to resolve the difference and attach to the shift work package.

L. FINAL RELEASE OF INMATE FUNDS

1. After confirming the inmate is eligible for release, the Release Clerk will clear the inmate’s cash account in full.

2. Inmates may be given up to $50.00 in cash at the time of release.

3. Checks should not be issued for any amount under $25.00 with the following exceptions:

    a. An inmate will be released with their final balance in a check if being released or transferred to another law enforcement agency or detention facility.

    b. If the cash on hand is depleted or unavailable.

    c. If a release occurs on a commissary day and the inmate did not receive their commissary, the commissary amount will be refunded to the inmate.

    d. If an inmate has $50.01 cash, the inmate will be given $25.00 in cash and $25.01 will be issued in the form of a check.

    e. **Note: At no time will the release clerk transfer funds into history instead of releasing the inmate with their funds.**

4. If a release is processed but the inmate is not released the transaction or transactions must be voided and the Cash account reactivated.

    a. To void a released transaction in JMS enter the Booking number in Funds/Transactions screen click on the Find button. Locate the proper transaction number or numbers to be voided then click on the Void button a dialog box will appear type in explanation, print the screen, then press ok.

    b. To reactivate the cash account in JMS go to Configuration/System Tables/Account Maintenance/in BK# enter in the booking number/ in FAC click on the down arrow and choose All Inmates/click on Find/double click on the appropriate line (could be CAF or CASH Account type) change status box by clicking on the down arrow to change from I to A by highlighting the A, then click on close and then click on yes.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 1-25-19 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Inmate Legal and Indigent Mail	

I. POLICY

A. Accounting is responsible for stamping all Legal and Indigent Inmate mail.

II. PROCEDURE

A. LEGAL AND INDIGENT INMATE MAIL

1. Inmates who deplete their cash account becoming Indigent are not eligible for two postage-free letters for one week after depletion. To verify the history of a cash account, go to JMS, Funds, Management, Account, Find, enter in the Booking number, click on Show; this will give the history of the Cash Account.

2. Indigent Legal mail will be processed every day.

3. Accounting will take the processed mail and run it through the postage stamp machine, then bring the stamped mail to the outgoing mail area of the facility.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.08
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Engraving Shop Invoices, T/C 62, Journals, and Deposit Permits	

I. POLICY

A. Accounting is responsible for processing the Engraving Shop Invoices, T/C 62s, Journals, and Deposit Permit.

II. PROCEDURE

A. ENGRAVING SHOP INVOICES, T/C 62s, JOURNALS, AND DEPOSIT PERMITS

1. Inmate Industries Supervisor will give Accounting the report titled, "Completed Jobs End of Month". This report will have the following information: **A**. the names of the departments or non-profits, **B**. the coding (fund/organization numbers and sub-account numbers to charge other departments), **C.** work order numbers, **D.** break down of services and tax, **E.** grand total of each order.

2. **All orders placed by departments in Contra Costa County** will be charged via T/C 62. To fill out a T/C 62 include: the Service Organization (2484 and Sub-account 9945 or 9951 for intrafund transfers), explanation: Printing/engraving services of a given month, fund/organization of the Contra Costa County department, Sub account of 2100 or 5011, total amount of order including tax, the Inmate Industries' work order number will be placed on the T/C 62. The Excel version of the T/C 62 will calculate the total and place the total in the total box, if a manual T/C 62 is used the total will be manually calculated. Insert page numbers (if only one state 1 of 1), prepared by the Accounting personnel's name, phone number of the Accounting personnel.

   a. **Note**: Only the Sheriff's Fiscal Officer can authorize a T/C 62, this document must be sent to the Fiscal Officer to be authorized. Only after the authorization will the T/C 62 be submitted to the Auditor's Office. Two copies will be made of the completed T/C 62, one for Accounting's file, , and the other to be sent to the Auditor's Office.

3. A T/C 36 Journal will be issued for the amount of the total tax included on the T/C 62. To fill out a T/C 36 Journal process as follows: enter 36 in the TC box, leave the JV box and the Journal number blank (will be filled in by the Fiscal

Officer or by Account Clerk Supervisor, Circle T/C 36, in description line one type in type **IWF-Inmate Industries,** Fund/Organization number **2484** Sub Account **9945,** Debit amount is the amount of total tax, on line two **Sales Tax Payable**, Fund/Organization number **100300,** Sub-Account number **0633,** credit amount is the amount of total tax. Enter in **total Debit** and **total Credit** the amount of the total tax. In the area Prepared by either type in **Accounting personnel name** and initial or sign with a black pen, in date area type in the date processed, enter in page area 1 of 1, Explanation box type in **To record Sales tax collected on Sales from Inmate Welfare Engraving/Sign programs for the stated month.**

a. **NOTE:** This journal will be sent along with the T/C 62 to be authorized by the Fiscal Officer.

4. **Sales to non-county departments and non-profit agencies** the Accounting personnel will issue an excel invoice. The invoice numbers will be included on a copy of the "Completed Jobs End of Month Report" to be given to the Inmate Industries Supervisor. Pull up the master Engraving/Sign Shop Invoice and rename it with the next sequential invoice number (03=year, next in sequence 510, 03-510) and add the name of the non-county department or non-profit (03-510 DanvillePD), enter the invoice number (03-510) in Invoice No., enter in amount ordered in Qty, Description of order, and Unit price. The total and tax will be calculated by the excel formula. Print two copies, one to mail and the other for file.

5. **If an order is placed for Sheriff's Office employees active or retired** a "yellow" Inmate Industries work order is to be filled out and approved by the Inmate Services Supervisor. The "yellow" with a total for service will be delivered to Accounting personnel for payment. Payment must be in full and in the form of a check or money order (no cash or credit cards accepted) made payable to: Office of the Sheriff Contra Costa County- IWF. The check or money order number, the payment date, and account personnel signature will be placed on the "yellow" and two copies of the "yellow" will be made, one for the employee or retired personnel and the second copy for the Accounting personnel. The original "yellow" will be forwarded to Inmate Industries to allow for the commencement of work.

6. When a payment or funds have been received a Deposit Permit will be processed. Fill out as follows: Organization **Office of the Sheriff**, Organization Number **2484**, Description **invoice number or employee name , check number, and coding (2484/9945)**, amount **the amount of sale**, next line description **Sales tax**, Fund/Org **100300**, Sub Acct **0633**, Total Deposit **enter total of the amount column**, Explanation **Engraving Shop Services Invoice number and or employee name and wo#,** Signed **Accounting personnel signature**, Title **Accounting personnel position**, Date **date of process**, check or money order copies will be made to attach to our copy of the Deposit Permit, the original Deposit Permit will be sent to the Auditor's Office for processing. The pink copy of the Deposit Permit will be returned stamped with a Deposit Permit number and date. The Deposit Permits will be reconciled with the Inmate Industries' expenditure detail report and any discrepancies will be brought to the attention of the Auditor's Office for correcting.

7. At the end of the month an Accounts Receivable spreadsheet is prepared with the current month's work-orders and invoices. The Accounts Receivable spreadsheet is then emailed to the Director of Inmate Services and the Inmate Industries Supervisor.

8. Note: Through out the month the prior month's spreadsheets are updated when payments are received.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.09
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Cash Bails	

I. POLICY

A. The Detention Facilities will accept Cash Bail in accordance with applicable law.

II. PROCEDURE

A. CASH BAIL GENERAL INFORMATION

1. Anyone including the Inmate may post bail in the amount established. Money orders, certified checks, and cash will be accepted. The amount for bail must be exact. No change will be permitted. Money orders and certified checks should be made out to the court, but are acceptable if made payable to The Office of the Sheriff although not preferred.

2. The Cash Bail safe will be locked at all times

3. When the Bail funds are in the form of money order or cashier's check and made payable to the court, the funds are receipted and sent directly to the court. Accounting will receive a copy of the bail package provided by the Clerical Supervisor for Accounting's files.

B. CASH BAIL PROCESS

1. Cash bail is manually receipted and the funds are placed in a sealed envelope and the yellow copy of the manual receipt is attached. The yellow receipt and the envelope are immediately placed in the locked cash bail safe by the clerk receipting the funds.

2. The Clerical Supervisor will take the previous days bail from the locked bail safe and verify the funds against the receipts. A deposit is made to Wells Fargo for the total amount of bail and put in the Loomis locked box to be picked up. If a discrepancy is found a notation must be made on all copies of the receipts and the booking. A memo is forwarded to Accounting documenting the discrepancy.

3. The Loomis receipt will be sent to Accounting with the next day's deposit information via the shift work drawer from Operations.

4. Accounting personnel will enter the bail information into the Check Writer System. *First,* click on **Enter Checks,** Batch Header will pop up - make sure **TC-54** is highlighted and the Fund/Org **811000** is entered, click on Continue, Warrant entry screen will pop up enter in the Vendor Name the **Court name**, skip a line and type **in Facility Name Rect. Number (example B120239) and the date of the receipt**, in For area type in **Cash Bail For: Name of Inmate** next line type **Paid by: Name of the person that paid** next line type Docket/Warrant: **Docket or Warrant number**, next line type Appear: **Appear in Court Date @ Time of Appearance**, type in Payee Name: **Court Name**, Amount: **type in amount**, Control # type **0400**, Batch: **type in Batch number received from the Auditor's office**. If you have multiple bails to process click on the bottom right arrow and a blank screen will appear to enter in another bail. When all bails are entered click on Quit. *Second,* click on **Reports** make sure that **Select the Print selected batches (see below**) is selected and **TC-54** is selected, click on **Print**, print two copies. *Third,* click on **Export a File**, put disc into the A Drive of the computer, and click on **TC-54** and **Export**. Remove the disc from the A Drive and put the disc and the Batch Verification form in the bag and lock the bag, then place the locked bag in a locked drawer.

5. The original batch verification form and copy of the Bail receipt with back up are sent by interoffice mail to the Sheriff's Department Fiscal Officer for signature.

6. Fill out a Deposit Permit, Organization **Sheriff-Jail MDF**, Organization Number **2578**, Description **Bail Collections** and the receipt number, Fund/Org **811000**, Sub Acct. **0800**, Amount **total cash and money orders received**, Total Deposit **manually total column**, Bank Deposits **enter amount of Total Deposit**, Explanation: **Deposit bag #**, Signed **Accounting personnel name**, Date **date processed**, Title **Accounting personnel title**, Ext. **ext of Accounting personnel phone number**. Place the filled out Deposit Permit on top of the copies of the bail package and place in the filing cabinet.

7. When the signed batch verification form is returned, attach a copy to the bail package in the drawer, put the original in the bag with the disc and send the bag to the Auditor's Office via inter-office mail.

8. Checks will come from the Auditor's Office along with a Warrant Register. Verify the checks against the bail package and send to the appropriate court in the inter-office mail along with the original bail receipt and back up. Attach the Warrant Register to the Batch Verification report to put in our file to be reconciled to the Auditor's Trust Fund Account Subsidiary Detail Report on a monthly basis.

9. When the pink deposit slip comes to Accounting from Wells Fargo Bank Accounting makes a copy of the deposit slip against the Deposit Permit to attach to the bail package, the pink deposit slip is stapled to the Deposit Permit and placed in an inter-office envelope to the Auditor's Office.

10. The pink copy of the Deposit Permit will come back to Accounting with a stamped Deposit Permit number and date. Attach to the bail package and file in

the completed Deposit Permit drawer and attach a copy of the deposit permit to the warrant register for reconciliation purposes.

11. If the Warrant issued by the Auditor's Office is lost only the Court can initiate a stop payment. Accounting will supply the Court with the Warrant number, amount and date. The Warrant information will be placed on a "Lost Warrant Affidavit" by the court and sent to the Auditor's Office for processing.

12. If payment was made by money order or cashier's check we do not have the authority to place a stop payment. It is up to the purchaser and payee to place a stop payment. Accounting will give the Court the issuing bank and identifying numbers but that is the extent of our involvement.

13. Note: Once a month the Bail Trust Account 811000 is to be reconciled to the MTD Subsidiary Detail Report sent to Accounting from the Auditor's office.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.10
	RELATED ORDERS: P.C. 4025	
ISSUE DATE: 07-01-04 **REVISION DATE:** 1-07-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Commissary Funds	

I. POLICY

A. Accounting is responsible for deducting, balancing, refunding and adjusting the Commissary for Inmates.

II. PROCEDURE

A. PROCESSING COMMISSARY

1. Transmit a cash file to the commissary vendor TKC Holdings via modem – **Tuesday** West County Detention Facility, **Wednesday** Marsh Creek Detention Facility, and **Thursday** Martinez Detention Facility every week.

2. The maximum commissary order is $100.00 per week.

3. TKC Holdings will fax an Inmate Status Sheet. Accounting verifies funds of questionable inmates in JMS. In the JMS system, go to JMS/ Inquiry/ Booking Summary, enter in booking number and click on Find (this allows a view to the inmates facility and module). Then go to Funds, Transactions, enter the booking number, then research the cash account. After researching the cash accounts of all questionable inmates, fax the information to TKC Holdings @ 925-754-8714 (example balance of funds, module number, if in custody).

4. A fax will be sent to Accounting from TKC Holdings of all of the Modules orders to be deducted - **MDF** modules: A,B,C,D,E,F,M,Q,T, **WCDF** modules: 4A, 5A, 5B, 6A, 6B, 7A, 7B, 8A, 8B and **MCDF** Dorms: D and E. If there is movement or releases note on a Commissary Change Form and fax information to TKC Holdings.

5. To deduct modules or dorms in JMS - go to JMS/Funds/Module Transactions, select Facility, Module, Section, Name (**always stays the same)**, click on Find - in the Transaction area select the facility that is being processed, click on Apply, place cursor on the first top box, and enter in the amount of the Commissary Order. When finished with the module or dorm click on Save - then a message will flash, and click on Ok. Compare total on the bottom of the screen to the total

on the TKC Holdings Report - if correct click on close, if not research the difference and make the necessary corrections.

6. To run the Balancing Report in JMS - click on JMS/Funds/Balancing/Transaction Type Activity, enter the start time of deductions, enter in the end time of deductions, enter in Transaction Type (example MDCOM), view the report to verify module total, then click on Print.

7. Staple report to TKC Holdings Report and write the module or dorm on the upper left corner.

8. Continue with number **4** through **6** till all modules or dorms are deducted, verified and reports printed.

9. If there are late charges or "not-in-custody" inmates do the necessary adjustments, balance and total, then re-run report(s) and manually add to original report.

10. When finished with all modules or dorms in JMS, go to JMS/Funds/ Balancing/Account Balancing/Acct Grp, choose Commissary, click on Find, double click on the Commissary Account, set the date parameters, and do a Print Screen. This is the total amount of Commissary deducted.

11. In Excel enter in module or dorm information in the Commissary Balance Sheet. The module or dorm totals should balance to Commissary Account Balance Report.

12. The next day Accounting will receive the signed TKC Holdings Menus and Pick Lists. The menus are then placed in module or dorm order. The menus that are for inmates that are "not- in- custody", have zero funds, or insufficient funds are to be placed together and labeled useless menus. The loose menus are to be put with proper module or dorm.

    a. Note: When looking at the amount of the menu the valid amount is the middle printed amount on the lower left hand corner.

13. Behind the Modified Changes Sheet (TKC Holdings Changes), first place the changed or invalid order forms in module order and then in the order listed on the sheet. Adjust each menu according to the Change Sheet by writing "VOID" or "CADJ", write the correct total and the action taken on the Change Sheet along with the original total and adjusted total.

14. Process Voids first in the JMS system - JMS/Funds/Transactions, enter booking number and click on Find, select the commissary transaction for the correct day and verify the amount, and then click on Party Details to verify name, click on Void (lower right corner of screen) and the system will ask you if you are sure you want to void the transaction - click on OK, type in the commissary date and why it was voided. After all the voids are completed run a Void Report by going to JMS/Funds/Balancing/Transaction Type Activity, enter in the date and the time the voids occurred and then enter in the end time, type in VOID, then click on View, verify that you have all of the voids processed, and then click on Print. Take the printed report and attach the menus. **Please note: If an inmate has been released reactivate the cash account in JMS by going to**

Configuration/System Tables/Account Maintenance/Booking Number area, enter in the proper booking number - In Fac, select ALL and click on Find. The cash account will be pulled and double click on it - change the status from I to A, then click on Close and then Save.

15. To adjust amount of the commissary order in JMS – Go to JMS/Funds/Transactions/enter booking number in Booking Number area/click on Find, verify that the booking number and name are correct, click on ADD/Transaction area choose the appropriate CADJ (example CADJ1, CADJ2, CADJ3)/Fund Type Interal - in the Notes enter the commissary date and why the adjustment is occurring/ click on Party Details - click on Find next to Facility and Account Group (the commissary accounts will appear click on the proper one)/enter in booking number/click on find verify that it is the proper inmate/click on save. Run the same report as in the preceding step #14, but type in CADJ1, CADJ2 or CADJ3. Attach the CADJ receipts to the proper menu, and then attach all to the report. Adjust the module or dorms Grand Total to reflect the changes and add adjustments to the Excel sheet.

16. Fax TKC Holdings the Excel Adjustment Sheet.

17. To process the refund checks and the TKC Holdings payment – Go to JMS/Funds/Add/enter in proper "WITH" (WITH1, WITH2, or WITH3) transaction/Fund type **check**/type in amount/type in notes Commissary Refund for specific commissary/click on Party details/book # area enter in proper booking number/click on find/type in To party the Inmates name and address/ click on Save. The check number will appear verify the check number if not correct change to correct number. Place check in check printer and click on save. The check will print first and a receipt will follow.

18. To print the TKC Holdings Payment Check, select the proper $COM ($COM1, $COM2, $COM3) and follow the same procedure as the refund checks stated in preceding step #17.

19. Package up Commissary as follows: Receipt of TKC Holdings Check/Change Forms and Excel Sheet/VOID and CAD Reports and Menus/Deduction day information/signed Pick Lists/signed TKC Holdings Menus, and then place in the file.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.11
	RELATED ORDERS: P.C. 4025	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Inmate Funds	

I. POLICY

A. Accounting is responsible for Inmate funds.

II. PROCEDURE

A. WESTAMERICA BANK POSITIVE PAY

1. The Inmate Trust Account has Positive Pay through Westamerica Bank. Accounting is required to send a file via e-mail with all authorized checks issued to inmates. Only the checks e-mailed to Westamerica Bank will be authorized for payment.

2. Accounting personnel will audit the check registers that are included in the Shift work packages or faxed to Accounting and will forward the check information to the Account Clerk Supervisor.

3. A query is run out of Oracle SQL Plus for either one day or several days. The date is entered (example 02-01-2003) or if over the weekend several days are to be processed (example start date 02-01-2003 end date 02-03-2003).

4. The check information is then transferred to the Report folder in several different reports The first report shows the check information in the format needed to email to Westamerica Bank Positive Pay program; second report shows the grand total, and third report is in the format to transfer to the Access database where Accounting processes the bank reconciliation.

5. On the check information report delete the first three lines leaving only the records. Save the changes and click on exit.

6. To email the report to Westamerica Bank Positive Pay. Open up GroupWise, create a new email in the "to" box enter POSITIVEPAY@WESTAMERICA.COM, in the "subject" box type in Checks issued MM/DD/YY (020204), click on the "Attach" box, the file is

located on G:\ACCOUNTNG\JMSSCRIPTS\REPORTS, Double click on the appropriate file to attach (CCCSOITA 020204), then click on send.

7. A Confirmation report will be faxed to us from Westamerica Bank Positive Pay confirming the check transfer information. This report will be verified against the stored transfer report for accuracy then placed in the positive pay file to be used for bank reconciliation purposes.

B. CHECK TRANSFER TO THE FUNDS DATA BASE

1. On a daily basis after the transmission of the Westamerica Bank Positive Pay Check Report Accounting will transfer the check and booking information to the Funds Access Database.

2. In the report file click on Checks Transfer.txt. Delete the first three lines and then click on save. Next click on Chkbknginfo delete the first three lines and then click on save.

3. Go to the Funds Database and double click, then double click on the button labeled “Import checks”, click on the “OK” message prompt to authorize transfer, then click on the “OK” message when the transfer is complete.

4. To verify that the check transfer was complete, click on the All Checks button, place the cursor in the date box and click on Z to A button on the toolbar. This tool will place all the current check transfers at the top of the list.

C. WESTAMERICA BANK ACKNOWLEDGEMENT OF DEPOSIT RECEIVED

1. Monday through Friday the Clerical Supervisor deposits the funds for each of the three shifts. A list of deposits including what shift, date and amount, tags of deposit bags, and tape totaling deposits. The next day the blue copy of Loomis deposit slip is attached to the next day’s deposit package.

2. Westamerica bank will send copies of the deposit receipts after verifying the deposits received by Loomis Transport Service.

3. If a deposit receipt is not sent from Westamerica Bank call 925-335-3050 ADD to verify if the deposit was received, and then request a copy of the receipt to be faxed to Accounting at 925-646-4641 ADD. If not received write a letter and attach a copy of the Loomis blue deposit slip and the Westamerica bank deposit slip. A notice of deposit will be sent and then used to verify to the Bank Statement.

D. WESTAMERICA BANK STATEMENT

1. Westamerica statement is sent once a month to show the deposits and the checks that have cleared the Inmate Trust Account. If the statement is not received by the middle of the month call Westamerica Bank at 925-335-3050 to have the Branch Manger research the missing statement and to send a duplicate statement.

2. Take the Deposit lists from each facility and verify with deposits listed on the bank statement. Toward the end of the month some deposits will not be included on the statement. Copy the list and hold till the next month's statement to verify.

3. Western Union funds will be in the deposit area of the bank statement. Pull the Recap reports from Western Union and verify against the statement. If a payment is missing call our Western Union representative to start research process and follow up with a letter listing the inmate's name, booking number, sequence number, MTCN number, and amount. A letter will then be received from Western Union along with the copy of the transmittal of funds receipt.

4. Under the area "Withdrawls-Fees- Charges" lists miscellaneous debits to the account. An example is if an Operations clerk deposited funds exceeding the amount stated on the deposit slip.

5. The checks that have cleared the account are then verified with the checks that have been issued out of JMS in the Funds database. The date of the statement is entered clearing the check from the system at the same time the check number and amount is verified. If the check cleared the statement for a different amount other than what it was issued by JMS, the amount of the check is entered in the "cleared amount if different" column. The cleared check is pulled to see if any alterations were made to the check. If alterations have occurred a call to the Facility Commander is made to have a criminal report written, the amount of the fraud will be placed on the inmate's CIN number to be collected the next time the inmate is in custody. If the error was made by the bank a call is placed Westamerica Bank Branch Manager and a letter will be sent along with a copy of the statement and check.

6. All of the bank statement information and other reports are then placed on an Inmate Trust Bank Reconciliation form to determine if the account is Over or Short. If short a relief of shortage is requested through the Fiscal Officer.

E. SECURITY OF INMATE TRUST ACCOUNT BLANK CHECKS

1. All blank, pre-numbered Inmate Trust Account blank checks are to be secured and accounted for at all times.

2. When a shipment of checks arrives at the facility Accounting will be notified immediately.

3. Accounting will verify the information on the checks. If incorrect call our Safeguard representative at 415-495-5000 to pick up the shipment and issue another order without delay.

4. When checks are required by Operations, Accounting will release one box at a time. A "release of check form" is filled out with the check numbers listed. A signature is required to enable the checks to be released. The signed form is then placed in the "Check release forms" folder and kept in the locked check cabinet next to the checks.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.12
	RELATED ORDERS: Inmate Orientation	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Inmate Restitution-Damaged or Destroyed Property	

I. POLICY

A. When inmates are found liable for restitution for intentionally or carelessly causing damage or destruction to property Accounting is responsible for processing the funds portion of the claim.

II. PROCEDURE

A. INMATE REIMBURSEMENT OF DAMAGED PROPERTY

1. The Operations Sergeant will provide Accounting with a completed "Inmate Cash Authorization" form as well as the corresponding copy of the Incident Report.

2. Accounting will check the inmates account balance the same day the forms are received and deduct the full amount from the account if it is available. If the full amount is not available but a large portion of it is, deduct the available amount. Begin tracking the balance and payments until the charges are paid in full. Continue to check the available balance, each week thereafter, on the day prior to commissary deduction day.

3. To deduct from the inmate's account, get a check from Release and put into printer. Go to JMS, Funds, Transactions, Add, Enter With1, With2 or With3 (which ever is appropriate) as the transaction type, select Check as payment type, enter check amount, enter support notes in note field to include the I/R number, click on Party Details, enter booking number, select the correct facility, click on Find, highlight the correct account from which the money will be deducted, go to "To Party" and enter CCC Sheriff's Dept. in the name field, enter MDF in the "Street" field, click on Save, enter the new correct check number and click on Save. The check will print first, and then a receipt will follow.

4. Sign the check on the top line and give to the Accounting Supervisor to stamp the Sheriff's signature on the bottom line. Staple the middle portion of the check to the bottom of the transaction receipt. Staple the receipt to the front of the support forms (i.e., Inmate Cash Authorization form and I/R report). Set aside, it will later be used to create a Deposit Permit. Make a copy of the transaction receipt

and paper clip the bottom portion of the check to the front of the receipt – give to the Release Clerk for the shift work package.

5. A Wells Fargo Bank deposit is prepared each Friday of the current weeks-accumulated work.

6. To prepare the deposit: Stamp the back of each check, run a tape, and paper clip to the front of the checks. Stack the cash by denomination, run a tape by denomination, subtotal the cash, add the total sum of checks, and then total. Photocopy the check and cash tapes to keep with your records. Fill out a deposit slip with the date, total currency, coin and enter the total sum of money orders/checks next to the "List Each Check" area – write the following info under the total checks/money orders amount – "see attached list". Fill in the "Total Deposit" amount. Write the Security Bag number on the body of the deposit slip. Remove the white and pink copies of the deposit slip from the book. Stamp a Letterhead envelope with the facility address and put it in the Security bag, Wells Fargo will return the pink copy of the deposit slip to us showing proof of deposit. Write the following information on the front of the Security Bag: "Depositor Name" is CCC Sheriff's Dept – MDF, 1000 Ward Street, MTZ, CA. "Financial Institution" is Wells Fargo, Main Street, MTZ, CA. Fill in the "Currency" amount, "Coin" amount, "Checks" amount and "Total" amount. Fill in "Date". Write in the appropriate information on the tear tag. Put the following into the security bag: Checks/money orders w/tape, cash/coin w/tape, self-addressed envelope, deposit slip. Drop the bag into the safe, which is located in the Release area of Operations.

7. Prepare a Deposit Permit. "Organization" is Sheriff-Jail-MDF "Organization Number" is 2578. Write the following information across the first line of the DP: "Description" is Damaged Property, Fund/Org is 2578, Sub.Acct. is 9975, Amount is total amount of deposit. Write in the total deposit amount again at the bottom next to "Total Deposit" and then again next to "Bank Deposits". Write the Security Bag number in the area under "Explanation". Sign Accounting personnel name, title, date, phone number.

8. Paper clip the support documents to the back of the Deposit Permit. Place it in the pending DP file.

9. The pink copy of the deposit slip will be mailed back to us from Wells Fargo. Lay it across the front of the matching Deposit Permit and make a copy. Staple the pink deposit slip to the top of the Deposit Permit on the tear strip. Send it via Inter-Office mail to the Auditors Office. Paper clip the copy to the top of the support documents and put back in the pending DP file.

10. The pink copy of the Deposit Permit will be sent back to us from the Auditors Office with the official DP number on it. Pull the support copies from the pending DP file, attach the pink to the front and place in the "Complete" DP file.

11. If the total amount due is not paid in full by the inmate's release date place the balance due in history in JMS.

12. The maximum amount of time an amount will be left in history will be 2 years.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.13
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Inmate Transportation Vouchers	

I. POLICY

A. Indigent inmates are eligible for transportation vouchers.

B. The Shift Supervisor will be responsible for issuing and logging transportation voucher activity to indigent inmates being released.

II. PROCEDURE

A. CONTROL & AUDIT OF RELEASED INMATE TRANSPORTATION VOUCHERS

1. Each Friday, the previous week's voucher logs will be audited by accounting.

2. Write the starting balance of each ticket type on the current day's log from the previous week's log.

3. Count and record the number of tickets used for the week and subtract from the starting balance. The current available supply should equal each total.

4. Count the available supply of each ticket type and record on the next line of the current day's log.

5. If the totals do not balance make an adjustment entry for each ticket type.

6. If the required information is incomplete on any of the logs and or if the totals from the audit do not balance, notify the Operations Sergeant in the following manner. Fill in the appropriate blanks on the preformatted Inter-Office Memo and make one copy of each voucher log. Attach the voucher log copies to the back of the original Memo form, give to the Operations Sergeant and attach the original voucher logs to the Memo copy form for the accounting file.

7. Replenishment tickets are pulled from the supply in the Accounting Safe at Martinez Detention Facility.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.14
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Meals and Miscellaneous Deposits	

I. POLICY

A. It is Accounting's responsibility to deposit funds by Deposit Permit to the correct coding.

II. PROCEDURE

A. Detention meal payments (15.00 per month or 5.00 per meal) are deposited each Friday from the MDF to Wells Fargo Bank in the following Fund/Org per Facility: MDF 2578/9873, WCDF 2580/9873, and MCDF 2585/9873.

B. Miscellaneous payments are also deposited to Wells Fargo Bank each Friday, to include but not limited to the following: Found Money Fac. Org./sub-account 9975, Damaged Property- Fac.Org./sub-account 9975, IWF org 2483/sub-account 9975, Med.Assets HSCA Rebates Fac.Org./sub-account 2150.

C. Payments collected by WCDF and MCDF will be forwarded for deposit to MDF Accounting by Blue Bag via Transportation and are to be detailed on a standard "Property /Inmate Transfer List". The MDF Accounting personnel will sign the Property List and return the copy to the sending facility in the Blue Bag via Transportation.

D. The accumulated cash/checks are to be secured under lock pending the Friday deposit.

E. To prepare the deposit: Stamp the back of each check, run a tape, and paper clip to the front of the checks. Stack the cash by denomination, run a tape by denomination, subtotal the cash, add the total sum of checks, and then total. Photocopy the check and cash tapes to keep with your records. Fill out a deposit slip with the date, total currency, coin and enter the total sum of money orders/checks next to the "List Each Check" area – write the following info under the total checks/money orders amount – "see attached list". Fill in the "Total Deposit" amount. Write the Security Bag number on the body of the deposit slip. Remove the white and pink copies of the deposit slip from the book. Stamp a Letterhead envelope with the facility address and put it in the Security bag as Wells Fargo will return the pink copy of the deposit slip to us showing proof of deposit. Write the following information on the front of the Security Bag: "Depositor Name" is CCC Sheriff's Dept – MDF, 1000 Ward Street, MTZ, CA. "Financial Institution" is Wells

Fargo, Main Street, MTZ, CA. Fill in the "Currency" amount, "Coin" amount, "Checks" amount and "Total" amount. Fill in "Date". Write in the appropriate information on the tear tag. Put the following into the security bag: Checks/money orders w/tape, cash/coin w/tape, self-addressed envelope, deposit slip. Drop the bag into the safe, which is located in the Release area of Operations.

F. Prepare a Deposit Permit. "Organization" is Sheriff-Jail-MDF "Organization Number" is 2578. Fill in the appropriate information in the body of the DP (ie. "Description", Fund/Org, Sub.Acct., Amount). Write in the total deposit amount at the bottom next to "Total Deposit" and then again next to "Bank Deposits". Write the Security Bag number in the area under "Explanation". Sign: Accounting personnel name, title, date, and phone number.

G. Paper clip the support documents to the back of the Deposit Permit. Place in the pending DP file.

H. The pink copy of the deposit slip will be mailed back to us from Wells Fargo. Lay it across the front of the matching Deposit Permit and make a copy. Staple the pink deposit slip to the top of the Deposit Permit on the tear strip. Send it via Inter-Office mail to the Auditors Office. Paper clip the copy to the top of the support documents and put back in the pending DP file.

I. The pink copy of the Deposit Permit will be sent back to us from the Auditors Office with the official DP number on it. Pull the support copies from the pending DP file, attach the pink to the front and place in the "Complete" DP file.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.15
	RELATED ORDERS: Department Fiscal Purchasing Manual	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Purchase Orders	

I. POLICY

A. Accounting will process Purchase Orders for Detention purposes.

II. PROCEDURE

A. All purchases must have a minimum three bids. Purchases under $50,000.00 are part of the SBE program, while purchases over $10,000.00 fall into the scope of the Outreach Program. (if further information is needed contact the Fiscal Office for program details.)

B. After receiving the three bids fill out a Solicitation form and an Award form (see #4 & #5 below.)

C. The Requisition is filled out as follows: **Date**: date of processing, **Control No**.: SHA is for MDF, SHD is for WCDF, and SHB is for MCDF; **Location No**.: 185 is for MDF, 187 is for WCSD, 186 is for MCDF; **Dept**.: Sheriffs Detention; **APS Vendor No**.:) if standing PO enter the number assigned, if new vendor accounts payable will assign); **Ship to Number**: SHA for MDF then the year, SHD for WCDF then the year, SHB for MCDF then the year (example SHA-03); **Invoice to Number**: always SH9-0; **Vendor**: Listed on quote; **Requisition No.**: issued by Accounting; **Line No.**: enter 1 (only use 1 on a PO); **Total**: total amount for the whole term, **ORG**.: organizational number of division purchasing; **Sub Object**: coding for type purchase; **Reason for Purchase/Comments**: examples are for Operations, see bids attached, SBE forms attached, **Requested by**: Accounting Personnel's name; **Phone ext**.: phone number of Accounting Personnel; **Date**: date of processing.

D. A Solicitation form is filled out for all purchases. In addition to information on bids/quotes received, it should include why the vendor was selected.

E. An Award form is then filled out for all purchases in the SBE program that were awarded to a SBE.

F. Attach the bids, Solicitation form, and Award form (if any) to the Requisition form and send to the Commander for signature.

G. Make a copy of all forms and send to the Director of Support Services located in our Fiscal division.

H. After being signed by the Assistant Sheriff the Green copy of the Requisition and a copy of the bids and forms are placed in a file.

I. Attach a copy of the forms and bids to the white copy of the Requisition and send inter-office to the Purchasing Department.

J. Log all information in the Purchasing log book and when the PO is returned from Purchasing log in the PO number.

K. Purchasing will generate a PO within four weeks.

L. Attach the processed PO to the green copy of the Requisition and place back in the file till an invoice and PO is received.

M. When the invoice is received type a TC52 as follows: **Prepared by**: Accounting Personnel; **Date**: date of processing; **Originating Unit**: Sheriffs Detention; **Date of Invoice**: date of invoice; **Description**: Invoice number and Vendor name, **Fund/Org**: 2578 for MDF, 2580 for WCDF, 2585 for MCDF, or other appropriate detention org; **Account**: type of expenditure; **Encumbrance No.**: provided by Purchasing on the PO plus 01; P/C if PO is complete put a **P** if incomplete put a **C**; **Payment Amount**: amount of the invoice; **Vendor**: issued by Purchasing on PO; **by the "$"**: enter in the grand total.

N. Send the completed TC52, Invoice, and one copy of the PO to the Captain for signature.

O. Send the original, signed TC52 and the original invoice(s) and one copy of PO to Accounts Payable and a copy of the TC52 and invoice(s) to the file.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.16
	RELATED ORDERS: Department Fiscal Purchasing Manual	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Purchase Warrant Requests	

I. POLICY

A. Accounting is responsible for processing Warrant Requests for Detention.

II. PROCEDURE

A. WARRANT REQUEST

1. Warrant requests can be used for purchases up to $500.00 only.

2. An invoice for purchases is received that does not have an authorized Purchase Order for Detention.

3. To fill out the Warrant request: Type in the date of the Warrant request/the amount/payable to/date of the invoice/in the description area type in the invoice number/Fund or Org number/Sub-account number/amount/Department type in Sheriff-Coroner Detention/ Captain or Assistant Sheriff's name/Description-information type in a brief explanation and check box to mail to payee.

4. Attach the invoice to the warrant request and send to the Captain or Assistant Sheriff for signature.

5. Take the signed Warrant request and make a copy of the invoice and attach the yellow copy of the Warrant request for Accounting's files.

6. Take the white, pink and green signed Warrant request with the original invoice and send to Account's Payable for payment.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.17
	RELATED ORDERS: Department Fiscal Purchasing Manual	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Procurement Cards	

I. POLICY

A. Accounting is responsible for processing Procurement Card purchases for Detention.

II. PROCEDURE

A. Procurement Card purchase limit is $3,000.00 for a single purchase and with a $10,000.00 maximum limit of charges for 30 days.

B. All purchases will be recorded on the Procurement Card Log.

C. Attach all Procurement Card receipts behind the Log sheet for a given month.

D. The Procurement Card statement will be received on a monthly basis, each charge is numbered consecutively, then place the number in red on the Procurement Card log next to the corresponding charge.

E. Verify recorded receipts (in order) to the Procurement Card statement.

F. Fill out a Procurement Card Purchase Authorization form for each purchase prior to making the purchase.

G. If the charge is for Inmate Welfare Fund have the IWF Director sign then forward to the Assistant Sheriff for signature; if it is a detention charge the Assistant Sheriff's signature is required.

H. Make copies of the statement, receipts, Authorization forms, and log sheets. The original receipts, and Purchase Authorization form and a copy the Procurement statement are placed in a file at Detention Accounting. The copy of the receipts, Purchase Authorization form, and the original Procurement statement and Log sheet are forwarded to the Fiscal Division, then who will send to Accounts Payable for payment.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.18
	RELATED ORDERS: Department Fiscal Purchasing Manual	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Outstanding Balances Report	

I. POLICY

A. Accounting is responsible for clearing items from the report.

II. PROCEDURE

A. The Outstanding Balances Report is an accumulation of data reporting amounts owed to inmates or amounts owed to the County by the inmate from the JMS database.

B. The Historical account and the Outstanding Balances Report are to be used by Accounting Personnel only.

C. This report should be printed and reviewed daily. To run the report, click on JMS, Funds, Balancing, Outstanding Balances, then click on Print.

D. If someone returns to custody who has a balance due or balance owed, the current booking number will appear on the report next to the inmate's name. Use the booking number to check for a cash account. A cash account must be established prior to transferring money owed or due from history. If there is no cash account, create one in JMS by going to JMS/Funds/Transactions/click on add/from the pick list in the Transaction field select PCOR (1,2,3)/Fund type Internal/amount .01/ in notes type in to create cash account/click on Party details/ click on booking only/type in booking number to create the cash account on/click on New Account/Account type click on CASH/then save, then create a NCOR (1,2,3) in JMS (same as PCOR1 except cash account portion has been established) for .01 to back out the credit.

E. Anytime money is owed or due, is transferred to history, a hard copy of the support information is printed and kept on file for tracking purposes. Always research the amount owed/due before transferring from history. If a hard copy is not on file, research the origin of the transaction by going through the cash account of each booking. If the origin cannot be positively determined, the stated amount owed or due must be zeroed out. Transfer the amount out of history onto the active cash account and then NCOR (1,2,3) or PCOR (1,2,3) to clear the cash account.

F. When taking funds from a current booking and applying the funds to a history account for an IR report or CAF fee process as follows:

1. Transfer the amount to the active Cash account.
2. Issue a PCOR (1,2,3) for the amount transferred from history to the active booking.
3. Issue a With (1,2,3) for the amount of funds on the current booking, make the check out to CCC Sheriff Dept, also include the ORG and Revenue account and the type of CAF fee or IR number.
4. If there is an outstanding amount go to JMS/Release Funds enter in the booking number, click on find, under Summary of Accounts click on the box, do a screen print, then click on the Transfer to history button, and attach to the back up documentation, then place in the file.

G. All cash transactions in history are to be kept on an excel spreadsheet to be updated when needed. This sheet is to be used to balance the Inmate Trust Account.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.19
	RELATED ORDERS: Department Fiscal Purchasing Manual	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Record Retention	

I. POLICY

A. It is Accountings responsibility to retain the accounting reports and financial records according to County Standards and applicable law.

B. Accounting is responsible for boxing, labeling, and sending to storage Accounting documents.

II. PROCEDURE

A. The following reports and financial records will be retained for the period stated then destroyed.

B. Cash Deposit Receipts 5 years, Deposit Permits 5 years, Inmate Trust Account records 5 years, Inmate Commissary Records 2 years, Purchase Orders 2 years, Requisitions 2 years, Shift work 2 years.

C. The MDF Accounting storage boxes are to be marked with blue marker on the top left corner MDF and the destroy date with a red marker on the top right corner; WCDF Accounting boxes will be marked with green marker on the top left corner WCDF and the destroy date with a red marker on the top right corner. Clearly describe the contents of the box using the name of the facility, contents and dates.

D. All reports, records, logs will be clearly marked with the facility name. The boxes will be forwarded to the West County Detention Facility Support Services Aide for storage.

E. If a box is needed for research prior to the destroy date, request the box be pulled from storage from the West County Detention facility Support Services Aide.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.02.20
	RELATED ORDERS: Department of Fiscal Purchasing Manual	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-15-05 **REVIEW DATE:** 04-02-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Fiscal Management	**SUBJECT:** Destruction and Transferring of Numerically Controlled Documents	

I. PURPOSE: To have a documented trail to account and maintain control of numerically controlled documents

II. POLICY: All destruction and transferring of numerically controlled documents will be documented and accounted for by the parties involved. The documentation of the destruction and transferring will be retained for a period of 5 years.

III. DEFINITION: To explain the proper documentation for destruction and transferring of numerically controlled documents.

IV. PROCEDURE:

A. List the starting and ending numbers of the documents that are being destroyed and/or transferred to another's custody (leave enough room for the individual to initial and date).

B. Have the individual taking custody of the numbered documents initial and date.

C. Take a photocopy of the document for the initiator's records and retain the original for 5 years.

D. If there is more than one transfer of custody of the same numbered documents you should request a copy of the additional transfers from each custodian.

E. Document custodians assume responsibility for the security of documents in their care.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.01
	RELATED ORDERS: CCCSO 1.05.58, 1.05.70 MOU	
ISSUE DATE: 07-01-04 **REVISION DATE:** 04-17-13 **REVIEW DATE:** 09-04-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Personnel Regulations	

I. POLICY

A. The Administration of Custody Services Bureau personnel will operate under personnel policies and procedures developed by County Departments of Administration and the Office of the Sheriff to ensure standardization of practice.

II. PROCEDURE

A. DIVISION POLICY

1. The Custody Services Bureau Assistant Sheriff has the authority to issue regulations and/or policies concerning specific Division operations that do not conflict with any regulations or policies issued by any higher authority.

2. The Custody Services Bureau Assistant Sheriff has the authority to assign staffing to meet the operational needs of the Bureau.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.02
	RELATED ORDERS: CCCSO 1.05.51 County Administrative Bulletin 23.4 (1/94) County Ordinance 85-57	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Tobacco/Smoking Policy	

I. POLICY

A. STAFF

1. All tobacco products and the use of such products within the Detention facilities are prohibited except in designated areas.

2. The irritation and health threat caused by smoking is a recognized problem in the work place.

3. To minimize these factors, while not unreasonably restricting the right of employees to smoke, the Department has established guidelines.

B. INMATES

1. All inmates are prohibited from smoking in any area of any facility.

II. DEFINITIONS

A. TOBACCO PRODUCTS: Includes, but is not limited to cigarettes, cigars, pipes, chewing tobacco and any smoking material.

B. SMOKE/SMOKING: The carrying or holding of a lighted pipe, cigar or cigarette or any other lighted smoking equipment of any kind.

C. DESIGNATED AREAS: Area authorized by the Bureau Assistant Sheriff for the use of tobacco products.

III. GUIDELINES

A. All restrictions in this policy have been established to meet the requirements set forth by County Ordinance and Department Policy.

B. Department Policy imposes other restrictions on employees; therefore Department employees should be familiar with Department Policy 1.05.51, as well as the guidelines listed here.

C. In any dispute arising under this smoking policy, the rights of the non-smoker shall prevail.

D. Smoking by Staff members will be permitted subject to Specific Restrictions:

1. The authorized areas for smoking shall be determined by the Bureau Assistant Sheriff and all personnel will be made aware of these designated areas.

2. Staff is prohibited from smoking in any county vehicle at any time.

3. The Bureau Assistant Sheriff will ensure that "No Smoking" signs are posted in compliance with County Administrative Bulletin 23.4. (1/94)

IV. PROCEDURE

A. ARRESTEES

1. In the case of new arrestees, they are to have their cigarettes, and all smoking materials, placed in their personal property by the arresting officer.

2. A personal property receipt will be given to new arrestee, and they are to be informed of the smoking policy and that all smoking materials are considered contraband.

3. Smoking materials confiscated from inmates after their initial booking and orientation are to be considered contraband.

B. STAFF & OTHER AGENCY PERSONNEL

1. Staff members may smoke in designated areas only.

2. Representatives of other agencies who are escorted by a staff member will utilize the appropriate smoking area or will leave the facilities to smoke.

C. DESIGNATED AREAS IN FACILITIES:

1. MARTINEZ DETENTION FACILITY

a. Vehicle Sally port

b. Outside main lobby

2. WEST COUNTY DETENTION FACILITY

a. Vehicle Sally port

b. Outside main lobby where cigarette urn is located

3. MARSH CREEK DETENTION FACILITY

a. Upper Camp Parking Lot

4. CUSTODY ALTERNATIVE FACILITY

a. Staff areas-Rear parking lot where appropriate receptacle is located. During inclement weather staff may utilize the appropriate area outside the lobby.

b. Clients and guests may smoke outside the lobby where appropriate receptacle is located.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.03
	RELATED ORDERS: CCCSO 1.04.71 CCCSO 1.04.12	
ISSUE DATE: 07-01-04 **REVISION DATE:** 02-23-16 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Detention Facility Transfers and Sign-Ups	

I. POLICY

A. It is the policy of the Sheriff's Office, Custody Services Bureau to assign personnel to detention facilities based on seniority, personal preferences and the ability of the employee to perform specialized functions.

II. DEFINITIONS

A. SENIORITY: Determined by the amount of time an employee has been employed in his or her current rank with the Office of the Sheriff. If identical times exist between two or more employees, the following is the order in which the senior person will be determined:

1. Department Seniority – seniority for laterals is based on date of hire or rank with the department.

2. Academy Ranking – seniority is based on how an Office of the Sheriff sponsored recruit placed in the academy at the time of graduation.

III. PROCEDURE

A. SHIFT BIDDING PROCESS AND TRANSFERS

1. Certain classifications of identified personnel are eligible to transfer from their assigned shift, days off, and respective detention facility (MDF, WCDF, or MCDF) at shift change. Personnel must indicate detention facility and shift preferences during the shift bidding solicitation process occurring at the semiannual sign-up.

2. Situations may arise where a vacancy needs to be filled and no transfer requests have been submitted. In instances where vacancies cannot be filled, these positions will be filled, as needed based upon the needs of the bureau.

B. BID PROCESS

1. Sergeants and Deputies will be allowed to bid for shifts, days off, and detention facilities (MDF, WCDF, or MCDF) semiannually – approximately every six months.

2. The Custody Administrative Services Lieutenant (or designee) will post a list of all available shifts and days off for bid. Personnel eligible for bidding will be requested to submit multiple shift preferences; failing to do so prior to the published deadline could result in the employee losing his or her seniority ranking for the current shift assignment.

3. Sufficient time will be provided to allow for employees to make their bid requests.

C. FEMALE DESIGNATED POSITIONS

1. Within the Bureau, a specified number of female positions must be staffed for proper facility operations and to comply with state and/or federal Minimum Jail Standards. All female positions to be filled will be posted during each bid process.

   a. During each bid group, the number of female designated positions to be filled will be posted, along with a list of female employees available to fill those positions based on seniority.

   b. At the conclusion of the bid, designated female vacancies remaining will be filled by the least senior female employee of the required job classification who did not bid for a female designated vacancy.

D. ELIGIBILITY TO BID

1. Personnel assigned to the Custody Services Bureau prior to the completion of the sign-up will be allowed to bid as outlined in their union M.O.U. Shift bidding for detention Sergeants and Deputy Sheriffs will be based on seniority, with any combination of facility (MDF, WCDF, or MCDF) and available shift.

2. Personnel assigned to the Custody Services Bureau after the completion of the sign-up will be assigned as needed by the Division Commander.

E. TRANSFERS TO/WITHIN DETENTION DIVISIONS

1. All personnel transferred to MDF of WCDF will contact Custody Administrative Services for equipment issue and information. Personnel transferred to MCDF will contact the Facility Commander for equipment issue and information.

F. TRANSFERS FROM/WITHIN DETENTION DIVISIONS

1. All personnel being transferred out of the Custody Service Bureau shall report to the CAS Sergeant at MDF or WCDF, or the Facility Commander at MCDF prior to the end of their shift on the final day of their assignment.

2. All Personnel will be required to return all equipment issued by CAS during their assignment.

3. In the absence of the CAS Sergeant, the Shift Supervisor shall be responsible for collecting all keys, equipment and identification badges from the employee and providing them to CAS on the next business day.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.04
	RELATED ORDERS: CCCSO 1.05.41	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 1-9-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Daily Attendance Reporting	

I. POLICY

A. Attendance reports at the Martinez Detention Facility, West County Detention Facility, and the Marsh Creek Detention Facility shall be completed in accordance with their span of control.

II. PROCEDURE

A. It shall be incumbent upon each supervisor to document the attendance of all personnel within their duty station.

B. Refer to Sheriff's Department Policies and Procedures Manual Section 1.05.41.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.05
	RELATED ORDERS: CCCSO 1.04.52, 1.05.41 MOU 6.1, 10.1, 10.2 10.3, 10.6	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Duty Hours	

I. POLICY

A. Detention personnel will be aware of all duty hours, schedules, shift assignments and relief procedures, as outlined herein.

B. Policy relating to On Duty Time shall be in accordance with CCCSO Policy 1.05.41

II. DEFINITIONS

A. DUTY HOURS: Schedules ranging from eight (8) to twelve and one half (12.5) hour shifts are available at Martinez Detention Facility, West County Detention Facility and Marsh Creek Detention Facility. Shift and duty hours vary based on job classification and assignment.

B. FIXED POSITIONS: Any position that must be filled twenty-four (24) hours a day, seven (7) days a week, fifty-two (52) weeks a year requiring relief for meals, breaks, days off, vacation, sick leave, military leave, industrial leave, administrative leave and training.

C. NON-FIXED POSITIONS: Any position that does not require relief.

III. PROCEDURE

A. DUTY HOURS

1. The Facility Commander will ensure that all master and daily schedules are posted and made available to staff.

2. Request for change of any schedules of shifts (shift trades) will be done by the following:

   a. Completion of a CSB Shift Trade Request/Agreement (DET 034:frm)

   b. Submit the completed form to your immediate supervisor.

   c. The approving authority will complete the request and return it to the

requesting staff member(s).

B. OVERTIME HOURS

1. Overtime procedures shall be in accordance with CCCSO Policy 1.04.52.

C. REPORTING FOR DUTY

1. Personnel will report to their assignment on time and relieve the prior shift punctually. Refer to CCCSO Policy 1.05.41

2. It is the responsibility of the employee taking scheduled leave to submit the appropriate forms to their immediate supervisor prior to taking the leave.

3. Personnel will be responsible for notices pertaining to schedule changes, announcements, and training and shift assignments placed in their assigned mailboxes and e-mail boxes.

4. Employees will report to their assignments through appropriate facility entrances.

D. LINEUPS

1. All lineups will take place on duty hours.

2. All employees will report to the lineup room ready for duty.

3. Loitering outside the lineup room is not permitted.

E. MEALS/BREAKS

1. All meals/breaks will be taken in accordance with Sheriff's Office Policy and Procedures 1.05.53 Meal Periods.

2. Employees assigned to line positions are not authorized to leave the facility for meals/breaks.

3. The ability to leave the facility during meals/breaks for non-fixed positions shall be discretionary upon position assignment and with the approval of the employee's supervisor.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.06
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 09-04-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Staff Meals	

I. POLICY

A. Sheriff's Office personnel assigned to the Detention Division facilities are entitled to a meal while on duty.

B. In order to prevent a negative impact on the Division budget, they will be charged a fee for meals.

II. DEFINITIONS

A. VISITOR: Any person not regularly assigned to Detention Division in either a full or part-time position.

B. CONTRACT PERSONNEL: Any person working in Detention Division who is not employed by the Sheriff's Office, but who are working on site, via contractual agreement. (GSD, Teachers, Medical, Mental Health, Chaplains, Library, etc.)

C. MEAL: A meal (breakfast, lunch or dinner), will consist of items outlined in the Food Services Menu.

III. PROCEDURE

A. MEALS WILL BE CAFETERIA STYLE AND THE FOLLOWING WILL BE ENFORCED:

1. Adherence to posted rules.

2. Bus your own trays, dishes, utensils and dispose of garbage.

3. Food, trays, dishes or utensils shall not be taken from the dining area. All liquid containers will have lids on them prior to leaving the dining area.

4. The dining area is no different from other locations throughout the facilities in that no posters, pictures or other items will be taped to doors or windows.

B. MEAL TICKET PURCHASE, USE AND ACCOUNTING

1. Employees eating facility prepared meals shall complete a County Payroll Deduction form (M203) authorizing $15.00 per month for meals provided. These payroll deduction forms may be obtained from Division or Facility Administrative personnel and forwarded to Payroll.

    a. Employees that do not have a completed Payroll Deduction form on file shall not eat Facility meals.

2. Authorized visitors may consume a meal if they have obtained permission from the Division Captain, Facility Commander, Custody Administrative Services Manager, or their designee.

3. Employees from other divisions are not authorized to consume any food or drink unless they are working overtime in that facility.

4. Any questions or conflicts regarding the meal policy will be referred to the Facility Commander.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 02.03.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Staff Parking	

I. POLICY

A. Personnel assigned to Martinez Detention Facility, West County Facility and Marsh Creek Detention Facility may park their personal vehicles in the county parking lot pursuant to this policy.

II. PROCEDURE

A. Free parking is provided at the facility. It is the employees' responsibility to park their vehicles safely, properly and securely. Parking is at your own risk.

B. Daily parking will be available on a non-reserved basis for assigned personnel.

C. Employees must park legally and only in designated, marked parking zones/stalls.

D. All vehicles shall remain secured and locked at all times. (Keys shall be removed from the vehicle, windows rolled up, etc.)

E. Weapons shall not be stored in any personal vehicle while parked at the facility. All firearms and ammunition should be secured in personal lockers or gun lockers provided in the facility.

F. Restricted Parking-Martinez Detention Facility: No privately owned vehicles are authorized to park in the following areas:

1. Posted parking stalls reserved for judges, located in front of the facility entrance.

2. Adjacent to, or obstructing the Loading Dock ramp on the east side of the Facility.

3. Posted parking stalls (1 thru 4) reserved for management personnel, located northeast of the facility entrance.

4. Posted parking stalls (5 thru 8) reserved for county vehicles, located northeast of the facility entrance.

G. **WEST COUNTY DETENTION FACILITY**

1. No privately owned vehicles are authorized to park in the following listed areas:

   a. The security lot immediately adjacent to the Intake Vehicle sally port.

   b. Posted parking stalls designated for Bay Station patrol vehicles directly southwest of the facility.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.08
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 11-28-2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Staff Locker Assignment	

I. POLICY

A. Employee lockers will be provided for as many uniformed personnel as possible.

II. PROCEDURE

A. **Martinez Detention Facility**

1. Locker rooms are located [redacted]

B. **West County Detention Facility**

1. Locker rooms are located [redacted]

C. **Marsh Creek Detention Facility**

1. Locker rooms are located [redacted]

D. All lockers will be assigned through the Custody Administrative Services.

E. Personnel will be assigned lockers based on their job classification.

F. Cleanliness of the locker room will be the responsibility of all staff.

G. Lockers are the property of the county and are subject to search in accordance with applicable law.

H. Staff will comply with CCCSO Policy 1.05.34, Sexual Harassment, to ensure that no offensive materials are posted in their assigned locker.

I. All employees assigned to the jail facilities shall report to the Custody Administrative Services for locker assignments.

J. Upon transfer from the facility, it shall be the employee's responsibility to remove personal contents from their locker.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.09
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 10-30-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Compliance with Labor Code 1030-1034	

I. POLICY

A. This policy applies to all employees who upon return from maternity leave need lactation accommodations.

B. Pursuant to Labor Code sections 1030 - 1034, The Contra Costa County Office of the Sheriff shall provide a reasonable effort to provide a private space other than a restroom, close to the employee's work area, to accommodate an employee desiring to express breast milk for her infant child.

C. The break time shall, if possible, run concurrently with any break time already provided to the employee.

II. PROCEDURE

A. An employee who has a need for lactation accommodation should inform her supervisor and discuss any relevant workload issues.

B. A lactating woman may need to express breast milk every two to three hours when she is away from her infant child.

1. Twenty to forty minutes may be needed for each session.

2. Additional time may be needed to set up and clean equipment.

C. Lactation Room

1. **Martinez Detention Facility**

a. A private office will be assigned by the Facility Commander as necessary.

2. **West County Detention Facility**

a. A private office will be assigned by the Facility Commander as necessary.

3. **Marsh Creek Detention Facility**

   a. The Facility Commander's office shall be made available in the event a lactation area is required.

4. The room is available on a drop-in basis and is designed for multiple users. The lactation room is shared by female employees needing to express milk.

5. Keys to the office are available for female employees through Custody Administrative Services.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.03.10
	RELATED ORDERS: CCCSO P&P 1.05.66 (Criminal Subpoenas) and 1.05.63 (Civil Subpoenas)	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-01-11 **REVIEW DATE:** 09-04-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Personnel	**SUBJECT:** Subpoena Service on Employees	

I. POLICY

A. Criminal and Civil subpoenas shall be processed and served on Sheriff's Office employees in an expeditious manner.

II. PROCEDURE

A. SUBPOENA SERVICE

1. The Operations Sergeant will be responsible for logging the subpoenas in the Subpoena logbook and disseminating subpoenas to the appropriate locations.

2. The Facility Commander or designee will be responsible for serving Sheriff's Office employees with criminal and/or civil subpoenas in an expeditious manner.

3. Staff serving subpoenas will be responsible for logging the service in the subpoena logbook and returning all served subpoenas to the subpoena clerk via a designated red transmittal envelope.

B. Refer to CCCSO Policies and Procedures 1.05.63 (Civil) and Chapter 1.05.66 (Criminal) for additional information.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.04.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-08-05 **REVIEW DATE:** 03-07-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Training and Standards	**SUBJECT:** Facility Training Program	

I. POLICY

A. It shall be the policy of the Custody Services Bureau to ensure that staff development and training programs, at all facilities are planned, coordinated and supervised by a qualified staff member.

B. This training plan shall provide for ongoing formal evaluation of all provided training programs.

C. The Facility Training Program shall be reviewed annually, and a written report submitted by CAS to the Administrative Lieutenant regarding the status of any deficiencies and/or revisions.

II. PROCEDURE

A. FACILITY TRAINING OFFICER

1. The Facility Training Program Manager (Administrative Lieutenant) and the Facility Commander shall designate Facility Training Officer(s) who shall be responsible for implementation of the Facility Training program.

2. The designated Facility Training Officer(s) shall meet specified requirements as determined by the Custody Services Bureau Assistant Sheriff and receive specialized training to ensure development, coordination and continuity of the training plan.

3. All Facility Training Officers performance will be reviewed annually for overall facility knowledge and proficiency. The results of the review in conjunction with the officer's compatibility with the ideals set forth in the "Facility Training Officers Philosophy" statement will determine if the training officer is selected to serve another year or not selected to serve.

B. FACILITY TRAINING PLAN

1. The Facility Training Program shall be reviewed and developed annually by the Facility Training Officer(s), in conjunction with the Custody Services Bureau Advisory Training Committee and approved by the Facility Training Manager. The Advisory Training Committee is composed of the following:

    a. Facility Training Program Manager (Administrative Lieutenant)

    b. Facility Commander

    c. Facility Training Coordinator (CAS Sergeants)

    d. Special Events Response Team (SERT) Training Coordinator

    e. Facility Training Officers

2. The Facility Training Officer(s) and the Advisory Training Committee shall meet at least quarterly to review the progress of the training program and to resolve any problems that may arise. The Facility Training Coordinator in the Custody Services Bureau Administrative Services Unit will keep a written record of these meetings on file in the Custody Administrative Services.

3. The Facility Training Program shall include, but is not limited to:

    a. Job specific training

    b. In-service training

    c. Facility operations, policies, procedures and updates

    d. Legal updates

4. The Facility Training Program is developed, evaluated and updated based on an annual needs assessment that identifies current job-related training needs. These training needs are as follows:

    a. Position requirements

    b. Professional development

    c. Current detention issues

    d. New theories, techniques and technologies

5. When conducting the annual needs assessment, the Facility Training Officer(s) shall obtain information about the training plan from the following sources:

    a. Observation and analysis of job components

b. Staff surveys regarding training needs

c. Reviews of agency/facility operations

d. Staff reports

e. Evaluations and findings from sources within and outside the jurisdiction

f. Feedback from trainees

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.04.02
	RELATED ORDERS: MJS-1020, 1023, 1025, 1026 Standards and Training for Corrections Program P.C. Sections 6035 through 6037	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Training and Standards	**SUBJECT:** Facility Personnel Training	

I. POLICY

A. Personnel training programs will be provided that enable all employees to function effectively.

B. All personnel who work with inmates shall receive sufficient training so that they are thoroughly familiar with the rules of inmate conduct, the rationale for the rules, and the sanctions available.

C. Programs will be planned in accordance with the directives as set forth by the Department, County and State statutes.

D. Programs will be coordinated to ensure compliance with the needs of each employee's respective job classification and pertinent to his/her work with inmates.

II. PROCEDURE

A. Training Program Organization and Objectives

1. The Sheriff's Office Law Enforcement Training Center and the Detention Division Training Program will coordinate training efforts to ensure compliance with standards outlined in MJS 1020, 1021, 1023 and 1025.

   a. All staff members are responsible for ensuring that all coordinated training is completed in a timely manner.

2. Training Methods: The training staff may utilize the following training methods:

   a. Departmental training packages and written programs

   b. Instructors and speakers from within the Facility

   c. Area specialists (Public Safety Officers, Fire Marshals and similar specialists often are available to supplement training)

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.04.03
	RELATED ORDERS: Policy and Procedures 1.05.33, 1.05.34, 2.08.01, 2.11.27	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Training and Standards	**SUBJECT:** Volunteer/Reserve Deputy Orientation and Training Program	

I. POLICY

A. It shall be the policy of the Detention Division to ensure that all Volunteers/Reserve Deputies complete an appropriate orientation-training program prior to their assignment.

B. This orientation/training program will be administered and documented by the division's training personnel.

II. PROCEDURE

A. ORIENTATION TRAINING

1. Prior to assignment, every volunteer will complete an orientation-training program appropriate to the nature of his or her assignment.

2. The length of the orientation training shall be as follows:

   a. Volunteers/Reserve Deputies engaging in activities requiring minimal inmate contact shall participate in 4 hours of orientation prior to their assignment, and 4 hours of training each subsequent year.

   b. Volunteers/Reserve Deputies engaging in activities requiring regular or daily contact with inmates shall participate in 24 hours of orientation prior to their assignment, and 24 hours of training each subsequent year.

3. Volunteers shall agree in writing to abide by all facility policies, especially those relating to security, emergency procedures and confidentiality of information, pursuant to Policy and Procedures;-

   a. 1.05.33 Treatment of Offenders
   b. 1.05.34 Harassment and discrimination in employment.
   c. 2.08.01 Computer Access and Security.
   d. 2.11.27 Release of Inmate Information.

4. Reserve Deputies are sworn personnel and have already sworn to abide by

Policies and Procedures.

B. TRAINING CURRICULUM

1. Volunteer/Reserve Deputy training programs will be established and implemented by facility training personnel. The curriculum for these training programs will minimally include:

   a. Departmental Policies and Procedures

   b. Departmental Rules and Regulations

   c. Security Procedures

   d. Supervision of Inmates

   e. Inmate Rules and Regulations

   f. Fire, Evacuation and Emergency Procedures

   g. Key Control

   h. Interpersonal Relations

   i. Social/Cultural Lifestyles of the Inmate Population

C. SCHEDULE OF SERVICES

1. Upon completion of orientation training, volunteers will be placed on the appropriate schedule of inmate service programs.

2. Inmate Services will ensure that a current schedule of volunteer services is posted in all appropriate areas of the facility and made available to all inmates.

d. Audio-visual programs

e. Centralized staff training facilities

f. Video programs

3. Basic Training Objectives: Program objectives will be as follows:

a. To inform the new employees of the Department's mission and Division goals.

b. To familiarize the new employee with the facilities' grounds and physical plant.

c. To instruct new employees in Division policies, procedures and programs.

d. To provide employees with improved skills in their specialty.

e. To introduce resource personnel throughout the division to new employees

f. To develop improved job skills.

g. To develop human relation skills to assist in establishing productive, meaningful and professional relationships with inmates.

B. Training Program Development and Coordination

1. The CAS Training Unit will be responsible for the coordination of all Division specific training.

2. Representatives of the CAS Training Unit and Division Administration will meet periodically to assess, plan, develop and coordinate the training plan for the Division.

a. They will meet as often as necessary to resolve problems, develop training curriculum, evaluate and update based on current job-related training needs.

3. The Facility Training Program Coordinator will be responsible for meeting with the Facility Training Officers on a regular basis to review the following:

a. Progress of Deputies in Training

b. Training Program Development

c. Policy and procedural issues/discrepancies

d. The Training Coordinator will report the status of the Facility Training Program directly to the Administrative Services Lieutenant.

C. Facility personnel shall receive at least the following training as specified herein:

1. CLERICAL/SUPPORT PERSONNEL

a. On-going training will be provided each year of employment.

b. This training may minimally include the following categories:

- Tour of Facility
- Policy and Procedures
- Organization of the Agency and Facility
- Communications
- Computer Training
- Emergency Procedures
- Hostage Survival
- Key Control
- Stress Management
- Material Safety Data Sheets
- Blood Borne Pathogens
- Physical Assault Hazards
- Con Games
- Interpersonal Communications
- Inmate Rights and Responsibilities
- Inmate Rules and Regulations

2. DETENTION SERVICE WORKERS / COOKS

a. Detention service workers and cooks shall receive First Aid and Cardiopulmonary (CPR) / Automated External Defibrillator (AED) training biannually along with the training offered to the support personnel.

3. CUSTODY LINE STAFF (DEPUTY SHERIFF)

a. 40 hours of training prior to entry on duty and an additional 120 hours of

training during their first year of employment.

- This training will be included as part of the Academy and Jail Operations.

b. 1 hour of orientation and 40 hours of training upon assignment to a detention facility.

c. 40 hours of training each subsequent year of employment.

d. This training may minimally include the following categories:

- Tour of Facility
- Policy and Procedures
- Security and Search Procedures
- Use of Force Policy
- Management and Supervision of Inmates
- Rights and Responsibilities of Inmates
- Emergency Procedures
- Interpersonal Relations/Communication Skills
- Stress Management
- Key Control
- Computer Training
- Hostage Survival
- Con Games
- Precautions and Risks of Suicide
- Report Writing
- Inmate Rules and Regulations
- Firearms Training (Departmental Range Program)
- Social/cultural lifestyles of the inmate population
- First Aid
- Cardiopulmonary Resuscitation (CPR)

- Automated External Defibrillator (AED)
- Material Safety Data Sheets
- Blood Borne Pathogens

e. ADMINISTRATIVE SEGREGATION STAFF TRAINING:

- All personnel managing administratively segregated inmates, shall receive training, including, but not limited to the following areas:
  - Administrative Segregation Operations
  - Classification
  - Policy and Procedures
  - Minimum Jail Standards 1053.

4. SAFETY MANAGEMENT PERSONNEL

a. Forty (40) hours of training during their first year of employment in addition to employee Orientation.

b. All employees in this category also are required to receive twenty-four (24) hours training annually for each subsequent year of employment.

5. PART-TIME PERSONNEL

a. 1 hour of orientation and 40 hours of training during their first year as a volunteer.

b. Additional training as needed.

c. This training shall minimally include the following categories:

- Tour of Facility
- Policy and Procedures
- Organization of the Agency and Facility
- Communications
- Emergency Procedures
- Hostage Survival
- Key Control
- Stress Management

- Material Safety Data Sheets
- Blood Borne Pathogens

d. Additional training as needed to remain informed and up-to-date with changes in facility operations, policy and procedures.

- This will be accomplished through their assigned supervisors in bulletins and videotape.

6. TRAINING RESOURCES

a. In addition to an employee's initial training, other mediums may include but are not limited to:

- Shift Line-ups or general meetings
- Training Bulletins
- Memorandums
- Video Tapes
- On the Job Training
- Annual Advanced Officer Training

b. It shall be the employee supervisor's responsibility to provide and document all training that occurs.

c. All in-house documented training will be forwarded to Custody Administrative Services for filing.

- All other training records will be maintained at the Sheriff's Training Center.

B. FACILITY TRAINING PLAN

1. The Facility Training Program shall be reviewed and developed annually by the Facility Training Officer(s), in conjunction with the Custody Services Bureau Advisory Training Committee and approved by the Facility Training Manager. The Advisory Training Committee is composed of the following:

    a. Facility Training Program Manager (Administrative Lieutenant)

    b. Facility Commander

    c. Facility Training Coordinator (CAS Sergeants)

    d. Special Events Response Team (SERT) Training Coordinator

    e. Facility Training Officers

2. The Facility Training Officer(s) and the Advisory Training Committee shall meet at least quarterly to review the progress of the training program and to resolve any problems that may arise. The Facility Training Coordinator in the Custody Services Bureau Administrative Services Unit will keep a written record of these meetings on file in the Custody Administrative Services.

3. The Facility Training Program shall include, but is not limited to:

    a. Job specific training

    b. In-service training

    c. Facility operations, policies, procedures and updates

    d. Legal updates

4. The Facility Training Program is developed, evaluated and updated based on an annual needs assessment that identifies current job-related training needs. These training needs are as follows:

    a. Position requirements

    b. Professional development

    c. Current detention issues

    d. New theories, techniques and technologies

5. When conducting the annual needs assessment, the Facility Training Officer(s) shall obtain information about the training plan from the following sources:

    a. Observation and analysis of job components

b. Staff surveys regarding training needs

c. Reviews of agency/facility operations

d. Staff reports

e. Evaluations and findings from sources within and outside the jurisdiction

f. Feedback from trainees

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.04.04
	RELATED ORDERS: CCC Policy 1.06.61 – Use of Force	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-26-18 **REVIEW DATE:** 07-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Training and Standards	**SUBJECT:** Special Event Response Team (SERT) Operations	

I. POLICY

A. A "Special Event Response Team" will be utilized for those events/critical incidents that require a specialized tactical team deployment in order to minimize dangers to inmates, staff, and public and to maintain the good order and security of the Detention facility.

B. SERT is tasked with coping with critical incidents or special events in a Detention Facility.

C. The SERT unit is a team possessing specialized equipment and tactical training designed to neutralize a dangerous or potentially dangerous situation within departmental standards.

II. PROCEDURE

A. ORGANIZATION

1. The SERT unit is made up of the following:

a. SERT Sergeant

- The SERT Sergeant supervises all aspects of the SERT unit and reports directly to the Facility Commander.
- The SERT Sergeant is responsible for the selection, training, supervision of SERT members, planning, scheduling of SERT events, and the inspection, inventory and operating condition of specialized equipment.
- Additional SERT support Sergeant(s) may be assigned at the discretion of the Facility Commander.

b. Team Leader

- The SERT Team Leader is either a Sergeant or Deputy selected by the SERT Sergeant and Facility Commander. The SERT

Team Leader is responsible for those duties as directed by the SERT Sergeant and assumes all the duties of the SERT sergeant in that individual's absence.

c. Assistant Team Leaders

- The SERT Assistant Team Leaders will assist the Team Leader with all duties as directed by the SERT Sergeant/ Team Leader.

d. Team Member

- The SERT Team Member is a Deputy who will perform all the duties and tasks as directed by the SERT Sergeant/Team Leader.

A. SPECIAL EVENT RESPONSE TEAM (SERT) TRAINING

a. 40 hours of training annually, which at least 8 hours are specifically related to emergency unit assignment.

b. This training shall minimally include the following categories:

- Use of Force Parameters
- Security Procedures
- Search and Seizure Techniques
- Weaponless Defense
- Weapons Training (Lethal and Non-Lethal)
- Proper Application of Restraint Devices
- Crowd Control/Riot Control
- Chemical Agents

B. EQUIPMENT AND UNIFORMS

1. Weapons and munitions will be maintained in the armory with the following exceptions:

a. Tasers

b. Pepperball Delivery System

c. FN303 Launcher

2. SERT safety equipment will be maintained in the secured storage lockers, located within the Facility.

3. K9s that are trained and certified in article location (narcotics, weapons, etc.) are

authorized for use in the detention facility, with prior approval by the Facility commander.

a. Inmates will be physically separated from and have no direct contact with the K9s.

C. USE OF FORCE

1. All use of force shall be in accordance with CCCSO Policy and Procedure 1.06.61, Use of Force.

   a. The SERT Sergeant will consider that a calculated and planned use of force is feasible in most cases.

D. ACTIVATION

1. SERT can be activated for either pre-planned events or upon the request of a Shift Sergeant or at the direction of the Facility Commander.

2. SERT unit will be deployed to respond to a critical incident/special event in a timely manner. These critical incidents/special events are as follows but are not limited to:

   a. Cell extractions

   b. Disruptive/non-compliant inmates(s)

   c. Refusal to lock down

   d. Crowd control

   e. Evacuation

   f. Escapes

   g. Riots and/or major disturbances

   h. Planned and methodical cell searches

   i. Any other incident/events requiring specialized team response

3. The SERT may be activated to assist the Sheriff's S.W.A.T. Team in the event of a hostage situation/armed barricaded subject in the Detention Facility.

4. Medical Staff will be advised, at the time SERT unit is deployed.

   a. Medical Staff will stage in an area as determined by the Sergeant or designee.

   b. Medical Staff will evaluate and treat inmates and/or staff as necessary.

E. DOCUMENTATION

1. All SERT deployment(s)/ incidents will be documented by:

   a. An Informational Report and a completed Special Event Operation Order Packet. Which will include, but are not limited to the following:

      - Nature of the incident/event
      - Cause of the incident/event
      - Names of the involved persons
      - Actions taken
      - Any use of force
      - Injuries sustained
      - Any property/ evidence, or contraband seized
      - Damage to the Facility or property

2. A Crime Report will be completed if the incident/event involves criminal activity or when deemed appropriate by the SERT Sergeant.

3. An After Action Report will be completed at the completion of the SERT Deployment. Which will include, but is not limited to the following:

   a. Nature of the incident/event

   b. Date/Time of the incident/event

   c. Time of SERT activation and deactivation

   d. Location of incident/event

   e. IR/DR numbers and total overtime involved

   f. Any use of force

   g. Any use of specialized equipment/weapons

   h. Any injuries

   i. Any property damages

   j. Any evidence/contraband seized

F. DEACTIVATION

1. Upon Deactivation of the SERT unit the Sergeant will ensure all equipment, weapons, and munitions are accounted for and returned to their proper storage locations.

2. All necessary documents are completed and routed to the proper channels.

3. When circumstances allow, a debriefing of the incident/event may be conducted with all involved SERT unit members. This may include, but is not limited to the following:

    a. Evaluation of the incident/event

    b. Evaluation of plan and tactics used

    c. Provide forum for input to improve future incident/events

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.04.05
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-14-13 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Training and Standards	**SUBJECT:** Facility Responsibilities Matrix	

I. POLICY

A. The Custody Services Bureau shall maintain a Facility Responsibilities Matrix to ensure accountability for tasks within a specific facility.

B. Accountability and Frequency of Inspections shall be in accordance with the following Facility Inspections Matrix (refer to following page):

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.04.06
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CHAPTER: Training and Standards	**SUBJECT:** Facility Reporting Matrix	

I. POLICY

A. The Custody Services Bureau shall maintain a Facility Inspections and Reporting Matrix to ensure accountability and timely compliance and reporting of custody activities to local state and federal authorities.

B. Reporting of custodial activities shall be in accordance with the following Facility Reporting Matrix (refer to following page):

Custody Services Bureau Inspections and Reports Matrix

Legend

- Reviewing Member
- Accountable Party
- Assisting Parties

	Armory	Blanket Exchange	BOC	Booking Fee Billing Disputes	Booking Tub Audit	Central Control Drill	Clothing Rack Audit	Detention Report	Deputy Station Inventory	Emergency Generator	Employee Evaluations	Facility Court	Facility Inspection	custody Death Report	Fire Drill	Fire Extinguisher	FTO Review	BOC Health Inspection	Housing Unit Inspection	Intake Inspection	BOC Jail Profile Survey	Lock & Keys	Multi-Casualty	BOC Nutritional Health Report	OHO Billing	PepperBall Equipment	Property Bin Audit	Radio/Alarm/Scan/ Duress	Roof & Perimeter	BOC Sanitation	SCAAP Report	Special Diet Report	Staffing Report	custody Death Report	Taser Equipment	Window Lock Check	F-ISO Certification	Exhaust Fan Cleaning	
Reviewed By:																																							**Reviewed By:**
Undersheriff			■					■																															Undersheriff
Assistant Sheriff			■					■			■						■															■							Assistant Sheriff
Division Captain			■	■				■			■		■	■	■		■	■						■						■	■			■			■	■	Division Captain
Facility Cdr.	■	■			■	■	■	■		■	■	■	■		■	■	■	■				■	■			■			■	■		■			■		■	■	Facility Cdr.
Administrative Mgr.						■		■			■			■			■				■		■		■	■		■		■	■		■				■	■	Administrative Mgr.
Logging Activity									■										■	■																	■		Logging Activity
Responsibility																																							**Responsibility**
Assistant Sheriff			■								■																												Assistant Sheriff
Assist. S. Sec.								■																															Assist. S. Sec.
Division Captain			■								■																												Division Captain
Facility Cdr.			■			■					■		■		■																								Facility Cdr.
Administrative Lt.			■								■					■																		■					Administrative Lt.
Operations Sgt.					■						■																							■					Operations Sgt.
Clerical Supr.					■						■																												Clerical Supr.
CAS Sgt.			■			■					■			■			■					■												■		■			CAS Sgt.
CAS Spec.													■	■																				■	■	■			CAS Spec.
CAS Clerk				■																														■					CAS Clerk
Classification Sgt.											■										■																		Classification Sgt.
Classification Clerk																					■				■						■	■							Classification Clerk
ITR Sergeant					■						■																		■										ITR Sergeant
Custody Sergeant					■						■	■			■							■																	Custody Sergeant
S.E.R.T. Sgt.	■																									■									■				S.E.R.T. Sgt.
Central Control																																							Central Control
Sheriff Aide							■																				■												Sheriff Aide
Deputy									■										■	■								■	■			■				■			Deputy
Program Svcs																																							Program Svcs
Food Services																								■						■			■						Food Services
Medical Director																		■					■										■						Medical Director
Chaplain																																		■					Chaplain
GSD										■						■						■															■	■	GSD
DSW		■																																					DSW
Frequency																																							**Frequency**
Each Shift									■										■	■								■	■			■				■			Each Shift
Daily																																							Daily
Bi-Weekly																																							Bi-Weekly
Weekly							■						■													■	■							■					Weekly
Every Two Weeks					■																																		Every Two Weeks
Monthly				■		■		■		■	■														■								■				■		Monthly
Quarterly		■												■	■	■					■																		Quarterly
Trimester	■																					■																	Trimester
Bi-Annual								■																															Bi-Annual
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Biannial																																							Biannial
Quadrennial			■																																				Quadrennial
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	Armory	Blanket Exchange	BOC	Booking Fee Billing Disputes	Booking Tub Audit	Central Control Drill	Clothing Rack Audit	Detention Report	Deputy Station Inventory	Emergency Generator	Employee Evaluations	Facility Court	Facility Inspection	custody Death Report	Fire Drill	Fire Extinguisher	FTO Review	BOC Health Inspection	Housing Unit Inspection	Intake Inspection	BOC Jail Profile Survey	Lock & Keys	Multi-Casualty	BOC Nutritional Health Report	OHO Billing	PepperBall Equipment	Property Bin Audit	Radio/Alarm/Scan/ Duress	Roof & Perimeter	BOC Sanitation	SCAAP Report	Special Diet Report	Staffing Report	custody Death Report	Taser Equipment	Window Lock Check	F-ISO Certification	Exhaust Fan Cleaning	

Section Two-Operations

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.01
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ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Staff-Communications and Transportation	**SUBJECT:** Computer Hardware/Software Problems	

I. POLICY

A. Staff will comply with the following procedures when experiencing problems with facility computer equipment and/or programs that are a part of the Local Area Network or has mainframe access, as defined in this order.

II. DEFINITIONS

A. LOCAL AREA NETWORK (LAN): The data infrastructure system that links together all the personal computers throughout the Sheriff 's Office.

B. PERSONAL COMPUTER (PC): Common terminals which can perform functions (such as electronic mail and file exchange) in addition to Jail Management operations. The personal computers are connected through the Local Area Network. They can be found throughout each County facility (Martinez, West County and Marsh Creek).

C. TRADITIONAL "MAINFRAME" TERMINAL: Computer terminal that can perform operations, such as LJIS, RMS, Internet browsing, etc. These functions are performed via terminal emulator programs or selected Personal Computers.

III. PROCEDURE

A. The following procedures will be used to document and report problems associated with, LAN, personal computers, traditional terminals, monitors, printers, software applications, keyboard, mouse, etc.:

1. Immediately notify Central Control

2. Control will initiate a call out to the appropriate computer technician.

   a. Non-urgent hardware problems will be submitted on a work order and routed to Central Control.

3. Notify Shift Supervisor of problem.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.02
	RELATED ORDERS: CCCSO 1.07.51	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-22-19 **REVIEW DATE:** 08-22-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Staff Communications and Transportation	**SUBJECT:** Departmental Cellular Phones	

I. POLICY

A. Departmental cellular phones will be issued to specific staff and will be utilized as specified in CCCSO Policy and Procedure 1.07.51.

II. PROCEDURE

A. Departmental cellular phones will be issued to the following personnel:

1. Custody Services Bureau Assistant Sheriff
2. Division Captain
3. Facility Commander
4. Other personnel as designated by the Division Captain

B. Personnel who are issued departmental cellular phones shall carry and utilize them in compliance with CCCSO Policy and Procedure 1.07.51.

C. Cellular phones shall be carried at all times while on duty, in an on-call status, or at other predetermined times.

D. Personnel who are issued departmental cellular phones are responsible for maintaining them in operational order. All repairs are to be arranged through Technical Services.

E. The Technical Services Specialist maintains a record of all departmental cellular phones issued to staff.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.03
	RELATED ORDERS: CCCSO 1.05.83 CCCSO 1.07.51	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Staff Communication and Transportation	**SUBJECT:** Facility Communications Systems	

I. POLICY

A. Employees are responsible for proper use of facility communication systems. These systems provide the most common means of contact within or outside the facilities. Rapid and effective communication is provided with proper use.

B. Communicating systems will be used only to conduct official business.

C. When using any communication system, staff will speak distinctly, be courteous, listen carefully and write down messages.

D. Certain systems are electronically sophisticated and require care and diligence in their operation. Employees who are not familiar with the use of a particular system should receive sufficient training prior to use.

E. Staff will immediately report any malfunction of a communication system to a shift supervisor.

F. In the event of facility telephone system failure, communication within the facility will be by radio, except when bomb-threat procedures are in effect.

II. PROCEDURE

A. TELEPHONES

1. The facility telephone system is a component of the County's Centrex system networks. All incoming calls made to the main telephone number and other selected numbers are received by the Operations and Central Control staff at the Martinez Detention Facility and Operations staff at Marsh Creek Detention Facility. The Operation staff is available 24 hours, 7 days a week.

2. The West County Detention Facility telephone system is a component of the PBX Electronic Telephone System. All incoming calls made to the main telephone number and other selected numbers are received by the Operation staff at the West County Jail. The Operation staff is available 24 hours, 7 days a week.

3. In the event that trouble receiving incoming calls is experienced Central Control

will be notified and call out for repairs will be initiated.

a. If the system develops a problem that cannot be resolved or for any emergency telephone repair, contact Central Control. Central Control personnel will contact the on-call Communications Technician through GSD, who will determine what type of maintenance will be required.

b. All requests for telephone repairs, other than those noted above will be made in compliance with Policy and Procedure 2.06.01, "Facility Repair Requests."

Department telephones are provided for Department Business.

Personal multi-message or long distance calls will not be made from Department telephones unless the call is placed collect or billed to the caller's home telephone or personal credit card.

c. Minimize the use of the telephone for personal business to reduce lost employee productive time and unavailability of the telephone line while the call is being made.

d. Staff will access the county Centrex/PBX system when calling any Contra Costa County Agency that is associated with the system.

B. MASTER INTERCOM/PAGING/STENOFON AND ALL-CALL PAGING SYSTEM

1. Master Intercom/Paging System: This system is the module emergency and communication lifeline. It allows for transmission between control and the module housing units.

2. An all-page capability is available in the event of an emergency at Martinez Detention and West County Detention Facilities.

a. All-Call Paging: The all-call page is a one way, overhead PA, communications system that originates from Central Control only. The all-call paging areas cover the core building and the service building areas. The all-call is for emergency and informational announcements.

C. EMERGENCY RADIO SYSTEM

1. In the event of an emergency or an urgent/unusual situation, and conventional means of communication within the facility, i.e., telephones and Master Intercom Systems are disrupted; radios will be used for all communications.

2. The Facility Commander or his/her designee will ensure that all staff assigned to security positions is in possession of a radio.

a. In the event communication with the outside is disrupted, 800 MHz radios will be used to maintain communication with the community and the Sheriff's Office Dispatch Center.

b. 800 MHz radios are designed to allow portable communication with Contra Costa County Sheriff's Office Dispatch. 800 MHz radios are located in Intake, Central Control and Sergeant's office at Martinez Detention Facility and in West County they are located in line-up/communication room.

c. During a crisis situation, Central Control and Operation Sergeant will assume dispatch duties and all correspondence with the network shall go through these areas.

D. ETIQUETTE

1. All communications will be professional and in accordance with CCCSO Policy and Procedure 1.07.51.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.04
	RELATED ORDERS: CCCSO 1.07.51	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-18-19 **REVIEW DATE:** 3-07-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Staff Communications and Transportation	**SUBJECT:** Custody Staff Radios	

I. POLICY

A. Staff will utilize the radio equipment per their Assigned Area in compliance with all Departmental Regulations, and the following procedure.

II. PROCEDURE

A. ACCOUNTABILITY

1. Central Control Staff shall maintain a master inventory list detailing work site location and status of radio equipment.

2. All portable radios, batteries and holders will be marked with identifying numbers.

3. Shift sergeants are responsible for ensuring that all radios, batteries and holders assigned to their areas are stored and used in those assigned areas. All supervisors will have access to radio assignments.

   a. Custody staff shall inventory and account for all radios within their unit at the beginning of each shift and report any discrepancies to the shift sergeant immediately.

4. Absent an emergency or mitigating circumstances, radios, batteries and holders will be returned to the appropriate control area upon completion of shifts.

   a. Storage of radios in personal lockers or vehicles is prohibited.

B. MAINTENANCE

1. Radio Operators discovering malfunctions and damage will submit a JMS Building Maintenance Order.

   a. The Work Order must include the serial number of the radio and accompanying battery.

b. Reporting staff will attach a "Write-it-don't-say-it" form to the radio with the following information:

- Name of operator
- Date
- Radio serial number
- Confirmation that a work order was submitted

c. Reporting staff will deliver the radio to Central Control.

d. Central Control Staff will update their logs to indicate the radio is out of service.

2. Central Control Staff will deliver the radio to CAS during normal working hours.

a. The CAS Specialist will ensure the Work Order has been entered into JMS.

b. The CAS Specialist will facilitate delivery of the radio for repair.

[redacted]

D. PORTABLE RADIO CONTROL AREAS

1. The following have been designated as control areas for portable radios and battery chargers:

a. Operations/Shift Supervisor's Office

b. Custody Sergeants Office

c. Transportation Office

d. Central Control

e. Housing Units

f. Classification Office

g. Intake

h. Custody Administrative Services (CAS)

E. 800 MHz RADIOS

1. 800 MHz radios are equipped with frequencies allowing communications with Sheriff's Office Dispatch and Custody Services Bureau Staff.

2. In the event personnel are assigned to make prisoner transports, they are to be assigned an 800 MHz radio from the Transportation Office.

F. DETENTION DIVISION RADIO CHANNELS

1. Channel 1 [redacted]
2. Channel 2 [redacted]
3. Channel 3 [redacted]
4. Channel 4 [redacted]
5. Channel 5 [redacted]
6. Channel 6 [redacted]
7. Channel 7 [redacted]
8. Channel 8 [redacted]
9. Channel 9 [redacted]
10. Channel 10 [redacted]
11. Channel 11 [redacted]
12. Channel 12 [redacted]
13. Channel 13 [redacted]
14. Channel 14 [redacted]
15. Channel 15 [redacted]
16. Channel 16 [redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.05
	RELATED ORDERS: CCCSO 1.06.54 CSB 2.05.03	
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CHAPTER: Staff Communications and Transportation	**SUBJECT:** Vehicle Control, Maintenance and Cleaning Procedures	

I. POLICY

A. Custody Services Bureau personnel will properly maintain assigned vehicles, ensure the cleanliness of those vehicles, govern and ensure the proper use and security of the assigned vehicles, and when using personal vehicles for official purposes, only do so upon authorization of competent authority.

II. PROCEDURE

A. All personnel assigned to the Custody Services Bureau are directed to maintain the following minimum standards of vehicle security when parking vehicles on or about jail facility grounds.

1. Vehicle keys are to be secured the same as jail security keys. Keys are not to be left unattended and never left in parked vehicles.

2. All vehicles parked on or about jail facility grounds are to be locked and secured.

3. All staff, transportation officers, outside arresting agencies, etc., entering via the vehicle sally port will secure their firearms and ammunition in available gun lockers, or may temporarily secure them in their locked, departmental vehicle trunk, prior to entering the facility.

B. ALL VEHICLES

1. The driver of each vehicle assigned to the Custody Services Bureau is responsible for making sure the gas tank is full, the oil, water and tire pressures are adequate and that all trash is removed after each use.

a. When a deputy is assigned a vehicle at a jail facility, he/she will be responsible for searching the vehicle prior to its use, except in emergencies.

b. Any contraband or debris left in the car is to be reported to the on-duty Shift Supervisor or Facility Commander immediately.

c. The deputy who was assigned the vehicle prior to the discovery of any debris or contraband will be held accountable for it being left in the vehicle, in that it was his/her responsibility to search the vehicle when it was received.

d. The Shift Supervisor/Unit Supervisor shall periodically assign personnel on his/her shift to inspect each Custody Services Bureau vehicle for cleanliness, contraband and adequate supply of gas.

e. The Shift Supervisor or Facility Commander will take the appropriate disciplinary action when contraband or debris is found in a vehicle assigned to the Custody Services Bureau.

f. For Officer Safety reasons, it is the responsibility of all personnel to ensure that our vehicles are clean and free of weapons, contraband and debris.

2. Each week all Custody Services Bureau vehicles will be washed and if needed, waxed. Each section shall be responsible for the care of their vehicles and compliance with this procedure.

C. VEHICLE MAINTENANCE

1. Drivers shall be responsible for checking the vehicle for defects or damage prior to each use. Any discrepancies shall be reported to the on-duty Shift Supervisor prior to using the vehicle.

2. Drivers shall notify a Shift Supervisor in the event maintenance problems are discovered. The Shift Supervisor will be responsible for contacting County Garage personnel to report vehicle discrepancies, and to ensure needed repairs are made.

a. Transportation staff shall be responsible for all vehicles within their unit.

b. Custody Administrative Services will be responsible for all command staff vehicles.

D. VEHICLE ACCIDENT/DAMAGE REPORTING

1. Vehicle accident reporting will be in accordance with CCCSO Policy and Procedure 1.06.54, Vehicle Accident Reporting.

E. EMERGENCY VEHICLE USAGE CONTROL

1. Key Control

a. All keys shall be maintained in as follows:

- Transportation Unit keys shall be stored in the Transportation Office.

- Command staff vehicles keys shall be stored in the CAS Sergeant's Office.

b. Each shift shall inventory and log the keys as received from the previous shift.

F. PARKING

1. All transportation vehicles should be parked in the following areas:

   a. Vehicle Sally Port North Door parking area

   b. South-West parking lot of Martinez Detention Facility

G. GAS CARD

1. Located in each county vehicle, or on its assigned key ring is a gas/diesel fuel card (Voyager) used for obtaining fuel products at various county facilities and selected contract stations.

2. Custody Administrative Services will maintain one (1) additional Voyager card in the event no vehicle fuel card(s) are available.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.06
	RELATED ORDERS: CSB 2.05.01, 2.08.10	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-18 **REVIEW DATE:** 11-28-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Staff Communications and Transportation	**SUBJECT:** Use of Transportation Unit Vehicles by Custody Line Staff	

I. POLICY

A. Vehicles assigned to the Transportation Unit may only be used by Transportation personnel, unless otherwise approved by the Transportation Sergeant or Facility Commander or designee.

II. PROCEDURE

A. Personnel who wish to use any vehicle assigned to the Transportation Section, must receive permission from the Transportation Sergeant or Administrative Lieutenant prior to such use.

1. Keys for custody staff vehicles can be located [redacted]

B. If permission cannot be obtained, and the need is urgent, the Facility Commander or designee may approve the use of a transportation vehicle provided that a note is left for the Transportation Sergeant, stating the following:

1. Date and time of use
2. Person driving and vehicle identification
3. Destination and purpose
4. How long vehicle is expected to be used
5. Vehicle condition if breakdown occurs

C. When not in use, transportation vehicle keys will be secured [redacted]

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.05.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-05 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Staff Communications and Transportation	**SUBJECT:** Facility Official Mail Procedure	

I. POLICY

A. All incoming and outgoing facility mail will be processed through the facilities mailrooms.

B. Employees shall not use the departmental address for personal mail, or process personal outgoing mail through the facility mailroom.

C. Inmate mail will be processed Monday through Friday, excluding holidays.

II. DEFINITION

A. TRANSMITTAL MAIL: Mail between Contra Costa County departments that are transported by County employees.

III. PROCEDURE:

A. INCOMING U.S. MAIL

1. Mail will be delivered to Administration by the United States Post Office, Monday through Friday excluding weekends and holidays.

2. Sheriff's Aides assigned to the lobby will sort all incoming mail and deliver to the respective areas as follows:

   a. All command and supervisory staff mail will be delivered to the mailboxes in the administration boxes in the 1st Floor Mailroom.

   b. All mail for line staff will be forwarded to the employee's mailbox for delivery to the employee.

   c. All mail addressed to a specific section will be delivered to the day shift supervisor in that section or placed in the corresponding mail.

   d. Mail for any area located in the facility, will be hand delivered to that

particular area or placed in the corresponding mailbox.

B. OUTGOING U.S. MAIL

1. Outgoing staff and inmate mail shall be deposited in designated bins in the 1st Floor Mailroom.

2. Proper zip codes will be included on all outgoing mail.

C. TRANSMITTAL MAIL

1. Representatives from each county department or section will be responsible for forwarding all transmittal mail to central services for distribution and delivery.

2. Incoming Transmittal mail will be processed in the same manner as U.S. mail.

3. The Transportation Unit will deliver all transmittal mail between facilities.

4. Custody Administrative Services will be responsible for the pick up and delivery of all administrative mail and payroll.

    a. Blue payroll envelopes will be delivered promptly to Sheriff's Administration at 651 Pine Street, 7th floor.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.06.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:**03-26-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Physical Plant	**SUBJECT:** Facility Repair Requests	

I. POLICY

A. General Services Department (GSD), Department of Information Technology (DoIT) and Global Tel-Link (GTL) work requests will be expedited and completed in a timely manner to ensure the efficient operation of the facility.

II. PROCEDURE

A. Routine repair requests shall be submitted in the following formats:

1. GSD Work Requests:
   a. Deputies will report routine maintenance/repair requests to the Shift/Ops Sergeant or CAS Specialist.
   b. The Shift/Ops Sergeant, or CAS Specialist will place a work order request online [redacted]
   c. Each work request can only contain one issue/location per work order. Do not list multiple items on one work order. This will ensure that work will be tracked and performed more accurately.
   d. Work request descriptions must contain:
      - Location (i.e. "D-Module")
      - Description of issue
      - Description of type of work to be performed (i.e. Fix, Replace, Estimate, etc.)
   e. The CAS Specialist will review and approve/deny facility work orders daily.

2. DoIT Work Requests:
   a. DoIT work requests are for STAFF phones only.
   b. All DoIT requests will be emailed to CAS who will place the work request on the DoIT online site [redacted]

3. GTL INMATE phone Work Requests will be forwarded to the CAS Specialist for coordination with the GTL field service representative.

4. Vandalism
   a. Any work orders submitted that involve vandalism shall be submitted with the corresponding incident report.
   b. If the vandalism is under $250.00, the cost shall be incurred by GSD.

B. EMERGENCY REPAIR

1. Emergency repairs are classified as equipment in need of repair that if delayed for any amount of time would result in a compromise of facility security or presents a hazard or life-threatening situation to any member within the facility.

2. The Shift Supervisor will be notified of the emergency repair request.

3. The Shift Supervisor will assess and determine if immediate repair is necessary.

   a. If immediate repairs are necessary the Shift Supervisor will contact Central Control who in turn will make the appropriate notification(s).
   b. All emergency work requests must be called into GSD, DoIT, GTL, without the use of the on-line service request systems.

   c. If immediate repairs are not necessary, the Shift Supervisor or his/her designee will follow the procedure in regards to routine work requests.

C. MARSH CREEK DETENTION FACILITY (MCDF)

1. The MCDF Commander will serve as the liaison between the facility and GSD.

2. The Shift Supervisor will be responsible for reviewing and submitting all work orders to GSD, DoIT and GTL for action.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.06.02
	RELATED ORDERS: MJS 1280	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Physical Plant	**SUBJECT:** Facility Plant Maintenance	

I. POLICY

A. The General Services Department (GSD) will provide a preventive maintenance program for building systems and equipment in order to minimize out of service time due to failure, as well as, reduce costly breakdown repair.

B. Building Maintenance Division is responsible for:

1. Maintenance and repair of the Custody Services building structures

2. Upkeep of exterior grounds

3. Maintenance and repair of interior walls (including glazing and common hardware items)

4. Repair and replacement of floor coverings

5. Repair and replacement of machinery and systems inherent to the building, and other special purpose equipment.

C. Services may be provided by county forces, by a vendor under contract with GSD, or a combination of the two.

D. For specifics, see the applicable Memorandum(s) of Understanding (MOU), between the Contra Costa County Sheriff's Office and General Services Department, regarding the specific detention facilities.

II. PROCEDURE

A. The Building Maintenance Division of the General Services Department will be notified of needs pertaining to operation, maintenance, repair and remodeling of structure, utility systems, refrigeration equipment, and mechanical equipment controls, which include setting and adjustments of thermostats.

1. If General Services Department/Building Maintenance Division cannot fix the

malfunction in a relatively short period of time, or if the repairs are beyond their expertise, they will notify the Facility Commander.

2. Upon agreement with the General Services Department, the Facility Commander will contact the original equipment manufacturer or his/her designated representative, who will carry out the repairs.

B. A maintenance team composed of a plumber, electrician, carpenter, lead painter and an operating engineer will be assigned to the facility.

1. This team will provide services to the facility during normal working hours.

2. Service during nights, weekends and holidays will be provided on an emergency basis and can be obtained by contacting the on-duty GSD employee.

C. Building Maintenance Division will be responsible for exterior window cleaning and other windows that require special equipment to clean. This cleaning will be minimally performed once per year.

D. The power generator and standby batteries will be tested at least every week for effectiveness and will be repaired as necessary to ensure reliability in time of need.

1. The Building Maintenance Division is responsible for landscape maintenance.

a. The Building Maintenance Division is responsible for picking up litter within the enclosed areas of the perimeter of the building, vehicle sally ports and all areas around the building.

E. To ensure proper operation of maintenance equipment within the facility, the Building Maintenance Division will be responsible for the inspection and service of all maintenance equipment.

1. The Appropriate GSD Supervisor will maintain a record of all inspections and service.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.06.03
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Physical Plant	**SUBJECT:** Emergency Cell Water Shut-Off	

I. POLICY

A. In the event that any cell floods, water to the cell shall be shut off until repairs can be completed.

B. All housing units are equipped with floor drains and emergency water shut-off valves.

C. In instances of flooding severe enough to damage building contents, the housing unit deputy will notify the Custody Sergeant who in turn will contact Building Maintenance.

II. PROCEDURE

A. EMERGENCIES DUE TO NATURAL DISASTERS AND MAJOR INCIDENTS

1. In the event that an earthquake or other major incident occurs causing a major failure in the facility water system or intrusive flooding, custody staff should take the following steps upon direction from the Facility Commander or designee or a General Services Department employee:

   a. The housing unit deputy on the flooding module shall notify all inmates housed in the cells to refrain from using their toilets and/or sinks.

   b. The housing unit deputy on both the flooding and problem housing units will shut off all water valves to the housing unit cells through the appropriate access panels.

      - Valve locations can be located in the Emergency Water Shut Off book in the Deputy Station.

2. The Shift Supervisor shall ensure General Services Department crews respond or have provided specific instructions on how to stabilize the situation until their arrival.

3. The shift supervisor will be advised.

4. Water service shall be restored as soon as possible.

B. EMERGENCIES DUE TO INTENTIONAL ACTS

1. Should it be determined that flooding is occurring as a result of intentional acts of sabotage, the following measures shall be implemented.

    a. The inmate shall be moved to an appropriate holding cell until their cell is deemed safe.

2. The Shift Supervisor will be advised.

3. Should the inmate continue flooding the cell, the following procedures will be followed:

    a. The inmate will be advised that the water supply to his cell will be restricted.

    b. Water to the holding cell will be manually turned off via the corridor chase.

    c. Water shall be turned on at the beginning of each shift for a period of ten (10) minutes.

        - Prior to feeding, water will be turned on for five (5) minutes for the inmate to wash their hands, etc.

4. The deputy assigned to the housing floor will supervise the turning on and off of water to prevent flooding.

5. The housing unit deputy will provide detailed information regarding the incident(s) to include the following:

    a. Incident Report

    b. Housing unit Redbook notes

    c. JMS Documentation of turning off/on the inmate’s water supply.

6. The Incident Report will be forwarded to the Facility Commander at the end of each shift, via the Shift Supervisor, advising of the time the water is turned on and off.

    a. One (1) copy will be placed in the inmate's booking file.

7. Inmates shall not remain on restricted water usage longer than necessary to ensure they will not continue flooding.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.01
	RELATED ORDERS: MJS 1029, 1032 P.C. 6031.1 (b) National Detention Standards (NDS)	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-31-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** General Fire Safety	

I. POLICY

A. The Custody Services Bureau is to provide a system of fire prevention and control through the use of efficient fire protection services and equipment, utilization of appropriate fire safety codes and regular monitoring to ensure the safety of all personnel, inmates and visitors.

B. These systems and controls will be reviewed annually and updated as needed; and shall include, but not be limited to the following:

1. An adequate fire protection service.

2. Fire drills at least once each quarter.

3. Quarterly testing of equipment refer to CSB Policy 2.06.02 Facility Plant Maintenance and 2.07.02, Fire Equipment-Description and Location.

4. A biennial inspection by a qualified outside fire inspector.

5. A monthly inspection by the facility Fire/Life Safety Officer.

6. A weekly inspection by a qualified departmental staff member.

7. Placement of adequate fire protection equipment throughout the facility.

    a. Refer to CSB Policy 2.07.02, Fire Equipment-Description and Location.

8. Use of various types of automatic fire alarm systems to provide early warning for the presence of fire and/or smoke.

    a. Refer to CSB Policy 2.07.02, Fire Equipment Description and Location.

9. A written facility wide evacuation plan which includes:

    a. Floor plan layout.

b. Location of exits.

c. Evacuation routes.

d. Location of fire plan.

- Refer to CSB Policy 2.07.03 through 2.07.05, Relocation and Evacuation Plan.

II. DEFINITIONS

A. FIRE/LIFE SAFETY OFFICER: The Custody Administrative Services Lieutenant or designee who is responsible for overseeing and assisting with fire safety, prevention and inspection tasks.

B. QUALIFIED DEPARTMENTAL STAFF MEMBER: An individual who has received training by the Fire/Life Safety Officer, to conduct the weekly facility fire/safety inspections.

III. PROCEDURE

A. FIRE PREVENTION

1. The most important aspect of an effective fire protection program is fire prevention and compliance with fire and safety codes.

2. Personnel should always be aware of fire hazards such as overloaded plug outlets, improper trash storage or expended fire extinguishers.

3. All personnel should make fire prevention a basic part of their daily routine.

4. To augment the fire safety plan, all personnel shall:

   a. Properly store combustible materials.

   b. Prevent hazardous electrical situations.

   c. Report fire hazards immediately.

   d. Check fire-fighting equipment regularly.

5. Specifications for the selection and purchase of furnishings must indicate acceptable requirements for fire and safety performances of materials prior to purchase by the supply section, pursuant to Title 19, of the California Code of Regulations.

B. FIRE SAFETY INSPECTIONS AND PLAN RESPONSIBILITY

1. The facility Fire/Life Safety Officer shall be responsible for facilitating inspections and ensuring the adequacy of the fire plan.

2. The Fire/Life Safety Officer is responsible for facilitating weekly and comprehensive monthly inspections.

3. The Fire/Life Safety Officer will train other staff members, designating them as Qualified Departmental Staff Members for the purpose of conducting weekly inspections.

4. Only the Fire/Life Safety Officer may conduct the monthly inspection. These inspections include, but are not limited to, the following:

    a. Fire equipment.

    b. Smoke detectors, sprinklers.

    c. Extinguishers, fire hoses and cabinets, standpipes.

    d. Fire hazards.

    e. Fire prevention practices.

    f. Use, storage and disposal of hazardous materials.

5. Fire Drills

    a. The Fire/Life Safety Officer will coordinate fire drills that will be conducted quarterly on each shift at the Martinez Detention Facility, the West County Detention Facility and the Marsh Creek Detention Facility, as directed by the Facility Commander or designee.

    b. The Facility Commander will maintain a record of all fire drills (January, April, July, October). Evacuation of inmates for fire drills will be at the discretion of the Facility Commander or designee, based on safety and security considerations of the facility.

6. Key and Lock Inspections

    a. The Facility Commander will designate a sergeant assigned to dayshift to conduct an inspection of all evacuation doors in the facility on a trimester basis.

        - The facility carpenter/locksmith will accompany the sergeant or designee throughout the inspection.

        - This inspection will include cycling the mechanism and manually opening the doors using the evacuation keys.

    b. The sergeant will complete a report documenting the inspection.

    c. The sergeant will forward the report to the Facility Commander.

7. Fire Extinguishers

   a. The facility engineer will inspect all fire extinguishers on a quarterly basis.

   b. The facility engineer will complete a report documenting the inspection.

   c. The facility engineer will forward the report to the Facility Commander.

   d. Any staff member using a fire extinguisher will place it in the Sergeants office with a write-it-don't-say it describing its original location and the request for servicing.

      - The shift supervisor will ensure that a work order is submitted to the stationary engineer for the extinguisher to be serviced.

      - The shift supervisor will ensure that a replacement extinguisher has been issued at the original location until servicing has been completed.

8. Inspection Reports

   a. The Fire/Life Safety Officer shall submit the monthly inspection reports to the Facility Commander by the 10th of the month for the previous month's inspection.

   b. The Facility Commander will then advise the appropriate personnel or entity responsible for the affected area(s) to take corrective action and report back, indicating the completed and/or initiated corrective action taken.

   c. The Fire/Life Safety Officer or designee shall complete and submit weekly inspection reports to the Facility Commander.

   d. All inspection reports will be returned to the Administrative Lieutenant.

      - The Administrative Lieutenant will then advise the personnel or entity responsible for the affected area(s) that need corrective action.

      - The supervisor or designated staff member will then report back to the Administrative Lieutenant, indicating the completed and/or initiated corrective action taken.

   e. The Administrative Lieutenant will follow-up on all pending corrective action and maintenance repairs until each deficiency is completed.

   f. Completed reports shall be maintained in Custody Administrative Services for at least two years

C. AUTHORITY AND RESPONSIBILITY DURING A FIRE

1. During an emergency, the Facility Commander, or highest-ranking officer on duty, will have authority for decisions made affecting the facility, the emergency and security.

2. Upon arrival of the fire department, the on-scene firefighters shall assume command of the fire scene.

D. BASIC GUIDELINES FOR ALL PERSONNEL

1. Emergency evacuation routes will be posted throughout all detention buildings to facilitate evacuation of inmates, visitors and staff.

    a. The travel distance of all exits shall be in compliance with the National Fire Safety Code and certified by the State Fire Marshal and/or designated local authority.

2. Fire doors will not be blocked or tied in an open position.

3. All housing units have emergency lighting installed to provide sufficient illumination to egress areas and stairwells during emergencies.

4. All facility staff will be trained in the operation of all written emergency plans prior to entry on duty.

5. All facility staff will be trained in the location and implementation of fire-fighting equipment and how to use it.

6. All facility staff will be trained in the location of fire exits and evacuation routes.

7. All fire incidents will be documented in an Incident Report or Crime Report (Arson) when necessary.

8. The fire department will be summoned for all designated fire incidents, depending on the severity of the incident.

    a. The Facility Commander or designee will determine if the fire department response should be cancelled.

9. Medical attention will be administered as necessary.

E. FIRE AND SMOKE ALARMS AT MDF and WCDF

1. Central Control, upon receiving a fire/smoke alarm, will immediately notify the Housing Deputy of the affected area.

    a. If the alarm is in a general area, they will advise an Escort Deputy.

    b. At the Deputy's direction, Central Control will activate the abort button on the fire control panel.

2. The deputy will quickly inspect the area for signs of smoke and/or fire

   a. The deputy will maintain voice contact with Central Control at all times.

   b. If voice contact is lost, Central Control will notify a Shift Sergeant immediately.

3. The deputy will advise Central Control of their status upon completing their assessment.

F. FIRE AND SMOKE ALARMS AT MCDF

1. The Housing Unit Deputy, upon receiving a fire/smoke alarm, will immediately notify the Shift Supervisor / Operations staff of the alarm.

2. The deputy will quickly inspect the area for signs of smoke and/or fire

   a. The deputy will maintain voice contact with the Shift Supervisor/Operations staff at all times.

3. The deputy will advise the Shift Supervisor/Operations staff of their status upon completing their assessment.

G. DISCOVERY OF SMOKE AND/OR FIRE AT MDF OR WCDF

1. Should a fire be discovered, Central Control will announce a “929" over the facility all call system, preceded by a single tone.

2. All unaffected housing units will lock down.

3. All available Sheriff’s Aides will respond to Central Control to assist as needed.

   a. **MDF**: One Sheriff’s Aide should remain in the lobby until all visitors have been cleared from the facility.

4. Central Control staff will immediately call Sheriff’s Dispatch or the local fire district when a staff member confirms a fire.

   a. Central Control staff will provide the following information:

      - Name and address of the facility where the fire equipment is to respond.
      - That an alarm has been received
      - The type of alarm
      - That the alarm has been investigated and confirmed to be legitimate
      - Location of the fire (kitchen, locker room, building number).

- If any medical emergencies exists.
- Staging areas and/or command post location (if applicable)

b. Central Control staff will ensure the Facility Commander or designee is aware of the fire and its nature.

- The Facility Commander or designee will designate a staff member to wait for the arrival of fire personnel and escort them to and from the location of the occurrence.

c. Central Control staff will note all notifications and times pertaining to requests for Fire Department assistance in the Central Control Log.

5. If the fire is discovered in a room, the door to the room should only be closed if the staff is certain that there is no one in the room.

6. The deputy should assess the scene and determine:

a. If they can immediately contain the fire with available extinguishers/fire hoses

b. If an evacuation is necessary and advise Central Control.

H. DISCOVERY OF SMOKE AND/OR FIRE AT MCDF

1. All unaffected housing units will lock down.

2. The Shift Supervisor/Operations staff will immediately call Sheriff's Dispatch or the local fire district when a staff member confirms a fire.

a. The Shift Supervisor/Operations staff will provide the following information:

- Name and address of the facility where the fire equipment is to respond.
- That an alarm has been received
- The type of alarm
- That the alarm has been investigated and confirmed to be legitimate
- Location of the fire (kitchen, locker room, building number).
- If any medical emergencies exists.
- Staging areas and/or command post location (if applicable)

b. The Shift Supervisor will ensure the Facility Commander is aware of the fire and its nature.

- The Facility Commander or designee will designate a staff member to wait for the arrival of fire personnel and escort them to and from the location of the occurrence.

c. Operations staff will note all notifications and times pertaining to requests for Fire Department assistance in the Central Control Log.

3. The deputy should assess the scene and determine if an evacuation is necessary and advise Central Control.

I. EVACUATIONS

1. Evacuations will be conducted in accordance with the following CSB Policies and Procedures:

   a. CSB 2.07.03, MDF Relocation and Evacuation Plan

   b. CSB 2.07.04, WCDF Relocation and Evacuation Plan

   c. CSB 2.07.05, MCDF Relocation and Evacuation Plan

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.02
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:**	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Fire Equipment Description and Location	

I. POLICY

A. The Custody Services Bureau will provide adequate fire detection and protection equipment for use in detecting and fighting fires.

B. All personnel shall be trained in the use and location of fire-fighting equipment present at all Contra Costa County Detention Facilities.

C. Although the fire suppression equipment and systems are inspected routinely as part of the fire/life safety program, all personnel are charged with the responsibility of reporting deficiencies of the equipment.

II. DEFINITIONS

A. TYPES OF FIRE EQUIPMENT:

1. Ansul fire protection: A dry chemical system, containing 98% bio-chemical soda, which activates when extreme heat is detected.

2. Dry chemical extinguisher: Dry chemical agent rated to extinguish Class A, B or C fires.

3. Water extinguisher: Contains pressurized water to extinguish common combustibles such as paper, wood or cloth. Not to be used on flammable liquids, metal or electrical fires.

B. FIRE CLASSIFICATIONS:

1. Class A Fire: Ordinary combustibles, such as paper, wood, and cloth, which can be controlled with large quantities of water.

2. Class B Fire: Fires in flammable liquids, such as gasoline, fuel oils, grease, or alcohol, where a blanket effect in smothering the fire is essential.

3. Class C Fire: Fires resulting from electrical equipment where the use of an

electrically non-conductive extinguishing agent is of primary importance.

4. Class D Fire: Certain combustible metals such as magnesium, titanium, potassium or sodium. Controlled with agents specially designed for the material involved. In most cases, they absorb heat and cool the material below its ignition temperature.

C. NFPA: National Fire Protection Association.

III. PROCEDURE

A. FIRE-FIGHTING AND DETECTION EQUIPMENT DESCRIPTION:

1. Equipment available within the facility consists of:

a. Ansul-Automatic dry chemical extinguisher system in main kitchen.

b. Automatic water sprinkler systems located throughout the facility, activated at 165°.

c. Pre-Action sprinkler systems located on all facility housing units.

d. Fire Extinguishers:

- 10# dry chemical extinguishers Class a,b,c.

e. Fire Racks:

- Located throughout the facility and one on each inmate housing unit.
- Each fire hose cabinet contains:
  - [redacted]
  - 10# dry chemical extinguishers Class a,b,c.

f. Point of Control (POC) Automatic Fire Alert Systems

- Smoke Detectors in all cells
- LED indicator; integral with detector.
- Inactivated: Flashing, low brightness.
- Activated: Steady, full brightness.
- Tamper proof mounting in all detention cells and inmate areas.

g. Thermal Detectors MDF Only

- 135°F; fixed temperature with rate of rise element.

2. Housing Units

a. Activation of any alarm initiation device within the housing unit shall:

- Annunciate on the housing unit smoke alarm annunciator.
- Register (Annunciation and printed record) fire alarm condition at Building Management Control Center and at Central Control.

B. SEQUENCE OF OPERATION AND EQUIPMENT STANDARDS:

1. General

a. The Fire Detection and Alarm System utilizes local fire alarm annunciation at all inmate housing units and is interfaced to a central monitoring station located in the Central Control. A computerized controller process monitors and dispatches all signals and data to the central control station. Central Control is the primary monitoring and control point for all fires.

b. The entire system has both primary and secondary power sources for reliability and redundancy.

c. Secondary monitoring locations are provided to assure timely and accurate notification of alarm in the event of failure or trouble at the primary location. Secondary locations are at:

- Engineering Office
- Each Housing Unit

2. Housing Unit Alarm Initiation

a. Any alarm signal within a housing unit will initiate the following indications:

- Primary:
  - An audible/visual signal on the graphic display panel at Central Control.
  - Martinez Detention Facility has a visual signal on the light display panel at the fire control panel located in Central Control and a printed alarm record showing time and detailed location.
  - An audible/visual signal on the annunciator panel in the Housing Unit.
- Secondary:

- An audible/visual signal on the fire control panel at the Building Management Center.

- Acknowledgment of an alarm or trouble signal will silence the audible signal and change the flashing visual signal to steady. Time of acknowledgment shall be recorded on the printers at Central Control.

C. EQUIPMENT MAINTENANCE AND INSPECTIONS

1. The Administrative Services Lieutenant, Custody Administrative Services and the Fire/Life Safety Officers will coordinate with the General Services Department (GSD) and the local Fire Marshal to ensure the following equipment maintenance and inspections are accomplished in compliance with Local, State, and Federal Regulations:

a. Fire Extinguishers-Dry

- Service yearly or after use

b. ***Stand Pipe Risers***

- Inspect Semi-Annually

- Service every 5 years

c. Automatic Sprinklers

- Inspect Quarterly

- Service every 5 years

d. Water Flow Devices

- Test Quarterly

- Service every 5 years

e. Supervisory Devices

- Test Quarterly

- Service every 5 years

f. ***Fire Hoses in Racks***

- Unrack/Reload Annually

- Test at 5 years initially then every 3 years.

g. Fire Hydrants

- Test Annually

h. Manual Fire Boxes

- Test Annually

i. Smoke Detectors

- 100 % Test Annually

j. Heat Detectors

- Recurring Test
- 100% Test Annually

k. Annunciators

- Test Annually

l. Control Panels

- Test lamps, LEDs, Fuses
- Primary and Secondary Power

m. Fire Alarm

- Test Semi-Annually

n. Emergency Lighting

- Quarterly

D. MDF EMERGENCY EQUIPMENT LOCATION

1. FIRE HYDRANTS

a. Northeast side of building (Ward Street)

b. East side of building (Willow Street)

c. Southeast side of building (Mellus/Willow Streets)

d. Southwest side of building (Mellus/Pine Streets)

e. West side of building (South Street)

2. FIRE HOSES

a. Maintenance Shops

- Emergency Shut Off: Food dry storage room next to kitchen.

b. Hallway next to Custodian's Office

- Emergency Shut Off: Food dry storage room next to kitchen.

c. M Module Program Room

- Emergency Shut Off: 2nd floor hallway in closet next to T3 visiting room

d. T Module Program Room

- Emergency Shut Off: In closet, single side, A Module sally port

e. A, B, C Module

- Emergency Shut Off: In closet, single side, A Module sally port

f. Main hallway across from

- Emergency Shut Off: Just inside the door of

g. Q Module Program Rooms

- Emergency Shut Off: West mechanical room

h. Booking Desk

- Emergency Shut Off: Inside the door of west mechanical room.

i. Q Module visiting

- Emergency Shut Off: Closet at foot of room #1 Q Module visiting room.

j. 2nd floor hallway across

- Emergency Shut Off: Closet at foot of stairwell to F Module visiting.

k. D, E Module Program

- Emergency Shut Off: Inside D Module janitor room, D/E hallway.

l. F Module, Old Deputy

- Emergency Shut Off: Inside D Module janitor room, D/E hallway

3. FIRE ALARM BOXES

a. First Floor Locations

- Sally port to loading dock
- Stairwell east side
- Stairwell west side
- Maintenance room
- Boiler room
- Intake
- Escort inner sally port
- Main Lobby
- East elevator
- West elevator

b. Second Floor Locations

- Stairwell east side
- Stairwell west side

c. Third Floor Locations

- Stairwell east side
- Stairwell west side

4. PORTABLE FIRE EXTINGUISHERS

a. 1A10BC dry chemical fire extinguishers are provided in each fire hose cabinet. Additional fire extinguisher locations are also listed.

b. First Floor Location

- M Module, Deputy Station
  - Dry 2A10BC and 3A20BC
- Q Module, Deputy Station
  - Dry 2A10BC

- T Module, Deputy Station
    - Dry 2A10BC
- Admin Office, Beside Door
    - Dry 3A40BC
- Courts Holding, Deputy Station
    - Dry 3A20BC
- Hall, Maintenance, Hose Cabinet
    - Dry 4A60BC
- Hall, East Storage, Hose Cabinet
    - Dry 4A60BC
- Hall, Main Courtyard & Q Area, Hose Cabinet
    - Dry 4A60BC
- Hall, Visitor Stairwell, Main Entrance
    - Dry 4A60BC
- Intake, Booking, Hose Cabinet
    - Dry 4A60BC
- Classification Office Area
    - Dry 3A20BC
- Kitchen, South End
    - Dry 2A10BC
- Kitchen, North Entry Door
    - Dry 40BC
- Laundry, North End
    - Water Pressure 2 2A
- Laundry, South End
    - Dry 3A40BC

- Courts, Mechanical Room, beside door
  - Dry 4A60BC
- Courts, Entrance, B-side door
  - Dry 3A20BC
- Courts, Entrance, B-side door
  - Dry 3A20BC
- Courts, Lobby, Between both Court doors
  - Dry 3A40BC
- Jury Room Hall, South end
  - Dry 3A20BC
- Boiler Room, South end
  - Dry 2A10BC
- East Mechanical Room, North end
  - Dry 2A10BC
- Switch Gear Room, South end
  - CO 2 5BC
- Operating Engineer Office, beside door
  - Halon 10BC
- Electronic Shop, beside door
  - CO 2 5BC
- Maintenance Shop, East wall
  - Dry 2A10BC
- Maintenance Shop, West wall
  - Dry 3A40BC
- Maintenance Shop, Welding cart
  - CO 2 5BC

- Admin Electrical Room, beside door
    - CO 2 5BC
- West Mechanical Room, beside door
    - Dry 3A40BC
- Seven (7) spares, East Mechanical Room
    - (5) Dry 3A40BC
    - (2) CO2 5BC

c. Second Floor Locations

- M Module, Visitor room, hose cabinet
    - Dry4A60BC
- M Module Office - 2nd floor - 2M21
    - Dry 3A20BC
- M Module, Storage Room
    - Dry 3A20BC
- Q Module, Storage Room
    - Dry 2A10BC
- Q Module, Visitor room 1, hose cabinet
    - Dry 4A60BC
- T Module, Visitor room 2, hose cabinet
    - Dry 4A60BC
- T Module, Storage Room
    - Dry 2A10BC
- Central Control, North end
    - Halon 10BC
- Computer Room, beside door
    - Halon 10BC

- Hall, Central Control area, hose cabinet
    - Dry 4A60BC

d. Third Floor Locations

- A Module, Visitor Room 3, hose cabinet
    - Dry 4A60BC
- A Module, Deputy Station
    - Dry 2A10BC
- B Module, Visitor Room 3, hose cabinet
    - Dry 4A60BC
- B Module, Deputy Station
    - Dry 2A10BC
- C Module, Visitor room 3, hose cabinet
    - Dry 4A60BC
- C Module, Deputy Station
    - Dry 2A10BC
- D Module, Visitor Room 4, hose cabinet
    - Dry 2A40BC
- D Module, Storage Room 3D10
    - Dry 2A10BC
- D Module, Control Room
    - Dry 2A10BC
- D Module, Control room
    - Dry 3A40BC
- D Module, Control Room
    - Water Stream WP 40
- E Module, Visitor room 3, hose cabinet

- Dry 4A60BC

- E Module, Deputy Station
  - Dry 2A10BC
- F Module, Deputy Station, hose cabinet
  - Dry 2A10BC
- F Module Nurses Station
  - Dry 2A10BC
- F Module, Storage Room, F-Iso
  - Dry 2A10BC
- F Module, Preaction Station
  - Dry 3A40BC
- F Module, Storage between rooms 2 & 3
  - Dry 4A60BC
- F Module, Storage between rooms 30 & 31
  - Dry 3A40BC
- F Module, Medical Director's Office
  - Dry 2A10BC
- Electrical Room, beside door, East
  - CO 2 5BC
- Electrical Room, beside door, West
  - CO 2 5BC
- West Stairwell
  - Dry 3A40BC

e. <u>Fourth Floor Locations</u>

- A Module, Mechanical Room
  - Dry 2A10BC

- B Module, Mechanical Room
    - Dry 2A10BC
- C Module, Mechanical room
    - Dry 2A10BC
- D Module, Storage Room
    - Dry 2A10BC
- E Module, Mechanical Room
    - Dry 2A10BC
- E Module, Mechanical Room (4E04)
    - Dry 3A40BC
- East Stairwell
    - Dry 3A40BC
- Library, beside elevator
    - Dry 3A40BC

5. PREACTION STATIONS

a. FIRST FLOOR WEST

- [redacted]
- Shuts off water flow to fire sprinkler heads located in:
    - West mechanical room
    - Armory
    - Vehicle sally port
    - Booking area
    - Courts holding
    - Transportation
    - Visitor lobby and bathrooms
    - Staff locker area

- Weight room
- Classification
- Administration area, hallway and sally port

b. FIRST FLOOR EAST

- [redacted]
- Shuts off water flow to fire sprinkler heads located in:
  - Kitchen area
  - DSWs office
  - Custodian's office
  - Shop area
  - East mechanical room
  - Laundry
  - First Floor Sally ports
  - T Module Housing Unit
  - Loading dock
  - Kitchen supply store room
  - Janitorial supply and commissary room.

c. SECOND FLOOR WEST

- [redacted]
- Shuts off water flow to fire sprinkler heads located in:
  - CAS
  - Central Control
  - Computer room
  - Visitor stairwells to F, M, E and D Modules
  - All hallways second floor west side.

d. SECOND FLOOR EAST

- [redacted]
- The room is identified by 10# dry chemical extinguishers Class a, b, c.
    - a sprinkler controls sign.
- Shuts off water floor to fire sprinkler heads in:
    - Assistant Division Commander's Office
    - Accounting Office
    - Health Services office
    - Visitor stairwells to A, B and C Modules
    - Visiting rooms M & T
    - All hallways and other rooms second floor east.

e. THIRD FLOOR WEST

- [redacted]
- Shuts off water flow to fire sprinkler head in:
    - Schools area
    - F, E & D Module hallways
    - Inmate services offices
    - D, E & F sally ports
    - Storerooms and electrical panel rooms on the third floor west.

f. THIRD FLOOR EAST

- [redacted]
- Shuts off water flow to fire sprinkler heads in:
    - Library
    - Chaplain's offices

- Storage room
- Mental Health Director’s office
- Storage room and sally ports for A, B and C

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.03
	RELATED ORDERS: MJS 1029, 1032	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-26-18 **REVIEW DATE:** 1-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** MDF Relocation and Evacuation Plan	

[redacted]

- [redacted]
- [redacted]
- [redacted]
  - [redacted]
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  - [redacted]
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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.04
	RELATED ORDERS: MJS 1029, 1032	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** WCDF Relocation and Evacuation Plan	

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.05
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 11-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** MCDF Relocation and Evacuation Plan	

[redacted]

[redacted]

[redacted]

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.06
	RELATED ORDERS: CCCSO 1.06.61 (Use of Force)	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Response and Requests for Assistance	

I. POLICY

A. All requests for assistance will be handled appropriately and according to type of request and priority.

B. Emergency assistance requests scan pen alarms and emergency panic alarms will be handled as emergency situations that will interrupt the normal operations of the facility.

C. Deputies will respond to all alarms and requests to render necessary aid and maintain facility security.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

F. RADIO DURESS, PANIC AND SCAN ALARMS

[redacted]

2. Central Control will announce all alarms by depressing the tone button one time and announcing, “Attention in the Facility: 10-33 Duress alarm at (location).”

[redacted]

- [redacted]

- [redacted]

- [redacted]

G. [redacted]

- [redacted]

- [redacted]

- [redacted]

- [redacted]

- [redacted]

[redacted] [redacted]

- [redacted]

- [redacted]

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 11-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Facility Power Failure	

I. POLICY

A. The Custody Services Bureau will maintain security and control of inmates during a power failure and to make every effort to ensure the safety of visitors, staff and inmates.

B. Each facility will have equipment necessary to maintain essential lights, power, and communications in an emergency.

C. All power generators shall be tested weekly and other emergency equipment and systems shall be tested for effectiveness on a quarterly basis.

D. Equipment will be repaired or replaced if necessary.

E. Emergency equipment such as standby lighting, batteries, firefighting apparatus, communication systems and alarms shall be checked at least quarterly to ensure their reliability.

II. DEFINITIONS

A. POWER FAILURE: Any loss or break in electrical service.

B. EMERGENCY POWER GENERATOR: Back up power source in event of power failure.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.08
	RELATED ORDERS: MJS 1029 (6) (B)	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-26-19 **REVIEW DATE:** 09-03-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Disturbances/Riots and Hunger Strikes	

I. POLICY

A. Disturbances/riots, violent attacks on staff or inmates, and hunger strikes will be handled immediately to ensure the control and de-escalation of violence, to prevent personal injury to staff, volunteers and inmates, prevent property damage to the facility, and to minimize negative impacts on the general operation of the facility.

II. DEFINITIONS

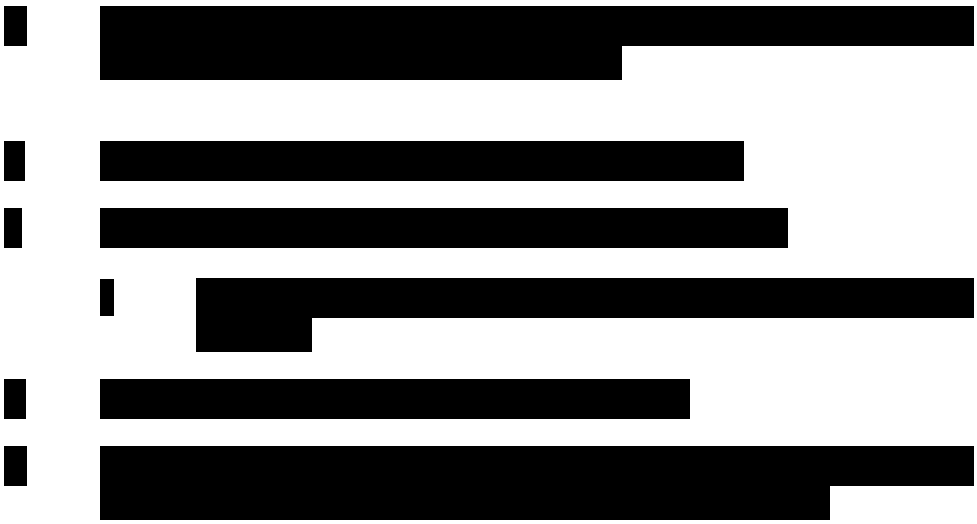
A. DISTURBANCE/RIOT: Any tumultuous acts by inmates to cause willful disorder and confusion.

B. MINOR DISTURBANCE: A disturbance, involving a minimal number of inmates, which can easily be controlled when immediately acted upon.

C. MAJOR DISTURBANCE: A disturbance, involving numerous inmates, where the situation requires additional resources from outside the facility.

D. HUNGER STRIKE: An act, of one or more inmates, refusing to eat as a protest for or against a cause or demand.

[redacted]



B. PREVENTION

1. Disturbance in a detention setting can often be prevented by being able to interpret and act on changes in the jail atmosphere and/or behavior patterns of the inmates.

2. It is better to prevent, rather than react to, behavior which can quickly escalate. Some of the things staff can do to prevent disturbances within the facility are:

   a. Create and maintain good communications with all inmates regarding plans, programs and procedures.

   b. Staff members who are knowledgeable of policies and procedures create trust and confidence from inmates.

   c. Well informed staff members are better able to relay appropriate information to the inmates in a timely manner.

3. Open communications between staff members and supervisors will increase the reporting of unrest among the inmates.

   a. Staff briefings will include a reasonable time allotment for all staff members to contribute information to the group and the supervisor.

   b. Supervisors will make themselves available to staff members regularly.

4. Morale among inmates is maintained in a variety of ways. The objective in maintaining morale is to develop a feeling that the inmate's basic needs are being adequately met in such matters as food, clothing, medical attention, etc. Equally important to the inmates is a sense of being treated fairly and justly; having the opportunity to appeal to authority in the righting of grievances; and a belief that their basic welfare is a matter of concern to management.

5. The administration of fair and even-handed discipline is fundamental to maintaining an orderly facility. This cannot be accomplished if some staff

members are inexcusably lax and others are needlessly harsh. Rules, regulations, policies and procedures for the administration of discipline must be specifically spelled out. All staff and inmates must be informed of the policies.

6. Prompt and positive handling of inmate complaints and grievances is essential in maintaining good morale. A firm "no" can be as effective as granting a request in reducing an individual's tensions, particularly if the inmate feels the problem has been given genuine consideration by the appropriate officials and if given a reason for denial. An individual can live with "yes" or "no" but a "maybe" or "perhaps" creates frustration. Equivocation and vague answers create false hopes and increase a person's anger when nothing is done.

7. Food complaints are one of the primary causes of disturbances in a detention facility. Facility food must maintain a proper diet, be wholesomely prepared and attractively served in clean surroundings. It is important that cold food is served cold and hot food is served hot.

8. Clothing is another issue where many complaints are heard. Ill fitting clothing, improperly laundered, poor issue or exchange procedures could be very costly to the facility. It is important that inmates be provided the appropriate clothing.

[redacted]

[redacted]

E. HUNGER STRIKE

1. In the event of a hunger strike by inmate(s), the shift supervisor or Facility Commander will attempt to resolve the situation by communicating with the inmate(s) to determine the problem and a possible solution.

2. Should the hunger strike continue for more than 24-hours, medical staff will be advised and will check the physical well-being of the inmate(s) daily, to determine medical care needed.

3. All suspected hunger strike situations shall be documented in an incident report.

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.09
	RELATED ORDERS: MJS 1029 (6) (B) CCCSO 1.06.46, 1.06.61	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 11-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Hostage Plan	

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.10
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Civil Disturbances	

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.11
	RELATED ORDERS: CCCSO 1.06.23 CCCSO FOG Bomb Threat Checklist	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Bomb Threat and Explosions	

[redacted]

[redacted]

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[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.12
	RELATED ORDERS: MJS 1029 (6) (D)	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Earthquake Plan	

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.13
	RELATED ORDERS: P.C. 409.3, 409.5 Contra Costa County Multi-Casualty Plan CCCSO FOG Multi-Casualty Incident Checklist	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Multi-Casualty Disaster Plan	

I. POLICY

A. Detention Facility staff will handle multi-casualty/disaster incidents in an expedient and professional manner to ensure the safety of staff and inmates and to prevent damage to the Facility.

II. DEFINITIONS

A. Multi-Casualty/Disaster Incident - An emergency incident involving any number of injured persons which may over-utilize the rescue and medical resources of the responsible agencies within a portion of the County. An incident could be a fire, earthquake, bomb, epidemic, riot or mass arrest.

B. External Facility Disaster - An incident which affects both a facility and the surrounding community.

C. Internal Facility Disaster - An incident which occurs in and is isolated to a Detention Facility.

D. Triage - The process of sorting casualties on basis of the urgency and type of condition presented.

E. Incident Commander - The highest ranking Sheriff's Department Officer at the scene. He/she may delegate this responsibility to a more qualified Law Enforcement Officer. In the absence of a Law Enforcement Officer from the jurisdiction in which the incident occurs, the line of authority will be any other Law Enforcement Agency, or the Fire Department in whose area the incident occurs.

F. Command Post - The location designated by the Incident Commander from which all incident command functions are directed.

G. Medical Advisory Alert - A "warning" communicated to Sheriff's Central Dispatch by the Incident Commander/Shift Supervisor, or designee, that signifies that an incident has occurred or a condition exists which may tax the resources of the affected area. Based

upon information received from on-scene personnel Sheriff's Central Dispatch will begin Multi-Casualty Plan implementation protocol.

III. PROCEDURE

A. DECLARATION OF MULTI-CASUALTY INCIDENT

1. The declaration of a multi-casualty incident is the responsibility of the Incident Commander. The declaration will follow the Medical Advisory Alert.

2. Specific assignments and responsibilities under the Incident Command System (ICS) are outlined in the County **MULTI-CASUALTY PLAN**, a copy of which is kept in Central Control, the Operations Sergeant's Office, MCDFs Facility Commander's Office and Division C.A.S. Updates and answers to questions can be channeled through OES - County Office of Emergency Services. The primary County coordinating agency for response to earthquakes, floods, hazardous materials incidents and other major emergencies. OES provides off-site coordination and resources for casualty identification and tracking, and releasing of post incident public information.

3. First-in units---law enforcement, fire and ambulances---will function as they would in their normal day-to-day operations. In addition, they will request additional resources and immediately begin triaging all casualties.

B. TRIAGE OVERVIEW

1. Initial casualty triaging is to be done by first-in responders at the scene of the incident with minimal casualty movement.

2. Initial triage will take priority over initial emergency care treatment.

3. All casualties are sorted according to the seriousness of the injury and tagged to establish priority of treatment and transportation.

4. Triage categories will be identified by colored tags:

   a. White tag - D.O.A. (Dead on Arrival)

   b. Red Tag - Major injury

   c. Green Tag - Minor injury

5. Personnel performing triage are to give a triage examination based on the "start" method and attach the appropriate colored tag.

   a. They are not to fill out the tags.

6. The emergency care administered by triage teams is to be restricted to assisting in maintaining an airway, controlling severe hemorrhaging and maximizing perfusion of heart, lungs and head.

7. Personnel assigned to treat casualties are to give a secondary examination and fill

out the triage tag on all persons deemed triaged casualties.

C. CONDUCTING TRIAGE

1. The mission on initial triage will be assigned to first-in responders (custody or medical staff).

2. All persons involved in the incident are to be quickly examined and tagged using the three categories of (1) D.O.A., (2) Major, and (3) Minor.

3. Non-ambulatory casualties are to be triaged where they lie, unless they are in an unsafe area which requires their immediate movement.

4. Triage tags of the appropriate color are to be attached to casualties near the head.

5. Initial triage personnel will stay with a casualty only to administer the necessary critical care treatment of:

   a. Opening an obstructed airway

   b. Positioning unconscious casualties in the coma position (Placing them on their side). Use cervical spine precautions on all unconscious persons.

   c. Stopping arterial bleeding.

   d. Administering CPR if staff is available (internal incidents).

6. Medical staff will be responsible for tagging casualties.

7. At the completion of triage, triage teams are to change their assignment to treatment teams or become treatment teams as indicated.

8. Paramedics will provide additional treatment during internal Facility disasters.

9. Priority for transportation will be given to all casualties tagged red who have received a secondary examination.

10. If a casualty triage category is wrong or changes during treatment, the original tag that has not been filled out is to be removed and discarded and a new tag attached.

11. If the triage tag has been filled out by a treatment team and the triage category changes, it is not to be removed but folded in half. A new triage tag indicating the new triage category is to be attached.

D. INITIAL TRIAGE AREAS

1. The triage location will vary from site to site in the Facility.

2. It shall be up to the Operations Supervisor to assess the extent of damage to the physical structure and make a determination as to the area suitable for treatment, yet physically safe for occupancy.

E. EXTERNAL FACILITY DISASTER

1. In the event of a major disaster involving activation of the Contra Costa County Emergency Operations Center, medical incidents would be prioritized by the Medical Operations Center with ultimate authority from the Director of Emergency Services.

2. Medical priorities would be based upon an assessment of medical needs and available resources.

3. In injury disasters that extend beyond the physical limits of the Facility, but include the Facility; notify the Office of Emergency Services of the extent of damages and involvement and number of injuries.

4. The medical staff in the Facility will triage and treat injuries to the fullest extent of in-house capabilities.

5. If additional custody personnel are required at the location of the incident, it will be the Operations Supervisor's option to lock down the unaffected portions of the Facility and have the second Housing Unit Deputy respond to the incident.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.14
	RELATED ORDERS: MJS 1012 P.C. 4012	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07/10/2018 **REVIEW DATE:** 07/10/2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Emergency Housing	

I. POLICY

A. In an emergency, when it has been determined that the facility is uninhabitable, inmate housing and associated services will be provided at one or more alternate locations for control and continuous custody of the inmates.

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.15
	RELATED ORDERS: Title 8 CCR, Section 3203 (a)	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Injury and Illness Prevention Program	

I. POLICY:

A. A comprehensive Employee Injury and Illness Prevention Program (IIPP) shall be developed in order to promote safe work practices, provide a safe work environment and ensure compliance with applicable health and safety regulations within the Contra Costa County Sheriff's Custody Service Bureau.

B. The program shall provide for the identification and control of hazards, the determination of accident causes and the instruction of employees in safe work practices.

II. PROCEDURE

A. All workers, including managers and supervisors, are responsible for complying with safe and healthful work practices.

B. The Custody Services Bureau Assistant Sheriff will ensure that all workers comply with these practices by including one or more of the following practices:

1. Informing workers of the provisions of the IIPP.

2. Evaluating the safety performance of all workers.

3. Recognizing employees who perform safe and healthful work practices.

4. Providing training to workers whose safety performance is deficient.

5. Disciplining workers for failure to comply with safe and healthful work practices.

C. The Division Captain shall be responsible for establishing an Employee Injury and Illness Prevention Program (IIPP) within their facility.

D. The IIPP may be reviewed by all department employees.

1. The IIPP may be located in each facility's CAS or administrative office.

E. The IIPP shall conform to OSHA Title 8 guidelines as well as all other applicable Health and Safety Codes and Regulations.

F. The IIPP shall contain a description of the program authority, responsibility, organization and administration and shall include the following minimum components.

1. Creation of a Site Safety Committee to administer the IIPP

2. Hazard Communication and Training

3. Evaluation of Workplace Hazards

4. Investigation of Employee Injuries.

5. Mitigation of Unsafe or Unhealthy Conditions

6. Evaluation of Inspection Reports

7. Employee Compliance System

8. Records Keeping and Documentation of Employee Injuries/Accidents

G. The IIPP shall contain such optional components as are deemed necessary to ensure the safe and healthy maintenance of the workplace. Examples of optional components that may apply are:

1. A Respirator Protection Program

2. Blood borne Pathogens Plan

3. Infectious Disease Plan

4. Hazard Communication Program

H. The IIPP shall be reviewed on an annual basis by the Site Safety Committee and shall be revised as necessary to ensure that its content is accurate, timely and effective.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.16
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-30-11 **REVIEW DATE:** 08-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Hazardous Materials Program	

I. POLICY

A. The Custody Services Bureau will implement and maintain an up-to-date Master Products inventory and their locations on Material Safety Data Sheets (MSDS), and appropriate training within each work unit as required by the Hazardous Substances Information and Training Act of 1983, and as specified in the Sheriff's Office Hazardous Communication Program, which will be documented and reviewed semi-annually. The review will be maintained with the (MSDS) Master file.

B. Disposal of all hazardous/infectious liquid and solid waste shall conform to the appropriate federal, state and local ordinances.

II. DEFINITIONS

A. FLAMMABLE MATERIALS: Liquids with a flash point below 100°F.

B. TOXIC MATERIALS: Substances that through chemical reaction or mixture can produce possible injury or harm to the body by entering through the skin, digestive tract, or respiratory tract (e.g., zinc chromate paint, ammonia, chlorine, antifreeze, herbicides, pesticides).

C. CAUSTIC MATERIALS: Substances that can destroy or eat away by chemical reaction (e.g., lye, caustic soda, sulfuric acid).

D. HAZARDOUS WASTE: A waste or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may either:

1. Cause, or significantly contribute to, an increase in serious irreversible or incapacitating reversible illnesses.

2. Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

E. INFECTIOUS WASTE

1. Infectious waste is considered to be the following:

a. Laboratory wastes include cultures of etiologic agents that pose a substantial threat to health, due to their volume and virulence.

b. Pathologic specimens, including human or animal tissues, blood elements, excreta and secretions that contain etiologic agents, and attendant disposable fomites.

c. Equipment, instruments, utensils, food containers and other disposable materials that are likely to transmit etiologic agents from the rooms of inmates that have been isolated because of suspected or diagnosed communicable disease.

d. Human dialysis waste material including arterial lines and dialyzed membranes.

e. Any other material that in the determination of the facility medical staff, presents a significant danger of infection because it is contaminated with, or may reasonably be expected to be contaminated with, etiologic agents.

F. ETIOLOGIC AGENTS: A type of microorganism, helmink, or virus that causes, or significantly contributes to, the cause of increased morbidity or mortality of human beings.

III. PROCEDURE

A. The following procedures will be used to assure that employees of the Custody Services Bureau and contractors working at Contra Costa County Detention Facilities will be informed about the properties and hazards of chemical substances present at both facilities.

1. Hazardous Substance Control

a. All hazardous substances stored or used at any Contra Costa County Detention Facility are to be cleared through the Facility Detention Service Worker Supervisor prior to such storage or use.

b. A Material Safety Data Sheet (MSDS) must accompany each hazardous substance that is to be stored or used at Contra Costa County Detention Facility.

- All Material Safety Data Sheets (MSDS) will be forwarded to Bureau Administrative Services for entry into a facility hazardous material information log.

- The CAS Specialist will forward the MSDS back to the appropriate department head.

    - General Services Department Safety Officer.

- Detention Services Worker Supervisor.
- Medical Staff Director

- The department head shall be responsible for placing the MSDS in a master log.
  - The master log will include information pertaining to the location of all hazardous material/substances.
  - A copy of the (MSDS) will be submitted to the Fire Department.
  - The Master file will include a comprehensive up-to-date list of emergency phone numbers i.e. Poison Control and Fire Dept.
  - Department employees shall be permitted viewing access to these records.

B. LABELS

1. Containers of products that contain hazardous substances will not be accepted from the supplier unless they are labeled with the name of the hazardous substance and appropriate hazard warnings.

2. When a product is transferred to a portable container in the workplace, the portable container must also be labeled. The label on the portable container may be handmade so long as it is legible and shows the product name as shown on the original container, has an MSDS, and lists the hazards associated with the product.

3. The responsible person within each work unit or, in their absence, a supervisor is responsible for assuring that containers, original and portable, are properly labeled.

C. INVENTORY CONTROL

1. All flammable, toxic and caustic materials received into the facility shall be inventoried by the requesting unit (Detention Service Workers, GSD, etc.).

   a. Inventory control shall consist of accurate recording of amount received by date and disbursement by amount and location receiving the substance.

2. All storage locations of flammable, toxic and caustic substances (storerooms, cabinets, lockers, etc.) shall maintain an accurate inventory control sheet showing amount stored therein.

D. TRAINING

1. The Sheriff's Office Safety Officer will develop a training outline that complies

with the Sheriff's Office Hazard Communication Program.

2. During employee orientation, new employees shall be given group instruction from the outline on the purpose, content and use of MSDS.

3. New employees will also be required to read and be familiar with the current Hazardous Substance Policy and Procedures.

4. Annual updates will be provided at the shift level by the training staff at each facility, following the outline used for new employees.

E. INMATE ACCESS TO HAZARDOUS SUBSTANCES

1. All flammable, toxic and caustic materials will be stored in secure areas that are inaccessible to inmates, in accordance with all applicable laws and regulations.

2. Inmates shall not possess or use such items unless under the constant supervision of qualified staff.

F. HAZARDOUS LIQUID WASTES

1. All hazardous liquid waste shall be stored in appropriate containers and removed from the facility by a state registered material or waste hauler, under the direction of the GSD plant manager.

   a. Responsibility for, and title to, all hazardous liquid wastes remains with the county until the chemical composition of the liquid has been changed to render it harmless by either burial or incineration.

G. HAZARDOUS SOLID WASTE:

1. All hazardous solid waste shall be placed in appropriate double-bagged, marked containers and removed from the facility by a state registered material or waste hauler, under the direction of the GSD plant manager.

2. Responsibility for and title to all hazardous solid waste remains with the county.

   a. Hazardous solid waste may be buried.

H. INFECTIOUS SOLID WASTE:

1. All infectious solid waste shall be double-bagged in appropriately marked bags and removed from the facility by Health Services Division (HSD).

2. Health Services Division is responsible for the disposal of all contaminated medical waste, and the appropriate disposition of contaminated linens and/or trash pursuant to contractual agreement.

3. Health Services Division is also responsible for the disposal of used protective disposable kits. Personnel using the protective kit shall notify HSD upon removal so that disposal can be accomplished in a timely manner.

I. FLAMMABLE STORAGE/WASTE:

1. Flammable liquids shall be stored in appropriately marked fire-safe cabinets.

    a. An inventory control sheet shall be maintained for all flammable liquid storage locations.

2. Flammable refuse (rags, etc.) shall be stored in appropriately marked, covered, fire-safe containers.

    a. The containers shall be emptied and cleaned daily.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.17
	RELATED ORDERS: Title 8 CCR, Section 3203 (a) MJS 1219	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Respiratory Protection	

I. POLICY

A. All staff assigned to the Custody Services Bureau shall receive annual training on the proper use of disposable respirators.

B. Such training shall include a respirator fit test and information on when, where and how to obtain a respirator when such is needed.

II. PROCEDURE:

A. In order to provide staff protection from contact with airborne pathogens, disposable respirators will be readily accessible in all Sheriff's detention facilities.

B. Use of respirators is required whenever contact with airborne pathogens is possible and where engineering controls such as ventilation and negative airflow isolation and/or administrative controls limiting are not adequate to ensure protection.

C. NIOSH/MSHA approved (Type N-95) quarter face, negative pressure, air purifying disposable particulate respirators shall be utilized. A sufficient variety of sizes and manufacturers brands may be provided to ensure that a comfortable and adequate fit are possible for all staff.

D. Staff shall receive annual training in the acquisition and use of the respirator. Such training shall be conducted during annual TB testing process and shall include the following components:

1. A health status assessment interview shall be conducted to ensure that each staff member is physically able to work while wearing a respirator.

    a. The health status assessment shall be documented and shall be placed in each employee's division file.

    b. If concerns arise as a result of the assessment, the employee shall be referred for a medical evaluation prior to being fit tested and approved to use a respirator.

2. A qualitative fit test of each staff member shall be conducted by trained and qualified personnel.

    a. The fit test shall include the opportunity to wear the respirator in a normal air environment, proper placement and fit checking, the verification of a tightly fitting face piece and odor threshold screening with isoamyl acetate.

3. Information shall be provided to staff on the capabilities and limitations of the respirator, where they can be obtained, and use and care of the equipment.

E. Documentation of the Medical Evaluation, Fit Test and Respirator Training shall be accomplished on the attached form and shall upon completion, be filed in the employee unit files at each jail facility.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.18
	RELATED ORDERS: CDC Guidelines: Recommendations for Prevention of HIV Transmission in Health Care Settings. CCCSO 1.06.34, Appendix 10	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Infection Control	

I. POLICY

A. Adoption of the most current CDC (Center for Disease Control) guidelines as a basis for isolation precautions and infectious waste disposal provides the most reliable means to prevent the transmission of disease between people.

B. Since medical history and examination cannot reliably identify all persons infected with HIV (Human Immune-deficiency Virus) or other blood born pathogens, blood and body fluid precautions should consistently be used for all people.

II. DEFINITIONS

A. Body Fluids - Blood, semen, drainage, pus, saliva, mucus, urine, feces.

III. PROCEDURE

A. CUSTODY STAFF

1. Use gloves when touching:

   a. Blood and body fluids

   b. Mucous membrane

   c. Non-intact skin

   d. Items or surfaces soiled with blood and body fluid

   e. When responding to an emergency call where there is a possibility of contact with blood.

2. Use a N95 Rated mask for suspected or diagnosed infectious respiratory disease, i.e., active tuberculosis. A private room will be required until the inmate is considered not infectious.

a. Masks are to be worn by staff inside the room.

b. The inmate is to wear a mask when leaving the room.

3. CPR Devices

a. Use CPR masks with protective exhalation valves for CPR. They are stored in blue cases in locked boxes on the housing unit - one near the Deputy Station and two in upper tiers.

b. Medical Services supplies clean masks for the modules.

4. Handwashing

a. Hands should be washed immediately and thoroughly if contaminated with blood or body fluid for a minimum of (15) fifteen seconds.

b. Wash even after removing gloves with the special soap provided by Health Services.

5. Searches

a. Gloves should be worn during pat searches to prevent possible infestation with lice, scabies or fleas.

6. Living Area Searches

a. Wear gloves and visually inspect all areas before using hands. Move slowly.

B. DETENTION SERVICE WORKERS

1. Disinfectants and chemical germicides:

a. Commercially available disinfectants and germicides are effective in inactivating HIV.

b. Those products that are approved for "hospital disinfectants" by EPA are tuberculocidal can be used for disinfecting and decontaminating surfaces and instruments.

c. Large spills can be flooded with a disinfectant and then cleaned up.

C. Housekeeping:

1. Environmental surfaces such as walls, floors and other surfaces are not associated with the transmission of HIV infection.

2. Cleaning schedules by module workers:

a. Upon inmate transfer or release

b. When soiling occurs

c. Regular routine

3. Use the disinfecting solution issued by Support Services.

D. Laundry

1. Risk of disease transmission is considered negligible by CDC and therefore "contaminated linen" designation is no longer needed.

2. All soiled linen will be placed in laundry carts on each module.

3. Linen contaminated with lice, scabies and/or fleas is to be red-bagged with a water dissolvable inner liner.

4. Laundry workers should wear gloves and an apron when transferring dirty linen into washing machines.

E. Kitchen

1. Risk of disease transmission is considered negligible by CDC, therefore disposable dishes and utensils are not necessary. All germs are killed by the 180 degree dishwasher water.

2. Kitchen workers are to wear gloves and hairnets when preparing food and when handling dirty dishes.

3. Kitchen workers are to be monitored by the Housing Deputy and kitchen staff. Inmates are to be infection free, i.e., no diarrhea, vomiting, fever, cold, open sores, etc.

F. Infective or Contaminated Wastes

1. CDC studies indicate that there is no evidence that most hospital waste is any more infective than residential waste or that hospital wastes cause disease in the community as a result of improper disposal.

G. Plumber

1. Precautions should be taken with the following items when there is a possibility of contact with blood or body fluids:

a. Gloves

b. Eye wear - plastic goggles for extreme splash

c. Apron or coveralls as needed

d. Mask for extreme splash

e. Trash infected blood and body fluids are to be put in a red bag labeled "trash".

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.19
	RELATED ORDERS: CSB Policy and Procedure 2.07.07	
ISSUE DATE: 09-03-07 **REVISION DATE:** **REVIEW DATE:** 08-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** Diesel Fuel Storage Tank	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.07.20
	RELATED ORDERS: NDS	
ISSUE DATE: 12-26-12 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Safety and Emergency Procedures	**SUBJECT:** ICE Transportation Emergencies	

I. POLICY

A. The Custody Services Bureau shall ensure that all inmates and detainees are safely transported while in the custody of the Office of the Sheriff. In the event of an emergency (Escape, medical emergency, facility evacuation etc), staff will utilize relevant policy and procedure and sound officer safety principles to ensure public safety, inmate/detainee safety and security and staff safety and security.

II. PROCEDURE

A. Emergency Detection / Response

1. While transporting ICE Detainees, staff will remain vigilant for any threat to the safety and security of all detainees.

2. If an emergency is detected (escape attempt, medical emergency, traffic collision) staff will take steps consistent with sound officer safety principles and existing policy to mitigate the emergency.

3. Once the emergency is mitigated, staff will notify Sheriffs Dispatch of the following:

   a. Nature and location of the emergency.

   b. Amount and type (medical, mechanical etc) of assistance needed, if any.

   c. Any threat or danger to the public or responding personnel.

4. Once the appropriate assistance has arrived and the emergency has stabilized, staff will seek guidance from supervisors as to the disposition of the detainees.

5. The incident will be documented as needed.

B. Supervisors and Managers Responsibilities

1. Supervisors and managers will consider the following concerns when resolving transportation emergencies:

   a. Vehicular escorts if needed.

   b. Additional personnel as needed.

   c. Mechanical assistance as needed.

   d. A replacement vehicle if required.

   e. Notification of appropriate allied agencies.

   f. Consideration of alternate housing.

   g. Notification of ICE as appropriate.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.01
	RELATED ORDERS: CCCSO 1.05.43, 1.05.44, 1.07.54, 1.07.55	
ISSUE DATE: 01-12-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 11-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Computer Access and Security	

I. POLICY

A. All information contained within the Facilities computers is confidential.

B. Staff authorized to use facility computers will adhere to all Sheriff's Office policies regarding the release of information.

C. Unauthorized personnel shall not be permitted to view information that is derived from or displayed on facility computers.

II. PROCEDURE

A. ACCESS/SECURITY PASSWORDS

1. Only authorized personnel will be allowed to access information from Detention Facility Computers.

2. Access to facility computers will be gained through employee security passwords.

   a. Employees are responsible for the security of their personal password.

   b. If it any time an employee feels that the security of their password has been compromised the employee shall change their password as soon as possible.

B. COMPUTER ENTRIES

1. Any use of E-Mail, Instant Messaging, and /or entries into JMS shall be in accordance with the following CCCSO Policy and Procedures:

   a. 1.05.43, Sheriff's Office Propriety and Decorum

   b. 1.05.44, Courtesy and Bearing

   c. 1.07.54, E-mail and Internet Access.

C. COMPUTER SYSTEM INTEGRITY

1. No personnel shall be permitted to add or remove software or hardware without the express written permission of the Technical Services Division.

    a. Addition of software to access Internet services, etc. is a direct violation of Sheriff's Policy and could cause significant damage to Sheriff's Office Local Area Networks.

2. No Deputy or civilian employee will teach any unauthorized person the operation of the computer.

3. No inmate (including inmate workers) will be allowed in any area having a computer terminal unless accompanied by staff or while being interviewed by a Deputy or Medical/Mental Health staff member.

D. PRIVACY AND SECURITY OF INFORMATION

1. Deputies working their assigned locations will not allow inmates to congregate around or lean on their desk while information about other inmates is displayed on their computer screen.

    a. All information displayed on the computer screen is confidential and inmates will not be allowed to view this information.

2. Personnel must close out any information displayed on their computer screen before leaving their assigned workstations.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.02
	RELATED ORDERS: P.C. 4570.5 P.C. 4571 CLETS Policies, Practices and Procedures Manual Section 1.6.1 D (2)	
ISSUE DATE: 01-13-04 **REVISION DATE:** 08-31-16 **REVIEW DATE:** 08-31-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Site Security Clearances	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER: 2.08.03**
	RELATED ORDERS: CSB Policy 2.08.02, 2.17.09, 2.18.12	
ISSUE DATE: 1-13-04 **REVISION DATE:** 2-21-17 **REVIEW DATE:** 11-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** CSB Photo and Visitor Badges	

I. POLICY

A. All personnel assigned or visiting the Custody Services Bureau as a condition of their professional duties, will display an authorized CSB photo badge or CSB visitor badge prior to entering any security area of the detention facility.

B. Social Visitors visiting inmates do not fall under this policy or process and shall never be issued a CSB badge. For social visitor procedures refer to CSB Policy 2.17.09.

II. DEFINITIONS

A. APPROVED IDENTIFICATION: A Contra Costa County Sheriff's Office badge or a state, county, city department-issued identification card containing the name, picture and signature of the individual for whom it was issued and authorizing person's signature.

CSB PHOTO BADGE: A jail security badge issued by CSB Custody Administrative Services (CAS) to authorized sheriff's office and contracted custody employees, which grants the employee facility access, and indicates the employee is a full-time or part-time employee, permanently assigned to work in the CSB facilities.

B. CSB VISITOR BADGE: A jail security badge issued by Sheriff's Office Custody Staff to a visiting member of the sheriff's office, sheriff's contracted service, vendor, or other authorized person requiring access to the jail for a professional purpose who do not fall within the scope of section (B).

III. PROCEDURE

A. CSB BADGE DESIGNATION, DISPLAY AND ISSUANCE

1. 1) All CSB Photo badges and 2) Visitor badges for Martinez and West County Detention Facilities are color-coded. Colors are used to designate an employee or visitor's service category and type of access into the facility:

[redacted]

2. CSB badges will be displayed prominently to the front of the outer clothing approximately chest high.

3. Deputies will challenge all non-uniformed persons without properly displayed badges or those who are in an area other than what is indicated by the color-coded.

4. Any violation that cannot be resolved immediately at the location will be referred to a Shift Supervisor.

5. Off-duty personnel shall check-in with the Lobby personnel prior to entering the security area of the facility, unless going to or from a work assignment at the facility.

[redacted]

[redacted]



C. CSB VISITOR BADGE ISSUEANCE

1. Visitor badges are issued by custody staff to sheriff's office personnel, contract employees and professionals visiting the facility in the course of business.

2. A Visitor badge can only be issued once approved identification is provided and their access has been verified and authorized.

3. Custody staff issuing the visitor badge will:

a. Obtain and retain approved identification, such as a state, county, or city-issued agency photo identification card, driver's license, California State Bar card, PI card, etc.

b. Verify the visitor is authorized to enter the facility by referring to the facility clearance list, court order, official visitor status, or written approval from the facility commander or designee.

c. Certain classes of Official Visitors (i.e.: Attorneys, Law Enforcement Officers investigating a case, Parole and Probation Officers) may not be found on the clearance list but are authorized access upon showing their official identification.

d. Provide the visitor with the correct color-coded visitor badge (MDF & WCDF only). The visitor will have their approved identification returned to them when leaving the facility once they have returned their issued visitor badge.

e. Ensure the visitor's log has been completed with the following information:

- Name
- Number of pass being issued
- Affiliation, Department, or Company
- Name of inmate being visited (if applicable)
- Authorized location of visit
- Time pass was issued
- Time pass was returned/Visitor time out

IV. VISITOR SERVICE CATEGORY ACCESS PROCEDURES AND BADGE DESCRIPTIONS

A. CONTRA COSTA SHERIFF'S OFFICE VISITOR

1. Sheriff's Office personnel only.

2. May access facility unescorted.

3. Visitor must have permission from the housing unit deputy prior to accessing the housing unit.

[redacted]



B. OFFICIAL VISITORS

1. The attorney of record on an active criminal case, California attorneys working in their official capacity (with court documentation), "Out-of-State" attorneys practicing immigration law or law students identified on EIOR 27 or 28 presenting a valid copy, California licensed medical doctors, psychiatrists, psychologists, Active law enforcement officers conducting investigations, Active Probation and Parole Officers in the performance of their duties, and Public Defender Investigator (Level II only).

2. Must be escorted through the facility by Sheriff's Office staff.

3. Afforded unscheduled contact visits with inmates any time (dependent on emergent and operational needs of the facility).

[redacted]



C. PROFESSIONAL VISITORS

1. Public Defender Investigator I, Private Investigators, Legal Runners, Agents working on behalf of the government or the court and Notaries.

2. Must be escorted through the facility by Sheriff's Office staff.

3. Afforded unscheduled non-contact visits during regular social visiting hours (EXCEPT NOTARIES).

4. Notaries must schedule an appointment during designated days/times 24 hours in

advance through CAS. Refer to CSB Policy 2.18.12 Notary Public Services.

[redacted]



D. OUTSIDE LAW ENFORCEMENT AGENCY VISITOR

1. Law enforcement officers that are guests of CCCSO facility staff.

2. Must be escorted throughout the facility by CCCSO facility personnel.

[redacted]



E. MEDICAL VISITOR

1. Medical employees only

2. Must be escorted throughout the facility by health services staff assigned to the facility.

3. May access the facility unescorted with prior approval of the Facility Commander and/or as designated by the clearance list.

4. Visitor must have permission from the housing unit deputy prior to accessing the housing unit.



F. MENTAL HEALTH VISITOR

1. Mental Health personnel only

2. Must be escorted throughout the facility by health services staff assigned to the facility.

3. May access the facility unescorted with prior approval of the Facility Commander and/or as designated by the clearance list.

4. Visitor must have permission from the housing unit deputy prior to accessing the housing unit.

[redacted]



G. MAINTENANCE SERVICES VISITOR

1. GSD, DOIT and Outside Maintenance employees only

2. Must be escorted by Custody or GSD Staff.

3. May access the facility unescorted with prior approval of the Facility Commander and/or as designated by the clearance list.

4. Visitor must have permission from the housing unit deputy prior to accessing the housing unit.

[redacted]



H. SCHOOLS VISITOR

1. Office of Education personnel only.

2. Must be escorted throughout the facility by Custody or Schools staff assigned to the facility.

3. May access the facility unescorted with prior approval of the Facility Commander and/or as designated by the clearance list.

4. Visitor must have permission from the housing unit deputy prior to accessing the housing unit.

[redacted]

[redacted]

I. INMATE PROGRAMS & INDUSTRIES VISITOR

1. Chaplain, Library, Engraving and Frame Shops

2. Must be escorted throughout the facility by Custody staff or the host program employee assigned to the facility.

3. Visitor must have permission from the housing unit deputy prior to accessing the housing unit.

[redacted]



J. IN-CUSTODY DEATH VISITOR

1. County Employees conducting an in-custody death investigation.

2. Given unrestricted access to the facility.

[redacted]



K. MARSH CREEK DETENTION FACILITY PHOTO AND VISITOR BADGES

1. All CSB photo badges for employees assigned to the MCDF will be color-coded to designate their service category.

2. The MCDF visitor badge will be issued to all service category visitors within the facility.

3. Must be escorted throughout the facility by the host program employee assigned to the facility.

4. Visitors must receive permission must by the housing unit deputy prior to accessing the housing unit.

[redacted]

VI. LOST OR MISSING BADGES

A. Staff members that have destroyed or lost their Photo badge must submit a memo to Custody Administrative Services (CAS) via their direct supervisor explaining the circumstances that require their badge to be replaced.

B. Staff members with photo badges will be required to check in and out of the facility as a visitor until a memo has been received and a new badge can be ordered.

C. Visitors that have lost their badge must report the lost badge immediately to custody staff so a thorough search can be conducted. Visitors who lose their visitor badge may be denied additional visiting privileges, until a memo has been submitted to CAS and/or the badge has been accounted for.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.04
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 10-01-18 **REVIEW DATE:** 10-01-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Facility Tours	

I. POLICY

A. Jail tours are intended to educate citizens about the role of law enforcement in Contra Costa County, promote good relations with the public, encourage transparency in county correctional practices, foster public engagement concerning the county's criminal justice system, and deter criminal behavior.

B. These public benefits must be weighed against the impact caused to jail operations by touring groups. Such touring also raises safety issues for those touring, inmates, and staff, as Custody Deputies' attentions may be diverted from observing the activities of inmates, to instead accommodating the needs of tour groups. Accordingly, the availability to tour detention facilities must be balanced against the custodial obligations of operating a secure jail facility.

C. Given these considerations, touring of detention facilities will be allowed on a limited basis and in accordance with the Procedures established in this policy.

D. This policy does not relate to official inspection groups, such as those on official business from fire authorities, OSHA, CalOSHA, jail facilities inspectors, police and correctional invitees on official business, health inspectors, contractors inspecting the facilities for purposes of bidding on open solicitations, or to individuals invited to visit a facility by the Sheriff.

E. All public tours are guided tours. All participants must stay within the sight and hearing of the guide at all times.

F. No person may tour jail facilities –

1. Who is under the age of 18 years.

2. Who is currently on parole or probation.

3. Who was an inmate in any of the Contra Costa County detention facilities within two years of the tour date.

4. Who has a currently incarcerated family member, friend, associate, or favorable acquaintance in any of the Contra Costa County detention facilities.

II. TOUR SCHEDULING AND APPLICATION.

A. In order to accommodate the goals of transparency and operational security, it is necessary to restrict public touring to scheduled dates and times. Tours shall be available once each quarter on a date and time set by the CSB Assistant Sheriff with the approval of the Sheriff or his designee.

B. No more than one tour group will be scheduled on any one available tour day. Tours shall run 1 hour, which may include a question period at the end. No more than five persons shall be permitted in any one tour group. Applications for the next available tour date will be accepted beginning on the Monday following the tour day in each quarter. The application window will close 45 days prior to the next available tour date to allow for processing. An "Interest List" for purposes of scheduling future tours will not be maintained. The timely submission of a tour application does not assure a place in a tour group. Applicants will be advised whether their applications have been granted approximately one month before the scheduled tour date. The Custody Administrative Services (CAS) Lieutenant at WCDF will be responsible for receiving and processing applications.

C. Each individual group seeking a tour appointment will be provided with a Tour Application Packet including:

1. A listing of rules (providing information concerning the prohibition of photography, contacts with inmates, acceptable dress/attire, contraband), upon which each applicant must sign that he or she has read and understood the rules and will comply with them;

2. A Release of Liability which must be signed by every person touring, both as an individual and as a member of a group. (This document discusses the inherent dangers of being in a detention facility, advises that the jail is a "No Hostage Facility," and warns that the Sheriff's Office will not negotiate with hostage takers.)

3. A personal information form will be checked on law enforcement databases including the National Crime Information Center (NCIC). All persons must bring with them to the tour the same Driver License (or other government issued picture ID card) as is listed on the submitted form (renewals are acceptable).

D. The Tour Application Packet (including the forms listed above) must be completed in its entirety at the time the application for a tour appointment is

submitted. (Tour Application Packets are available at the Reception windows in the lobbies of the MDF and WCDF.) Anyone wishing to tour MCDF may request a Tour Application Packet at either MDF or WCDF.

III. APPLICATION PROCESSING.

A. Within two weeks of the receipt of a timely application, the CAS Lieutenant shall review the application for completeness. If the application is not complete, it may be denied and returned to the applicant. The applicant may be permitted to correct deficiencies and resubmit his or her application.

B. If the application is complete, an NCIC/ARIES/RMS check shall be conducted on all tour applicants. If information is developed that would bar that person from joining a tour, he or she shall be informed that his or her application has been denied and advised of the basis for the denial. However, if the information shows a Want or Warrant on such person, they shall not be so advised and will be detained or arrested prior to the tour.

C. All completed and satisfactorily checked applications will be forwarded to the CSB Assistant Sheriff 45 days prior to the next scheduled tour date, who shall recommend a rank ordering in the event that there are more applicants than can be accommodated under this policy. Such rank ordering will consider (a) county diversity (East County, Central County, and West County); (b) diversity by organizational type (educational, professional); (c) first time or previous tourer; (d) significance of tour to organizational purpose; (e) timeliness of applicant filing, and (f) such other considerations specified by the CSB Assistant Sheriff. In the event all considerations result in a tie, the earliest filed applications shall be given ranking priority.

D. The CSB Assistant Sheriff shall forward all acceptable, ranked applications (along with a brief description of the reasons for such rank ordering) to the Sheriff for review and approval. The Sheriff, or in his absence the Undersheriff, shall determine which applications to grant. If possible, this will be completed at least one month prior to the scheduled tour to allow for notification of the applicants.

E. Upon the return of the applications to CSB, the CAS Lieutenant at WCDF shall advise the successful applicants of the date, time, and location of their tour. The CAS Lieutenant shall also notify the unsuccessful applicants that their applications were not chosen after a comparative evaluation of applicants.

IV. TOUR PROCEDURES.

A. Approved individuals and groups will be instructed to arrive 30 minutes prior to the start of their tour. Identification will be checked and matched against the approved list for that tour. They will be instructed before the tour begins on touring rules and will be given time to leave prohibited or unnecessary items in their vehicles or in secured lockers if available. Anyone in inappropriate attire will be given the opportunity to add clothing as necessary, time permitting (refer to CSB Policy 2.17.09 “Official, Professional, and Program Visitors” Visiting

Rules – Dress Code). They will proceed into the facility through the metal detector ("Screening Station" and/or wand) in the facility lobby and will be subject to search. All individuals who have satisfactorily cleared this process will be issued a visitor identification card, which will be worn so that it is visible at all times. Individuals not complying with these instructions or refusing to be searched will not be allowed to tour. They will be advised that any disruptive behavior or violation of the rules will result in tour termination and removal from the facility.

V. TOUR CANCELLATION.

A. Tours can be cancelled at any time when required for the security of the facility, when in the opinion of the CSB Assistant Sheriff or his designee or the Officer of the Day, such cancellation is warranted. If a tour is cancelled on a security basis, it may be rescheduled by the CSB Assistant Sheriff outside of the standard schedule in Procedure I.A.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.05
	RELATED ORDERS: MJS 1032(b), 1280	
ISSUE DATE: 01-13-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Custody Operations	**SUBJECT:** Facility Inspection	

I. POLICY

A. The Custody Services Bureau will conduct regular inspections of all areas of the facility relating to food service, inmate housing, general site safety and fire/life safety.

II. PROCEDURE

A. The Facility Commander shall be responsible for conducting Facility Inspections on a weekly basis.

B. The Facility Inspection Team for MDF and WCDF shall consist of at least three (3) the following members:

1. Facility Commander and/or Operations Sergeant
2. CAS Sergeant and/or Custody Sergeant
3. CAS Specialist
4. GSD Representative
5. Housing Unit Deputy
6. Director of Food Services (Kitchen, Servery and Laundry areas only)

C. The Facility Inspection Team for MCDF shall consist of at least two (2) of the above listed members.

D. In the event of a Facility Inspection Team Members absence, a representative of equal or higher rank shall replace them.

E. The following areas will be inspected as applicable:

1. All housing units

2. Intake

3. Transportation

4. Clothing room

5. Kitchen and Servery area

6. Laundry area

7. Dry and chemical storage areas

8. Maintenance shops

9. Various program areas

F. Areas will be inspected for compliance in the following categories:

1. Cleanliness

2. Upkeep and maintenance

3. Compliance with local and state fire/life safety regulations

4. Compliance with local and state health and safety regulations

G. Reporting Discrepancies

1. Any discrepancies noted during the inspections shall be documented via General Services Department Work Order and/or Incident Report and the site survey inspection checklist.

a. The Housing unit deputy shall be responsible for submitting the appropriate work order(s) to CAS by the completion of their shift.

b. Facility Rules and Safety Violations

The Housing Unit Deputy shall be responsible for acting on and documenting any violations of facility rules via incident report.

The Housing Unit Deputy shall be responsible for acting on and documenting any officer safety hazards that have been identified.

Near miss accident reports are available at each facility's safety bulletin board.

H. Area Supervisor Responsibilities

1. Area Supervisors, responsible for the inspected areas, shall ensure that all discrepancies are corrected in a timely manner.

I. Housing Unit Deputy Responsibilities

1. Housing Unit Deputies will ensure that no more than 10 inmate workers are selected to work and prepare the housing unit for inspection.

2. Housing Unit Deputies will ensure the following prior to arrival of the Facility Inspection Team:

    a. All inmate cells are clean, orderly and free of excess contraband.

    b. All deputy specific areas are in order and well maintained.

    c. All housing unit areas are clean and free of immediately preventable safety hazards.

    d. All Fire/Life Safety related areas are in proper working condition and free of hazards and/or obstructions.

    e. All work crewmembers are properly dressed and clean.

3. Housing Unit Deputies will ensure that all work crew members present themselves and remain in the servery or courtyard area while the Facility Inspection Team is on the housing unit unless directed otherwise.

    a. Work crew members shall place themselves in a single file line and shall be presentable within the following standard:

        Gold or Gold and Green Top and pants

        T-shirt

        Socks

        Sandals or shoes

        Armbands

        No hats

    b. Work crew members shall not speak during the inspection unless directed to by a Facility Inspection Team member

J. Housing Unit Scoring and Evaluation

1. The Facility Inspection Team will provide the Housing Unit Deputy with an overview of the inspection prior to exiting the housing unit.

    a. The housing unit deputy will be responsible for ensuring that all deficiencies have been properly addressed prior to completion of their shift. (i.e. GSD Work Orders, I/Rs, room searches, etc.)

b. Housing Unit Deputies will list all actions taken on the Housing Unit Inspection Form and place the form in the Facility's CAS routing box in the mailroom.

Deputies at MCDF will provide the information to the Facility Commander for routing.

2. The Facility Inspection Team will rate each housing unit based on the totality of the following conditions:

a. Housing unit order and cleanliness

b. Work Crew cell order and cleanliness

c. Work crew appearance and presentation

d. Work crews will not be penalized for areas outside their responsibility (i.e., a housing unit inmate's cell condition, maintenance or safety hazards not created by the crew, etc.)

3. The Facility Inspection Team will rate the presentation on a scale from 1 to 10 (10 being the highest score possible).

a. Rating of 7 or above will allow the work crew the following privileges:

Free time

MDF and MCDF

From the end of inspection to 1800 hours

WCDF

From the end of inspection to 1700 hours

One (1) soda

One (1) candy bar

One (1) bag of popcorn (to be shared between work crew members)

b. Rating of 5 or 6 will allow the work crew the following privileges:

MDF and MCDF

Free time from the end of inspection to 1800 hours

WCDF

From the end of inspection to 1700 hours

c. Rating below 5 will result in no privileges being awarded.

4. DSW Staff will automatically provide all food items to all housing units unless they are otherwise contacted by CAS Staff.

a. MDF and MCDF

Provisions will be made for no more than 14 work crew members.

Food items shall be delivered to the housing unit no later than 1500 hours.

b. WCDF

Provisions will be made for no more than 10 work crew members.

Food items shall be delivered to the housing unit no later than Thursday at 1500 hours.

5. Documentation and Routing

a. Copies of the Completed Facility Inspection Forms shall be routed to the following locations:

CSB Assistant Sheriff

Detention Division Captain

Director of Detention Division Medical Services

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.06
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Escape Review Committee	

I. POLICY

A. In the event of an inmate escape or attempted escape, the Facility Commander will form an internal Escape Review Committee.

II. PROCEDURE

A. The Committee shall be composed of least three (3) Departmental members, one of which shall be the Facility Commander acting as Chairman.

B. The scope of the review shall be as follows:

1. Review reports submitted in conjunction with the escape/attempted escape.

2. Review the escape/attempted escape scene noting safety factors, equipment failure, procedural steps, security breaks, staffing levels, etc.

3. Review CSB Policy and Procedures, CCCSO Department Policy and Training Bulletins covering escapes/attempted escapes, noting appropriateness as to procedural steps, notification, etc.

4. At the discretion of the Facility Commander, the investigation may be deferred to another investigative body.

C. Upon completion of the review, the Committee shall adopt a finding consistent with one of the following dispositions:

1. Preventable.

2. Un-preventable.

3. Unresolved.

D. In the event the Committee adopts a finding of preventable or unresolved, the Committee, by majority consensus, may recommend further action be undertaken.

E. The Chairman of the Escape Review Committee shall submit such findings with a recommendation in writing to the Assistant Sheriff of the Custody Services Bureau, via chain of command.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.07
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 11-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Security Cameras and Perimeter Fence Alarms	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.08
	RELATED ORDERS: MJS 1121 (L)	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 01-08-2019	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Sally Port Access and Egress	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.09
	RELATED ORDERS: CSB 2.08.03	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 11-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Vendor/Supply Deliveries	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.10
	RELATED ORDERS: MJS 1029	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-16-11 **REVIEW DATE:** 12-08-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Key Control and Emergency Access	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.11
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Management Cards	

I. POLICY

A. Facility Inmate Management Cards are to be used in addition to the JMS computers system to maintain inmate counts.

B. In the event of a computer failure, jail counts, inmate accountability and locations must be maintained.

C. Under no circumstances will inmates ever be allowed to possess a management card.

D. All filing, reconciliation, transportation, destruction, or storing of management cards will be done by Sheriff's personnel only.

II. PROCEDURE

A. ITR staff will make a management card for all inmates booked into Contra Costa County Sheriff's Detention Facilities.

1. The card must include the following information prior to the inmate being transferred to a housing unit:

   a. Full Name

   b. DOB

   c. Booking Number

   d. Photograph

B. ITR staff will transport the inmate to a housing unit once the booking process is completed.

1. The transporting deputy will ensure the management card accompanies the inmate and is delivered to the housing unit deputy.

C. Housing unit deputies will write only the inmate's room assignment on the management card.

1. Classification shall be the only staff authorized to make any other notations on an inmate's management card.

a. This includes classification hazard codes and EIFs.

D. Disparaging comments or symbols, unauthorized placement of hazard codes or any other marks that deface the inmate's management card is expressly forbidden.

E. Custody staff will exercise every precaution to prevent any inmate from viewing any information on any Inmate Management card.

F. The housing unit deputy will file the management card in a central location with all cards of that particular housing unit.

G. When inmates go to court or out to appointments, the inmate's management card will follow the inmate.

H. If an inmate is bailed or released from their housing unit, a deputy will deliver both the inmate and management card to release.

1. In the event Operations staff is not ready to release the inmate, the inmate and management card shall be taken to Intake to await pick-up.

I. The deputy will give the management card to the Operations staff in Release, who will be responsible for filing the management card in the released inmate's booking records.

J. Replacement of management cards

1. Inmate management cards will be replaced by the housing unit deputy in which the inmate is assigned when any of the following conditions apply:

a. The card has been damaged

b. The card shows signs of significant wear

c. The card is illegible

d. The card no longer accurately depicts the physical description of the inmate

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.12
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 11-28-2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Counts	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.13
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 11-28-2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Module Security Inspection	

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II. PROCEDURE

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B. Deputies will document all unusual findings in the JMS Module Notes.

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- [redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.14
	RELATED ORDERS: CSB Policy and Procedure 2.10.19	
ISSUE DATE: 01-12-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Window and Lock Security Check	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.15
	RELATED ORDERS: MJS 1058 CCCSO 1.06.61 CSB 2.08.29	
ISSUE DATE: 09-29-02 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 11-28-2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Roof and Perimeter Security Checks	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.16
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Isolation Cell Negative Pressure Checks	

I. POLICY

A. Each Deputy assigned to F Module Housing Unit is responsible for conducting an inspection of each respiratory isolation cell to ensure it has proper negative pressure.

B. GSD Personnel are responsible for conducting an inspection of the respiratory isolation area on a monthly basis to ensure proper negative pressure functions.

C. GSD Personnel shall ensure that an airflow certification test is conducted on an annual basis.

II. PROCEDURE

A. F Module Housing Unit Deputies are responsible for the following:

1. If inmates with infectious precautions occupy the area, deputies will not enter the space without donning a N95 rated protective respiratory mask.

2. From the outside of each closed cell door (food port included), tear the corner from a sheet of tissue paper and release it at the threshold of the door.

3. Release the tissue paper and observe it for movement.

   a. The tissue paper should be drawn under the closed cell door and into the cell to indicate a proper negative pressure function for that space.

   b. If the tissue paper is not drawn under the door, ensure that it is placed at least halfway under the door.

4. Enter each cell and inspect the vent to ensure it is free of any obstructions and/or discrepancies that may hinder the airflow through the vent.

5. Repeat the process for each cell door in F-ISO.

6. Document the F-Isolation cell inspections in the JMS module activity notes.

B. Negative Pressure Failures or Discrepancies

1. The inspecting deputy will report any discrepancy or failure in negative pressure tests in the following manner:

   a. Record any discrepancies in the JMS Work Order System.

   b. In the event of a negative pressure test failure, the inspecting deputy will secure the affected room and make the following notifications:

      Shift Supervisor

      Medical Staff

      GSD

      Facility Commander

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.17
	RELATED ORDERS: MJS 1055, 1056, 1058, 1219 CSB 2.08.12, 2.08.13	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07/10/2018 **REVIEW DATE:** 07/10/2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Room Checks and Observation Requirements	

I. POLICY

A. All inmates will be subject to observation and direct visual supervision by sworn custody staff.

B. Inmates who are violent or mentally disordered or who demonstrate unusual or bizarre behavior shall receive more frequent and direct observation.

II. DEFINITIONS

A. OBSERVATION LOG: A type of record utilized to document the direct visual observation of a specified inmate that has been placed in a safety cell, sobering cell or direct observation cell.

B. INMATE HISTORY: A JMS entry used to document the specific activities of an inmate that has been placed in administrative segregation, disciplinary/medical isolation or protective custody.

III. PROCEDURES

A. GENERAL OBSERVATION REQUIREMENTS

1. Deputies will observe inmates as frequently as possible to ensure their safety and general welfare.

2. Deputies will note activity of inmates and compare it to new observations as they are made to help determine their welfare status.

3. Deputies will note inactive or sleeping inmates by observing their skin, obvious movements or signs of distress.

4. Deputies unable to make a determination as to the inmate's welfare through regular observation may use the following techniques:

   a. Using the flashlight to illuminate the area and/or inmate

b. Attempt to gain the inmate's attention from the door before making a closer approach.

c. Entering the room to confirm the inmate's presence and condition.

- Caution should be exercised when entering a room of a sleeping inmate.

- Deputies may request additional assistance to complete their investigation.

5. This policy does not apply to those inmates under direct supervision (i.e. work crews, schools, programs, etc.)

B. OBSERVATION REQUIREMENTS OF INMATE CLASSIFICATIONS

1. General Population Inmates

a. All general population inmates shall be directly observed by custody staff:

[redacted]

b. Custody staff will log all observations into the JMS Activity Notes after they occur. Refer to CSB Policy and Procedure 2.08.18, Observation Logs, for additional information.

2. Disciplinary Inmates

a. Any inmate placed into a disciplinary lockdown in excess of 48 hours shall require their daily activity to be recorded in JMS Inmate History.

3. Special Classification Inmates

a. Any inmate placed into a special classification status as described in CSB Chapter 9, Special Management Inmates or Chapter 12, Classification shall have their activity recorded in JMS Inmate History.

4. Safety and Sobering Cell Placements

a. Inmates placed into safety cells shall be observed in accordance with the following CSB Policy and Procedures:

- 2.08.19, Safety Cell Use

- 2.08.18, Observation Logs

b. Inmates placed into sobering cells shall be observed in accordance with

the following CSB Policy and Procedures:

- 2.08.20, Sobering Cell Use
- 2.08.18, Observation Logs

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.18
	RELATED ORDERS: MJS 1219	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-09-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Observation Logs	

I. POLICY

A. Custody staff will ensure that all inmates that have been determined to be a direct threat to the safety and security of the facility or a risk to themselves or to other inmates are observed on a frequent basis.

B. Custody staff will maintain written observation logs documenting their direct visual observations and interactions with the inmate until the time the inmate is no longer a threat or risk.

II. DEFINITIONS

A. OBSERVATION LOG: A type of record utilized to document the direct visual observation of a specified inmate that has been placed in a safety cell, sobering cell or observation cell.

III. PROCEDURES

A. CONDITIONS REQUIRING OBSERVATION LOGS

1. Observation Logs must be initiated and maintained whenever the following occur:

   a. Placement of an individual into a safety cell

   b. Placement of an individual into a sobering cell

   c. Placement of an individual into an observation room

   d. Any other time at the direction of the Shift Supervisor or Medical/Mental Health staff

2. MAINTAINING OBSERVATION LOGS

   a. Observation Logs will be completed in their entirety, describing the event(s) leading to placement in detail.

b. Observation log entries may be made by custody, medical and mental health staff.

- All entries must be legible, to include name, date and time.

c. The staff member initiating the log shall ensure the following notifications are made:

- Shift Supervisor
- Classification staff
- Housing unit or intake nurse
- Mental health staff

d. The Shift Supervisor shall review and approve (as appropriate) the circumstances surrounding the initiation of the log and ensure that the log is completed correctly.

e. Custody staff will ensure that direct visual observations and log entries occur as follows:

- Safety Cell Logs will be checked and maintained at least once every fifteen (15) minutes and no less than twice every thirty (30) minutes.
- Observation Room Logs will be checked and maintained at least once every fifteen (15) minutes and no less than twice every thirty (30) minutes on an irregular basis.
- Sobering Cell Logs will be checked and maintained no less than once every thirty (30) minutes on an irregular basis.
- Restraint Logs will be checked and maintained at least once every fifteen (15) minutes and no less than twice every thirty (30) minutes.

f. Observations shall be recorded only as they occur and shall include the following:

- Visual observations
- Direct interaction with individual
- Offers of food, drink and exercise
- Escalation or de-escalation of placement or status
- Any other supplemental information

- Video monitoring of inmates may supplement but shall not replace direct observations.

g. Observation Logs may not contain lines that are incomplete or are empty between entries.

h. Staff shall not make observation log entries based on other staff member's observations.

i. The deputy initiating the action will complete an incident report for all placements into the safety cell and observation room.

j. The deputy initiating the action shall make an entry into the JMS Redbook Notes to provide a brief description of circumstances leading to the action.

k. The heading and details of the new or any additional Observation Log must be completed in its entirety.

l. Observation logs shall be maintained continuously until the appropriate supervisor has made the determination that the individual is no longer a threat or at risk.

- The supervisor terminating the activity shall provide detailed information on the observation log regarding their decision.
    - The supervisor will legibly sign, date and document the time in which the termination of the log was approved.
- The supervisor terminating the activity shall ensure that the Shift Supervisor receives the completed Observation Log(s) in their entirety.

3. INMATE MOVEMENT

a. Observation logs must accompany inmates when they are moved out to internal or external appointments and must be under constant observation by sworn staff.

b. The Observation Log will be attached to the Inmate's Management Card.

c. Transporting officers will be responsible for log entries during transport.

d. Sworn staff receiving inmates and providing security will continue log entries until the transport back to the housing location.

4. DISPOSITION OF COMPLETED OBSERVATION LOGS

a. All completed logs will be routed to the Shift Supervisor.

- The Shift Supervisor will review each log for completeness, accuracy, and legibility.

b. The Shift Supervisor will route a copy of the completed logs and incident report to the following locations:

- Facility Commander
- Involved inmate's booking folder
- Classification Unit

5. RECORD RETENTION OF OBSERVATION LOGS AND RELATED REPORTS

a. All completed Observation Logs shall be maintained in the inmate's booking file.

b. All medical reports and/or documentation relating to the initiation of an observation log will be maintained in the inmate medical file under the control of the contract medical service provider.

c. All psychiatric reports and/or documentation relating to the implementation of an observation log will be maintained in the inmate case files under the control of Custody Services Bureau Mental Health staff.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.19
	RELATED ORDERS: MJS 1055, 1056, 1058 CSB 2.08.18	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-09-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Safety Cells	

I. POLICY

A. The Custody Services Bureau will provide a safe and secure environment to those arrested or incarcerated persons who pose a threat to themselves or others or are considered a threat to the facility.

B. Safety Cells may not be used as standard holding cells for any reason.

C. The Facility Commander may delegate authority to place an inmate in a safety cell to a physician.

D. No inmate should be retained in a safety cell longer than is necessary for the protection of the inmate or others.

II. PROCEDURE

A. SAFETY CELLS

1. Only one inmate can be held per safety cell.

2. The Facility Commander will ensure that safety cells are used to segregate and protect those inmates who:

   a. Present a danger to themselves or others and require close observation.

   b. Display behavior that has resulted or may result in destruction of property.

3. Safety Cells shall not be used as a sobering cell, or for "attitude adjustment" or discipline or as a substitute for treatment.

4. Placement in a safety cell shall occur only with the approval of the Facility Commander or designee.

   a. Continued retention in a safety cell shall be reviewed and approved by the

Facility Commander or designee at a minimum of every four (4) hours.

5. Inmates shall be allowed to retain sufficient clothing or be provided with a suitably designed "safety garment," to provide for their personal privacy unless specific identifiable risks to the inmate's safety or to the security of the facility are documented.

6. Sanitation conditions shall be maintained at all times, and the cell shall be kept warm and dry.

7. Custody staff shall notify Medical/Mental Health staff of an inmate's placement into a safety cell.

    a. Medical/Mental Health staff will render a medical/mental health opinion regarding placement and retention in the safety cell and inspect any restraint devices placed upon the inmate to ensure proper circulation.

    b. The inmate shall be medically cleared for continued placement, every eight (8) hours thereafter.

    c. Continual medical/mental health evaluations shall be performed at least once on each shift, until a referral appointment has been completed.

    d. Once placement has been made in a safety cell, an observation log shall be initiated in accordance with CSB Policy and Procedure 2.08.18, Observation Logs.

        - Custody staff shall conduct observation checks at least once every fifteen (15) minutes and no less than twice every thirty (30) minutes.

    e. Routine feeding shall be provided using paper plates and plastic utensils. Fluids shall be provided in paper or Styrofoam cups.

    f. Fluids must be offered to the individual, at least every two (2) hours.

    g. Following placement in a safety cell, a "Use of Safety Cell" Incident Report shall be completed and will include the following information:

        - Circumstances justifying placement
        - Use of restraints
        - Use of force
        - Use of modesty garment
        - The names of staff or medical personnel involved in the placement or retention.
        - Date and time of supervisor notification

- The name of the supervisor or physician approving the placement
- Date and time of placement
- Any statement by medical personnel, which justifies continued retention in the safety cell.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.20
	RELATED ORDERS: MJS 1055, 1056, 1058 CSB 2.08.18	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-09-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Sobering Cells	

I. POLICY

A. The Custody Services Bureau will provide a safe and secure environment to those persons arrested or incarcerated who, due to intoxication, are unable to take care of themselves.

B. Sobering Cells may not be used as standard holding cells for any reason.

C. Inmates shall be removed from the sobering cell as soon as they are no longer a threat to their own safety or the safety of others, due to their state of intoxication.

II. PROCEDURE

A. SOBERING CELLS

1. The Facility Commander will ensure that sobering cells are used to segregate and protect those inmates who are a threat to their own safety or the safety of others due to their state of intoxication.

2. Staff will evaluate the following conditions when considering placement into a sobering cell:

   a. Are conscious

   b. Respond to simple commands

   c. Have no difficulty breathing

   d. Do not appear to be acutely ill or have apparent injuries

   e. Are able to respond verbally to stimulation and walk to the cell with minimal assistance.

3. All persons who are brought into custody for any charges involving alcohol or drugs shall be evaluated immediately upon entry, to establish their degree of intoxication.

4. The medical staff shall be notified immediately for an inmate's placement in a sobering cell and asked to render a medical opinion regarding placement and retention in the sobering cell.

    a. Continued inmate placement in a sobering cell shall require a new medical evaluation at least once every six hours.

5. Placement in a sobering cell shall occur only with the approval of the Shift Supervisor.

6. All items of personal property, as well as shoes, socks, belt, or other potentially dangerous items, shall be removed prior to placing an inmate in a sobering cell. All other clothing items shall be retained and placed in a secure location.

    a. Any soiled personal clothing may be replaced with facility issued clothing.

7. Sanitation conditions shall be maintained at all times, and the cell shall be kept warm and dry.

8. Once placement has been made in a sobering cell, an incident report will be written and the observation log shall be initiated. Refer to CSB Policy and Procedure 2.08.18, Observation Logs.

9. Intermittent direct visual observation of inmates held in the sobering cell shall be conducted no less than once every half hour and should include the following:

    a. Observation of the inmate’s breathing to determine that breathing is normal.

        - Breathing should not be erratic nor indicate that the person is having difficulty breathing.

    b. Observation of the inmate to ensure there has been no vomiting while sleeping.

    c. An arousal attempt to ensure the person will respond to verbal or pressure stimulation

        - If unable to obtain a verbal response to stimulation, the officer must enter the cell and attempt to arouse the person to assess consciousness.

10. The Facility Commander or Designee, along with medical staff, must review retention every six (6) hours after placement.

    a. Time between retention reviews shall not to exceed 6 hours.

11. A medical assessment shall be performed within 12 hours from the time of placement.

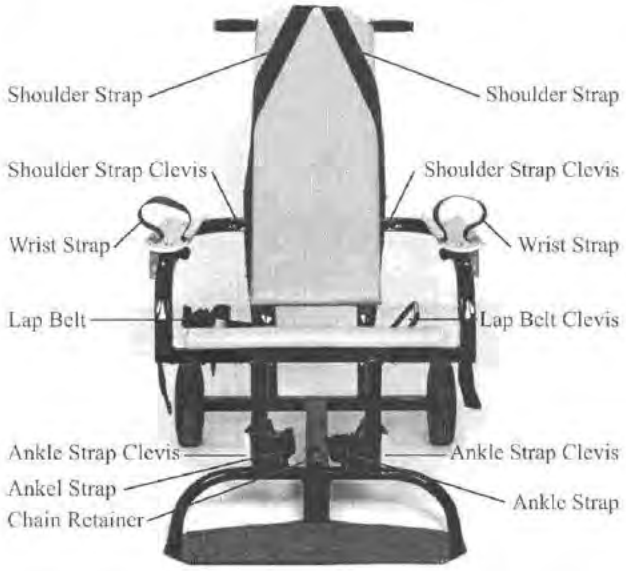
Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.21
	RELATED ORDERS: MJS 1055, 1058, 3268.2	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-09-19 **REVIEW DATE:** 01-09-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Use of Restraint Chair	

I. POLICY

A. Sworn Custody Staff may use the restraint chair to control inmates who have displayed hazardous behavior that results in the destruction of property or reveals intent to cause physical harm to self or others. Use of the restraint chair is a temporary means of securing and controlling an inmate who displays hazardous behavior.

II. DEFINITIONS

A. Restraint Chair: A chair with equipment designed to restrain, control, and limit the movements of inmates who display hazardous behavior.



B. Hazardous Behavior: Inmate conduct that results in the destruction of facility property or reveals intent to cause physical harm to self or others. This may include immediate verbal threats to cause such destruction or harm, accompanied by articulated information that would support the inmate's stated intention.

III. PROCEDURE

A. USE OF RESTRAINT CHAIR

1. The restraint chair shall only be used after all other alternatives have been considered and deemed inappropriate.

    a. Other alternatives may include single person cells, single person sobering cells, safety cells, handcuffs, leg shackles, or waist chains and cuffs.

2. The Shift Supervisor shall be notified and approve of any placement or continued use of the restraint chair for the following circumstances:

    a. To temporarily restrain, control, and/or secure an inmate who engages in hazardous behavior

    b. For transportation of an actively violent inmate from the location of the disturbance to a facility safety cell

    c. The transportation of an inmate with known significant history or potential for violence from the inmate's housing location to other custody facilities

    d. The transportation of an inmate that is a high security risk

3. Use of the restraint chair as punishment or disciplinary purposes is expressly forbidden.

4. A sergeant shall be present whenever an inmate is placed in the restraint chair for any reason.

5. The sergeant observing placement shall ensure that available medical/mental health staff are notified and respond as soon as possible, but no longer than one (1) hour from the time of placement to respond and provide a medical/mental heath opinion on the placement of the involved inmate.

6. The sergeant observing placement shall ensure that medical/mental health staff are notified and respond no longer than four (4) hours from the time of placement to conduct a health screening of the involved inmate.

    a. This health screening shall include an assessment for signs of:

        - Medical distress
        - Mental illness
        - Proper circulation
        - Breathing restriction
        - Vital signs

7. The sergeant reviewing continued retention will consult with medical/mental health staff following their assessment(s) to determine if continued use of the restraint chair is necessary.

    a. If the Facility Commander or designee determines, with consult from Medical and Mental Health staff, that the inmate cannot be removed from the restraint chair within eight (8) hours. The inmate will be transferred to Contra Costa Regional Medical Center (CCRMC) for care/observation.

8. The sergeant observing placement shall ensure that an inmate observation log is initiated.

9. The Shift Supervisor and available medical/mental health staff shall review the need for continued retention in the restraint chair at least once every hour.

    a. All reviews and determinations shall be noted in the inmate observation log.

B. PLACEMENT OF AN INMATE INTO THE RESTRAINT CHAIR

1. Only deputies that have been trained in the proper use of the restraint chair shall be directly involved in the inmate's final placement into the chair.

2. Deputies shall use only that amount of force that is necessary to place an inmate into the restraint chair.

3. Deputies shall ensure that a sergeant has been notified and observes the inmate's placement into the restraint chair.

4. The inmate may also be fitted with a spit hood as necessary. Refer to CSB Policy and Procedure 2.08.23, TranZport Spit Hood for additional information.

5. Staff shall place the inmate in the restraint chair in accordance with the restraint chair manufacturer's recommended procedure, while also maintaining officer safety and a position of advantage.

    a. Deputies will ensure that all of the individual's personal property has been removed from them, to include jewelry, glasses, shoes, boots, socks, coat, hat and belt. They should only be clothed in their shirt, pants or dress, or an approved modesty garment.

    b. Deputies should ensure the individual is handcuffed and wearing leg irons when warranted.

[redacted]

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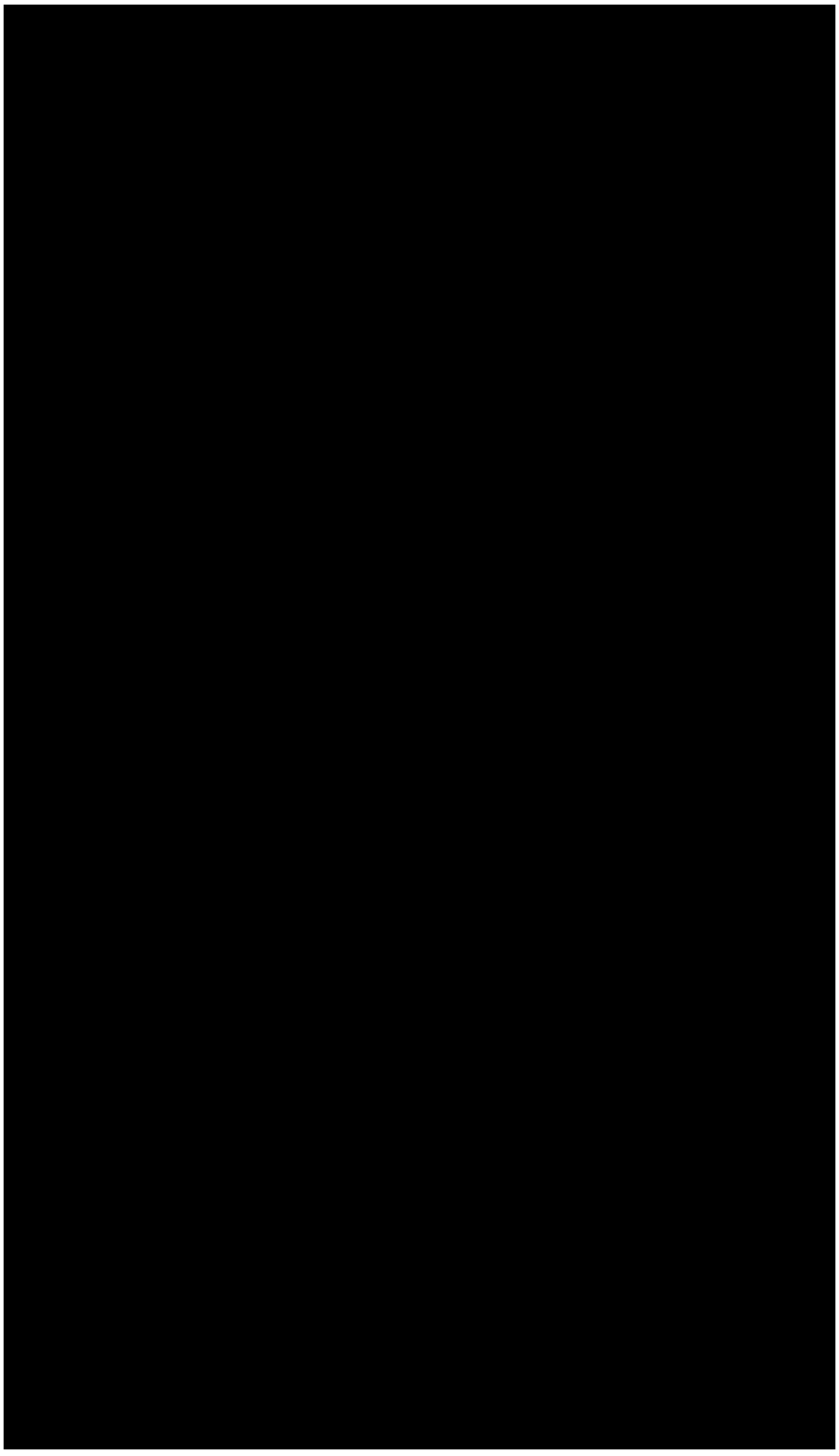

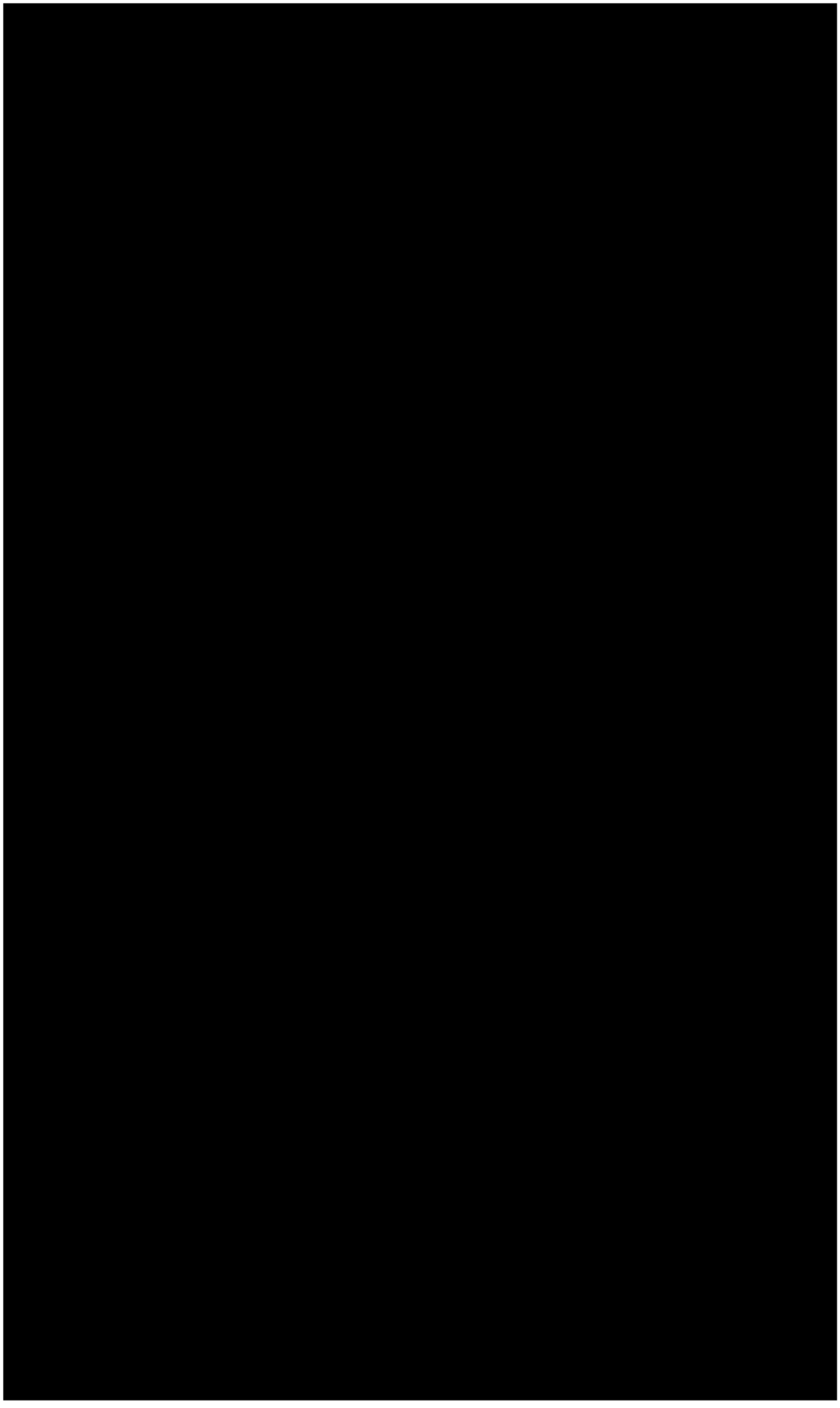

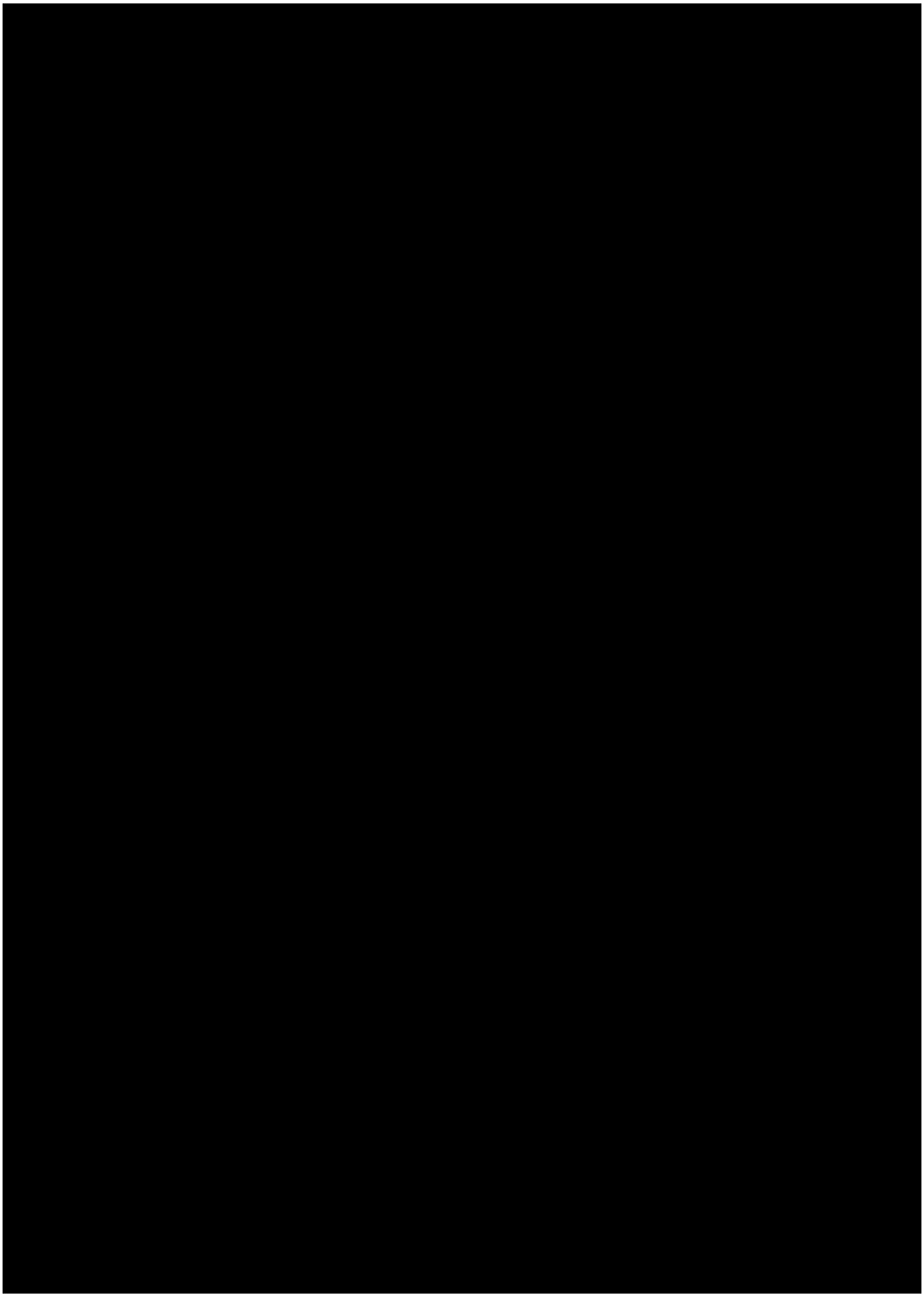

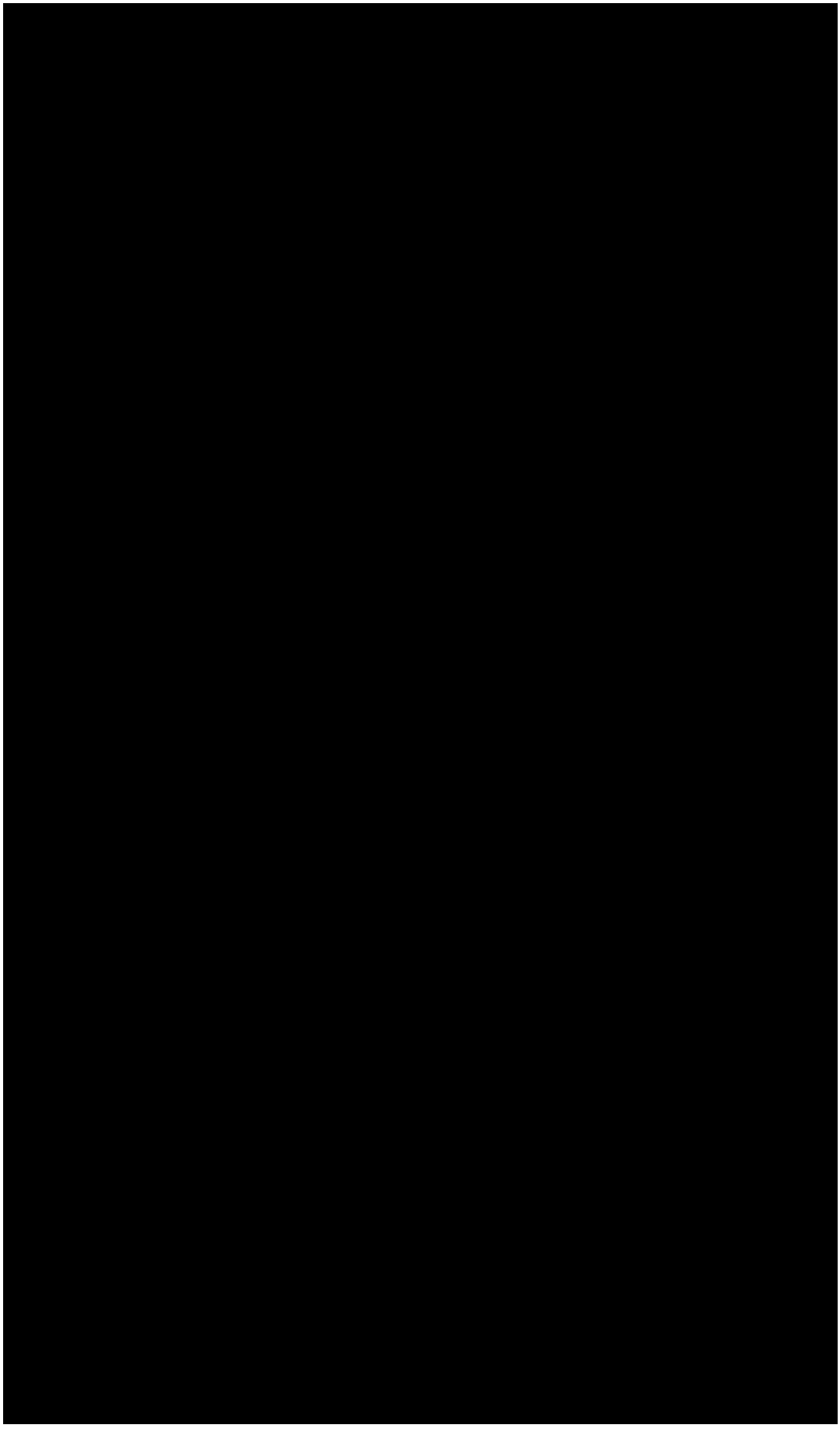

6. Manufacturer Cautions

   a. Violent behavior may mask dangerous medical conditions. Individuals must be monitored continuously and provided medical treatment if needed.

   b. Handcuffs and leg irons must be removed as soon as possible to prevent injury.

   c. Belts and straps may need to be loosened to ensure adequate blood flow.

   d. The restraint chair must always be used in the upright position.

   e. Individuals should not be left in the restraint chair for more than two hours.

      - The two hour limit may be extended, but only under direct medical supervision.

      - The extended time period must not exceed eight hours and must be accompanied with range of motion exercises.

7. Deputies should restrain an inmate with handcuffs and leg shackles prior to placement into the restraint chair.

C. HYDRATION AND SANITATION

1. An inmate placed in a restraint chair will be offered water and access to a toilet at least once every two hours by available medical staff.

2. If the inmate expresses a need to use the toilet, the Shift Supervisor will be notified and will respond and supervise.

   a. The inmate will be removed from the chair in reverse order of placement, and will be restrained with handcuffs in the front and leg shackles.

   b. The inmate will be escorted to a cell with a toilet and supervised by a Deputy of the same gender.

   c. If, at any time during this process, the inmate attempts to injure self, staff, or others, he/she will be immediately returned to the restraint chair.

3. Any hydration and/or sanitation needs addressed by staff will be noted on the inmate observation log.

D. EXERCISING EXTREMITIES

1. Deputies will provide the restrained inmate an opportunity to exercise their extremities every two hours and at all other times as recommended by medical staff.

a. Deputies shall release one limb at a time, allowing the inmate to extend the limb as fully straight as possible, ten times per limb or three minutes per limb, whichever comes first.

b. If, at any time, the inmate attempts to injure staff or self, the inmate will be immediately restrained.

c. Additional attempts to provide exercise will occur within two hours.

2. Any exercise addressed by staff will be noted on the inmate observation log.

E. MONITORING OF AN INMATE PLACED IN A RESTRAINT CHAIR

1. Custody staff must observe any inmate placed in a restraint chair at least once every fifteen minutes and no less than twice every thirty minutes to ensure the safety and well being of the inmate.

a. Any observations made by custody or medical/mental health staff will be noted on the inmate observation log.

2. Deputies shall observe the restrained inmate for the following:

a. Restraints are properly employed

b. Visual checks of circulation and breathing

c. Behavior

3. The observing deputy shall notify the Shift Supervisor when the following occur:

a. The integrity of the restraint chair has been compromised

b. Dramatic changes in the inmates physical or mental behavior would require a new medical/mental health assessment

c. The inmate’s actions indicate they are ready to be removed from the restraint chair.

4. The supervising sergeant shall personally observe the inmate at least once every hour.

a. The supervising sergeant will determine if the inmate is to remain in or be removed from the restraint chair.

b. The supervising sergeant will note and articulate the determination of removal or continued placement of the inmate in the restraint chair in the observation log.

F. REMOVAL FROM THE RESTRAINT CHAIR

1. The supervising Sergeant shall ensure that an inmate placed into a restraint chair is removed as soon as possible.

2. Upon approval from the supervising sergeant, deputies will remove the inmate from the restraint chair.

3. Deputies will continue to maintain the inmate's observation log.

G. DOCUMENTATION AND REPORTING

1. Any time an inmate is placed in a restraint chair, an inmate observation log must be initiated and completed as described in CSB Policy and Procedure 2.08.12 Observation Logs.

2. The supervising sergeant will ensure that an incident report and related inmate observation logs are prepared.

   a. The Incident Report will include:

      - Circumstances surrounding the restraint chair placement
      - Notification of the supervising sergeant
      - Time and duration of placement
      - Notifications, actions, and/or observations of Health Services staff
      - Other staff who were directly involved in the placement and/or observation of the inmate in the restraint chair
      - Initiation of the Inmate Observation Log

   b. The Shift Supervisor will ensure that a copy of the Incident Report and are forwarded to the following locations:

      - Facility Commander
      - Involved individual's booking folder

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.22
	RELATED ORDERS: MJS 1058 P.C. 3407 CCCSO 1.06.61 CSB 2.08.21	
ISSUE DATE: 01-12-04 **REVISION DATE:** 01-09-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Use of Special Restraints	

I. POLICY

A. Special restraints shall be used only as prevention against self-injury, injury to others, property damage, or other occasions as may be approved by the Detention Division Captain, or designee, and the medical/mental health staff.

B. The use of special restraints on known pregnant inmates, or inmates in recovery after delivery, shall adhere to the requirements of PC 3407 whereby leg irons, waist chains, or handcuffing behind the body shall not be used.

C. Special restraints should be utilized only when it appears less restrictive alternatives would be ineffective in controlling the disordered behavior.

D. Restraints will be applied for only the amount of time absolutely necessary, and shall never be applied as a punishment.

E. This policy shall be considered separate from CSB Policy and Procedure 2.08.21, Use of Restraint Chair.

II. DEFINITION

A. SPECIAL RESTRAINT DEVICES- Special restraint devices include, but are not limited to, any device that immobilizes an inmate's extremities and/or prevents the inmate from being ambulatory. Such devices as cloth or soft padded leather ties may be used to restrain an inmate.

III. PROCEDURE

A. In the event the use of special restraints are necessary and the inmate is not transferred to a medical/mental health unit, the following procedure shall be followed:

1. Physical restraints such as cloth or leather ties, etc., can only be used with the advance approval of the Shift Supervisor and under close supervision.

a. The Shift Supervisor will be notified prior to or immediately following

any application of special restraints.

b. The Shift Supervisor will notify the Facility Commander as appropriate.

c. The Shift Supervisor shall notify the appropriate medical/mental health personnel.

d. Once special restraints have been applied, continual direct visual observation by staff shall be maintained prior to evaluation from the medical/mental health authority.

- The sergeant observing placement shall ensure that available Medical/Mental Health staff are notified and respond as soon as possible, but no longer than one (1) hour from the time of placement to respond and provide a medical/mental health opinion on the placement of the involved inmate.

- visual observation will be made approximately once every 15 minutes, no less than twice every thirty minutes.

- An observation log shall be initiated and maintained whenever special restraints are used.

- All cases requiring physical force shall be in accordance with CCCSO Policies and Procedures 1.06.61, Use of Force.

- The appropriate report, completely documenting the incident will be submitted.

2. The medical/mental health staff shall assess the inmate's medical and mental health condition, and to advise whether, on the basis of serious danger to self or others, the inmate should be placed in a medical/mental health unit for emergency involuntary treatment with appropriate medical management.

a. Medical/Mental Health staff shall respond no longer than four (4) hours from the time of placement to conduct a health screening of the involved inmate.

- This health screening shall include an assessment for signs of:

  - Medical distress

  - Mental illness

  - Proper circulation

  - Breathing restriction

  - Vital sign

3. Special restraining devices shall not be used as punishment or in a way that causes

undue physical pain or restricts the blood circulation or breathing of an inmate.

4. Continued retention in special restraints shall be reviewed by the Shift Supervisor and health services staff every hour.

    a. If the Facility Commander or designee determines, with consult from Medical and Mental Health staff, that the inmate cannot be removed from the restraint chair within eight (8) hours. The inmate will be transferred to Contra Costa Regional Medical Center (CCRMC) for care/observation.

5. Inmates placed in special restraints must be housed in single cells and must be monitored once approximately every 15 minutes, no less than twice every thirty minutes.

6. Inmates in special restraints must be turned every two hours while awake and given the opportunity to use toilet facilities when necessary, and appropriate.

B. SPECIAL RESTRAINTS WITH THE USE OF CHEMICAL AGENTS

1. A situation may arise where the use of chemical agents has been ineffective and special restraints must be used to control an inmate who has been exposed. Caution must be used in restraining the subject so that breathing difficulty is not caused.

2. The Shift Supervisor shall be notified prior to the application of special restraints to the exposed inmate. If prior notification is not possible, the Shift Supervisor will be notified following application of special restraints as described above, and all provisions of CCCSO Policies and Procedures 1.06.61, Use of Force, will be followed.

3. The medical staff will be notified, and respond to assess, and treat as necessary.

4. An inmate exposed to chemical agents shall not be placed in a prone position and placed on his/her stomach. A subject who has been exposed to chemical agents may experience breathing difficulty. Refer to CSB Policy and Procedure 2.08.24, Prone Restraints, for additional information.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.23
	RELATED ORDERS: MJS 1055, 1056, 1058 CSB 2.08.18, 2.08.19, 2.08.21	
ISSUE DATE: 01-13-14 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** "TranZport Hood" Protective Spit Hood	

I. POLICY

A. Custody staff members will utilize only the "TranZport Hood" Protective Spit Hood in an effort to take all reasonable precautionary efforts to protect themselves and other staff members and/or individuals from those that present a risk of transmitting potentially infectious fluids by spitting, sneezing or coughing.

II. PROCEDURE

A. "TranZport Hood" PROTECTIVE SPIT HOOD

1. The protective spit hood is a temporary protective hood for use on those persons where a risk of exposure to infectious disease is present.

2. If used properly, the Hood can reduce the risk of the wearer transmitting fluids (saliva and mucous) from the facial area, as by spitting, sneezing or coughing.

3. Improper use can result in serious injury or death.

4. Improper use may cause asphyxiation, suffocation or drowning in one's own fluids.

B. CONDITIONS FOR USE

1. The individual must be under control and restrained.

2. An observation log must be started prior to any application of the hood to any individual.

3. The wearer must be under constant visual supervision and will not be left unattended.

4. Custody staff shall not use the Hood on anyone that is vomiting, having difficulty breathing, or is bleeding profusely from the mouth or nose area.

5. Custody staff will remove all of the wearer's jewelry and eyewear prior to application.

6. The Hood is a "one-size-fits-all" application. Custody staff shall discontinue applying a Hood if they encounter any difficulty with fit.

C. INSTRUCTIONS FOR USE

1. Custody staff will notify and make all attempts to have medical staff available to observe placement of the Hood.

2. Open the Hood bag and remove the Hood.

3. Place the Hood over the head of the person where the mesh fabric is covering the eye area (top) of the head, and the filtration fabric is covering the lower half of the head (below the nostrils).

4. For best fit: The center elastic will go under the nose and over the ears.

   a. For increased protection, the elastic may be placed over the nostrils.

5. Carefully push the white plastic Secure-Lock tab down toward the top of the head while holding the top of the mesh fabric.

   a. This should take the slack out of the top and help to secure the Hood in position.

   b. Do not push so tightly as to be uncomfortable or impair the vision of the wearer.

D. FOLLOW UP ACTIONS

1. The sworn staff member applying the hood to the wearer shall ensure that details of the Hood's application are included in an incident report and noted in the individual's observation log.

   a. The reports will be completed and submitted to the Shift Supervisor prior to the employee leaving the facility from his/her tour of duty.

   b. The report shall include:

      Staff members present at the time of the Hood's application

      If medical staff was present to observe application of the Hood

      The individuals actions which caused the application of the Hood

      Description of any observable marks or injuries to the inmate

      Complaints from the individual

      Refusals for medical attention

c. The Shift Supervisor will ensure that a copy of the Incident Report are forwarded to the following locations:

Facility Commander

Involved individual's booking folder.

E. REMOVAL AND DISPOSAL

1. The TranZport Hood shall not be reused.

2. Custody staff shall remove and discard the Hood when the following occurs:

a. When any type of fluid has accumulated inside the Hood

b. The transport destination is reached

c. When the prisoner is left unattended

d. When directed by a supervisor

3. Custody staff removing the Hood will ensure removal is noted on the individual's observation log.

F. STORAGE AND INVENTORY

1. The TranZport Hood may be stored for immediate accessibility in the following locations:

a. Martinez Detention Facility

3rd Floor Custody Sergeant's Office

Intake

Transportation

M Module Housing Unit

Crime Scene Cleaners closet

b. West County Detention Facility

The SERT Offices in Building 1 and the main compound area

2. The Shift Supervisor shall be responsible for the storage and inventory of the TranZport Hood.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.24
	RELATED ORDERS: P.C. 3407 CCCSO 1.06.61 CSB 2.08.22, 2.08.25	
ISSUE DATE: 01-13-04 **REVISION DATE:** 05-15-13 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Prone Restraints	

I. POLICY

A. The use of prone restraint techniques shall be limited.

B. The use of prone restraints shall not be used for inmates known to be pregnant or in recovery after delivery.

C. Restrained inmates shall be constantly monitored, pursuant to CSB Policy and Procedure 2.08.22, Use of Special Restraints.

II. DEFINITIONS

A. PRONE RESTRAINT: The use of ankle, wrist, waist restraint devices, hobblers or any physical control applied to an individual in any manner which places the individual in a prone or supine position, while preventing his/her ability to move or change position without assistance.

III. PROCEDURE

A. PRONE RESTRAINT

1. Prone Restraint may be used to gain control of a combative or violent inmate when such force is deemed necessary to ensure the safety and security of staff and the affected inmate.

   a. Inmates in wrist, waist or ankle restraints, or any combination or any physical control, and who are subsequently placed in a prone or supine position, shall be constantly monitored to ensure they remain alert and exhibit no signs of respiratory difficulty.

   b. Special attention shall be paid to those individuals who are under a combined effect of any drug and alcohol.

      The risk of sudden death increases significantly when individuals are impaired in such a manner.

The symptoms can be, but are not limited to the following:

Bizarre and/or aggressive behavior/violence toward others.

Shouting/Paranoia/Panic.

Sudden Tranquility.

Unexpected Physical Strength.

c. Duration of the application of prone restraint techniques shall be limited to the time necessary to gain control of the inmate and to ensure the safety and security of staff and the affected inmate.

d. Once control is gained and the situation is secure, the individual shall be returned to an upright or sitting position.

2. No individual shall be left unattended while restrained in a manner that prevents the individual's movement from a prone or supine position without assistance.

3. Maximum Prone Restraint techniques shall not be employed during transportation of inmates.

a. Inmates in wrist, waist or ankle restraints, or any combination thereof, shall be transported in an upright or sitting position.

b. Personnel transporting inmates shall ensure their body position is such that normal respiration (breathing) is not inhibited.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.25
	RELATED ORDERS: MJS 1055, 1056, 1058 CSB 2.08.18, 2.08.19	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-26-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Modesty Garments	

I. POLICY

A. Inmates shall be allowed to retain sufficient clothing or be provided with a suitably designed "safety or modesty garment," to provide for their personal privacy unless specific identifiable risks to the inmate's safety or to the security of the facility are documented.

II. PROCEDURE

A. MODESTY GARMENT

1. The purpose of the modesty garment is to provide warmth and personal privacy to an inmate placed in the safety cell or observation room.

2. The modesty garment will be provided to the inmate immediately upon placement into a safety cell whenever clothing (i.e. shirts, pants, etc.) articles must be removed.

3. An explanation of how to get into the garment may be given from outside the cell if the violent nature of the inmate prohibits closer contact or assistance.

4. Once the inmate is removed from the safety cell and the modesty garment is no longer needed, the staff member receiving the garment will:

   a. Place the garment in a plastic yellow “soiled linen” bag

   b. Take the bag with garment to the following location:

      - MDF-Sergeant’s Office
      - WCDF-Sergeant’s Office
      - MCDF-Facility Commander’s Office

   c. The Shift Sergeant will contact the designated company to request

garment pick-up.

5. The Crime Scene Cleaners will retrieve and return all articles to be cleaned to the Shift Sergeant.

B. STORAGE AND MAINTENANCE

1. Modesty Garments may be stored for immediate accessibility in the following locations:

   a. Intake

   b. M Module Housing Unit

2. The Shift Supervisor shall be responsible for the storage and maintenance of all Modesty Garments.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.26
	RELATED ORDERS: CCCSO 1.06.61 CSB 2.08.19, 2.08.22, 2.08.24	
ISSUE DATE: 07-01-04 **REVISION DATE:** 06-26-13 **REVIEW DATE:** 06-01-15	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Disruptive, Resistant, or Combative Inmate Management	

I. POLICY

A. Deputies shall use only that force which is reasonable and necessary, given the facts and circumstances known at the time of the event, to effectively bring disruptive, resistant and/or combative inmates under control.

B. Deputies who must remove a violent or resistive inmate from a cell or holding area will comply with the guidelines presented in CCCSO Department Policy 1.06.61 (Use of Force).

II. DEFINITIONS

A. RESISTANT INMATE MANAGEMENT- The process utilized to engage and/or remove disruptive, resistive, combative and/or armed inmates from a cell/holding area, vehicle, etc. in such a manner as to maximize safety, while minimizing personal injury to staff and inmates.

III. PROCEDURE

A. TO GAIN VOLUNTARY COMPLIANCE

1. Staff shall attempt to identify the reason(s) the inmate is uncooperative, disruptive resistant or combative.

2. When possible, staff should utilize verbal techniques to encourage voluntary compliance.

3. In the absence of exigent circumstances, staff shall utilize time to de-escalate the situation.

4. The Sergeant shall be notified of any inmate who repeatedly refuses to comply with a lawful order, is uncooperative, disruptive, resistant or refuses to exit a cell or holding area.

5. If a staff member must engage the inmate, by means of opening a secured door or

other means, staff shall notify the Sergeant and request additional assistance prior to doing so unless exigent circumstances exist.

B. RESISTANT INMATE MANAGEMENT

1. The Sergeant will determine if relocation or removal of the inmate is necessary.

2. The Sergeant will determine if the situation justifies the need for SERT utilization and shall organize staff in accordance with CSB SERT Team Policy.

2. The Sergeant or designee will develop an operational plan and will brief involved staff.

3. If the inmate is actively resistive, destructive or assaultive, the Sergeant or designee shall assemble and assign personnel/equipment as necessary to safely control the inmate.

[redacted]

[redacted]

D. EQUIPMENT INVENTORY

1. The Facility Commander shall designate staff to conduct a monthly inventory of all equipment.

   a. This information will be forwarded to the Facility Commander and will be included as part of the Division's Monthly Operational Readiness Report.

[redacted]

F. DEBRIEFING AND REPORTING

1. Immediately following the incident, the sergeant shall ascertain the welfare of the inmate(s) and staff, ensuring medical treatment for injuries is provided.

   a. Whenever force is used, inmates must be examined and treated by a nurse as soon as possible.

   b. The sergeant will review the incident with involved staff.

      - The videotape (as applicable) may be used to aid in debriefing.

2. The sergeant will ensure that all necessary reports are submitted by the end of the shift.

3. Facility Commanders shall review all reports and videotapes, to ensure compliance with agency and facility rules and regulations.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	DETENTION	NUMBER: 2.08.27
	RELATED ORDERS: CCCSO 1.06.61	
ISSUE DATE: 01-13-04 REVISION DATE: 0227-13 REVIEW DATE:	CLEARANCE: CUSTODY	
CHAPTER: Custody Operations	SUBJECT: Jaycor Pepperball Delivery System and FN303 Less Lethal Launcher	

I. POLICY

A. Use of the Jaycor Pepperball Delivery System and/or FN303 Less Lethal Launcher is restricted to sworn members of the department who have been trained and certified to operate these devices.

B. Sworn members may use the Jaycor Pepperball Delivery System and/or the FN303 Less Lethal Launcher with the authorization of the Shift Supervisor for the purpose of:

1. Protecting an inmate from self-inflicted injury or suicide
2. To deter organized gatherings and/or failure to lockdown
3. Control combative inmate(s)
4. To affect a cell extraction
5. To prevent an escape
6. At any other time where force may be deemed necessary

II. DEFINITIONS

A. Jaycor Pepperball Delivery System: A defensive weapon that delivers an encapsulated chemical powder (OC) to a specific target in order to reduce or stop a predetermined threat.

B. FN303 Less Lethal Launcher: An impact launcher powered by compressed air that delivers a .68 caliber impact projectile (may be filled with paint or powder) to a specific target in order to reduce or stop a predetermined threat.

C. PAVA Impact projectile: Used in the FN303 Less Lethal, it is a .68 caliber impact projectile filled with PAVA powder (pepper). Its primary function is to impact with a secondary effect of irritation.

III. PROCEDURE

A. DEPLOYMENT AND USE:

1. Prior to use of the Jaycor Pepperball Delivery System or the FN303 Less Lethal Launcher, the following considerations should be made:

   a. The degree of threat the arrestee or inmate poses to the safety and security of the facility, staff and other inmates.

   b. Attempts to subdue or control the arrestee or inmate through lesser means.

   c. Custody staff members in the immediate area have been advised that deployment is forthcoming and are prepared for residual exposure.

2. Pepperballs or impact projectiles should not be targeted at a subject's face, eyes, throat, spine or groin.

3. Deploying staff members shall deliver only the minimal amount of pepperballs or impact projectiles as necessary to effect compliance.

   a. Excessive projectiles will cause increased exposure to both staff and threat and may escalate the incident further.

B. FOLLOW-UP ACTIONS

1. Deputies shall immediately restrain any individual subdued by use of Pepperball or the FN303 Less Lethal munitions.

2. Deputies will place the exposed individual in an upright, seated position.

3. The sworn staff member deploying Pepperball(s) or FN303 munitions against a threat will immediately report the incident to their immediate supervisor.

4. Upon exposure to the Jaycor Pepperball Delivery System or after deployment of the FN303 Less Lethal Launcher, jail medical staff shall evaluate the individual.

   a. The Shift Supervisor will ensure that the Custody medical staff is notified.

   b. The medical staff will be asked to conduct a thorough medical examination and, if warranted, evaluate a chemical (OC) exposure.

   c. Deputies will assist medical staff in allowing individuals exposed to the chemical (OC) to access flushing stations, showers, etc.

   d. Medical refusal

      - Individuals exposed to the Jaycor Pepperball Delivery System or deployment of the FN303 Less Lethal Launcher must make all

refusals for medical treatment directly to medical staff.

- The reporting deputy will ensure the refusal and the medical staff member's name receiving the refusal is documented in the incident report.

5. The sworn staff member deploying Pepperball(s) or FN303 munitions against the threat shall complete a "use of force" incident report.

   a. The report will be completed and submitted to the Shift Supervisor prior to the employee leaving the facility from his/her tour of duty.

   b. The report shall include:

      - Staff members present at the time of Jaycor Pepperball Delivery System activation or FN 303 Less Lethal launcher deployment
      - The individuals actions which caused the deployment of the device
      - Description of any observable marks or injuries to the subject
      - Complaints from the individual
      - Refusals for medical attention
      - Supplemental incident reports from witnessing sworn staff of the FN303 deployment

   c. The Shift Supervisor will ensure that a copy of the Incident Report is forwarded to the following locations:

      - Facility Commander
      - Involved individual's booking folder.

[redacted]

2. The Operations Sergeant and / or FN303 instructor/armorer shall be responsible for the storage and maintenance of all Jaycor Pepperball Delivery Systems, FN 303 Less Lethal Launchers and peripheral equipment.

3. Maintenance and care of the pepperball and FN303 munitions and both weapon systems shall be completed by a certified armorer(s) and will include:

    a. Logging and tracking of all pepperball and FN303 munitions and both weapon systems

    b. Ensuring serviceability and completion of repairs and routine maintenance for each weapon system

    c. Ordering and maintaining adequate munitions and maintenance supplies for each weapon system

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.28
	RELATED ORDERS: CCCSO Policy 1.06.61 Use of Force	
ISSUE DATE: 01-13-04 **REVISION DATE:** 08-26-19 **REVIEW DATE:** 09-03-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Electronic Weapons	

POLICY

A. It is the policy of the Office of the Sheriff that personnel only use that level of force objectively reasonable to perform their official duties. Electronic Weapons have been proven effective and are authorized for use in appropriate circumstances by trained personnel.

II. DEFINITIONS

A. **Electronic Control Device (ECD).** A device that uses propelled wires or direct contact to conduct electrical pulses to affect the sensory and motor function of the nervous system.

B. **Electronic Weapon.** An Electronic Weapon is a weapon designed to subdue a person by administering an electric current aimed at disrupting superficial muscle functions. The electrical pulses cause an uncontrollable muscle tissue contraction that physically debilitates the subject regardless of pain tolerance or mental focus.

C. **Taser Cam**. A digital camera attached to the Taser® brand of ECD, which makes video and audio records when the Taser® brand device is activated.

D. **Holster.** An agency authorized retention device meant to secure the Electronic Weapon to the operator's weak side allowing it to be readily available when needed.

E. **Deployed**. Removal of the Electronic Weapon from its holster when in the presence of another other than for training or maintenance.

F. **Discharge.** The pulling of the trigger of the Electronic Weapon to fire the probes or to use the weapon in a drive stun mode.

III. PROCEDURE

A. Use of Electronic Weapons within the Custody Services Bureau (CSB) is limited to those sworn personnel who are currently certified as an operator of each Electronic Weapon.

1. Initial ECD training will be conducted by Custody Administrative Services (CAS)

upon assignment to the Custody Services Bureau. Initial user training will be completed following current POST and STC guidelines, as directed by Sheriff's Training. CAS will maintain records regarding the ECD certification of all bureau employees.

2. Personnel will not be compelled to be exposed to the effects of the ECD as part of any training course.

B. Electronic Weapons may be used to:

1. Control a person who is actively resisting or showing active aggression.

2. Protect an inmate from serious self-inflicted injury or suicide.

3. Prevent an escape.

4. To conduct a cell extraction.

5. When attempts to subdue the subject by other conventional tactics have been, or will likely be, ineffective in the situation.

6. The ECD may be used in a situation where it is unsafe for officers to approach a person and take him or her into custody without the probability of injury to the officers or suspect.

C. Electronic Weapons will not be:

1. Used on an individual who is demonstrating passive resistance or is unresponsive.

2. Used on pregnant women, elderly persons, young children, or frail adults unless exigent circumstances exist.

3. Used on handcuffed or restrained persons unless they are actively resisting or exhibiting active aggression or attempting to harm themselves or others.

4. Used when the individual is in a location where a fall may cause substantial injury or death.

5. Intentionally discharged at a person's head, neck or groin.

6. Used in a punitive manner, or to extract contraband or evidence.

7. Used in an environment where potentially flammable, volatile, or explosive materials (gasoline, natural gas, propane, oxygen, etc) are stored.

8. Modified by users. No changes, alterations or substitutions shall be made to Electronic Weapons. All repairs to Electronic Weapons will be made by trained staff or the manufacturer's representative.

9. When possible, TaserCam equipped ECDs will be used.

10. No more than one officer should discharge an ECD against a person at a time.

D. ECDs should only be used for one, five second cycle and then stopped. Allowing the user to re-evaluate the situation. Repeated ECD cycles should be limited to five second cycles and will be restricted to the minimum number of activations that are necessary to place the subject under control.

E. When carried, the ECD will be maintained in an authorized holster on the Deputy's weak side and drawn with the Deputy's weak hand to avoid possible confusion with firearms.

1. Cross draw of the Electronic Weapon is not authorized, except under urgent circumstances

F. Deputies should give a verbal warning prior to activating the ECD, unless doing so would place the deputy at risk.

G. Follow-up actions:

1. Following exposure to the ECD, staff should use a restraint technique that does not impair respiration, to bring the subject under control.

2. Upon exposure to the ECD, the individual who was exposed will be examined by medical personnel (Jail Nurse, Paramedic, etc). Medical evaluation will be verified by the on-duty supervisor.

3. Staff members will report all deployments of an ECD to a supervisor, regardless of whether or not the ECD was discharged.

4. On-duty medical staff will evaluate the condition of the individual with emphasis on any injuries that may have been sustained because of the use of the ECD.

5. If the ECD contacts have penetrated the skin, the puncture sites shall be located and brought to the attention of medical staff for treatment and removal if necessary.

6. If any of the probes are embedded in the following areas, the subject shall be transported to a Hospital Emergency Room for probe removal.

    a. Face

    b. Neck

    c. Groin

    d. Spinal column

    e. Eyes

7. Medical Refusal

    a. Individuals who have had an ECD used upon them must make all refusals for medical treatment directly to medical personnel.

b. The reporting deputy will ensure the refusal, and the staff member's name receiving the refusal, are documented in an incident report.

H. The staff member who deployed the ECD (regardless if discharged or not) will complete an incident report. Electronic Weapon discharges will include a "Supplemental Taser Use Form".

1. The incident report will be completed and submitted to the Shift Supervisor prior to the employee leaving the facility from his/her tour of duty.

2. The report shall include:

a. Staff members present at the time of the ECD deployment.

b. If upon display of the ECD, the subject complied with directives.

c. The individual's actions at the time the device was deployed and an ECD was discharged, the actions of the individual at the time of discharge.

d. Description of any observable marks or injuries to the inmate cause by exposure to the ECD, or injuries that resulted due to the ECD application.

e. Complaints from the individual regarding injury or pain.

f. Refusal of medical attention.

g. In instances where the ECD was deployed, but not activated, an incident report will be generated (Incident type – Use of Taser)

3. The Shift Supervisor will ensure that a copy of the completed Incident Report is forwarded to the Facility Commander. The Facility Commander will review the report and place a copy of the initialed report in the involved inmate's booking folder.

4. In the event an ECD is deployed and discharged, once the exposed subject is under control, all injuries associated with the deployment of the ECD shall be photographed and noted within the incident or crime report.

5. The Operations Sergeant and the Facility Commander will be notified of an ECD discharge. The Operations Sergeant/Facility Commander will then download the recorded incident. The videos are not to leave the facility without the permission of the Facility Commander.

IV. ECD STORAGE AND MAINTENANCE

A. ECDs are authorized for use by trained sworn staff members in the following locations:

1. Martinez Detention Facility (MDF).

2. West County Detention Facility (WCDF).

3. Marsh Creek Detention Facility (MCDF).

4. Contra Costa County Regional Medical Center (CCCRMC).

5. Contra Costa County Court Security (upon approval of the Presiding Judge).

6. Custody Alternative Facility (CAF).

B. The Shift Supervisor shall be responsible for the storage and serviceability of all ECD and the peripheral equipment.

C. CAS will be responsible for obtaining repairs of devices that exceed the user level.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.29
	RELATED ORDERS: MJS 1029, 1058 PC 3407	
ISSUE DATE: 01-13-04 **REVISION DATE:** 4-17-18 **REVIEW DATE:** 4-17-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Transports	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.30
	RELATED ORDERS: MJS 1029, 1058	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 3-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** WCDF Inmate Transports	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.31
	RELATED ORDERS: CCCSO 1.06.35, 1.06.36, 1.06.41, 1.06.71, 1.06.78, 1.06.79	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 02-10-15	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Investigation of Crimes	

I. POLICY

A. The Custody Services Bureau will take all steps necessary to ensure that any crime committed by an inmate while incarcerated within its facilities will be fully investigated.

B. Upon commission of any crime by an inmate, the Facility Commander or designee will determine if additional resources are necessary to properly complete the investigation.

C. The Shift Supervisor will ensure that a crime report is submitted by the investigating deputy and is properly routed for disposition.

II. PROCEDURE

A. The following crimes will be investigated by detectives assigned to the Investigation Section at FOB upon notification and with the authorization of the Facility Commander:

1. All felonies that involve major injury or death of staff or inmate.

2. All sexual assault crimes.

3. Any case that originates within the Detention Division, but requires follow up outside of the facility.

4. Deaths/suicides, escapes, arsons and/or when the Facility Commander deems appropriate.

5. Any other crime that requires the expertise of a regularly assigned investigator due to special circumstances or needs as determined by the Facility Commander.

B. Once the assigned investigator arrives at the crime scene and is briefed, he/she then becomes in charge of the scene and the investigation. Detention personnel will assist in the investigation as needed.

C. Preliminary release of basic information to the media about the crime under investigation will be in accordance with CCCSO Policy and Procedure Sections 1.06.71, 1.06.78 and 1.06.79.

D. The investigation by detectives of crimes involving Detention staff or inmates, not otherwise noted in this procedure, will be at the direction of the Custody Services Bureau Assistant Sheriff, Investigations Captain, or the OOD, and upon notification by the Facility Commander or Shift Supervisor.

E. DETENTION PERSONNEL WILL INVESTIGATE THE FOLLOWING CRIMES WITHIN THE FACILITY:

1. All misdemeanors, unless involving unusual circumstances.

2. All narcotic/drug violations not requiring follow up investigations by a regularly assigned investigator.

3. Minor assault cases upon staff or inmates.

4. Any other crimes as directed by a supervisor.

F. CONDUCTING A CRIMINAL INVESTIGATION:

1. Once it has been determined that a criminal act has occurred, the deputy or sergeant in charge of the crime scene will direct and assign responding deputies.

2. The deputy or sergeant in charge will ensure the crime scene is secured and that suspects and witnesses are placed in separate holding cells.

3. The crime scene will be isolated and if necessary, a deputy will be posted to safeguard the scene.

4. The deputy, or sergeant in charge, will coordinate a search of the crime scene.

a. Evidence in the crime scene will be identified and photographs will be taken (when needed) of the evidence before they are removed and processed in the evidence room.

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e. Deputies assigned to the crime scene will take statements from all involved person(s) in the alleged crime.

- The statements will be attached the Criminal and Incident Reports.
- Criminal and Incident reports will be written as directed by the Shift Supervisor.

f. All evidence shall be properly marked and routed and/or delivered in accordance with CCCSO Policy and Procedure 1.06.35 and 1.06.36.

G. REPORTING

1. All crime reports originating within the Detention Division will be reviewed for accuracy and completeness by the Custody Sergeant.

2. In the event of missing reports, reports being returned for follow up or other report problems, the Custody Sergeant of the responsible deputy will resolve such issues in a timely manner.

3. All crime reports investigated will be reviewed and processed by the Shift Supervisor. Reports will be routed in accordance with CCCSO Policy and Procedure Section 1.06.41.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER: 2.08.32**
	RELATED ORDERS: PC 243.4, 261, 266, 286, 288,289.6 CCCSO 1.05.33, 1.06.35, 1.06.36, 1.06.41, 1.06.71, 1.06.78, 1.06.79 Patrol 3.04.06, CSB 2.08.49	
ISSUE DATE: 07-01-04 **REVISION DATE:** 8-18-17 **REVIEW DATE:** 8-18-17	**CLEARANCE:** CUSTODY	
CHAPTER: Custody Operations	**SUBJECT:** Sexual Assault Prevention and Investigations	

I. POLICY

A. All sexual assault allegations will be investigated and a crime report will be written.

B. A thorough investigation will be conducted, regardless if the victim has made a decision to press charges.

C. All victims of sexual assault will be referred to the jail medical staff for evaluation and referral for services.

D. This policy shall be in accordance with the Prison Rape Elimination Act (PREA), which makes prevention and detection of sexual assaults/abuse a top priority with a "Zero Tolerance" mandate.

II. DEFINITIONS

A. SEXUAL ASSAULT: For the purposes of this manual, sexual assaults are comprised of the following criminal acts:

1. Rape
2. Sodomy
3. Forced oral copulation
4. Unlawful intercourse
5. Penetration with a foreign object
6. Sexual battery
7. Sexual exploitation

III. PROCEDURE

A. Assault Prevention

1. Sexual assaults can be prevented in many ways, including but not limited to:

a. Observations during room/cell checks.

b. Inmate orientation of "Zero Tolerance" policy and PREA reporting.

c. Make it clear that sexual behavior is not acceptable and discourage any activity that lends itself to sexual behavior.

d. Investigate all allegations of sexual abuse and sexual harassment whether the report is made verbally, in writing, or by a third party.

e. Be aware of grouping of probable aggressors near showers, courtyards or elsewhere.

f. Be aware of potential victims based on being physically smaller than average, lacking "street smarts", developmentally disabled, homosexual or transgender inmates, and child molesters.

B. Victim Identification

1. The victim of a sexual assault can be identified in many ways, including:

a. Deputy discovers the assault in progress

b. Victim's self-report to any staff member.

c. A third party reports a sexual assault

d. Staff member observes signs of victimization from an inmate. Including, but not limited to:

- Depression
- Uncharacteristic behavior for the individual
- Change in appearance
- Change in diet
- Change in routine

2. Staff should question a suspected victim without jeopardizing the inmate's safety, identity, and confidence by removing them from the immediate area.

C. Assault Investigation

1. Deputies will conduct an investigation in accordance with Sheriff's Office Patrol Division Policy 3.04.06, Sexual Assaults, whenever a report is made alleging that an inmate has been sexually assaulted.

a. If the alleged abuse appears to be a Felony, the Sexual Assault Unit will be notified immediately to conduct the investigation.

2. If a staff member has been accused of sexual assault, an investigation will be performed per CSB policy 2.08.49.

D. Staff member's responsibilities following a sexual assault that occurred recently are as follows:

1. The staff member receiving the report or observing the assault will immediately notify the Shift Sergeant or nearest deputy (if applicable).

a. The Shift Sergeant will assign deputies to protect the crime scene, gather witnesses and keep them separate until interviewed, identify and isolate the assailant(s) and any other duties related to the investigation of the incident.

[redacted]

c. The Shift Supervisor will notify Medical and Mental Health Staff for an initial assessment of the victim. If transport to CCRMC is necessary for a Sexual Assault Forensic Examination, the shift Sergeant will notify the hospital staff to ensure that proper staff is available, to include:

- A Sexual Assault Forensic Examiner (S.A.F.E) and/or Sexual Assault Nurse Examiner (S.A.N.E).
- A sexual assault victim advocate.

d. The Shift Supervisor will request a detective and an evidence technician to respond, if necessary.

e. In the event the victim/suspect inmate needs to be removed from his current housing assignment for their safety or the safety of others, custody staff will isolate the inmate until classification arranges for a new assignment, either in protective custody or another housing area.

f. Evidence collected shall be booked in accordance with established procedures outlined in the Sheriff's Policy and Procedures Manual 1.06.35.

- Evidence (if available) that will be collected and booked shall include:
  - Physical evidence
  - Video Surveillance
  - Audio recordings
- The reporting deputy will attach an inmate housing unit log sheet of the victim's housing area, and/or other area where the assault occurred, to the crime report.

g. Sexual assault investigations will be completed regardless of whether or not the alleged victim or abuser has been released or transferred.

h. The credibility of an alleged victim, suspect, or witness should not be determined by their status as an inmate or staff member.

2. Medical/Mental Health Staff Assessment and Follow Up

   a. All victims of sexual assault will be referred to the jail medical and mental health staff for evaluation and referral for services.

   b. Services for sexual assault cases which have occurred within the previous week and all follow-up testing and treatment may be given by the facility medical staff or at CCCMRC Emergency if necessary.

   c. Jail medical staff will make the referrals to Mental Health for psychological treatment. This referral may be immediate according to the inmate's needs.

   d. Medical Staff will coordinate the delivery of follow-up services required during the remainder of the jail sentence or stay.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.33
	RELATED ORDERS: CCCSO 1.06.35, 1.06.36, 1.06.37 CSB 2.08.49	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 01-08-2019	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Evidence Control and Handling	

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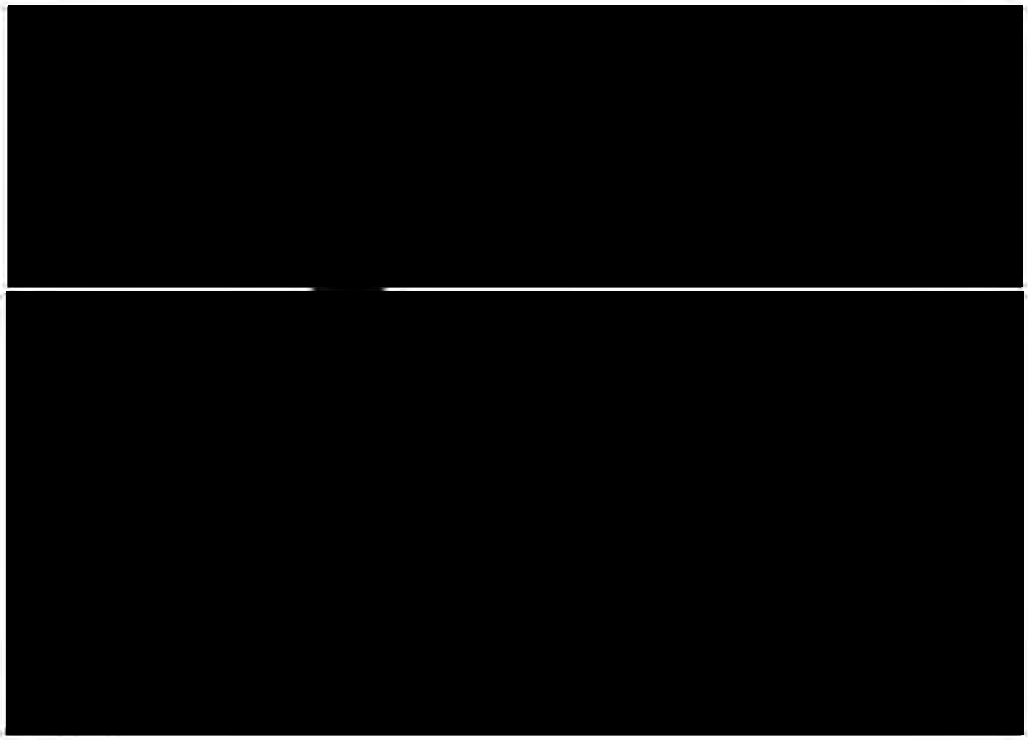

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.34
	RELATED ORDERS: CSB 2.08.26	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Video Taping Equipment	

I. POLICY

A. The Custody Services Bureau will document, through the use of video equipment, any incidents required by policy.

B. Videotapes shall be retained at MDF Administrative Services for a three-year period.

II. DEFINITIONS

A. VIDEO EQUIPMENT SETS:

1. Martinez Detention Facility: One camera, a battery charger, one 3-hour battery, one 30-minute battery and two blank videocassettes.

2. West County Detention Facility: One camera, a battery charger, one 3-hour battery, one 30-minute battery and two blank videocassettes.

III. PROCEDURE

A. STORAGE/ACCOUNTABILITY

1. Martinez Detention Facility

a. Video equipment set shall be stored in the Sergeant's Office in a camera bag.

b. Shift Sergeants will be responsible for inspecting the video equipment set daily to ensure that it is ready for immediate use.

2. West County Detention Facility

a. Video equipment set shall be stored in the SERT Office in a camera bag.

b. Shift Sergeants will be responsible for inspecting the video equipment set daily to ensure that it is ready for immediate use.

B. USE OF EQUIPMENT

1. The video camera is to be used only after obtaining authorization from the on-duty Shift Supervisor.

2. The supervisor coordinating the use of the video equipment shall ensure that camera users log the video equipment in and out.

    a. Such action shall include an entry on the shift log recording the event, the video equipment set number, the video operator's name, and the time(s) of use.

3. At the conclusion of each use, the video camera set shall be returned to its originating storage area via the Shift Supervisor.

    a. The supervisor shall ensure that the set is made ready for the next use, including any arrangements for equipment maintenance and/or replacement of expended tapes.

4. Video camera set maintenance shall be coordinated through the Operations Sergeant.

C. TAPE STORAGE

1. Video tape(s) recorded as part of a criminal investigation shall be processed and stored as evidence in accordance with CSB 2.08.33, Evidence and Property Handling Policy and Procedure.

2. Any videotape used to record an incident shall also require the removal of the plastic record tab to prevent accidental erasure of recorded evidentiary events.

3. Video tape(s) recorded for purposes other than evidence shall be labeled in the following manner:

    a. Incident date/time and report number.

    b. Supervisor's name and employee number

    c. Recording deputy's name(s) and employee number

    d. Involved subject/inmate's name and booking number.

4. Tapes, and a copy of any report generated from the recorded incident, shall be forwarded to the CSB Administrative Office for that facility.

5. Custody Administrative Services shall be responsible for maintenance of a videotape log and for storage, retrieval, and purging of all videotapes.

    a. The log will include:

Name of the subject/ inmate being recorded

Incident and/or crime report number

Recording date

Recording officer's name

Purge review date.

Tapes will be retained for a three-year period.

Prior to the purge of videotape, contact shall be made with the Internal Affairs Division to ensure purged videotapes will not detract from ongoing litigation(s).

Expired tapes will be forwarded to the Training Deputy for review of their potential in training staff members.

6. Additional blank tapes shall be kept in the Sergeant's Office (MDF/MCDF), and CAS (WCDF).

   a. Additional tapes may be ordered through the Shift Supervisor

Contra Costa County Office of the Sheriff CSB Policy and Procedure	DETENTION	NUMBER: 2.08.35
	RELATED ORDERS: MJS 1029 (6) (B)	
ISSUE DATE: 01-13-04 REVISION DATE: 08-08-18 REVIEW DATE: 03-17-19	CLEARANCE: CUSTODY	
CHAPTER: Custody Operations	SUBJECT: Inmate Escapes	

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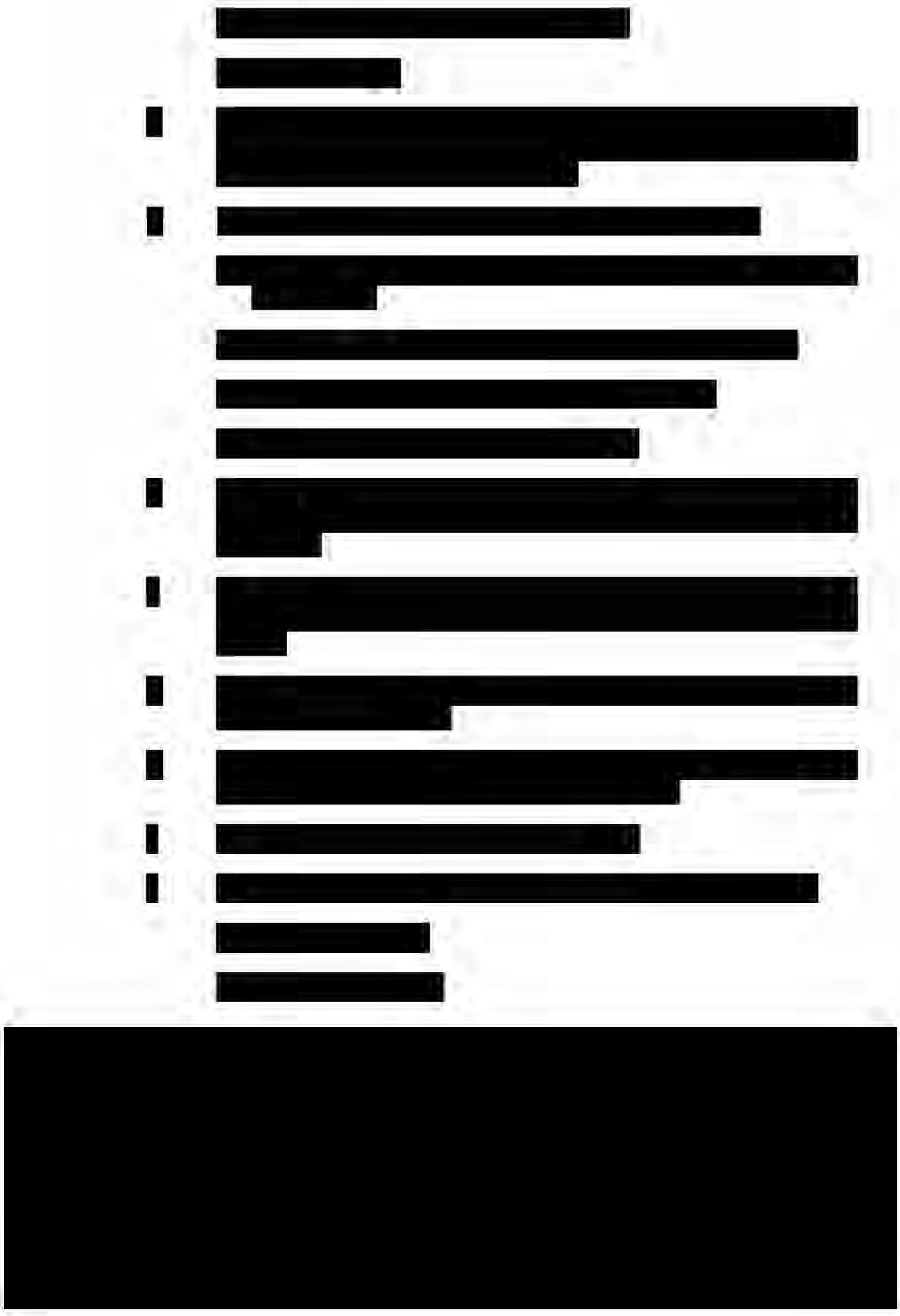



Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.36
	RELATED ORDERS: MJS 1218 CCR 12525 G.C. 26643, 27491 W & I - 208.1	
ISSUE DATE: 01-13-04 **REVISION DATE:** 03-18-19 **REVIEW DATE:** 03-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Death	

I. POLICY

A. The Custody Services Bureau shall conduct a comprehensive investigation of the circumstances leading up to, during and following every inmate death, pursuant to Minimum Jail Standard 1218 and California Code of Regulations 12525.

B. Inmate deaths will be handled as outlined in the Sheriff's Office Manual Section 1.06.62.

II. DEFINITIONS

A. In-Custody – An inmate that is currently in the custody of the Sheriff's Office Custody Services Bureau.

B. Constructive Custody – An inmate that is sentenced to the custody of the Sheriff and has been released to a Custody Alternative Program.

1. Such constructive custody may be any of the following:

a. County Parole

b. Electronic Home Detention (EHD)

c. Work Alternative Program (WAP)

d. An “In-Custody” inmate on a temporary release pass

III. PROCEDURE

A. INMATE DEATH/INCIDENT LIKELY TO RESULT IN DEATH

1. In cases where cessation of life is not obvious, life saving measures (CPR, FIRST AID) will be administered immediately.

2. Appropriate emergency life saving measures will be continued and the inmate immediately transported to the nearest hospital for medical treatment.

3. In cases where death has already been determined or death is obvious, i.e., post-mortem lividity, rigor mortis, the body will not be disturbed or moved from the scene until approved by and at the direction of Coroner's Division personnel.

4. Facility staff will not make any public comment regarding the situation or the individual(s) involved and will refer all inquiries to the Facility Commander or the Division Commander.

5. The Coroner's Division is responsible for the notification of next-of-kin on any inmate death.

    a. In the event that an inquiry is received regarding the incident, no information will be released. Contact information shall be obtained and forwarded to the appropriate investigating entity. (Coroner, Investigations, District Attorney, etc.)

6. The Coroner will be responsible for, and take custody of all the deceased's personal property and clothing.

B. RESPONSIBILITIES OF FACILITY STAFF

1. Staff Making Discovery

    a. Staff will secure or preserve the scene and all evidence.

    b. Staff will detain, identify and separate all suspects and witnesses.

    c. Staff will notify the Shift Supervisor.

2. Shift Supervisor (Sergeant)

    a. The Sergeant will notify the Facility Commander.

    b. The Sergeant will obtain the in-custody death kit and will respond to the scene.

    c. The Sergeant will complete the “In-Custody Inmate Death” checklist and forward the original to the Division Captain via chain of command.

    d. The Sergeant will coordinate activities with the investigating entity to ensure all inmates and other potential witnesses are interviewed.

        - In the event the investigating entity is unable to complete interviews in a timely manner, the Shift Supervisor shall assign sworn facility staff to interview witnesses.

        - Complete names, booking numbers, cell assignments and statements will be documented.

        - In all inmate deaths, which meet the definition of Department Policy 1.06.62, the Fatal Incident Protocol shall be invoked.

- Instances may arise when it would appear elements of the Fatal Incident Protocol are not met, but concerns arise. At this time the Facility Commander or designee may invoke protocol.

- In all inmate death cases, the Facility Commander/ Sergeant will ensure County Risk Management is notified as soon as possible.

e. The Facility Commander will be responsible for the preparation and forwarding of the below documents to the Attorney General's Office at the listed address within ten (10) days of the inmate death.

- Incident Report

- D.O.J. "Death In Custody Reporting Form" (BCIA 713)

- Crime Report

- Forward to:

  Department of Justice
  Criminal Justice Statistics Center
  P.O. Box 903427
  Sacramento, CA 94203-4270
  Questions - (916) 210-4285
  Facsimile: (916) 227-0427 or 227-3561

f. California Government Code (GC) Section 12525 requires the Attorney General to be notified within ten (10) days of the inmate death explaining the circumstances of the death.

g. A review team comprised of the below listed personnel will review all in-custody deaths within 30 days of an in-custody death.

Facility Commander
Health Services Administrator
County Counsel
Treating Physician
CAS Representative or Designee
Other health care and supervision staff relevant to the incident

h. The review will determine the following, but not limited to:

- Was appropriate clinical care provided

- Whether modification to policy(ies) and procedures are needed

- To identify issues that require further attention

i. The CAS Specialist will ensure completion of review and tracking for compliance.

3. Shift Supervisor or Designee

a. In all cases of in-custody deaths, the Sergeant or designee shall make two complete copies of the contents of the inmate's booking folder, one for the CSB Administrative Services and one for Investigation Division.

b. The Sergeant or designee will make copies of any housing unit documentation on the inmate, including diary entries, module logs, separation logs, etc., for CSB Administrative Services and Investigation Division.

c. The Sergeant or designee will submit a memo to the Division Captain detailing the chronological set of events preceding the death of the inmate, to include a brief history of the inmate.

4. Custody Administrative Services

a. CAS will retain the original booking folder, containing the Health Questionnaire and all other booking records on the inmate.

b. CAS shall:

- Maintain the original folder in CAS at Martinez Detention Facility indefinitely.

- Notify California Board of Corrections of any juvenile injury or death within 10 calendar days after the death pursuant to 208.1 W&I and Tile 15 section 1341.

C. DECEASED INMATE'S PERSONAL EFFECTS

1. The Coroner’s Division will secure the following:

a. Any clothing on the inmate

b. Any suicide note(s)

c. Any medication(s)

d. Any prosthetics, dentures, medical appliances (insulin pumps, etc.)

2. The Investigation’s Division will secure the following:

a. All other clothing, personal property, cell property and money

b. Any property not taken by the Coroner’s Division.

D. INCIDENT-CRIME REPORTS

1. A Deputy not involved in the incident as directed by the Shift Supervisor will initiate an incident and crime report.

2. The Investigation Division or Coroner's Division as deemed appropriate will handle subsequent follow-up investigation.

   a. Constructive Custody Inmate Deaths

      - The law enforcement jurisdiction at the death site will be responsible for initiating all criminal elements applicable "reports". The CAF Sergeant will submit a memo regarding the incident. The CAF Sergeant will assign an appropriate CAF staff member to complete the incident report.

3. The Shift Supervisor will initiate an "Unusual Incident Report".

   a. The report must be routed via standard routing, prior to departing the Facility at the end of shift.

4. Facility Incident Reports and the initial Crime Report shall be completed and forwarded to the Facility Commander prior to the end of shift.

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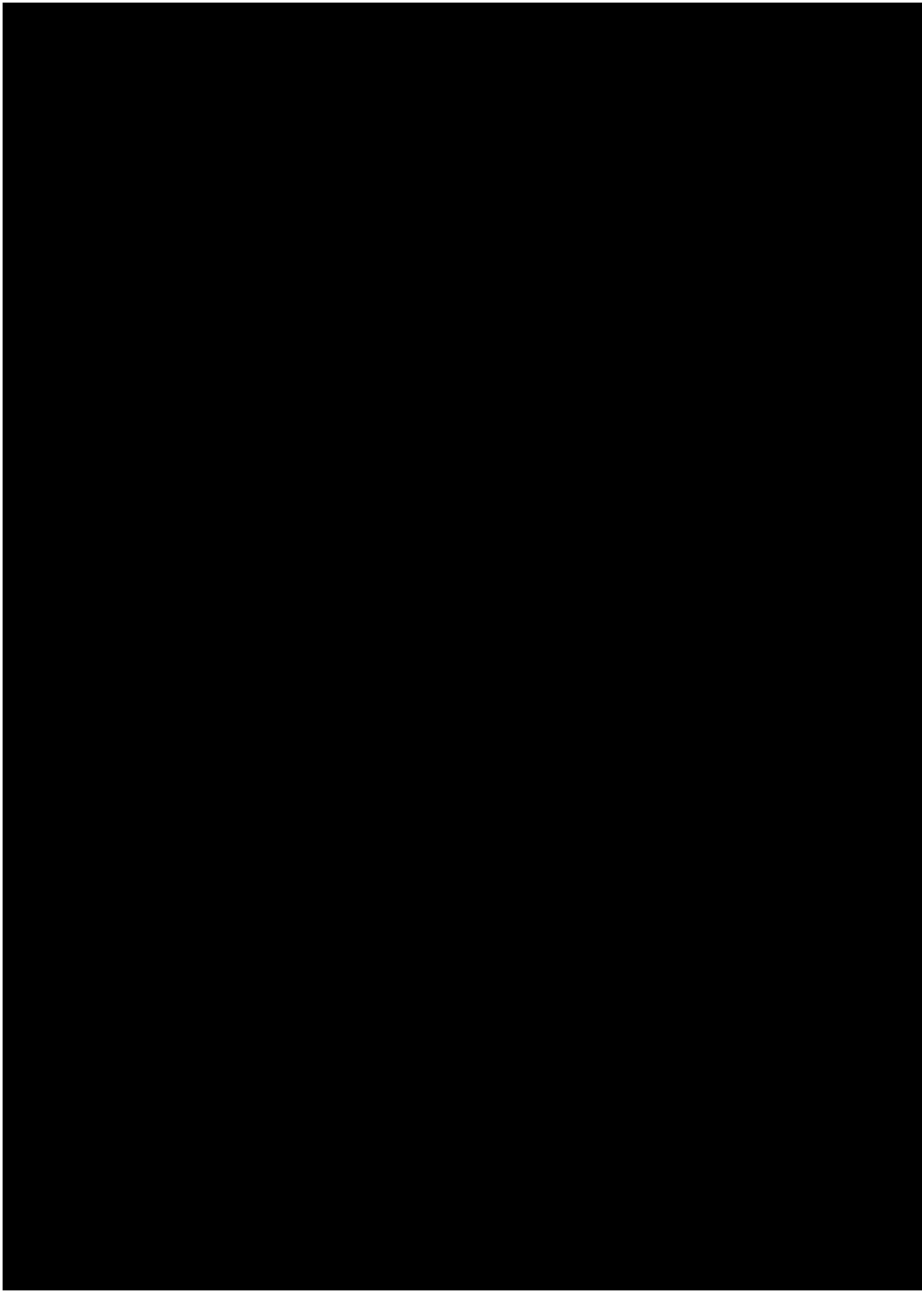

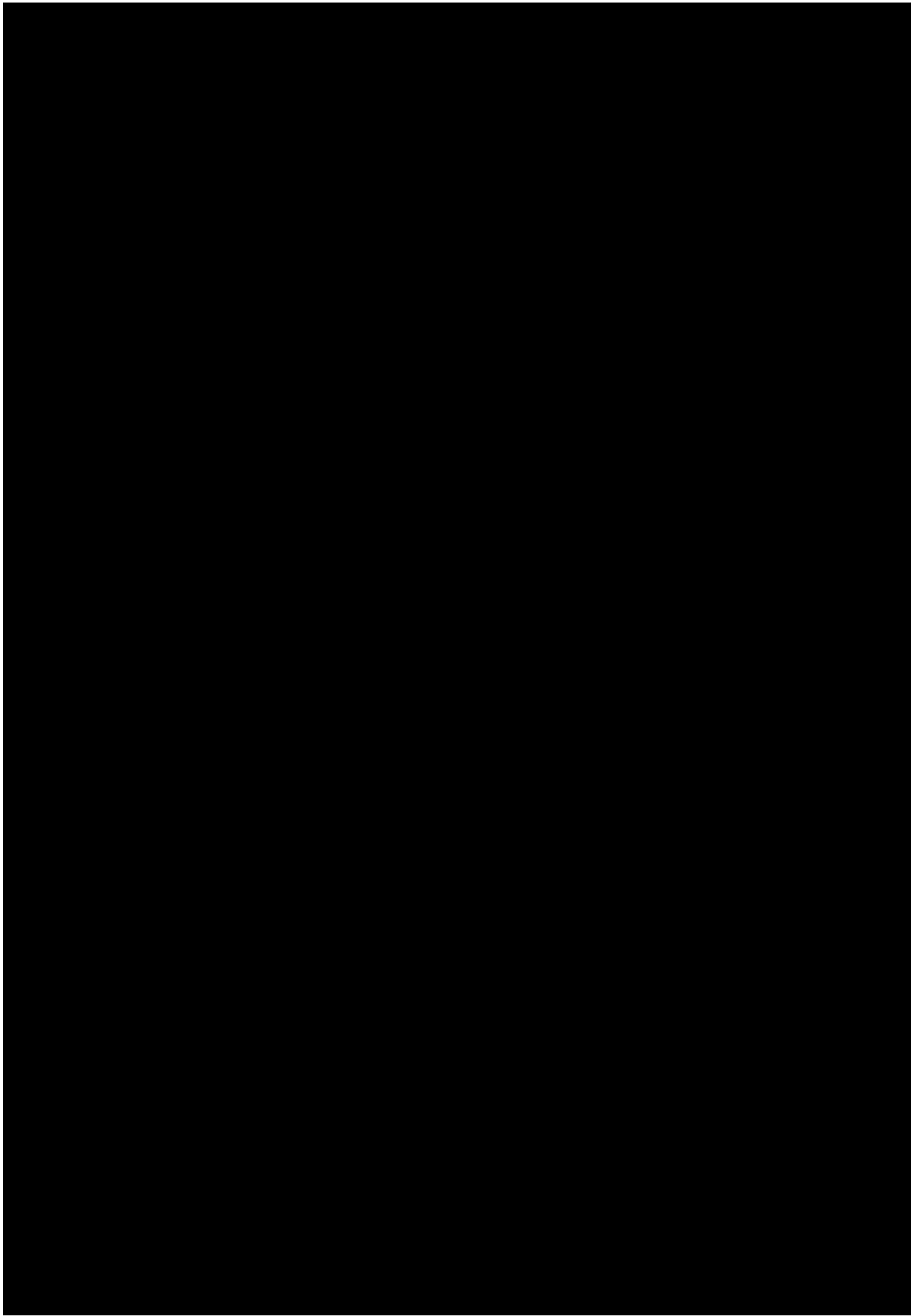

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.37
	RELATED ORDERS: Cardi Cardiac Science AED Operation and Service Manual.	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-08-19 **REVIEW DATE:** 07-08-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Automatic External Defibrillator (AED)	

I. POLICY

A. The Automatic External defibrillator will be available for emergency treatment of victims exhibiting symptoms of sudden cardiac arrest who are unresponsive and not breathing.

B. Staff will be familiar with the use of the AED as part of their regular CPR training.

C. The device is not meant to replace staff trained in CPR and does not eliminate the need for basic CPR.

II. PROCEDURE

A. AED LOCATIONS

1. Martinez Detention Facility (MDF):

   a. 1st floor medical, on the wall near the copy machine.

2. West County Detention Facility (WCDF):

   a. Men's (building 2) on the wall in the nurse triage room (left of dental)

   b. Building 8 on the wall in the nurse triage room.

3. Marsh Creek Detention Facility (MCDF):

a. Mounted on the wall in the staff office.

B. Medical Staff shall inspect the AED daily to ensure rescue readiness (green light is on.)

C. AED RESCUE PREPARATION

1. The AED will be carried to all Code 3 Medical situations.

a. Responding staff will initiate CPR, if needed, until AED on site.

2. The operator should not open the AED until ready to use. The device is for short-term use only.

3. The operator will ensure that the green status indicator light is on (the AED is rescue ready.)

a. If not, remove and reinsert the battery. (See device manual)

4. WARNING: Do not operate cell phones or wireless telephones within 1 meter (approximately 3 feet) of the AED (danger of incorrect rhythm recognition.)

D. AED RESCUE

1. The AED Operator will take the following steps:

a. Ensure the skin site is clean and dry.

- Shave if necessary

b. Place electrodes on chest according to audible/written/pictured directions.

- WARNING: Do not place electrodes directly over implanted pacemaker. Place at least one inch from device.

c. Refrain from touching patient and allow AED to analyze cardiac rhythm.

d. If shock is advised by the AED, stand clear and push button to deliver shock.

- This cycle will repeat until 3 shocks have been delivered or until a stable cardiac rhythm is established, whichever is less.

- The 3-defibrillation shocks are delivered in a pre-programmed sequence.

e. Re-check for breathing, and if not breathing, give two breaths then check for pulse.

f. If no pulse, re-start CPR.

E. DOCUMENTATION

1. Medical staff will document all actions as soon as possible after each use and will notify the Facility Commander.

2. Custody Staff will complete an Incident

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.38
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 02-10-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Line Ups	

I. POLICY

A. The Shift Supervisor will coordinate and make the line-up room available to all law enforcement agencies in compliance with the following procedures.

II. PROCEDURE

A. SCHEDULE

1. In the event a request for the use of the line-up room is received, the requestor will be advised to contact the Shift Supervisor who will coordinate this activity.

2. Request for this service can be made by telephone, or in person Monday through Friday, between the hours of 0700-1500.

   a. At least five (5) days advance notice needs to be given.

      - This advance notice allows time to pick the appropriate inmates for the line-up, and ensure they will still be in custody on the day selected.

3. If circumstance indicates that a line-up needs to be conducted sooner, it will be at the discretion of the Shift Supervisor.

4. Line-ups will not be allowed when it is disruptive to the operation or affects the security/safety of staff or inmates.

5. The requestor of the line-up should be made aware of public visiting hours for inmates and of the possibility of any witness coming in contact with relatives/friends of the suspect.

6. It is suggested that line-ups will be scheduled between the following hours:

   a. MDF and WCDF: 0900-1100 hours and 1300-1500 hours, Monday through Friday.

7. Once a line-up is scheduled, the Facility Commander of the affected facility will be notified in writing of the event and what agency to expect.

8. The requesting agency is responsible for the coordination and escort of all witnesses.

    a. Under no circumstances will anyone involved in the line-up be allowed to enter the jail security area without proper authorization.

B. DEVELOPING THE LINE UP

1. Inmates (including the subject inmate) have a right to refuse to participate in the line-up for whatever reason.

2. It will be the responsibility of the agency/division conducting the line-up to ensure all legal issues involving a line-up are followed, i.e., defendants attorney present, suggestive wording to witness avoided, etc.

3. Only lineups involving in-custody inmates will be conducted inside a detention facility.

    a. Inmates selected shall be informed that participation is voluntary.

    b. Inmates will be brought to the line-up room as one group.

        - They will enter the line-up room in a straight-line formation.

4. To conduct a line-up, a group of five (5) subjects should be available. The following precautions should be observed:

    a. Subjects participating in the line-up should have the same general appearance as the suspect with respect to race, height, weight, hair color, clothing, etc.

    b. The suspect will be permitted to select his/her own position in the line-up. This will be done prior to the investigator conducting this viewing.

    c. The line-up members will be ordered not to talk while in transit to the line-up room, during the line-up, or while moving from the line-up room to the holding cell. If voice identification should be required, it will be done at the direction of the requesting agency. Line-up participants will be informed in advance that voice identification will be required.

5. The requesting agency should determine prior to the line-up if it will be necessary to have the line-up members wear hats, show certain physical areas or demonstrate any characteristics and provide them in advance.

6. The Shift Supervisor will select and direct deputies to conduct line-ups. These deputies will be responsible for selecting inmates to participate in the line-up.

    a. In the event it is impossible to match physical descriptions of subjects to a

suspect, the requesting agency will be notified in writing.

7. Numbered placards used to identify suspects are kept in the viewing room area and will be issued to the line-up members prior to entering the line-up room, out of the sight of witnesses. The suspect is to be allowed to select his/her position.

C. CONDUCTING THE LINE-UP

1. It is the policy of this division to have the requesting agency/or CCCSO investigation personnel conduct the line-up.

   a. The Detention Division will provide the availability of rooms, subjects for a line-up when needed, and other necessary assistance, such as security. This is done to limit the amount of duplicate reports, court time, etc., staff members could become involved in.

2. Deputies involved in the line-up must remember to exercise security and safety measures when dealing with witnesses. The possibility does exist that a witness could smuggle in a weapon in an attempt to injure a suspect.

3. A memorandum with attached Live Line-Up Log will be written by the deputy assigned to the line-up detail that will be forwarded to the Shift Supervisor for processing. A copy will be given to the person requesting the line-up and in the inmate's booking.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.39
	RELATED ORDERS: P.C. 4021, 4030 CCCSO P&P 1.06.61, 1.06.27 CSB 2.08.49	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** CUSTODY	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Body Cavity Searches - Body Cavity, Strip, Visual and Pat	

I. POLICY

A. The Custody Services Bureau will establish policy and procedure for searching inmates that allows the following objectives to be reached:

1. To promote the safe, secure and orderly running of Sheriff's Office detention facilities by locating contraband and deterring its introduction and movement.

2. To use the least intrusive type of search, depending on the suspected type of contraband and suspected method of introduction or movement.

3. To preserve the dignity of the inmate searched to the extent possible.

II. DEFINITIONS

A. STRIP SEARCH: A visual inspection of an inmate's underclothing, unclothed body, breasts, buttocks, or genitalia after the inmate arranges or removes (partially or fully) his or her clothing.

B. VISUAL BODY CAVITY SEARCH: A visual inspection of an inmate's stomach, rectal cavity, or vagina. It may involve the unclothed inmate bending at the waist, squatting, or lifting or spreading breasts, buttocks, or genitalia to allow visual inspection of an inmate's stomach, rectal cavity, or vagina. The mouth is not considered a body cavity for these purposes.

C. PHYSICAL BODY CAVITY SEARCH: A visual body cavity search of an inmate plus a physical intrusion, manually or by instrument, into an inmate's stomach, rectal cavity, or vagina.

D. CLOTHED PAT SEARCH: A tactile, visual, and/or scanner inspection of an inmate's clothing (including hats, wigs, coats, pockets, socks and footwear), personal effects, hair, mouth, or ears. The inspection may include requiring the inmate to remove footwear, socks, hats, wigs, gloves, and outerwear (coats, jackets, sweatshirts, sweaters). The inspection may include requiring the inmate to turn his or her pockets inside out.

1. A male officer may not conduct a clothed pat search on a female inmate unless exigent circumstances exist and the supervising officer approves.

   a. If a cross-gender pat search is conducted on a female inmate, it must be documented in JMS.

2. A female deputy may conduct a clothed pat search on a male inmate as reasonably required.

E. CONTRABAND: For these purposes, contraband means weapons, money, controlled substances, or other items posing a threat to the security of a Sheriff's detention facility.

F. CONVICTED INMATE: For these purposes, a convicted inmate is one who is currently serving a sentence and is incarcerated in a state or local detention facility.

III. PROCEDURE

A. INTAKE RECEIVING AREA

1. All arrestees and inmates entering the intake receiving area, for any purpose, will be clothed pat searched by deputies.

2. Clothed pat searches shall be conducted by deputies of the same sex as the person to be searched whenever possible.

a. A male deputy may not conduct a clothed pat search on a female inmate unless exigent circumstances exist and the supervising sergeant approves.

- If a cross-gender pat search is conducted on a female inmate, it shall be documented in JMS.

b. A female deputy may conduct a clothed pat search on a male inmate as reasonably required.

c. Pat searches of transgender or intersex persons may be conducted by a male or female deputy.

- Split searches may be conducted by the deputy of the sex requested by the transgender person (if available) to search those parts of the body that are anatomically the same as the officer who is requested to do the search.
- If a transgender or intersex pat search is conducted, it shall be documented in JMS.

B. SEARCHES OF PREARRAIGNMENT INMATES

1. All pre-arraignment inmates, whether arrested for an infraction, misdemeanor, or felony, will be searched before initially entering the jail population. Deputies will determine the appropriate kind of search to be conducted.

2. No pre-arraignment inmate will be subjected to a strip search or visual body cavity search unless there is reasonable suspicion that the inmate is concealing contraband that will be discovered in a search

3. Reasonable suspicion must be based on specific and clear-cut facts related to the particular pre-arraignment inmate's circumstances. The following factors are to be considered in determining whether reasonable suspicion exists:

a. The nature of the inmate's criminal offense. Consider whether the offense is associated with or involves weapons, violence, or controlled substances. The nature of the offense alone, however, does not necessarily constitute reasonable suspicion.

b. The inmate's appearance and conduct. Consider whether the inmate has made furtive movements or refused to cooperate.

c. The inmate's prior arrest and conviction record.

d. The inmate's prior custody experiences, including custody status, classification, and discipline. Consider whether the inmate is known to staff as one who possessed contraband while in custody.

e. Other pertinent information.

4. No pre-arraignment inmate will be subject to a physical body cavity search absent a valid search warrant or a signed consent by the person searched, unless an immediate present danger exists that a concealed weapon will be used against a deputy or another person and no less intrusive alternative exists.

5. All pre-arraignment inmates may be subject to clothed pat searches.

C. SEARCHES OF POST-ARRAIGNMENT INMATES AND CONVICTED INMATES

1. No post-arraignment inmate or convicted inmate will be subjected to a strip search or visual body cavity search unless reasonable suspicion exists that the inmate is concealing contraband that will be discovered in a search.

2. Reasonable suspicion must be based on specific and clear-cut facts related to the particular post-arraignment or convicted inmate's circumstances.

3. Reasonable suspicion may arise if a post-arraignment inmate or convicted inmate had a good opportunity to conceal contraband. A post-arraignment inmate or convicted inmate may be considered to have had a good opportunity to conceal contraband when any of the following have recently occurred:

a. The inmate returns to his or her housing unit.

b. The common area of the inmate's housing unit was visited by non-sworn staff members (i.e. Kitchen staff, laundry staff, library staff, teachers, trades people, medical personnel, etc.)

c. The inmate returns from physical contact with members of the public.

4. No post-arraignment inmate or convicted inmate will be subject to a physical body cavity search absent a valid search warrant or a signed consent by the person searched, unless an immediate present danger exists that a concealed weapon will be used against a ~~officer~~ deputy or another person and no less intrusive alternative exists.

D. CONDUCTING STRIP SEARCHES AND VISUAL BODY CAVITY SEARCHES

1. No strip search or visual body cavity search may be conducted without the prior written authorization of a supervising sergeant. The written authorization will state the factual reason(s) for conducting the search.

2. Deputies conducting strip and visual body cavity searches shall take all reasonable measures to protect the inmate from undue distress or embarrassment.

3. Each strip search and visual body cavity search must be conducted in an area of privacy so that non-participants cannot observe the search.

4. Only persons required to be present for a strip search or visual body cavity search may be present for the search.

5. Deputies conducting a strip search or visual body cavity search, or in the immediate vicinity of such a search, must be the same sex as the person searched, except licensed medical personnel required to be present.

6. Strip searches of transgender or intersex persons may be conducted by a male or female deputy.

   a. Split searches may be conducted by the deputy of the sex requested by the transgender person (if available) to search those parts of the body that are anatomically the same as the officer who is requested to do the search.

   b. If a transgender or intersex strip search is conducted, it shall be documented in JMS.

7. Strip or visual body cavity searches are not allowed for the sole purpose of determining the genital status of an inmate.

8. Deputies conducting a strip search or visual body cavity search may not touch the breasts, buttocks, or private parts of the person searched.

9. The hygiene and physical needs of the person searched will be reasonably accommodated.

10. A written record of every strip search or visual body cavity search will be made.

    a. The written record will identify who conducted the search, who was searched, when the search was conducted, where the search was conducted and what items, if any, were discovered or removed in the search.

    b. The written record of the search, along with the written authorization for the search, will be kept in the booking jacket with a copy to the Facility Commander via the chain of command.

11. The written record of a strip search or visual body cavity search shall be made available to the person searched upon his or her request for the record. The Facility Commander shall be notified whenever such a request is made.

E. CONDUCTING PHYSICAL BODY CAVITY SEARCHES

1. A physical body cavity search may only be conducted by licensed medical personnel in sanitary conditions (determined by licensed medical personnel).

2. Each physical body cavity search must be conducted in an area of privacy so that non-participants cannot observe the search.

3. Only persons required to be present for a physical body cavity search may be present for the search.

4. Deputies present during a physical body cavity search must be the same sex as the person searched.

5. Physical contact with the person searched shall be limited to only that which is necessary to carry out the search.

   a. Deputies shall comply with Sheriff's Office Policies and Procedures 1.06.61, *Use of Force*, if force is necessary due to a lack of cooperation by the person to be searched.

6. The hygiene and physical needs of the person searched shall be reasonably accommodated.

7. A written record of every strip search or visual body cavity search will be made.

a. The written record will identify who conducted the search, who was searched, when the search was conducted, where the search was conducted and what items, if any, were discovered or removed in the search.

b. The written record of the search, along with the written authorization for the search, will be kept in the booking jacket with a copy to the Facility Commander via the chain of command.

c. The written record of a strip search or visual body cavity search shall be made available to the person searched upon his or her request for the record. The Facility Commander shall be notified whenever such a request is made.

F. PROCEDURE FOR DRESSING INMATES WHO ARE NOT BEING STRIP SEARCHED.

1. The deputy will inspect the dressing room for contraband.

2. The inmate will be given a clothing bag and told to enter the dressing room and to put their clothes in the bag.

3. The inmate will be told to knock on the door when their clothes are in the bag.

4. The deputy will take the bag and scan the room to ensure no contraband is in the room or street clothes remain on the inmate.

5. The deputy will give the inmate jail issued clothing and will close the door.

6. The inmate will be told to dresses in the jail issued clothing and exits the room when dressed.

G. PROCEDURE FOR DRESSING INMATES WHO ARE BEING STRIP SEARCHED.

1. The deputy will inspect the dressing room for contraband.

2. The deputy will enter the dressing room with the inmate and instruct the inmate to remove his/her clothing.

3. The deputy will physically inspect each item of clothing as inmate removes them.

4. The deputy will put the inmate's clothing in the inmate's assigned clothing bag.

5. The deputy will conduct a visual body cavity search.

6. The deputy will give the inmate jail issued clothing and the deputy will exit the room.

7. The inmate will be told to dress in the jail issued clothing and to exit the room when they're dressed.

H. WHEN SEARCH EVIDENCE MAY LEAD TO NEW CHARGES

1. When a search of an inmate yields contraband that may lead to the filing of new criminal charges against the inmate, staff shall collect, control, and handle the evidence in accord with Sheriff's Office Policies and Procedures 1.06.35, *Evidence Handling*.

2. The officer obtaining the evidence shall write a report and submit it to the District Attorney's Office for review about whether a criminal complaint should issue.

3. Ensure the new charges are listed and included in the inmates booking.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.40
	RELATED ORDERS: MJS 1029 P.C. 4030 CSB 2.08.13, 2.08.14, 2.08.39	
ISSUE DATE: 1-13-04 **REVISION DATE:** 5-2-17 **REVIEW DATE:** 11-20-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Facility Searches/Contraband Control	

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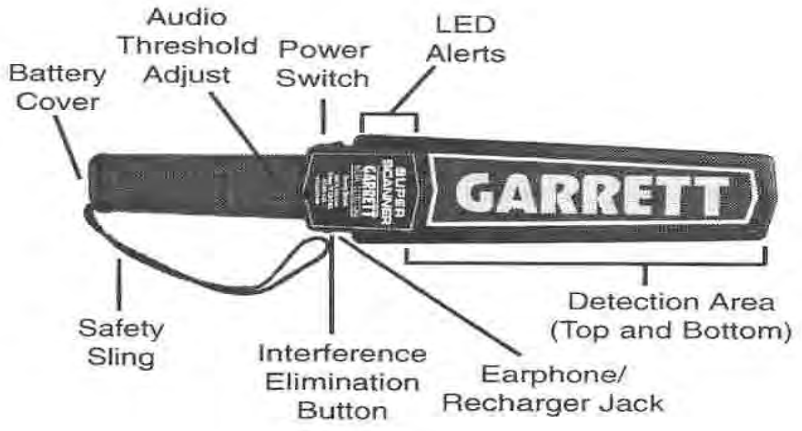
Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.41
	RELATED ORDERS: CCCSO P&P 1.06.61, 1.06.35 CSB 2.08.39	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Garrett Metal Director	

I. POLICY

A. Detention Division officers will search inmates to promote the safe, secure, and orderly running of Sheriff detention facilities by locating contraband and deterring its introduction and movement.

B. Techniques used to locate and deter contraband shall be through the least intrusive type of search under the circumstances, and preserving the dignity of the searched inmates to the extent possible.

II. EQUIPMENT COMPONENTS



A. POWER SWITCH: Setting the switch to the "On" position will cause a brief audio tone and red LED alarm to activate to signal the unit is ready for use.

B. AUDIO ALERT: The speaker provides a clearly audible sound whenever metal is detected. When the earphone plug is installed, the alert will sound only through the

earphone. The audio alert will change from a strong steady tone to a fluctuating tone to indicate the need for battery replacement.

C. LED ARRAY:

1. Green LED-Power is on.

2. Amber LED-Battery Warning. Approximately one-hour of power remains to the unit.

3. Red LED-Metal detection alert

D. INTERFERENCE ELIMINATION BUTTON: Press and hold this button to decrease sensitivity to a level that does not respond to interfering metal objects.

III. PROCEDURE

A. GSS Detection Principles and Capabilities

1. The Garrett Super Scanner (GSS) is an active hand held metal detector with very high sensitivity to all metals, including ferrous, non-ferrous and stainless steel.

2. Detection range of the GSS is dependent upon the size and the conductivity of the metal object.

a. Larger objects will be detected more quickly.

3. The GSS is factory preset for maximum sensitivity.

a. When metal objects are detected, a sharp, audible signal and a red LED will activate.

- The audio alert may only be silenced by inserting an optional earphone into the audio jack.

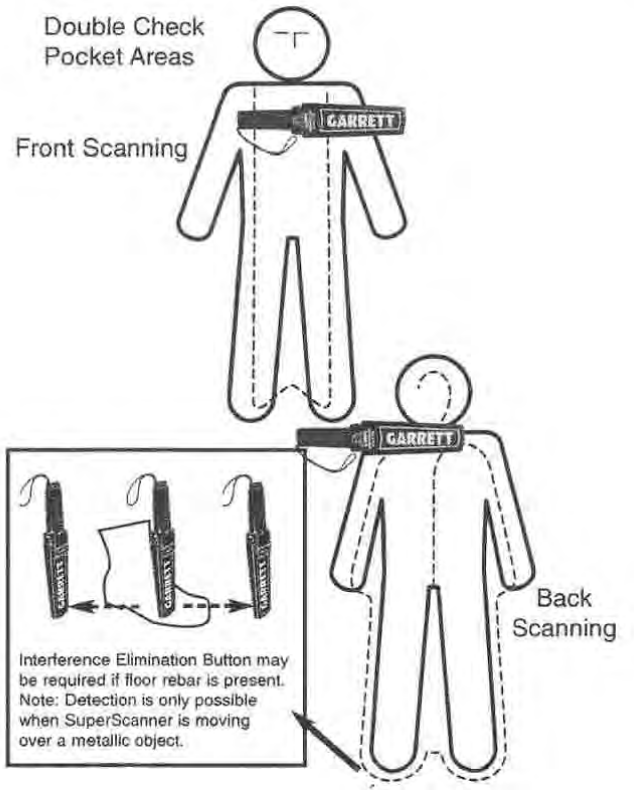
b. Should nearby metal objects cause interference during a particular scan, the operator should depress and hold the Interference Elimination Button to reduce the scanners level of sensitivity.

- This will allow the operator to scan objects with greater precision.

B. Operator Scanning Techniques

1. Move the scanner within two (2) inches from the person being inspected.

2. The operator should scan person(s) being inspected in accordance with the following diagram:



3. When metal is detected adjacent to the scan area:

   a. Audio alert will increase sharply.

   b. The red alert light will illuminate.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.42
	RELATED ORDERS: MJS 1260, 1262, 1263, 1270, 1271, 1272 P.C. 6030 NDS	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-26-19 **REVIEW DATE:** 07-29-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Clothing and Bedding	

I. POLICY

It is the policy of the Office of the Sheriff to issue all inmates housed in Contra Costa County Detention Facilities clothing that is clean, freshly laundered, in good repair, and free of vermin. Inmates will be afforded the opportunity to launder their clothing and linen at least once each week. Each item of clothing and linen issued is Sheriff's Property for which the inmate shall be held accountable.

II. PROCEDURE

A. CLOTHING AND BEDDING ISSUE

1. All inmate clothing and linen will be issued at the Martinez Detention Facility (MDF). The MDF DSW Supervisor is responsible for ensuring all issued inmate clothing is clean, serviceable and free of vermin.

2. Pillows and blankets will be issued by the facility where the inmate is housed.

3. Inmates will be issued the following clothing, linen, and bedding items. A sufficient amount of undergarments will be issued to allow for laundry exchange on a weekly basis.

a.	Towel	2 each
b.	T-shirt	3 each
c.	Underwear (Female: Bras and panties) (Males: Boxer shorts)	3 each
d.	Socks	3 pair
e.	Uniform Shirt	3 each

f.	Uniform Trouser (Pregnancy pant for pregnant inmates)	3 each
g.	Sheets	2 each
h.	Pillowcase (When issued a pillow)	1 each
i.	Blankets	2 each
j.	Sandals	1 pair
k.	Laundry Bag with inmate name tag	1 each

4. When an inmate is dressed out, the Deputy will issue the inmate a mesh clothing bag with the inmate's name and booking number written upon the tag. This will serve as the inmate's clothing bag until their release from custody.

    a. Nylon tags with metal grommets will be secured to the bottom of the mesh bag using a Zip-tie.

    b. The inmate's name will be written on one side of the tag using a black marking pen.

    c. Once the inmate is no longer in custody, the name will be crossed off with a black marking pen and the new name written on the opposite side of the tag.

    d. Once both sides of the tag have been used, the tag will be cut off the bag, discarded, and a new tag secured to the bag.

5. Inmates are responsible for maintaining their clothing, linen, bedding, and clothing bag during their time of incarceration. When a Housing Deputy verifies that a county-issued item, is lost or damaged through no fault of the inmate it shall be replaced without charge to the inmate.

6. MDF DSW staff will be responsible to stock the property room with the net bags and clothing. DSWs will be responsible for filling the net bags with the proper amount and size of clothing. The net bags will contain two sets of clothing. The Deputy will give the inmate one set of clothing during the dress out process, for a total of three issued sets.

7. Upon arrival at a housing unit, all inmates will be assigned a serviceable mattress. They may request a pillow and pillowcase from the facility DSW.

B. INMATE CLOTHING

1. All inmates, regardless of status or work assignment, will not possess more than three sets of clothing. MCDF inmates will be allowed for four sets of clothing. Excess clothing, linen, or bedding will be considered contraband.

2. Inmates shall be appropriately clothed at all times, consistent with their housing assignment, work, or program activities as directed by staff. Inmate clothing will

be worn in the manner in which it was manufactured to be worn. Inmates will not alter or tailor issued clothing.

3. Facility Commanders may provide additional seasonal, labor, and safety clothing as required. Facility Commanders are responsible for developing procedures to ensure these clothing items are routinely cleaned and are recovered upon inmate release.

C. INMATE CLOTHING REPLACEMENT

1. Inmates shall not alter or dispose of damaged or worn out county-issued clothing in any manner without specific authority and direction to do so by staff.

2. Inmate clothing that becomes damaged or worn-out through no fault of the inmate, will be replaced without cost to the inmate. Inmates who have damaged or worn out items will complete a written request form identifying that a clothing item requires replacement. The inmate request form will be addressed and forwarded to the Facility DSW Supervisor, following approval by the module deputy.

3. If replacement at county cost is approved, the damaged clothing items will be replaced on a one-for-one basis. Damaged clothing items will be removed from the housing unit for destruction.

D. CLOTHING AND BEDDING TURN-IN

1. Prior to release, inmates will deposit all issued clothing and linen in the designated carts in the release area. Inmates will not retain any county-issued clothing upon their release.

2. Inmates will be held accountable for missing clothing, linen, and bedding items.

E. LAUNDRY GUIDELINES.

1. Each Facility Commander is responsible for publishing and posting a laundry schedule for their facility. Facility Commanders will ensure that laundry is collected for each inmate at least once each week. Facility Commanders may provide extra laundry service for inmate workers, but will not provide additional clothing. The facility laundry schedule will include the dates for blanket exchange, which will be al least once every three months.

2. All Inmates will participate in the laundry exchange process.

3. Federal Detainees shall be given the opportunity to exchange their clothing three (3) times per week.

F. LAUNDRY EXCHANGE

1. On clothing exchange day, inmates will be directed to fill their laundry bags with their dirty clothing, towels, and linen. Blankets will only be collected on special laundry days.

2. Inmates will be directed to retain one set of clothing for wear during the day.

3. Housing Unit Deputies will use a housing unit roster to record the clothing bags that are collected for cleaning from inmates.

4. Inmates with medical conditions, whose clothing is considered to be contaminated or infectious, shall have their clothing separated from general population clothing. Contaminated clothing will be collected and handled in accordance with CCCSO CSB Policy 2.15.08 - Contaminated Clothing, Bedding and Linen.

5. Housing Unit Deputies will apply a zip-tie on the inmate clothing bag to ensure the bag is secure. Clothing bags will then be placed in laundry carts for removal from the housing unit by laundry personnel.

6. Inmate laundry will be washed and dried in the bag provided by the inmate, ensuring that inmates receive their same clothing in return. Once laundered, the clothing bags will be returned to the housing unit by laundry personnel.

7. Housing Unit Deputies will use the roster created in (4) above to verify that all inmate clothing bags have been returned from the laundry process. Housing Unit Deputies will remove and discard the zip-ties from the laundry bags and return the clothing bag to the designated inmate.

G. BLANKET EXCHANGE

1. Facility Commanders will ensure that a blanket exchange is conducted at least once every three months.

2. The Facility DSW Supervisor is responsible for the organization and the conduct of blanket exchange within each facility. Typically DSW staff will deliver two clothing carts at 0700 on the day of the exchange. All dirty blankets are placed in these carts. The DSWs will pick them up, wash, dry and return them to the module by 1500 hours.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.43
	RELATED ORDERS: P.C. 4025	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Commissary Issue	

I. POLICY

A. It is the Module Deputies responsibility to ensure the safety/security of the facility during the ordering/distribution of commissary.

B. Commissary must be ordered at the kiosk in the housing units or by Commissary forms.

II. PROCEDURE

A. Inmate Commissary Orders

1. **Martinez Detention Facility**

   a. Morning shift deputies will provide commissary order forms every Wednesday evening to any inmates requesting commissary.

   b. Evening shift deputies will collect all completed commissary order forms no later than 2200 hours every Wednesday night.

   c. Morning shift deputies will forward all commissary order forms to the kitchen staff by placing them on the meal service cart immediately following Thursday morning service.

2. **West County Detention Facility**

   a. Day shift deputies will provide commissary order forms every Monday afternoon to any inmates requesting commissary.

   b. Evening shift deputies will collect all completed commissary order forms no later than 2145 hours every Monday evening.

   c. Morning deputies will place completed commissary order forms in the mailroom slot marked “CANTEEN”.

3. **Marsh Creek Detention Facility**

a. Inmates must submit their commissary orders no later than every Monday at 2200 hours.

b. Deputies will collect the orders from the box at the deputy station and ensure that all forms are signed and have a booking number on them.

c. Deputies will place the forms on the clerk's desk for delivery to Canteen on Wednesday morning.

d. Canteen will check in to the facility office on Wednesday evening. Deputies will escort Canteen through the number 5 gate.

e. After count has cleared, deputies will set up a table at the dorm entrance next to the deputy station.

f. Deputies will call inmates to the table to receive their orders.

- Inmates must present their identification, settle any disputed items and sign for all purchases.

- All commissary sales are final after the inmate leaves the table.

4. Adjustments may be made to the commissary schedule due to holidays, etc.

B. Distribution of Commissary

1. All housing units will remain in lockdown status every evening of commissary following evening meal service thru completion of commissary distribution and cleanup.

2. Housing unit deputies will conduct a contraband search and secure the programs room scheduled for commissary operations prior to commissary staff arrival.

3. Housing unit deputies shall allow the commissary service to enter the housing unit at their request at any time between 1900 and 2300 hours.

a. Exceptions:

- Facility emergencies

- Conditions on the housing unit do not present a safe environment for commissary staff.

b. Housing unit deputies will immediately notify the custody sergeant of any situation that prevents commissary staff from entering the housing unit at the requested time.

4. Housing unit deputies will place commissary staff in the scheduled program room.

5. Housing unit deputies will control the release and return of inmates to their cells.

    a. Housing Unit deputies will ensure that number of inmates being released is sufficient enough to complete commissary in a timely manner without overwhelming commissary staff or creating an unmanageable situation for the deputy.

6. Commissary staff will distribute commissary to the inmates.

    a. Housing Unit deputies must allow sufficient time for each inmate to inventory their order.

    b. Each inmate will be responsible for conducting an inventory and signing for his or her order.

    c. Any dispute of the inmate's commissary order must be addressed at the time the order is received.

    d. Any dispute of the inmate's commissary order that cannot be resolved in a reasonable time must be challenged by Inmate Request Form.

        - Housing unit deputies will provide the inmate with an Inmate Request Form if commissary staff acknowledges a dispute over an order.

        - Housing unit deputies will instruct inmates to direct their grievance to the Director of Food Services.

7. Inmates are not be allowed to keep the plastic bag that their commissary is delivered in.

8. Inmates must return directly to their cell upon receipt of commissary.

9. Commissary staff will be responsible for all undelivered items and will remove them from the facility.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.44
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-28-18 **REVIEW DATE:** 07-31-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Inmate Meal Service	

I. POLICY

A. Meals will be served under the supervision of staff in a manner that ensures food safety, proper handling, adequate allocating, equal treatment of inmates and overall waste reduction.

B. Inmates will be provided three meals, at least one of which will be hot, served at regular meal times during each twenty-four (24) hour period.

1. There will be no more than fourteen (14) hours between the evening meal and breakfast except in exigent circumstances.

2. Supplemental food will be provided if the interval between meals exceeds fourteen (14) hours.

C. Meals at Marsh Creek Detention Facility will be served at a central dining room. All other facilities will follow the procedures contained within this policy.

II. DEFINITIONS

A. Transport Log - Detailed information regarding all food to be served at each meal, the portion sizes, microwave instructions, utensil counts, provision for meal evaluation responses and leftovers.

III. PROCEDURE

A. Inmate Meal Service Orders

1. The cook responsible for loading the meal carts for each meal will contact the housing unit deputy to confirm the inmate count.

2. The housing unit deputy will advise the cook how many meals are needed

a. The supervising cook will contact the Custody Sergeant regarding any discrepancies in the housing unit count.

3. Any special food handling/deviation from a menu for a housing unit must be requested by the Facility Commander.

    a. Example: Emergency situations on a housing unit requiring bag lunches be served

B. Inspection of Meal Carts-Supervising Cook

1. The supervising cook will count the food portions on each meal cart to ensure that the number of portions sent to each housing unit is adequate to feed the number of inmates housed on the housing unit.

2. The supervising cook will record the meal count on the Transport Log which will accompany the meal cart to each housing unit.

3. The supervising cook will check each meal cart for utensils/flatware prior to the carts being moved to the housing units.

4. The supervising cook will sign at the top of the Transport Log on each cart verifying that the contents of each cart is accurate to feed the inmate count for the housing unit.

5. The supervising cook or Food Service Director will conduct random food safety and service checks on the inmate meals and record them on a Food Safety and Service Inspection Log.

    a. Food safety and service checks will verify the quality of food being served for taste, nutrition, and visual appeal.

    b. The food safety and service checks will occur a minimum of twice per week.

    c. The Food Service Director will audit the Inspection Logs monthly to ensure compliance.

C. Inspection of Meal Carts-Deputies

1. The housing unit deputy will count serving utensils, flatware and food items in the meal cart to verify that these items correspond with the Transport Log.

2. The housing unit deputy will conduct a thorough inspection of the entire meal cart for contraband secreted within the cart and/or meals.

3. The housing unit deputy will sign the log next to the cook's name if the count corresponds.

    a. The housing unit deputy will contact the cook for additional food/flatware should the count not correspond and make notation on Transport Log along with signature.

4. The supervising cook will provide additional food should the count not correspond.

D. Preparation of Meals

1. The Housing Unit Deputy will move the meal cart from the sally port to the serving counter.

2. The Housing Unit Workers will remove the bread, salads, desserts, flatware and serving utensils from the meal cart and place on the tables provided.

3. The Housing Unit Workers will be responsible for the following duties:

   a. Set up the inmate trays, i.e., flatware, napkins, salad, milk and desserts

   b. Serve all food items on the menu including beverages

   c. Heat entrees in each microwave oven provided; use the heating specification indicated on transport log; remove heated entrees from the microwave oven and place on the inmate's tray.

E. Distribution of Meals

1. The Housing Unit workers, under the supervision of the Housing Unit Deputy will serve the meals.

   a. The housing unit workers shall not be permitted to eat their meal until food services to the entire unit is complete.

2. The Housing Unit Deputy will instruct all Housing Unit workers to:

   a. Contain/cover hair with hats

   b. Wear plastic gloves at all times during the preparation or handling of meal service.

   c. Wash their hands upon reporting to duty, after using toilet facilities, after picking up items off the floor, after handling garbage or after any other potentially unsanitary practice.

3. Housing unit deputies will control the distribution of meals to the cells to a rate that allows the deputy to properly supervise/and observe the housing unit. Inmates in locked sections of “A”, “B”, “C”, “D”, “E”, "F", “Q” and “M” housing units will be served meals through the food ports.

   a. All food port doors will be closed and locked **except during meal service and pill call.** Food ports are to be opened only during the presence of a Deputy. If the Deputy leaves the door, the food port is to be closed. During the delivery of food and other items by the Deputy, the trays, food and other items are to be passed through the opened food port, and the food port closed immediately afterward

b. Food Port doors will only be used for pill call when it has been determined by custody staff that administration of medication via open cell door is a threat to the safety and security of staff, inmates or the facility.

c. Eight (8) to ten (10) food ports opened at one time is considered to be a reasonable number during meal supervision, but is flexible based on the Deputy's judgment, experience and capabilities.

d. D Module Meal Distribution-B and C Sides.

1. Housing Unit Workers from the "A" Section will act as tray runners for "B" and "C" Sections. Day shift Deputies will select them after checking with Classification. Selection will exclude escape risk inmates. The Floor Deputy must serve "B" and "C" Section inmates.

2. Inmate workers shall not serve "B" and "C" Section.

e. F Module Meal Distribution-F/B and F-Iso Sides

f. Module Workers from the F/A side will prepare all F/B side and F-Iso meals. Using the food ports, the F/B module workers will serve the F/B cells. The Housing Unit Deputy must serve the F-Iso cells.

g. Housing unit deputies will immediately notify the custody sergeant of any situation that prevents timely meal service.

4. Housing Unit deputies must allow sufficient time for each inmate to inventory their order.

a. Inmates must have a minimum of fifteen (15) minutes to consume their meals.

5. Inmates in a legal visit or medical/mental health appointment during meal service will receive their meals as soon as possible after completion of their visit or appointment.

a. Upon an inmate's request, the inmate will be allowed to take his/her meal into the legal visit or medical/mental health appointment.

F. Post Meal Service

1. The housing unit deputy will ensure the following occurs:

a. All trays have been removed from each cell and/or eating area.

b. All excess food/food not consumed during meal service is removed from cells and disposed of.

c. Salt and peppershakers are returned to the pantry cabinet.

d. All tables are cleaned

e. Flatware, plates and useable leftovers are placed into the food meal cart

f. Empty large wastebaskets and place plastic containers with dry garbage for removal from Housing Unit. The plastic containers with wet garbage are to be placed in the tote box and then into the meal cart.

g. The designated tables used for food service are returned to their original location.

h. Pantry area and equipment, i.e., microwave oven, coffee machine, juice machine, etc., are cleaned

i. Pantry linoleum is mopped and carpet area is vacuumed.

j. All other areas used for meal service have been cleaned and secured.

k. The food cart is returned to the sally port with:

- All metal trays
- All excess items
- Meal Log

l. Housing unit workers will be allowed to eat after all post service meal requirements are met.

- Housing unit workers may not store excess food in the servery area or in their cells. Any violations may be handled through the inmate disciplinary process.

m. Foodports closed after meal service.

G. Meal Service-Intake and Courts Holding

1. Intake

a. A new inmate received too late for regular meal service (the Shift Supervisor will determine if the inmate must be fed), will be given appropriate foods according to the time of arrival at the facility.

b. Inmates already in custody, but are detained in Intake or Court Holding during lunch and dinner meal servings, will be provided a bag meal.

2. Courts Holding

a. The Transportation/Booking Deputy will:

- Unlock group holding cells
- Advise inmates to form a single line for their bagged meal.

- Advise inmates to place all refuse in the container provided after the meal.

H. Meal Service-**Marsh Creek Detention Facility (MCDF)**

1. MEAL COUNT FOR INMATE POPULATION

a. On a daily basis, the lead cook will obtain the inmate count from the Administration Office.

2. MEAL SERVICE

a. Meal Service will take place at the following times:

- 0620 Breakfast
- 1215 Lunch
- 1700 Dinner

b. All dorms will be fed in order of their placement in the weekly inspection.

c. The shift supervisor will assign at least two Deputies to supervise the movement of inmates to/from the dining hall as well as meal service to ensure the orderly flow of the line and the overall peace and quiet of the dining room.

- Inmates will walk in a single file line while going to/from the dining hall.
- Inmates are not permitted to loiter or roam to/from the dining hall.
- All inmates shall be required to go to the dining hall for meal service regardless of whether they choose to eat or not.

d. Kitchen Deputies:

- The Kitchen Deputies will monitor the inmates in the dining room to ensure the inmates, upon finishing their meal, remove their plastic ware, plates, trays and refuse, and place them in the designated receptacles prior to leaving the dining room.

3. KITCHEN HOUSEKEEPING AFTER MEAL SERVICE

a. Upon completion of the meal, each inmate will:

- Dispose of leftovers, scraps and trash into the trash cans, place tray, plastic ware, plates, trays and refuse and place them in the designated receptacles, prior to leaving the dining room.
- No food is to be removed from the kitchen.
- No food, fruit or milk is to be stored in lockers or bed areas
    - Exception: Items purchased at Commissary.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER: 2.08.45**
	RELATED ORDERS: None	
ISSUE DATE: 1-13-04 **REVISION DATE:** 07-30-19 **REVIEW DATE:** 07-31-19	**CLEARANCE:** CUSTODY	
CHAPTER: Custody Operations	**SUBJECT:** Control of Tools, Culinary Equipment and Medical Equipment	

[redacted]

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[redacted]

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[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.46
	RELATED ORDERS: MJS 1029 CCCSO 1.06.61, 1.07.23, 1.07.32	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-22-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Control of Weapons and Armory Equipment	

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.47
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Control of Cleaning Tools on Housing Units	

I. POLICY

A. Each housing floor/unit will maintain an inventory list of the cleaning tools assigned to that housing floor/unit.

II. PROCEDURE

A. CLEANING TOOL CONTROL

1. All cleaning materials will be secured in the housing floor janitor's closet when not in use.

B. CLEANING TOOL INVENTORY

1. At the beginning of each shift, Housing Unit Deputies will conduct an inventory of the cleaning tools assigned to that housing floor/unit will be taken.

   a. The inventory checklist will be completed showing the results, and will be checked against the previous shift's inventory for consistency.

   b. Any cleaning tools which are broken, damaged, etc. will be noted on the comments section of the inventory list.

      - The disposition of the broken item will be noted (i.e. out to trash, etc.).

2. The inventory checklists will be maintained on a clipboard located inside the janitor's closet.

3. Completed inventory lists will be maintained for one month. The previous month's lists will be forwarded to the CSB Custody Administrative Services Office for that facility.

   a. CAS will note any discrepancies and ensure compliance with inventory accountability.

C. REPORTING

1. Security staff will immediately notify their Shift Supervisor if the inventory shows an item lost or missing.

    a. A search of the immediate area in which the tool was last seen will be initiated.

    b. A search of the housing unit will be conducted at the discretion of the Shift Supervisor.

2. Broken or damaged tools recovered during a search will be checked against the inventory lists.

3. The appropriate documentation (reports, memos, etc.) will be generated at the direction of the Shift Supervisor.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.48
	RELATED ORDERS: CCCSO 1.06.61 Use of Force Patrol Division Policy 3.07.10 40mm Less Lethal Weapons System	
ISSUE DATE: 02-19-09 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 11-28-2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** 40mm Less Lethal Weapons System	

I. POLICY

A. The Department recognizes the value and need for the use of less lethal weapons under certain circumstances.

B. The use of such weapons will follow the Department's policies and procedures pertaining to the use of force.

II. DEFINITIONS

A. Cover Officer: A cover Deputy or Supervisor shall be assigned to the Deputy deploying the impact Projectile Weapon.

B. Sponge Round: The Def-Tech eXact Impact foam sponge round. (Blue Tip)

C. Gas Round: The Direct Impact OC round. (Orange Tip)

D. Marker Round: The Direct Impact marking round. (Green tip)

E. 40mm Launcher: The Defense Technology's 40mm Launcher, [redacted]

III. PROCEDURE

A. TRAINING

1. Initial instruction in the weapons system will include a block of instruction covering nomenclature, function, use of force and live fire/qualification of the 40mm less lethal system.

B. GENERAL PROVISIONS

1. The less lethal weapon system is intended for use by those who are trained and qualified in the weapons system to defend themselves and the public against combative, assaultive, resisting, and or violent individuals.

2. Upon assessing and determining the need for the impact projectile weapon, the Deputy will request a Supervisor to respond. Additionally, the Deputy will advise the Supervisor of the circumstances. The Supervisor if available, should make an assessment of the circumstances and situation. In determining whether or not the impact projectile weapon system should be used, the Supervisor, or Deputy when no Supervisor is available will consider the following:

    a. Tactical considerations indicate that the use of impact projectile system would provide greater officer safety and reduce the likelihood of serious or lethal injury to the suspect(s).

3. Impact projectile weapons shall be treated the same as firearms for safety practices. Refer to Office of the Sheriff Policy Section 1.07.12, Firearms Safety and Qualification for firearm safety practices.

C. DEPLOYING LESS LETHAL ROUNDS

1. All users of the 40mm less lethal system must remember that any use of force must be objectively reasonable and necessary to protect themselves and others or to overcome resistance to lawful authority.

2. Whenever possible, the deploying officer will warn the intended target of the weapon's eminent use in an effort to have him/her surrender to the officer's lawful authority.

3. Prior to deploying the sponge round, the deploying sergeant/deputy will give a loud, clear warning to other personnel at the scene.

    a. This is done to advise all personnel of the impending use of force so they may quickly move to affect the subsequent physical control of the subject and to minimize the potential of sympathetic weapons fire.

4. Primary target areas for the Exact Impact rounds will be lower torso, buttocks, thighs and lower leg area.

5. Secondary target areas will include the upper torso, arms, elbows and hands.

6. The groin, head and neck should be avoided at all times. **The Sponge Rounds should not be deployed at distances of less than 10 feet.**

D. HANDLING OF INJURED SUBJECTS

1. In all cases where the sponge round is deployed, medical staff will respond to evaluate. If medical is not available, the subject will be transported to a medical facility for evaluation and treatment.

E. DOCUMENTATION

1. All uses of the less lethal weapons system will be documented in a department incident report.

2. The report should minimally contain the number of less lethal rounds fired, the type of round fired, the distance they were fired from, the impact area, the injuries caused and actions taken to treat those injuries.

3. Photos of injuries will be taken and submitted into evidence.

4. When possible, the expended less lethal projectile will be recovered and placed into evidence.

F. STORAGE AND MAINTENANCE

1. Maintenance of the 40mm weapons system is the responsibility of the Facility Commander.

2. Maintenance of the 40mm weapons system will be performed by the department armorer.

3. Routine maintenance and repairs will be documented and a copy of all records maintained in the armorer's files.

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.49
	RELATED ORDERS: CCSO Policy 1.06.35; CSB Policy 2.01.02, 2.01.14, 2.08.02, 2.08.17, 2.08.31, 2.08.32, 2.08.39, 2.09.02, 2.09.03, 2.10.05, 2.10.18, 2.10.25, 2.12.01, 2.16.02, 2.16.03, 2.18.03 Patrol Policy 3.04.06	
ISSUE DATE: 06-25-15 **REVISION DATE:** 10-18-16 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Prison Rape Elimination Act (PREA)	

I. POLICY

A. The Prison Rape Elimination Act (PREA) was signed into law in 2003 and became effective in December, 2012. Final Standards were enacted in May, 2014 to address the prevention and elimination of sexual assault and rape in correctional institutions. PREA applies to Federal, State, and Local institutions.

B. The Contra Costa County Office of the Sheriff is committed to providing a safe, humane and secure environment free from sexual misconduct and shall maintain a zero tolerance towards all forms of sexual abuse and/or harassment in all of its jail and holding facilities. The Office of the Sheriff will ensure all policies are adhered to in an effort to prevent, detect, and respond to all forms of sexual misconduct, whether it is being perpetrated by an inmate or staff member.

C. This policy will be enforced by ensuring all employees, contractors, volunteers, visitors, or inmates within the Custody Services Bureau comply with the PREA standards. Staff members found to have sustained allegations shall be subject to disciplinary actions, including termination. Further, all sustained allegations will be criminally investigated and forwarded to the Contra Costa County District Attorney's Office for review.

D. It shall be the policy of the Office of the Sheriff to thoroughly investigate and immediately address all allegations of sexual assault, sexual abuse, and sexual harassment of those in our custody, to include criminal and administrative sanctions as appropriate.

E. The standards apply to any person incarcerated or detained in a lockup or holding facility, regardless of adjudication status. The standards account in various ways for the inmates', detainees', and residents' individual vulnerabilities.

F. This policy shall be in accordance with PREA, which makes prevention and detection of sexual assault and sexual abuse a top priority.

G. Any employee, volunteer, or contractor who has received information that an inmate has been or may be subjected to any form of sexual abuse or sexual harassment, whether received verbally or in writing, shall immediately notify the designated PREA Compliance Manager.

II. DEFINITIONS

A. CROSS-GENDER SEARCHES: A search of a person by a deputy of the opposite sex.

B. GENDER: A socially constructed concept classifying behavior as either “masculine” or “feminine,” unrelated to one’s external genitalia.

C. GENDER EXPRESSION: A person’s expression of his or her gender identity, including appearance, dress, mannerisms, speech, and social interaction.

D. GENDER IDENTITY: Distinct from sexual orientation, and refers to a person’s internal, deeply felt sense of being male or female.

E. GENDER NON-CONFORMING (GNC): A person whose appearance or manner does not conform to traditional societal gender expectations.

F. INTERSEX PERSON: A person whose sexual or reproductive anatomy or chromosomal pattern does not seem to fit typical definitions of male or female. Intersex medical conditions are sometimes referred to as disorders of sexual development.

G. TRANSGENDER: A person whose gender identity differs from their sex at birth.

H. TRANSEXUAL: A person whose physical anatomy does not match his or her gender identity and seeks medical treatment (sex reassignment surgery, hormones or a combination).

I. TRANSVESTITE: A person who engages in gender non-conforming behavior, such as adopting the gender expression of the opposite sex for purposes of sexual or emotional gratification, but does not necessarily consider his or her gender identity to be different from his or her sex.

J. LGBTI: Acronym for a group of sexual minorities including lesbian, gay, bisexual, transgender, and intersex individuals.

K. NEED TO KNOW: A criterion for limiting access of certain sensitive information to individuals who require the information to make decisions or take action with regard to an inmate’s safety or treatment or to the investigative process.

L. PREA COMPLIANCE MANAGER: Under the direction of the PREA Coordinator, the PREA Compliance Manager will oversee day-to-day PREA compliance in his or her assigned facility.

M. PREA COORDINATOR: An upper level manager who will be responsible for guiding and coordinating the Bureau’s effort to comply with PREA.

N. SEXUAL ABUSE: Any form of sexual activity between two or more persons, if the victim does not consent, is coerced into such an act by overt or implied threats of violence, or is unable to consent or refuse. This includes inmate on inmate and staff on inmate.

O. SEXUAL HARASSMENT: Any form of repeated and/or unwelcomed sexual advances,

requests for sexual favors, or verbal comments, gestures, or actions of a derogatory or offensive sexual nature towards an inmate. This includes inmate on inmate and staff on inmate.

P. STAFF MEMBER: Any employee, volunteer, or contractor working within any jail facility, who may have contact with inmates during the course of his or her assigned duties.

Q. TRANSGENDER PERSON: A person whose gender identity does not correspond to that person's biological sex assigned at birth.

R. FOUNDED ALLEGATION: An allegation that was investigated and determined to have occurred.

S. UNFOUNDED ALLEGATION: An allegation that has been investigated and was determined not to have occurred.

T. UNSUBSTANTIATED ALLEGATION: An allegation that was investigated and the investigation produced insufficient evidence to make a final determination as to whether or not the event occurred.

III. PROCEDURES

A. TREATMENT OF LGBTI/GNC, DISABLED INMATES, AND DETAINEES

1. Cross-Gender pat searches of female inmates and detainees (absent exigent circumstances) are prohibited per CSB policy 2.08.39.

2. Cross-Gender strip and visual body cavity searches are prohibited except when licensed medical personnel are required to be in attendance. All strip and visual body cavity searches shall be conducted in accordance with CSB policy 2.08.39

3. Pat searches and strip searches may not be performed to determine the genital status of inmates or detainees.

4. Disabled inmates shall be provided equal opportunity to participate in or benefit from all aspects of policies to prevent, detect, and respond to reported sexual abuse and sexual harassment. The same opportunities shall be provided to those inmates with limited English language skills.

5. Inmates acting as interpreters, inmate readers, or other types of inmate assistants should not be used to determine a victim inmate's safety, assist with first responder duties, or investigate allegations, except in limited circumstances where an extended delay in obtaining an effective interpreter could compromise such duties.

6. Housing assignments of LGBTI/GNC inmates may not be determined based solely on being identified as a member of the protected group(s). Inmates at high risk for sexual victimization may not be placed in involuntary segregated housing unless an assessment of all available alternatives has been made and a determination has been made that there are no available alternative means of

separation from likely abusers. Classification of LGBTI/GNC inmates shall be made in accordance with CSB policies 2.09.02-2.09.03.

7. If an involuntary segregated housing assignment is made for an LGBTI/GNC inmate, the Classification Unit shall perform a review every 30 days to determine whether there is a continuing need for separation from the general inmate population.

8. Transgender and intersex inmates will be allowed to shower at a separate time from other inmates on the housing unit. Times allowed for this will be based on module activities and the safety and security of the facility.

B. PREVENTION

1. Inmate Orientation

   a. All new inmates will receive orientation information during the intake process, which includes PREA prevention and reporting information.

   b. Inmates will receive orientation information when transferred to a different facility, which includes PREA prevention and reporting information.

2. Intake deputies will perform an initial screening of inmates for potential sexual abusers and/or potential sexual victims per CSB Policy 2.12.01.

   A. If the initial PREA screening identifies a potential abuser or potential victim, the deputy will make a classification referral further evaluation

      - PREA evaluations and documentation collected by the classifications deputies will be maintained by the Classifications Unit.

3. Awareness / Prevention

   a. Inmate phone hotlines (speed dial numbers) and PREA reporting information shall be posted on every housing unit.

   b. PREA information shall be included in the Inmate Handbook.

   c. Random room checks shall be performed by housing unit deputies, at least twice per hour in compliance with Title 15 requirements and CSB Policy 2.08.17.

   d. Facility cameras are located in housing and intake areas, where possible.

4. Module announcements shall be performed to ensure the privacy of inmates. Staff shall announce the presence of any non-medical personnel of the opposite sex who is entering a living area or prior to approaching any holding cells to give the inmate an opportunity to cover him or herself while dressing, using the shower, or using the restroom.

A. Deputies shall directly notify inmates who are hearing impaired to ensure their privacy.

5. Unannounced Rounds will be performed at least once every shift by the on-duty shift sergeant to ensure that all efforts are being made to help protect, detect, and respond to sexual abuse and sexual harassment.

A. Staff are prohibited from "warning" other staff that the unannounced rounds are being performed.

5. Male deputies may be assigned to augment female deputies in a female housing unit. Absent exigent circumstances, male deputies will not be assigned to any female housing unit without a female deputy present per CSB Policy 2.10.25

a. Male deputies shall not perform clothed searches of female inmates, except when exigent circumstances exist and upon receiving approval from the Shift Supervisor.

C. REPORTING OF SEXUAL ABUSE/HARASSMENT

1. Inmates and staff shall be permitted to report any sexual assault or sexual harassment to any rank they feel comfortable reporting to.

a. There is no time limit for filing a "Good Faith" sexual harassment or sexual abuse report.

b. Inmates making a PREA report deemed to be made in "Bad Faith" shall be subject to disciplinary action.

c. No disciplinary action can be taken against an inmate if a report of sexual harassment or abuse has been deemed to have been made in "good faith," even if the allegations are determined to be unfounded.

2. Any staff member who has cause to believe an inmate has been or may be subjected to an act or threat of sexual abuse or harassment is required to immediately notify the shift sergeant.

a. This notification may be made in private, but must be done immediately after obtaining the knowledge of possible sexual abuse or sexual harassment.

3. All staff must accept any report of sexual abuse or sexual harassment whether it is in verbal form or in writing, and must take the appropriate actions.

4. Any inmate who is subjected to an act or threat of sexual abuse/harassment may report the incident using any of the following methods:

a. Sexual assault crisis hotline (Inmate phone speed dial number, posted in housing units.)

b. Inmate request slip or any other form of written notification.

c. Reporting verbally to any staff member, contractor, or volunteer.

5. Third party reporting of sexual abuse or sexual harassment reports shall be permitted.

a. Third parties include

- Outside Advocates
- Family Members
- Sworn and Non-Sworn Staff Members
- Contractors
- Volunteers
- Attorneys
- Other inmates

b. Any inmate advocating on behalf of another inmate may report an act or threat of sexual abuse/harassment incident by using the following methods:

- Jail crisis hotline (Inmate phone speed dial number, posted in housing units.)
- Inmate request slip, or any other form or written notification.
- Reporting verbally to any staff member.

c. The inmate shall be asked if he or she would like the report filed on their behalf upon receipt of a third party report.

- If the inmate declines the report to be filed on his/her behalf, the decision shall be recorded in JMS.

6. If the allegation of abuse or harassment is against a staff member, the inmate is not required to report to, or attempt to resolve the issue with the accused staff member.

D. RESPONSE TO REPORTED INCIDENTS OF SEXUAL ABUSE OR HARASSMENT

1. All reports of sexual abuse or sexual harassment will immediately be referred to the PREA Coordinator via the facility PREA Compliance Manager. The Coordinator will be responsible for ensuring that a full investigation is completed on all reported incidents in accordance with CSB policy 2.08.32.

a. The credibility of an alleged victim, suspect, or witness should not be

determined by their status as an inmate or staff member.

2. If an emergency report is received alleging that the inmate is in imminent danger of abuse, the shift sergeant shall notify the facility PREA Compliance Manager, Facility Commander, and Classification Unit immediately.

   a. Immediate action shall be taken to protect the inmate.

   b. An initial response to the report must be done within 48 hours.

   c. A final action plan and response shall be completed within five days.

3. Upon receipt of a report of sexual abuse or harassment, staff members will ensure steps are taken to separate the victim from the perpetrator. Non-Sworn staff members, contractors, and volunteers are to notify the nearest deputy or the shift sergeant immediately.

   a. The on duty shift sergeant shall be notified immediately. The sergeant will ensure the incident is documented in a JMS Incident Report.

      - The shift sergeant will assign a deputy to start an investigation of the allegation in accordance with CSB policy 2.08.31 and 2.08.32.

      - If it appears as if the alleged abuse is a crime, the incident will be thoroughly documented and forwarded to the Sexual Assault Unit for further investigation and disposition.

      - The PREA Compliance Manager will be notified within 24 hours of receiving the report.

   b. Staff members will also take measures to preserve any evidence which may be pertinent to the incident, in accordance with CCCSO Policy 1.06.35.

[redacted]

   d. Inmates who are an alleged victim of sexual abuse may not be placed in

involuntary segregated housing unless an assessment of all available alternatives has been made and there are no available alternative means of separation from likely abusers.

- The Classification Unit will be contacted to evaluate the housing assignment for the victim.
- If an involuntary segregated housing assignment is made for an inmate who has been the victim of an alleged sexual abuse, the PREA Coordinator shall ensure a classification review is completed every 30 days to determine if there is a continuing need for separation from the general inmate population per CSB Policy 2.09.02 and 2.09.03.
- The Classification Sergeant will consult with medical and mental health staff to screen the victim to provide the appropriate level of care and placement for the victim.

4. If the report involves misconduct or negligence by a staff member, contractor, or volunteer, the shift sergeant will notify the PREA compliance manager immediately to make the appropriate notifications to the PREA coordinator, and facility command staff.

   a. The notification to the Sergeant and/or Facility Commander can be made in private, but must be done immediately.

   b. Allegations shall not be forwarded to the accused person except through the appropriate administrative channels.

   c. Discussing the allegation with the accused staff member, volunteer, or contractor without approval from the facility command staff may result in administrative discipline.

   d. An administrative investigation into the allegation of staff-on-inmate abuse, negligence leading to an event, or harassment will be initiated at the direction of the Division Commander, in accordance with CCCSO policy 1.06.80.

   e. The PREA Coordinator will ensure the appropriate actions are taken to protect the inmate from further abuse and/or harassment.

   f. Based on the severity of the allegation, any of the following may occur during an investigation, or after there has been a final resolution from a criminal or administrative investigation:

      - Temporary work reassignment to another module or work area.
      - Administrative action
      - Termination

- Criminal Prosecution

g. If the report determination is "Unfounded," the staff member, volunteer, or contractor may return to normal duties as previously assigned.

5. The victim must be informed whenever:

   a. The inmate, staff member, volunteer, or contractor is no longer to be assigned on the victim's module.

   b. The staff member, volunteer, or contractor is no longer employed at the facility.

   c. The inmate, staff member, volunteer, or contractor has been indicted and/or convicted on charges related to the sexual abuse.

   d. All notifications are to be done in writing.

   e. Notifications shall continue until the inmate is released from custody or transferred out of the Contra Costa County Jails.

   f. All notifications shall be documented in JMS.

6. Any retaliation against an inmate or staff member who reports or assists in the investigation of a sexual assault or sexual harassment is strictly prohibited and is grounds for disciplinary action.

   a. Housing and/or work assignment changes will be made available for the inmate(s) who fear retaliation from cooperating with an investigation.

   b. Work assignment changes will be made available for staff members who fear retaliation from cooperating with an investigation.

   c. Crisis hotline (emotional support) will be available for any inmate who is involved in a sexual assault or harassment investigation.

   d. Support services (emotional support) will be available for any staff member who is involved in a sexual assault or harassment investigation.

   e. The PREA Compliance Manager shall monitor for retaliation for a period of 90 days following any incident.

      - Weekly status checks on inmates shall be documented in an incident report.

      - The Compliance Manager shall check in with any involved employee weekly and give written status updates to the PREA Coordinator.

      - The obligation to monitor shall terminate following the release of the involved inmate from custody, or if the investigation

determines the allegations were unfounded.

f. If it is determined necessary, the PREA Manager will continue monitoring for retaliation beyond 90 days.

g. If it is determined that any retaliation may have occurred, the PREA Manager along with Classification will determine the appropriate actions to remedy the situation immediately.

7. A final report on any allegation of sexual abuse or harassment shall be completed no later than 90 days from the time of the initial complaint.

a. A 70-day extension may be applied based on the circumstances of the complaint.

- The alleged victim must be notified of this extension in writing, and be provided a date as to when the final decision will be made.

b. The alleged victim shall be notified in writing when it is determined that the allegations are founded or unfounded.

8. If an allegation of sexual abuse, sexual harassment, or negligence leading to a PREA incident is received and the accused person is a staff member, volunteer, or contractor:

9. If there is a founded allegation of sexual abuse or harassment against a staff member, contractor, or volunteer, the report will be forwarded to the District Attorney's office for criminal prosecution.

10. An accused inmate is subject to disciplinary action after being found guilty by an administrative or criminal investigation.

11. If an alleged sexual abuse or sexual harassment has occurred at another agency's facility, and has not been previously reported, the on-site PREA Compliance Manager shall notify the facility manager where the alleged incident occurred.

a. The notification shall be made within 72 hours.

b. The notification shall be documented in an incident report.

c. The facility in which the alleged incident occurred is responsible for investigating the allegation. The PREA Coordinator will determine the level of the CCCSO involvement in that investigation

12. Inmates shall be subject to disciplinary sanctions pursuant to a formal disciplinary process following an administrative finding that the inmate engaged in inmate-on-inmate sexual abuse or following a criminal finding of guilt for inmate-on-inmate sexual abuse.

13. Disciplinary sanctions may be applied to an inmate for sexual contact with staff only upon a finding that the staff member did not consent to such contact.

14. Allegations received from an outside facility shall be investigated as described in this section above.

E. INCIDENT REVIEW

1. An incident review and report must be completed within 30 days after completing the investigation on any founded sexual abuse or harassment claim.

2. Review team shall include:

   a. PREA Coordinator

   b. PREA Compliance Manager from the facility where the abuse or harassment was reported

   c. Shift supervisor (if applicable)

   d. Investigator(s) (if applicable)

   e. Medical Supervisor (if applicable)

   f. Mental Health Supervisor (if applicable)

3. Review Team Shall Consider

   a. Whether the investigation results indicate change(s) in policy or daily operations are necessary.

   b. What motivated the incident

      - Race
      - Sexual Orientation
      - Gender Identity
      - Gender Expression
      - Gang Affiliation
      - Any other factors

   c. Staff Dynamics/Levels

   d. Examine the location of the incident to determine if any further preventative measures could be implemented. Including:

      - Monitoring technology
      - Lighting
      - Mirrors

- Staffing

e. A "Report of Findings" will be prepared by the PREA Coordinator and submitted to the Division Commander for each incident review.

- Report will include a summary of the incident, findings of the review team, and recommendations for change (if any).

F. STANDARD OF CARE

1. Medical

a. Victims of sexual abuse shall have immediate and unimpeded access to medical staff for emergency services at no cost to the inmate.

b. Upon notification of an alleged sexual abuse, medical staff will attend to the victim and treat any injuries in accordance with standard medical protocol.

c. A victim of a sexual assault who has suffered penetration of their anal or genital opening will be transported to Contra Costa Regional Medical Center for medical examination by a Sexual Assault Nurse Examiner.

d. Inmate victims of sexually abusive vaginal penetration while in jail shall be offered a pregnancy test.

- If pregnancy does result from the sexual abuse, victims shall receive timely access to lawful pregnancy-related medical services.

e. Any information regarding sexual victimization or abusiveness obtained during a medical screening in intake or during a medical examination will be made private, except sharing information to aide in housing and management decisions.

2. Mental Health

a. Victims of sexual abuse shall have immediate and unimpeded access to mental health staff at no cost to the inmate.

b. Upon notification, mental health staff will screen the victim within 24 hours. The mental health staff will notify the shift sergeant and classification staff of their recommendations.

c. Mental Health staff shall attempt to conduct a mental health evaluation of the inmate perpetrator within 60 days of notification of the event, and offer appropriate mental health treatment.

d. Classification staff will work with Mental Health staff to determine the appropriate housing assignment for the inmate perpetrator.

e. Any information regarding sexual victimization or abusiveness obtained during a mental health screening in intake or during a mental health examination will be made private, except with respect to the sharing of information to aide in housing and management decisions.

3. Victim Advocacy

a. Inmates may contact the sexual assault crisis hotline via inmate phones and the posted speed dial numbers. Calls to the hotline will be free of charge, unmonitored, and shall be unrecorded.

b. Inmates may contact Immigration and Customs Enforcement (ICE) via inmate phones and the posted speed dial numbers. Calls to ICE will be free of charge, unmonitored, and shall be unrecorded.

4. Disciplinary Sanctions for Inmates

a. Inmates are prohibited from all sexual activity between inmates, per CSB Policy 2.16.02.

b. Inmates are subject to disciplinary sanctions for engaging in any kind of sexual activity, pursuant to a formal disciplinary process, per CSB Policy 2.16.03.

G. ANNUAL PREA REVIEW

1. The PREA Compliance Manager or designee will generate an annual report assessing PREA compliance. The annual PREA Report will be forwarded to the Facility Commanders and the Custody Services Bureau Captains and Assistant Sheriff, to help develop action plans to achieve full compliance with PREA standards.

a. A report of findings and corrective actions will be prepared for each facility.

- The review shall consider the staffing plan, new monitoring technology, policy, and allocation of resources.

- All available data from incident reviews and data collection will be considered. The data will also be compared to previous years to aide in further considering corrective actions.

b. The report will be submitted to the division commanders on an annual basis.

c. Once submitted to the Division Commander, the report shall be made available on the CCCSO website for public viewing.

- Redactions may be applied to the report if the information poses a clear and specific threat to the safety and security of the facility.

H. DATA COLLECTION

1. All reports and investigation documents will be preserved for five years beyond the term that the involved parties are in custody and/or employed.

2. The PREA Incident Log will be preserved for 10 years.

3. The PREA Incident Log will be made public on the CCCSO website annually.

    a. All personal identifiers shall be redacted prior to making the information public.

IV. TRAINING

A. All sworn staff will receive biennial training in regards to prevention and identification of sexual abuse and sexual harassment in a confinement setting.

B. Orientation training for all staff members will be required within 60 days of work assignment to the detention facilities. The orientation will include training in prevention and identification of sexual abuse and sexual harassment, and PREA standards for reporting and investigation, related to their job classifications

V. PREA COORDINATOR

A. The CAS Lieutenant is designated as the PREA Coordinator.

B. The PREA Coordinator will oversee the implementation of the CCCSO PREA plan, and will:

1. Ensure an investigation is completed on all allegations of sexual abuse/harassment.

2. Review policies, practices, and procedures related to PREA to ensure compliance.

    a. Incident Review

    b. Annual PREA Review

    c. Data collection

3. Work with training staff to develop a PREA education plan for Sworn and non-sworn staff, contractors, volunteers, and inmates.

4. Advise on PREA elements of facility design and upgrades.

5. Submit the U.S. Department of Justice Bureau of Justice Statistics (BJS) “Survey on Sexual Violence (SSV-3) annually. The PREA Coordinator will complete this and return it in a timely fashion.

VI. PREA COMPLIANCE MANAGER

A. Oversees daily operations in their assigned facility regarding PREA compliance and reports to PREA coordinator.

1. Accepts all reports and ensures investigations are started on all allegations of sexual abuse or sexual harassment.

2. Make sure "Unannounced Rounds" are being completed and documented at least once per shift by the designated shift supervisors.

3. Participates on the PREA incident review and annual review teams.

4. Ensures that the inmate orientation is being completed properly to provide all inmates with information regarding PREA.

B. The designated PREA Compliance Managers:

1. Jail Facilities

a. MDF – Operations Sergeant

b. WCDF – Operations Sergeant

c. MCDF – Blue Team (weekday day shift) Sergeant

2. Court Holding Facilities

a. Martinez Courthouse – Administration Sergeant

b. Bay Court – Sergeant

c. Delta Court – Sergeant

d. Walnut Creek Court - Sergeant

VII. HIRING AND PROMOTIONAL PROCESS:

A. All incidents of sexual harassment shall be considered when determining whether to hire or enlist the services of any contractor, volunteer, or staff member who may have contact with an inmate.

B. All employees, contractors, and volunteers shall be subject to a criminal background check prior to employment. Consistent with Federal, State, and local law, the Sheriff's Office shall make its best effort to contact all prior institutional employers for information on substantiated allegations of sexual abuse or any resignation during a pending investigation of an allegation of sexual abuse.

C. The agency shall not hire or promote anyone who may have contact with inmates, and shall not enlist the services of any contractor or volunteer who may have contact with inmates, who:

1. Has engaged in sexual abuse in a prison, jail, lockup, community confinement facility, juvenile facility, or other institution (as defined in 42 U.S.C. 1997).

2. Has engaged in sexual activity facilitated by force, overt or implied threats of

force, or coercion, or if the victim did not consent or was unable to consent or refused.

3. Omits misconduct or gives false information, shall be grounds for termination of the hiring process.

D. The agency is notified by the Department of Justice anytime a current CCCSO employee is fingerprinted as a result of any arrest.

E. Civilian contractors will renew their site clearance, which includes a background check, annually per CSB policy 2.08.02.

F. Contractors or volunteers who have been found to have participated in any abuse or harassment of an inmate shall have their site clearance revoked and will not be allowed on the property in any capacity.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.08.50
	RELATED ORDERS: CCCSO 1.06.61 CSB 2.08.24	
ISSUE DATE: 07-07-15 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Unrestrained Prone Control/Placement	

I. POLICY

A. As a means to deescalate a potentially volatile situation or to control a subject while maintaining officer safety in a custodial setting, deputies may place an unrestrained inmate in a prone position.

B. Deputies shall use only that degree of force that is objectively reasonable to protect themselves and others, or to overcome resistance to their lawful authority.

C. Deputies shall only use approved force techniques for which they have received and completed P.O.S.T. certified and/or Sheriff's Office authorized training. Refer to CCCSO Policy and Procedure 1.06.61, Use of Force, and CSB Policy 2.08.24, Prone Restraints, for additional guidelines.

II. DEFINITIONS

A. FORCE: Any physical effort or technique used to control, restrain, or overcome the resistance of another person.

B. PRONE POSITION: An individual lying flat on the ground on his/her stomach, in position, with his/her face down or turned to the side, as directed by the deputy.

C. TAKEDOWN: A maneuver or technique used to bring an individual down to the ground from an upright position.

III. GENERAL

A. PRONE CONTROL/PLACEMENT. The decision to place an inmate in the unrestrained prone position shall take into consideration the facts and circumstances of the current situation. The prone placement should generally not be used on a fully compliant inmate. The factors a deputy should consider when deciding to use prone control in a given situation include, but are not limited to:

1. Severity of the violation;

2. Whether or not the individual poses an immediate threat to the safety of deputies or others;

3. Whether or not the inmate is actively resisting or refusing to comply with orders;

4. Availability or limitation of space (if the area is open or confined);

5. Number of available deputies at the scene;

6. Age, size, and relative strength of the inmate to the deputy;

7. Special knowledge or skill level of the inmate to the deputy;

8. Physical abilities or disabilities of the inmate;

9. The inmate's mental and/or emotional state.

10. Prior contacts with the inmate, or other information known to the deputy about the inmate at the time of the incident.

IV. PROCEDURES

A. In the event an inmate is in need of placement in the unrestrained prone control position, the following procedures shall be followed:

1. Combative or Actively Resisting Inmate

a. Deputies may utilize a recognized control hold or takedown technique to control the inmate and place him/her in the prone position.

b. Deputies may utilize a recognized prone leg control technique if the inmate is physically resisting while in the prone position.

c. In the event an inmate's arms are tucked under his/her body, deputies will use the proper technique(s) to extract the inmate's arms.

d. Once the inmate is in the prone position, the deputy will not order the inmate to place his/her hands under his/her body.

e. If space permits, the deputy will give clear verbal commands to the inmate to keep his/her arms stretched out to the sides.

f. In the event the inmate is being placed prone into a holding cell,

safety cell, or some other confined area, the deputy will order the inmate to place his/her hands behind the lower back, until deputies have safely exited the cell or area.

g. Deputies will notify the shift Sergeant and document the incident in the JMS incident report system.

2. Passive Resistant Inmate

a. When placing a passively resistant inmate into a holding cell, the deputy may place the inmate in the prone position to allow deputies to safely exit the cell.

1. In the event the inmate is responsive and adhering to the deputy's commands, an alternate position to the prone position should be considered (e.g.: in a kneeling position, facing the wall, with hands behind the back).

b. Once the inmate is in the prone position, the deputy will not order the inmate to place his/her hands under his/her body.

c. If space permits, the deputy will give clear verbal commands to the inmate to keep his/her arms stretched out to the sides.

d. In the event the inmate is being placed prone into a holding cell, safety cell, or some other confined area, the deputy will order the inmate to place his/her hands behind the lower back, until deputies have safely exited the cell or area.

e. Deputies will notify the shift Sergeant and document the incident in the JMS incident report system.

3. Facility Emergencies

a. In the event of a "Code 2 Assist" or any "code" or emergency requiring additional staff members to respond to an area, deputies may order inmates to the prone position to minimize injuries to inmates and staff and to help gain control of the situation. Additional restraints can be added as the situation dictates, per CSB policy 2.08.50, Prone Restraints.

b. Deputies may order an inmate to face the wall with his/her hands behind the back if the inmate has a medical condition preventing the prone position.

Once control is gained and the situation is secure, inmates shall be returned to upright or sitting positions as soon as possible.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.01
	RELATED ORDERS: MJS 1247 CSB 2.13.03, 2.17.01, 2.18.06, 2.18.10	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 12-03-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Disciplinary Isolation	

I. POLICY

A. It shall be the policy of the Custody Services Bureau to supervise inmates placed into Disciplinary Isolation only after an impartial hearing has determined:

1. Other available alternative dispositions are inadequate

2. The inmate's presence in the general population poses a serious threat to the orderly operation or security of the facility.

B. When it is determined by a Disciplinary Hearing Officer with the Facility Commander or designee's concurrence that an inmate is guilty of a serious rule violation, that inmate may be placed in Disciplinary Isolation.

C. Direct supervision of disciplinary isolation inmates will be the responsibility of the housing unit deputy.

D. Inmates in disciplinary isolation shall be provided with the same rights and provisions as other inmates unless it poses a threat to staff, other inmates or the security of the facility.

II. DEFINITIONS

A. DISCIPLINARY ISOLATION: Punitive segregation from the general jail population and restriction of privileges of an inmate who has committed a serious rule violation.

III. PROCEDURE

A. POST-DISCIPLINARY HEARING

1. Classification will track inmates in Disciplinary Isolation.

2. No inmate may be in disciplinary isolation for more than thirty (30) consecutive days without prior review and approval of the Facility Commander.

a. The Facility Commander will consult with medical/mental health staff

prior to authorizing continued placement.

b. Disciplinary isolation reviews shall continue every fifteen (15) days thereafter until isolation status has ended.

3. When an inmate completes his/her time in isolation, a classification deputy may interview the inmate to determine the inmate's suitability for return to the general jail population.

4. Before the interview, the classification deputy will review the inmate's classification, disciplinary history and previous housing assignments.

a. If an interview is / is not warranted, the classification deputy will put the inmate on the in-house movement list and assign the inmate to a new module.

b. The classification deputy will be responsible for updating the inmate Classification Chronological notes to reflect the status change.

B. DISCIPLINARY ISOLATION TRACKING

1. Classification will maintain records regarding an inmate's disciplinary history.

2. Disciplinary Isolation records will be reviewed:

a. Any time an inmate receives disciplinary action against them

b. When reviewing an inmate's record for transfer to another facility

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.02
	RELATED ORDERS: MJS 1053, 1267 CSB 2.13.07, 2.17.01, 2.17.08, 2.18.15	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-13-19 **REVIEW DATE:** 12-13-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Administrative Management	

I. **DEFINITION**

a. ADMINISTRATIVE MANAGEMENT: A designation applied to inmates who, due to demonstration of the following behaviors and/or risks, require housing in a more limited setting (This setting typically includes a single-cell assignment and reduced social interaction compared with the general population):

i. Prone to assault staff or other inmates
ii. High likelihood of victimizing other inmates
iii. Security risk to the facility and or staff.

b. PHASE 1: The initial Phase of Administrative Management. A more limited housing setting that, upon successful completion, an inmate can transfer from into Phase 2.

c. PHASE 2: A less restrictive housing setting with more privileges earned by good behavior and successful completion of the Phase 1 Administrative Management Plan.

d. STATUS CHANGE AGREEMENT and BEHAVIORAL CONTRACT: An agreement between the inmate and the Classification Unit to follow facility rules, obey all laws, and avoid placement into Administrative Management.

II. **ADMINISTRATIVE MANAGEMENT PROCEDURE:**

a. Only the Classification Unit can assign an inmate into Administrative Management. When Classification is unavailable, the Facility Commander, or his/her designee, may order immediate placement of any inmate into Pre-Classification Administrative Management for the safety and security of staff and inmate(s) under the following circumstances:

i. The inmate poses an immediate safety risk and no other housing classification or unit is sufficient to protect the inmate or others from harm.

ii. The inmate has failed to integrate into a less restrictive housing setting because of repeated and recent history of assaultive behavior or current threats of violence associated with being in a less restrictive setting.

iii. Objective evidence indicates the inmate participated in a recent assault and the assaultive behavior involved an assault on staff or inmate, serious injury, use of a weapon or multiple inmate assaults.

NOTE**:** Mutual combat situations that do not otherwise qualify for Administrative Management do not form a basis for placement.

iv. Pregnant female inmates shall not be placed into Administrative Management unless documented extreme risks to facility security and/or officer safety exist with the approval of the Facility Commander or Division Commander.

b. If a request for Administrative Management placement originates from outside the Classification Unit, an incident report based on facts, information, and/or observation will be initiated by the requesting individual. Any additional reports, memos, etc., which pertain to the request shall be attached. The entire package shall be forwarded to the shift supervisor for review and/or comment. The Facility Commander, Classification Sergeant or designee, will make the final determination on whether the information provided warrants a placement into Administrative Management.

c. The Classification Unit will review all cases and interview the inmate no later than five (5) days of the placement into Administrative Management. The interview with the inmate will be conducted in a private setting, either in the Classification office or in a private room removed from other inmates to ensure confidentiality. The Classification Unit will re-interview the inmate after 30 days in Administrative Management.

d. Upon initial placement of an inmate into Administrative Management, the inmate will be given documentation informing them of the reason for the placement and an explanation on the downgrade process to return to General Population. The inmate will be given a request form for the purpose of appealing his/her placement into Administrative Management. The inmate will be given a copy of the incident report detailing why he/she was placed into Administrative Management.

e. The inmate will be informed of the phase process involved at the time of placement. The inmate will read and sign a behavioral contract which will explain the Phase process.

f. An inmate may appeal movement into Administrative Management by submitting a request slip addressed to the Classification Sergeant. The Classification Sergeant or his/her designee will respond to the request form within 5 business days.

g. Notwithstanding any other provision in the Administrative Management Plan, the Office of the Sheriff may place any inmate in a more restrictive form of Administrative Management when the inmate is so violent that the inmate cannot be managed under the terms of the Administrative Management Plan. This option should rarely be invoked and requires the approval of the Facility Commander or Division Commander.

h. A Qualified Mental Health Professional will screen any inmate placed into Administrative Management within seventy-two (72) hours of placement. The Classification Unit deputy will immediately notify the following detention health services employees with each new Administrative Management placement:

i. Mental Health Program Chief
ii. Mental Health Program Manager
iii. Director of Detention Nursing
iv. Detention Nursing Program Manager

III. ADMINISTRATIVE MANAGEMENT PHASES

a. The Office of the Sheriff shall develop and implement a phased system for inmates designated as Administrative Management to achieve a lesser restrictive housing setting.

i. PHASE 1

1. Phase 1 is the most limited housing for inmates in Administrative Management and can include lockdown time and loss of privileges.

2. Inmates will be offered a minimum of one (1) hour per day free time for a total of seven (7) hours a week.

3. Inmates shall be offered the opportunity to program in groups, unless grouping of an inmate is not possible for safety and security reasons. If an inmate is unable to be grouped, the decision and reasoning shall be documented by the Classification Unit. Group size for inmates in Phase 1 will be at the discretion of the Classification unit.

4. Inmates shall remain in Phase 1 for no longer than fifteen (15) days unless the inmate engages in new conduct warranting further retention in Phase 1. A documented review will be completed by the Classification Unit deputy within fifteen (15) days of placement and forwarded to the Classification Sergeant for review. If an inmate has been in Phase 1 for fifteen (15) days and objective

evidence indicates the inmate participated in a recent assault involving an assault on staff or visitor, serious injury, use of a weapon or multiple inmate assaults, the Classification Sergeant must approve the inmate's continued placement in Phase 1. Mutual combat situations, defacing or inflicting minor damage to state property, unauthorized medication or harassment do not otherwise qualify for continued placement of an inmate in Phase 1.

a. While placed in Phase 1, if an inmate commits a serious behavioral violation, Classification Deputies may review the inmate's behavior and propose the inmate be extended in Phase 1.

5. An inmate placed into Administrative Management due to a PREA incident where by the inmate is the suspect, cannot be held for longer than thirty (30) days in Phase 1 without prior review and approval by the Classification Unit Sergeant or his/her Designee (unless new behavior in Administrative Management is documented).

a. The Classification Unit Sergeant, or Designee, will consult with medical/mental health staff prior to authorizing continued placement of PREA inmates.

6. Upon the successful completion of Phase 1 after fifteen (15) days with no new conduct warranting retention, the inmate shall be transferred to placement in Phase 2 of Administrative Management.

ii. PHASE 2

1. Inmates shall be offered two (2) hours of free time a day, for a total of fourteen (14) hours a week.

2. Inmates shall be offered the opportunity to program in groups, unless grouping of an inmate is not possible for safety and security reasons and those reasons are documented by the Classification Unit.

3. Inmates shall remain in Phase 2 for no longer than thirty (30) days unless the inmate commits a serious behavioral violation while in Administrative Management including, but not limited to: fighting; threatening staff or other inmates; resisting or delaying an order from staff that impedes jail operations (e.g., failure to lockdown), refusing to submit to a search of person or property, possessing contraband that implicates safety or security (e.g., weapons, razors) and/or sexual activity or harassment. If a minor violation occurs and does not pose a significant threat to the safety and security of staff, facility or inmates, the inmate will not be held in Phase 2.

4. If a serious violation occurs, the inmate could either be extended in Phase 2, or if warranted, be placed back into Phase 1.

5. After thirty (30) days, the Classification Unit will review an inmate in Administrative Management Phase 2 to see if the inmate can be placed in less restrictive housing such as general population, or protective custody.

    a. If an inmate is to remain in Phase 2 for longer than thirty (30) days, the Classification Unit will work in conjunction with Mental Health to develop a behavioral management plan to facilitate returning the inmate to general population.

IV. DOCUMENTATION AND REVIEW OF ADMINISTRATIVE MANAGEMENT INMATES

a. The Classification Unit shall document the reason for placing an inmate into Administrative Management. This includes all paperwork, forms and notes, name of inmate, booking number, housing location, date admitted, reason for placement, and special medical needs of the inmate if advised via medical staff.

b. No inmate will be in Administrative Management longer than forty-five (45) days, unless specific information is developed which shows the inmate would be a continued threat towards staff or other inmates. The Classification Sergeant, Facility Commander, or Designee must approve the continued retention of an inmate in Administrative Management longer than 45 days, and the Classification Sergeant, Facility Commander, or Designee must reauthorize such placement at least once every forty-five (45) days.

c. The Classification Unit will document the removal of any inmate from Administrative Management through the completion of a Status Change Agreement and Behavioral Contract. The Classification Unit will explain the Status Change Agreement and Behavioral Contract to the inmate before a signature is obtained.

d. The Classification Unit Staff shall attempt to downgrade inmates to a less restrictive housing setting at the earliest opportunity, consistent with the safety and security of staff and the facility. In making this assessment, Classification Unit Staff shall:

    i. Consider all aspects of the facts which resulted in the inmate being placed in Administrative Management.
    ii. Examine the record for compliance with department and facility policy.
    iii. Develop a strategy to downgrade the inmate from Administrative Management, this will include inmate behavior, reports and other documentation.

e. The Classification Unit will continuously determine if Administrative Management is still necessary and/or whether a lesser restrictive form of Administrative Management housing is appropriate.

f. A Classification Unit Deputy will be designated to monitor all Administrative Management Inmates to include grouping of inmates for free time, interviewing and documenting all information related to the placement.

V. HOUSING OF ADMINISTRATIVE MANAGEMENT INMATES

a. The Office of the Sheriff shall provide inmates with access to the following services while in Administrative Management:

   i. Visiting
   ii. Mail
   iii. Reading materials
   iv. Religious services
   v. Telephone
   vi. Hygiene materials and clothing exchange
   vii. Commissary.

b. Room checks will be conducted per CSB Policy 2.08.17 (Inmate Room Checks and Observation Requirements).

   i. Administrative Management inmates shall be locked down in their assigned cells for the duration of room checks, pill calls and other essential movements on the module. Inmates will be let back out of their cells to continue their free time at the completion of these movements.

c. Administrative Management inmates will only be housed and grouped with other Administrative Management inmates.

d. Housing of Administrative Management inmates will be designated to one module unless the population of Administrative Management inmates exceeds the maximum occupancy of that module. Alternate module housing may be used if necessary. Attempts should be made to house all Administrative Management inmates on one designated module.

e. Administrative Management inmates will thoroughly be reviewed before being placed in a group setting. All efforts will be made to group inmates with compatible individuals.

f. All efforts will be made to group as many Administrative Management inmates as possible. The Classification Unit may have justification that certain inmates would not group well with other inmates based on history, compatibility or EIF (Enemies in Facility) issues. The safety of inmates and staff is paramount when considering grouping of Administrative Management inmates.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.03
	RELATED ORDERS: MJS 1053 CSB 2.10.02, 2.10.05, 2.13.07, 2.17.01, 2.17.08, 2.18.06, 2.18.15	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-03-19 **REVIEW DATE:** 12-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Protective Custody Inmates	

I. POLICY

A. Under certain circumstances, it may be necessary to place an inmate by request in Protective Custody pursuant to Minimum Jail Standards 1053. It shall be the policy of the Custody Services Bureau to supervise inmates requesting or requiring protection from the general population.

B. Each Protective Custody case should be reviewed frequently with the goal of terminating the separate housing assignment as soon as possible.

C. When Classification is unavailable, the Facility Commander or their designee may order immediate placement of any inmate into Pre Classification status for the safety of staff and inmates.

1. If this action is taken, an Incident Report will be generated. The Classification Sergeant and/or designee(s) will review the placement within (3) three working days.

D. The Classification Unit will review the status of inmates in Protective Custody every seven (7) days for the first two (2) months and at least every thirty (30) days thereafter.

E. During scheduled reviews, or as needed, the Classification Unit will review the status of inmates in Protective Custody to determine eligibility for reclassification to other appropriate housing.

F. In addition to the direct supervision afforded by the unit deputy, the Custody Sergeant may conduct daily reviews the inmates housed in Protective Custody.

G. Each inmate in Protective Custody placed into an isolated or Administrative Management status shall be seen by a qualified heath care official three (3) times a week unless medical attention is needed more often

I. DEFINITIONS

A. PROTECTIVE CUSTODY (PC): The separation of inmates, from the general

population, who request or require protection from other inmates for reasons of health or safety. Protective Custody is a non-punitive area for inmates who need protection from other inmates in general population.

II. PROCEDURE

A. Inmates requesting or requiring protection from the general population may be placed in Protective Custody and will be allowed to participate in as many of the programs afforded the general population as possible, providing it does not impose a threat to the inmate's safety or the security of the facility.

1. Inmates in Protective Custody shall have access to qualified medical staff.

- Protective Custody inmates will be allowed out of their cells a minimum of (3) three hours per day, six (6) days per week to exercise.

2. Each inmate will be allowed to shower and shave during their free time, unless these procedures present an undue security hazard.

B. When an inmate is placed in Protective Custody, it shall be warranted, fully documented, and no reasonable alternatives are available. An inmate may, at any time, request re-assignment to the general inmate population.

C. With consent signed by the inmate, an inmate shall, upon request be placed in Protective Custody.

D. If a deputy believes the inmate is in immediate danger, the deputy will place the inmate in a holding cell by him/herself and notify classification immediately.

E. A classification officer will classify an inmate into Protective Custody upon receiving a credible verbal or a written request any time the inmate believes their presence in the general population would jeopardize the inmate's safety.

F. An inmate classified as Protective Custody, will be housed in a housing unit with other inmates with the same classification.

1. Classification may place a Protective Custody inmate into Administrative Management housing if it is determined the inmate's life and safety would be at risk in all other housing units.

G. The Classification Unit will review the status of an inmate in Protective Custody status every seven (7) days the first two (2) months and at least every thirty (30) days thereafter with the goal of terminating the special housing assignment as soon as possible.

H. HOUSING

1. The same general rights and privileges which govern housing for general population inmates shall apply to inmates placed in Protective Custody, and will

not be restricted more than necessary to ensure the safety and security of the staff, other inmates, and the facility.

I. SUPERVISION

1. In addition to the direct supervision afforded by the unit deputy, the Custody Sergeant may conduct daily reviews of inmates housed in Protective Custody.

J. ACCESS TO LEGAL AND READING MATERIALS

1. Inmates in Protective Custody shall have access to both personal legal materials and available legal reference materials pursuant to CSB Policy.

2. Inmates in Protective Custody should be provided a sufficient quantity of reading materials and have the opportunity to borrow reading material from the library pursuant to CSB Policy.

K. PERSONAL HYGIENE

1. Protective Custody inmates shall have the opportunity to maintain an acceptable level of personal hygiene as inmates in the general population, e.g., toilet tissue, basic hygiene supplies, eyeglasses, etc.

    a. Exceptions are permitted only when found necessary by the Shift Supervisor

        - Any exception shall be justified in writing and recorded in the housing unit log.

2. Each inmate will be allowed to shower and shave during their free time, unless these procedures present an undue security hazard.

3. Each inmate shall receive laundry, and have access to hair care supplies, issue/exchange of regular jail clothing, bedding and linen on the same basis as inmates in the general population.

L. MEDICATION

1. Inmates in Protective Custody will be provided prescribed medication by medical staff on a schedule as prescribed by the issuing medical professional pursuant to CSB Policy.

M. CORRESPONDENCE AND VISITS

1. Correspondence privileges shall be continued in Protective Custody unless compelling reasons exist to the contrary.

2. Inmates in Protective Custody can write and receive letters on the same basis as inmates in the general population pursuant to CSB Policy.

3. Inmates in Protective Custody shall have the opportunity for visitation unless

there are substantial reasons for withholding such visits.

a. Every effort shall be made to notify approved visitors in advance of any restrictions on visiting.

H. TELEPHONE ACCESS

1. Inmates in protective custody will have access to telephones on during their regularly scheduled free time, pursuant to CSB Policy and Procedure 2.17.08, Inmate Telephone Access.

O. PROGRAMS AND SERVICES

1. Inmates in Protective Custody will continue to have access to programs and services including, but not limited to, educational services, commissary services, library services, social services, counseling services, religious guidance, and recreational programs.

2. There shall be no major differences from those offered the general population, as long as access to these programs does not pose a threat to the safety of inmates or staff or pose a threat to the security of the facility.

P. PROCESS FOR RELEASE FROM PROTECTIVE CUSTODY

1. Before inmates are released from Protective Custody, the Classification Unit shall ensure the following is considered:

a. Review of inmate's file by the Classification Unit or the assigned classification deputy to determine if the current status warrants the inmate's release from Protective Custody.

b. If initial reasons for placement into protective custody no longer exist, the Classification Unit or assigned classification deputy shall return the inmate to the general population.

c. All information pertaining to the inmate's release from Protective Custody shall include: date of release, reason for release and releasing authority.

d. A complete interview of the inmate by (2) classification deputies will be conducted and the inmate will be advised of their return to general population. The inmate will enter into a contractual agreement with the Classification Unit prior to their placement

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.04
	RELATED ORDERS: MJS 1217, 1219 CSB 2.08.18, 2.10.02, 2.10.05, 2.13.07, 2.17.01, 2.17.08, 2.18.06, 2.18.15	
ISSUE DATE: 05-19-16 **REVISION DATE:** 12-04-19 **REVIEW DATE:** 12-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Mental Health Inmates	

I. POLICY

A. Inmates who have mental/emotional issues or psychiatric problems identified by history, receiving, intake screening, or after admission, must be monitored and followed up by Medical/Mental health staff.

B. Inmates experiencing psychiatric emergencies that present a threat to themselves or others shall receive immediate attention.

II. DEFINITIONS

A. MENTAL HEALTH INMATE: An inmate with special needs who is afflicted with an illness, disease, or condition that substantially impairs the person's thought, perception of reality, emotional process, or judgment; or which grossly impairs behaviors; or an inmate who demonstrates or has demonstrated evidence of an acute brain syndrome for which prompt remission in the absence of treatment is unlikely.

III. PROCEDURE

A. The Classification Unit, in conjunction and in partnership with Medical/Mental Health staff, will continually strive to house mental health inmates in a manner that affords the maximum amount of free time and programs available.

B. Mental health staff, in conjunction with the Classification Unit, will attempt to reintegrate mental health inmates and special needs inmates into the general population as soon as possible. The assimilation of mental health inmates with the general population will occur with respect to the safety and security of the various inmate populations, the overall safety and capability of the facility, and the specific mental health needs of each individual mental health inmate.

C. When a mental health inmate is identified, he/she may be separated from the rest of the inmate population for his/her safety and/or the safety of others. Administrative Management should only be

considered when interaction with the general population poses a threat to the health, safety, danger to life, or security of the inmate, staff, or facility. Administrative Management should be ceased as soon as it is identified that the mental health inmate is safe to reintegrate with the general population.

D. When a mental health inmate is identified and subsequently separated from the rest of the inmate population, an observation log will be initiated in accordance with CSB Policy and Procedure 2.8.18, Observation Logs.

E. Medical/Mental Health staff will be notified and will perform an immediate initial evaluation.

1. Based on the results of the evaluation the medical staff may:

a. Arrange for immediate or follow-up treatment, if needed.

b. Recommend continuing or discontinuing the Observation Log.

c. Recommend the inmate be housed on M Module.

d. Facilitate transfer of the inmate to an appropriate psychiatric facility.

F. The Classification Unit will be notified and will arrange for the appropriate housing and security needs. Classification staff will continue to work with Medical/Mental Health staff to determine the least restrictive forms of housing for mental health inmates.

1. Mental health inmates or inmates who remain on observation logs will be housed on M Module when feasible with the appropriate hazard code designation.

G. Maximum cooperation between custody personnel and health care providers is essential so that both groups are made aware of movements and decisions regarding mental health inmates.

1. Psychiatric problems may complicate work assignments or disciplinary management and may be considered when determining housing assignments.

H. M MODULE HOUSING UNIT

1. Mental health inmates requiring special management considerations (e.g.: Out Alone, Protective Custody, distinct mental health needs), will be allowed a minimum of (1) one hour of exercise/free time per day outside their cells, excluding the facility inspection day, and/or unless security or safety considerations dictate otherwise.

a. A written record/log of each mental health Administrative Management inmate will be kept in the Jail Management System (JMS) noting their free time participation, or lack of it. All other inmates housed on M module for medical / mental health reasons shall have the same free time as general population inmates.

b. Free time must be completed between 0700 and 2200 hours. In any instance where free time cannot be completed within this time frame, the facility commander or his/her designee (shift supervisor) must be notified; a written notation explaining the reason for the postponed free time must be recorded in the module notes.

c. Inmates on disciplinary lockdown shall receive (1) one hour of free time every other day in accordance with CSB Policy and Procedure 2.16.03, Inmate Incidents and Discipline; inmates on lockdown shall be afforded a reasonable opportunity to shower and shave daily, excluding facility inspection day.

2. The general rights, privileges and activities of mental health inmate and inmates placed on the Mental Health housing unit will not be restricted more than is necessary to ensure the safety and security of the staff, other inmates, and/or the facility. Deprivation of any right, privilege, and/or activity is to be documented and forwarded to the Facility Commander, via appropriate channels.

3. Admissions of all inmates to M module will be logged, including the following information:

a. Name of inmate and booking number

b. Designated room

c. Date of admission

d. Tentative release date

e. Special medical or psychiatric problems or needs

4. The module log will also be used to record all visits by officials who inspect the units or counsel inmates, in addition to all unusual behavior and all releases.

I. SUPERVISION

1. In addition to the direct supervision afforded by the unit deputy, the Custody Sergeant may conduct daily reviews of inmate housing conditions.

J. MOVEMENT

1. Care must be taken when moving mental health inmates, so they are not mixed with general population inmates. When feasible, inmates will move in groups of like classification.

K. PERSONAL HYGIENE

1. Mental health inmates shall have the opportunity to maintain an acceptable level of personal hygiene as inmates in the general population (e.g.: toilet tissue, wash basics, toothbrush, eye glasses, etc.). Exceptions are permitted only when found necessary by the area supervisor or Custody Mental Health staff; any exception shall be justified in writing and

recorded in the housing unit log.

2. Each inmate shall have the opportunity to shave and shower every day, except facility inspection day, and/or unless these procedures present an undue security hazard.

3. Each inmate shall receive access to laundry, approved hygiene supplies, issue/exchange of regular jail clothing, bedding and linen on the same basis as inmates in the general population, except when any of these would pose a threat to safety.

L. MEDICATION

1. Inmates assigned to the medical module will be provided prescribed medication by medical staff on a schedule determined by the issuing medical professional, pursuant to CSB Policy.

2. Any separated mental health inmate shall have access to medical staff as needed.

M. ACCESS TO LEGAL AND READING MATERIAL

1. Mental health inmates shall have access to both personal legal materials and available legal reference materials, pursuant to CSB Policy.

2. Mental health inmates should be provided a sufficient quantity of reading materials and have the opportunity to borrow reading materials from the facility library, pursuant to CSB Policy.

N. CORRESPONDENCE AND VISITS

1. Correspondence privileges shall be continued in mental health housing units unless compelling reasons exist to the contrary.

2. Mental health inmates can write and receive letters on the same basis as inmates in the general population, pursuant to CSB Policy.

3. Mental health inmates shall have the opportunity for visitation unless there are substantial reasons for withholding such visits.

   a. Every effort shall be made to notify approved visitors in advance of any restrictions on visiting.

4. Mental health inmates can write and receive letters on the same basis as inmates in the general population, pursuant to CSB Policy.

O. TELEPHONE ACCESS

1. Mental health inmates will have access to telephones on a daily basis during their regularly scheduled free time, pursuant to CSB Policy and Procedure 2.17.08, Inmate Access to Telephones.

P. PROGRAMS AND SERVICES

1. Mental health inmates will continue to have access to programs and services including, but not limited to, educational services, commissary services, library services, social services, counseling services, religious programs, and recreational programs.

2. There shall be no major differences with mental health inmates from those programs and services offered to the general population, as long as access to these programs does not pose a threat to the health, safety, danger to life, or security of the inmate, staff, or facility.

The Classification Unit will work with the Medical/Mental Health staff to ensure the ability of inmates housed on the Medical Module for a temporary evaluation period to be re-entered into the general population on a case by case basis.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.05
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 8-14-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Juvenile In-Custody	

I. POLICY

A. No one under the age of 18 will be housed at any Contra Costa County Sheriff's Detention Facility. This does not prevent the housing of persons over the age of 18, who are being prosecuted on juvenile matters.

II. DEFINITIONS

A. JUVENILE: Anyone who has not reached the age of 18 on or before the date of incarceration.

III. PROCEDURE

A. If it comes to the attention of any staff that there is a possibility of someone under the age of 18 being housed, they will immediately bring it to the attention of the Shift Supervisor.

1. The individual shall be immediately isolated and will remain isolated from any adult inmate until their age is verified.

2. The supervisor will be responsible for verifying that the individual is in fact a juvenile.

a. This can normally be accomplished by contacting a relative of the individual, or by contacting juvenile probation.

B. Once the age has been verified, the supervisor will contact the arresting agency and inform them the individual is a juvenile and that they will need to transport the individual to Juvenile Hall.

1. If the arresting agency refuses to transport, the Facility Commander will determine if we will transport or release.

C. The Shift Supervisor will direct Operation staff to pull all appropriate records.

1. Copies of the booking face sheet will be made available for the transporting

officer.

2. All personal property and money will be pulled and necessary receipts made out for signature of the transporting officer.

    a. The juvenile will be brought to Intake and held separately until the transporting officer is ready to leave.

D. The Shift Supervisor will complete a Records Correction Form and forward the information the Records Unit no later than the end of shift.

E. The deputy discovering the juvenile will be responsible for generating an Incident Report.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.06
	RELATED ORDERS: MJS 1050 CSB 2.13.07, 2.17.01, 2.18.06, 2.18.15	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** High Profile Inmates	

I. POLICY

A. All effort should be made to ensure all high profile inmates take precedence over all other inmates during booking, screening, classification and movement.

II. DEFINITION

A. High Profile inmates are considered to be the following:

1. Those inmates who draw special attention because of the nature of their crime.

2. Those having community status, e.g., public officials, dignitaries, law enforcement members, etc.

3. Members of racial/terrorist organizations, both foreign and domestic.

4. Those identified as being involved with organized crime, high ranking gang members, major narcotic traffickers, inmates with a documented history of attempting to manipulate the judicial process, and all others that seek out or act out to draw special attention.

III. PROCEDURE

A. FACILITY COMMANDER NOTIFICATION

1. All external inquiries regarding those identified as high profile inmates will be directed to the Facility Commander.

B. CLASSIFICATION PERSONNEL NOTIFICATION

1. Classification deputies will give priority to classifying high profile inmates so that the inmate will move through the receiving-booking process expeditiously, and will immediately notify movement deputies upon the completion of the classification process. Refer to Minimum Jail Standards 1050.

C. BOOKING/ITR STAFF

1. Booking/ITR staff responsible for movements will make every effort to move the high profile inmate expeditiously to their proper housing.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.07
	RELATED ORDERS: MJS 1050	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-04-19 **REVIEW DATE:** 12-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Deprivation of Authorized Items or Activities of Administrative Management Inmates	

I. POLICY

A. Whenever an inmate is separated from the main population and deprived of any usually authorized item or activity, a report of the action is made and forwarded through the appropriate chain to the Division Captain.

II. DEFINITION

A. Administrative Management will refer to any classification of an inmate that as a result of certain conditions, requires housing which is separate from inmates assigned to general population housing units, pursuant to Minimum Jail Standards 1050.

III. PROCEDURE

A. Inmates separated from the general population shall be afforded the same basic rights, privileges, services and participation in facility programs as those in general population except where security requirements or facility resources dictate otherwise.

B. No item or activity should be withheld longer than is necessary to ensure the inmate's safety and well being of the staff and other inmates.

C. In no instance, will an inmate be deprived of an item or activity for the purpose of punishment.

D. Staff members requesting a restriction of any item, program or service to an inmate shall obtain approval from the Facility Commander prior to implementing the restriction.

1. A memorandum or Incident Report will be submitted, outlining the reason or basis for such action.

    a. Additional reports, memos, etc., which pertains to this request, will be attached.

2. The package will be forwarded to the Shift Supervisor for review and comments.

3. The Facility Commander or their designee will forward the report to the Classification Sergeant, who will investigate the matter further if necessary.

E. Any deviation from this policy will be done at the direction of the Facility Commander or their designee, i.e., emergencies, immediate security problems.

1. If this action is taken, an Incident Report will be completed prior to the end of shift. The Facility Commander and Classification Sergeant and/or designee(s) will review the incident within (3) three working days.

F. The inmate may appeal any action taken against them in accordance with CSB Policy.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.08
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Confidential Contacts	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.09.09
	RELATED ORDERS: MJS 1053	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Special Management Inmates	**SUBJECT:** Special Inmate Management Plan	

I. POLICY

A. The Custody Services Bureau will identify any inmate who presents a unique threat, or security risk to themselves or others.

B. An inmate who falls into this category is anyone who has not been successfully managed through the normal disciplinary or behavioral health protocols.

C. Once identified, a formal written plan can be developed in accordance with the CSB procedures.

II. DEFINITIONS

A. SPECIAL INMATE MANAGEMENT PLAN: A formal written plan approved by the Facility Commander that is developed through a cooperative effort of the various detention, medical and behavioral health disciplines to address special inmate management needs.

III. PROCEDURE

A. Any deputy, medical clinician, or behavioral health specialist may recommend that an inmate be reviewed to determine whether a special inmate management plan should be implemented.

1. The request for review should be made to the Facility Commander.

B. The Division Captain or designee will approve the initiation and implementation of a Special Inmate Management Plan.

C. Once an inmate has been identified as a candidate for a Special Inmate Management Plan, the Classification Unit will conduct a thorough assessment of the inmate to include the following:

1. Complete Booking Information

a. To include booking date, charges, court of jurisdiction and court dates, conviction and sentencing information if applicable.

2. Background Criminal History

a. Past arrests and convictions, prior state prison commitment information including intelligence from CDC officials if applicable.

b. If necessary, the agency of jurisdiction for the inmate's previous arrests and convictions may be contacted in order to obtain additional information regarding inmate's history, behavior, etc.

3. Inmate's Current Classification Status and Housing Assignment.

4. Criteria Justifying Classification

a. A synopsis of the reason for inmate's current classification status and housing assignment.

5. Behavioral (or Potential Behavioral) Problems and Issues

a. A synopsis of the inmate's current in-custody behavior, to include information obtained from the classification file, disciplinary records, interviews of line staff, reports, memorandums and logbook entries.

6. Medical and Psychological Status

a. Information that may have an impact on management options should be included, and may be obtained from Prison Health Services, Criminal Justice Mental Health, and from the inmate's classification file, specifically the intake medical screening sheet.

7. Transportation, Inmate Movement Issues and Courtroom Security Issues

a. If applicable, the Transportation Unit and Court Security Unit will be contacted to address issues regarding the inmate's movement to and from appointments, and temporary holding at facilities other than county jails.

8. Inmate Management Options and Recommendations

a. The options and recommendations will be determined after completing a thorough analysis of the aforementioned areas of consideration, and must be complete, taking into consideration classification and housing options, daily actions taken by housing staff, criminal proceedings and disciplinary options, transportation and courts issues.

b. In all cases, a classification deputy will be identified as a liaison deputy to the inmate placed on the Special Inmate Management Plan.

D. The completed Special Inmate Management Plan will be submitted to the Division Captain via the chain of command for approval and/or additional recommendations.

E. At the time the Special Inmate Management Plan is approved, a classification deputy will be designated as the inmate's liaison deputy. The contact through the liaison deputy will be the inmate's primary means of communication with the facility's management.

F. At a minimum, the liaison deputy will have weekly contacts and discussions with the inmate.

a. The liaison deputy will thoroughly monitor and document the inmate's behavior.

2. It will be the liaison deputy's responsibility to interview housing unit staff, and review all logbook entries, memorandums and reports.

G. The Division Captain will be kept appraised weekly of the inmate's behavior by the liaison deputy, via the Classification Sergeant, and in all cases will be notified immediately of any negative behavior on the inmate's part.

H. The Special Inmate Management Plan must be updated, reviewed and approved as new information pertaining to the inmate status develops.

1. Any changes to the Special Inmate Management Plan must be made in writing and submitted to the Division Captain via the chain of command for approval and implementation.

2. These written addendums will be attached to the original Special Inmate Management Plan, with copies of the addendums appropriately disseminated by the Classification Unit.

I. Dissemination of the approved written plan will include, at a minimum:

1. Division Captain

2. Facility Commander

3. Administrative Lieutenant

4. Classification Unit

5. All shift sergeants

J. Additional dissemination will include, if applicable, the following:

1. Transportation Unit

2. Court Security Unit

3. District Attorney's Office

4. Public Defender's Office

5. Probation Department

6. Other applicable custody staff

K. In the event that the inmate governed by a Special Inmate Management Plan is transferred to another facility, the Facility Commander and Classification Unit of that facility will be notified, and provided with a copy of the Special Inmate Management Plan.

L. The Special Inmate Management Plan will become a part of the inmate's classification file, and will be treated with the same confidentiality as any other classification document.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 01-08-2019	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Post Orders	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.02
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** General Security Post Orders	

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Concur 05/22/2018

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.03
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Lieutenant / Facility Commander	

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Facility Inspections and Reports Matrix.

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.04
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Administrative Lieutenant	

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Concur 05/22/2018

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.05
	RELATED ORDERS: CSB 2.08.49	
ISSUE DATE: 07-01-04 **REVISION DATE:** 06-22-18 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Shift Sergeant	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.06
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Operations Sergeant	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-31-19 **REVIEW DATE:** 07-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** CAS Lieutenant	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.08
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Training Sergeant	

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Contra Costa County **Office of the Sheriff** **CSB Policy and Procedure** **ISSUE DATE:** 07-01-04 **REVISION DATE:** 10-30-18 **REVIEW DATE:** 1-17-19 **CHAPTER:** Post Orders	**DETENTION**	**NUMBER:** 2.10.09
	RELATED ORDERS: None	
	CLEARANCE: **CUSTODY**	
	SUBJECT: Classification Sergeant	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.10
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 10-30-18 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Transportation Sergeant	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.11
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-06-19 **REVIEW DATE:** 12-06-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Special Event Response Team (SERT) Sergeant	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.12
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-30-11 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Booking / ITR Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.13
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 04-13-07 **REVIEW DATE:** 10-24-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** MDF Escort Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.14
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-01-10 **REVIEW DATE:** 02-09-15	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** WCDF Escort Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.15
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-10-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** WCDF Cover Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.16
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-17-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** WCDF Visiting Deputy and Sheriff's Aide	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.17
	RELATED ORDERS: CSB 2.07.09 CCCSO 1.06.46, 1.06.61	
ISSUE DATE: 10-23-03 **REVISION DATE:** 11-06-18 **REVIEW DATE:** 1-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** WCDF Perimeter Unit	

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[redacted] Response by the patrolling deputy assigned to the Perimeter Unit will be immediate and controlled.

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.18
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 06-14-17 **REVIEW DATE:** 08-08-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Housing Unit Staffing Requirements	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.19
	RELATED ORDERS: CSB Policy and Procedure 2.08.14, 2.13.10	
ISSUE DATE: 07-01-04 **REVISION DATE:** 06-05-19 **REVIEW DATE:** 07-31-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Housing Unit Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.20
	RELATED ORDERS: CSB 2.10.19	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 10-24-17	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** D Module Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.21
	RELATED ORDERS: CSB 2.08.49, CSB 2.08.44 CSB 2.10.19, CSB 2.08.17, CSB 2.08.18 CSB 2.10.25	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-08-19 **REVIEW DATE:** 12-09-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** F Module Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.22
	RELATED ORDERS: MJS 1051-52, 1055-56, 1021 (c)-(d), 11200-1218 MJS for Juveniles 4502, 4512, 4537 PC 825.5, 4011(d), 4011.5, 4011.6, 4020 4-4021, 4023-4023.6, 4028, 4029	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-13-16 **REVIEW DATE:**	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** M Module Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.23
	RELATED ORDERS: Title 15, sec. 1027 CSB 2.07.04, 2.10.19	
ISSUE DATE: 07-01-04 **REVISION DATE:** 05-30-19 **REVIEW DATE:** 07-02-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** WCDF Building 4 Housing Unit Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.24
	RELATED ORDERS: CSB 2.09.03, 2.07.04, 2.10.19	
ISSUE DATE: 07-01-04 **REVISION DATE:** 05-22-19 **REVIEW DATE:** 07-03-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** WCDF Building 8 Housing Unit Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.25
	RELATED ORDERS: P.C. 4013	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Male Deputy Supervising Female Inmates	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.26
	RELATED ORDERS: CSB 2.17.02, 2.17.09.	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-17-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Hospital Deputy	

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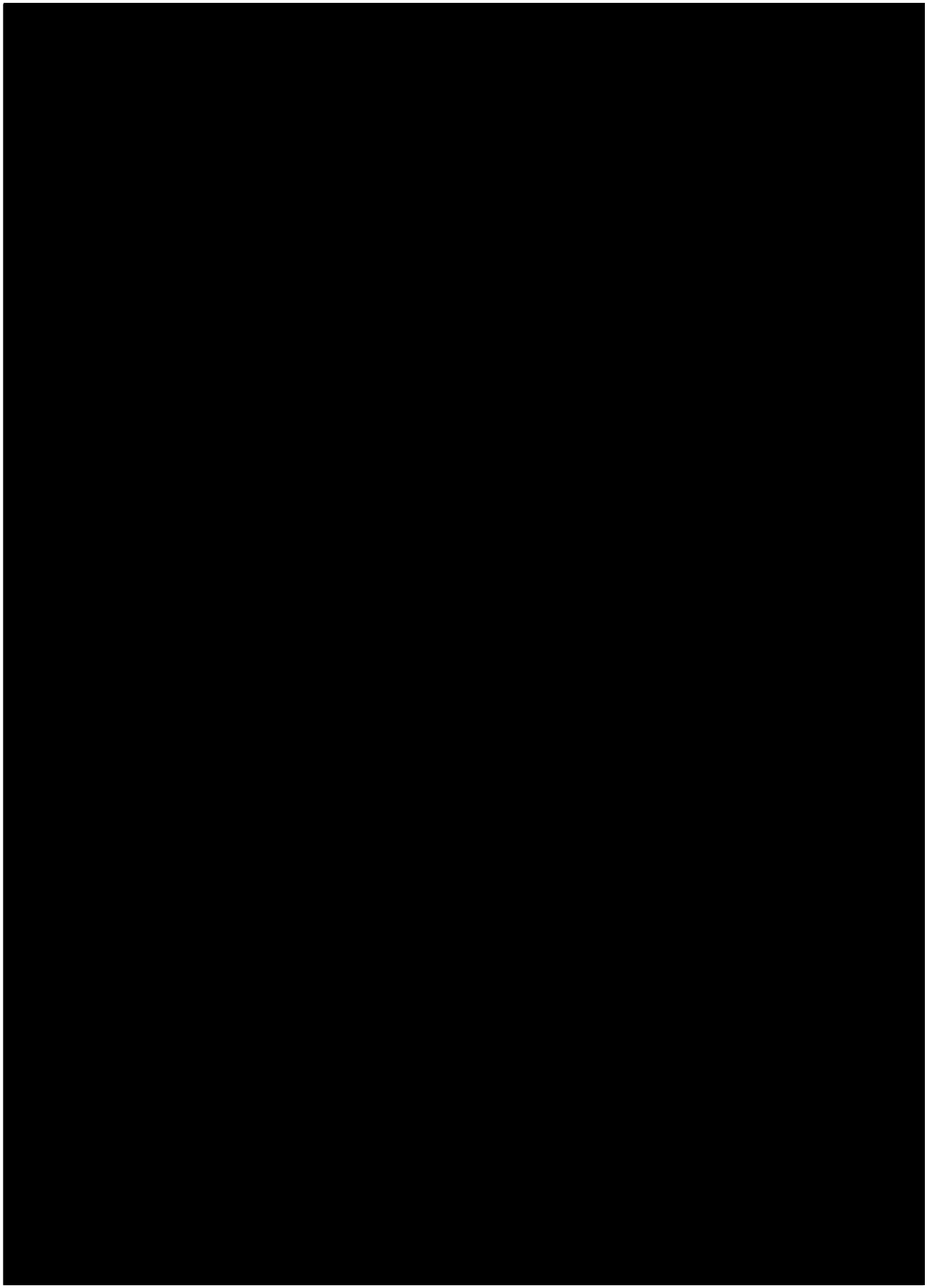

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.27
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 04-23-08 **REVIEW DATE:** 10-24-17	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Sheriff's Aide – Central Control	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.28
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Sheriff's Aide – Property	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.29
	RELATED ORDERS: P.C. 4013	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 08-22-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Sheriff's Aide/Operation Clerk-Reception Lobby	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.30
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Custody Administrative Services Specialist	

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Concur 05/22/2018

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.31
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** CAS Senior Clerk	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.32
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Custody Support Services Sheriff's Aide	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.33
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-19-18 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Clerical Supervisor	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.34
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 3-05-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Operations Clerk	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.35
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Lead Detention Services	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.36
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Head and Lead Cook	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.37
	RELATED ORDERS: CSB 2.08.14, CSB 2.08.29, CSB 2.09.02, CSB 2.10.19, Title 15	
ISSUE DATE: 07-01-04 **REVISION DATE:** 10-15-19 **REVIEW DATE:** 10-18-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** "A" Module Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.38
	RELATED ORDERS: CCCSO Policy 1.05.33, 1.06.29, 1.06.51, 1.06.54, 1.06.61, 1.07.23, 1.07.42, 1.07.51 CSB Policy 2.13.12	
ISSUE DATE: 07-13-16 **REVISION DATE:** **REVIEW DATE:** 08-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** Field Transportation Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER: 2.10.39**
	RELATED ORDERS: CSB Policy 2.08.39	
ISSUE DATE: 4-17-18 **REVISION DATE:** 08-08-18 **REVIEW DATE:** 03-17-19	**CLEARANCE:** CUSTODY	
CHAPTER: Post Orders	**SUBJECT:** WCDF Medical Clinic Deputy	

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.10.40
	RELATED ORDERS: CSB Policy and Procedures 2.10.19 and 2.10.25	
ISSUE DATE: 6-25-19 **REVISION DATE:** 6-25-19 **REVIEW DATE:** 7-08-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Post Orders	**SUBJECT:** T- Module Post Orders	

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Booking Folder Organization	

I. POLICY

A. All inmate-booking files will conform to one standardized format, in order to provide uniformity and expediency in the booking process.

B. The individual documents in the booking file will be placed in the appropriate section in all booking files, so that individual documents may be found easily.

C. The following Procedures/Guidelines will be adhered to when creating or maintaining an individual file.

II. PROCEDURE

A. MAINTENANCE

1. Each Facility will maintain custody records on all inmates incarcerated in the Facility. The files will contain but are not limited to:

   a. Intake/Booking information

   b. Court generated background information

   c. Cash and Property Receipts.

   d. Reports of Program participation, including Work Release or Trusty Programs and Program Time accumulated.

   e. Reports of disciplinary actions, incidents or crime(s) committed while in custody.

2. The documents in the Custody File ensure that the inmates are properly committed, that inmate property is correctly managed and that a record of major events while in custody is maintained.

3. Inmate booking files are transferred to Detention Division storage at the West County Detention Facility, approximately 24 hours following the inmate's release (excluding weekends and holidays).

B. FILE SECTIONS

1. The inmate booking files will be Blue in color and divided into 4 sections. The following is a list of the sections and where they are located in the file:

   a. Section 1- Left side as you open the file (page 1).

   b. Section 2- Right side of file when you open it (page 2).

   c. Section 3- Backside of Section 2 (page 3).

   d. Section 4- Last page of file (page 4).

C. Documents that belong in booking files will be placed in the appropriate section and secured with the metal clasps. On-view court cards and enroute cards will be stapled to the file's cover. Legal-sized documents will be folded up from the bottom of the document.

D. FILE ORGANIZATION CHART

1. SECTION 1- Initial Booking and Booking Information (starting from bottom):

   a. Booking Photo

   b. Booking Authority

   c. Booking Charge Report

   d. On View and Probable Cause Declaration

   e. Bail Determination

   f. Health Questionnaire

   g. Updated Charge Reports

2. SECTION 2- Legal/Criminal Authorities Preceding (Chronologically from the bottom):

   a. Prison Detainer

   b. Warrant Abstracts

   c. Remands

   d. Papers in Court

e. Minute Orders

f. Criminal Calendar

g. All Court Papers

3. SECTION 3- Custodial/Housing/Administration (Chronologically from the bottom):

a. Incident Reports

b. Observation Logs

c. Request Slips

d. Visiting Lists

e. Returned Mail Notices

4. SECTION 4- Inmate Property and Funds

a. Fingerprint confirmation (pink paper)

b. Orientation and Telephone Verification (Yellow paper)

c. Strip Search Record

d. Inmate Property Receipts

e. Inmate Clothing Receipts

f. All Release Authorizations

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.02
	RELATED ORDERS: MJS 1040, 1041, 1207, 1264 P.C. 1412, 4019	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-17-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Introduction to Intake	

I. POLICY

A. The Booking/Intake section will serve as the main receiving and release area at the Martinez Detention Facility (MDF).

B. All transfers, intakes, and court remands will be processed at this location prior to the inmate being housed.

C. The intake process shall include medical screening, booking photo, classification, fingerprints, appropriate pre-trial interviews, mental health evaluation, and where applicable, dress-out.

D. For more specific procedures regarding this area, refer to the specific area manual(s), or appropriate procedures in this section of the Policy and Procedure Manual.

II. PROCEDURE

A. MARTINEZ DETENTION FACILITY

1. Booking

a. This area is designed to process all inmates before being housed. Additionally, some inmates being released or transferred may temporarily be held in Intake. Intake contains the following:

- Female/Male inmates are processed and held in the intake area but are separated at all times.
- Holding Cells: There are nine (9) holding cells in male booking area. Included in this number are the following special cells:
  - Separation (3).
  - Sobering (2).

- Safety (2).

- Other rooms/areas include:
  - Arrestee Search Station
  - Photograph Station
  - Booking Officer Area
  - Phone Area
  - Fingerprint Station
  - Medical Screening Station
  - Medical Exam Room
  - Dress Out Rooms (2)
  - Property Storage Room
  - Mental Health Screening Station
  - Female Holding Area
  - Male Holding Room.

2. The Vehicle Sally Port of this facility is divided into distinct areas as follows:

   a. Law Enforcement Vehicle Parking

   b. Arresting Agency Files/Processing station

   c. Breathalyzer/ Biological Evidence Room.

   d. Work Station

   e. Arrestee Bench

   f. Gun Lockers (25)

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.03
	RELATED ORDERS: MJS 1041 P.C. 4015, PC 3407 P.C. 7 section 21 CSB Policy 2.11.07 and 2.08.39	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-20-19 **REVIEW DATE:** 08-20-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Intake Procedure	

I. POLICY

A. Acceptance of new inmates shall be done in accordance with 4015 PC.

B. Newly admitted inmates will be segregated from the general inmate population until the admissions process has been completed.

II. PROCEDURE

A. In all cases a completed Booking Authority, Probable Cause Declaration or Warrant, Property Receipt, and medical screening questionnaire shall accompany the inmate.

B. All sections shall be filled in that are needed, to facilitate a complete booking.

C. The on-duty Shift Supervisor is to be notified as soon as possible whenever there is a problem in accepting a prisoner.

D. In all cases where an arrest is made for reasons other than on-view, the supporting document(s) must be attached; i.e., a warrant arrest shall have either the physical warrant or a machine generated, verified warrant.

1. Contra Costa County warrants must contain “Warrant Abstract”.

2. Out of county warrants shall contain either “Warrant Abstract” or the following information:

a. Inmate’s name

b. Inmate’s DOB

c. Inmate’s identifying information, including:

- Race
- Height

- Weight
- Eye color
- Hair color
- Driver's License number
- Social Security Number
- Other identification number, i.e. FBI, SID or CIN

d. Charges

e. Bail amount

f. Judge

g. Court information

h. Warrant number

E. The following procedures shall apply in the acceptance of arrestees presented at the booking counter.

1. The arresting officer will secure his/her firearm(s), ammunition, baton, and any other lethal weapon(s) prior to bringing the arrestee into Intake.

a. Firearms and ammunition will be stored in the provided gun lockers or temporarily secured in the locked police vehicle trunk, without exception.

The arresting officer will be responsible for maintaining control of the arrestee, until Sheriff's Office staff accepts them. Once the arresting officer has relinquished physical custody and control of the arrestee to Sheriff's Office Staff, the arresting officer shall cease the use of any and all recording devices (body worn cameras, digital audio recording devices, cellular phone recordings, etc.) during the remaining administrative process associated with booking.

i. If any exigency occurs during the booking process and the arresting officer actively assists in helping to manage the emergency he/she shall be permitted to activate the recording device during the duration of the incident, per the arresting officers' department policy.

3. All interviews, breath tests, and blood tests will be completed prior to acceptance by receiving staff.

4. The arresting officer will bring the arrestee to the Intake sally port and completed paper work to the Booking Station. If there is no Escort Deputy in the sally port, the arresting officer will stay with the arrestee in the sally port until an Escort Deputy is present.

a. In all cases and prior to acceptance, a Custody Deputy will search the arrestee for property and/or contraband. The deputy will instruct the arrestee to remove their shoes and will conduct a thorough search of the shoes. The deputy will instruct the arrestee to put their shoes back on if the shoes are deemed safe for entry in the facility. In the event a strip search is deemed necessary, refer to Policy 2.08.39 (Inmate Body Cavity Searches – Body Cavity, Strip, Visual and Pat)

b. If during the intake process it is discovered a female inmate is pregnant, the Deputy shall advise the inmate of the standards and policies governing pregnant inmates. The Deputy will have the inmate read and sign the Pregnant Inmate Advisement Form (DET 023:FRM). A copy of the form will be given to the inmate, and a signed copy will be placed in the inmate's booking file.

5. Prior to accepting a new arrestee, staff shall examine the documents supporting the arrest for completeness, and time stamp the Original Booking Authority.

6. If PC Dec form is required, the Intake Deputy will ensure one has been submitted through ARIES to cover the on-view arrest.

7. The arresting officer will collect all money and property from the arrestee's person, bag property and money separately, and document each item and amount of money on the Property Receipt and give it to the on-duty booking Deputy.

   a. All property bags containing personal property of an arrestee will be sealed by the arresting agency prior to custody staff taking possession of it.

8. Booking personnel will process the inmate's money and property in compliance with Policy and Procedure.

9. If during the pat search, any alcohol, firearms, live ammunition, explosive substance, or suspected drug or paraphernalia is discovered, it will be the responsibility of the arresting officer.

   a. Perishable items will not be accepted by this facility and must be retained or disposed of by the arresting officer/agency. Prescribed medication will be placed into the arrestee's personal property bag.

10. The arresting officer will be permitted to leave immediately upon completion of pre-booking activities, to include medical staff review and acceptance.

11. If during the intake search, contraband is found and the arresting officer has left, the following will occur:

    a. Contraband will be seized without listing it on the property inventory.

b. The Shift Supervisor will be contacted and;

- The supervisor shall contact the arresting agency, inform them of the item(s) seized and request they return to take possession of the item(s).
- If they comply, all items will be turned over to the arresting agency and no further action is necessary.
- If they refuse to return for the items, the deputy discovering the items will write an incident/crime report, place the contraband into evidence, and process as an on-view arrest, if appropriate.
- Contraband items shall not be placed in an inmate's property.

12. Everyone entering Booking will receive a yellow wristband containing the following information:

a. Name

b. Booking Number

c. CIN Number

d. Booking Photo

13. All newly arrested persons will have fingerprints taken in accordance with Penal Code 7 section 21.

Contra Costa County
Pregnant Inmate Advisement Form

INMATE NAME_____ **BOOKING#**_____

Sheriff's Office Policy Statement

An inmate known to be pregnant or in recovery after delivery, shall not be restrained by the use of leg irons, waist chains, or handcuffs behind the body.

A pregnant inmate in labor, during delivery, or in recovery after delivery, shall not be restrained by the wrists, ankles, or both, unless deemed necessary for the safety and security of the inmate, the staff, or the public.

Penal Code 3407

(a) An inmate known to be pregnant or in recovery after delivery shall not be restrained by the use of leg irons, waist chains, or handcuffs behind the body.

(b) A pregnant inmate in labor, during delivery, or in recovery after delivery, shall not be restrained by the wrists, ankles, or both, unless deemed necessary for the safety and security of the inmate, the staff, or the public.

(c) Restraints shall be removed when a professional who is currently responsible for the medical care of a pregnant inmate during a medical emergency, labor, delivery, or recovery after delivery determines that the removal of restraints is medically necessary.

(d) This section shall not be interpreted to require restraints in a case where restraints are not required pursuant to a statute, regulation, or correctional facility policy.

(e) Upon confirmation of an inmate's pregnancy, she shall be advised, orally or in writing, of the standards and policies governing pregnant inmates, including, but not limited to, the provisions of this chapter, the relevant regulations, and the correctional facility policies.

(f) For purposes of this section, "inmate" means an adult or juvenile who is incarcerated in a state or local correctional facility.

I acknowledge being provided with the above information.

_____ **Date** _____

Inmate Signature

_____ **Date** _____

Intake Deputy

DET023:FRM

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.04
	RELATED ORDERS: P.C. 4011.5, 4015 C.C.R. 844, 844.6, 845.6	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Acceptance of Injured/Physically Impaired Inmates	

I. POLICY

A. No inmate will be received who is in need of immediate medical care, until medically cleared for booking into the MDF.

B. Physically impaired inmates will not enter the MDF except under exigent circumstances.

C. The on-duty Shift Supervisor, in conjunction with Medical staff, will make the determination of whether or not the arrested person will be received into the facility or transported by the arresting agency for medical clearance prior to acceptance.

D. Arrestees who are apparently physically impaired (i.e., transported by ambulance or ambulatory service, wheelchair-bound, in possession of a colostomy bag, etc.) will be considered a priority upon intake and will be processed expeditiously.

E. No part of this policy shall be interpreted in such a manner as to cause discrimination against the physically impaired.

F. Physically impaired arrestees shall not be segregated from the main population unless the classification of the inmate, the security of the facility, and/or special needs of the inmate require it.

II. PROCEDURE

A. INJURED INMATES

1. The booking deputy will notify the Medical Staff and/or Shift Supervisor if an arrested person is in need, or appears to be in need, of immediate medical care.

2. The on-duty Medical Staff and/or Shift Supervisor and or Watch Sergeant will respond to the Booking/Intake area.

3. Medical staff will respond to Intake to examine the individual.

4. The Shift Supervisor will determine whether to accept the arrested person into the

facility or to inform the arresting agency that the individual must be medically cleared prior to acceptance into the facility.

a. Medical clearance will minimally consist of a release form and associated discharge paperwork from a hospital.

a. Intake Officers receiving inmates from arresting agencies after they have been treated at a hospital shall personally deliver any discharge orders issued by the treating physician to the medical staff immediately upon receiving the inmate into custody.

b. The arresting agency will not be permitted to leave until medical staff has reviewed and approved the discharge order.

5. If the determination is made not to accept the arrestee, all processing of the arrested person will stop.

a. All documents, property, money, or related items will be returned to the arresting agency for transport with the arrested person.

b. No property will be held for persons not accepted into Sheriff's Office facilities.

B. PHYSICALLY IMPAIRED INMATES

1. Physically impaired inmates are to be housed at the MDF or WCDF.

2. Intake deputies will immediately notify medical staff of all arrested persons with an apparent physical impairment.

3. Following the intake property and contraband search, a physically impaired inmate will be escorted to the Booking/ITR nurse's station for medical screening.

4. The nurse will identify and notify the booking deputy of any special needs the inmate may have.

5. Upon notification of special needs, the booking deputy will make all reasonable efforts to provide the noted accommodations, including an accessible lavatory.

a. All persons confined to a wheelchair shall be placed in a cell designated for the physically impaired.

b. If the accommodations cannot be met, the booking deputy will notify the Shift Supervisor or Watch Commander.

6. Following the medical screening, if special needs are identified and/or housing on the medical floor or infirmary is indicated, the remaining processing will be completed immediately. The inmate is to be moved to the identified housing location without undue delay.

a. Intoxicated/under the influence inmates will remain in Intake until they are sober enough to be moved.

b. Violent and/or uncooperative inmates will be processed, housed and moved with due regard for the safety and security of staff.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.05
	RELATED ORDERS: P.C. 1300, 1301 CCR 26642	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Scope of Classification and Medical Screening Procedures	

I. POLICY

A. All incoming inmates shall undergo thorough screening and assessment upon admission, and shall receive orientation to the facility's procedures, rules, programs and services pursuant to Departmental Policy and Procedure.

II. PROCEDURE

A. All new inmates will be interviewed by a classification officer, if needed, and a medical staff member, as required, at the time of admission to initially determine potential level of offense, sophistication, violence potential, and any medical or mental or chemical dependency issues in order to determine proper assignment to a housing unit.

B. Suicide screening will be conducted and any inmate with suspected suicide potential will be placed in appropriate accommodations and restraints, as required, in the Safety Cell.

C. Intake staff will complete the Health Questionnaire prior to the arresting agency leaving the Intake area to ensure that the arrestee does not have any serious medical/mental condition.

1. Medical staff will record the inmate's response to all questions on the health questionnaire.

2. Whenever possible, medical staff will screen the arrestee prior to the arresting agency leaving.

D. All inmates showing signs of intoxication may be placed in the Sobering Cells until at such time they can continue processing.

1. An Observation Log is required and must be initiated.

E. All combative inmates, or those inmates posing a danger to themselves or others may be placed in a Safety Cell until they are no longer a risk.

1. Placement in the Safety Cells require the initiation of a Safety Cell Log, including notification to medical staff and the Shift Supervisor, as required.

F. All new inmates shall be issued clean, laundered jail clothing and bedding appropriate to their housing location.

G. Refer to CSB Policy and Procedure 2.12.01, Intake Classification and 2.13.03, Inmate Medical/Health Appraisal Screening for additional information.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.06
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 02-13-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Compliance with 40304.5 CVC	

I. POLICY

A. Staff will comply with Section 40304.5 CVC, which requires that persons taken into custody for two (2) or fewer traffic warrants be provided with the opportunity to immediately post bail and not be booked, photographed or fingerprinted, nor an arrest record made until that person has been given at least three (3) hours in which to arrange for the deposit of bail.

II. PROCEDURE

A. Ascertain if arresting agency has in fact given the arrestee opportunity to post bail. If so, request the same be noted on the Booking Authority.

1. Do not book the arrestee until the following has been complied with:

   a. Arrestee has been given up to three (3) hours to arrange bail.

   b. Arrestee has been given an opportunity to make not less than three (3) completed telephone calls to arrange bail.

B. If the arrest has sufficient cash in his/her possession, the arrestee shall be taken to the reception lobby by the arresting officer and immediately be given the opportunity to post bail.

C. Arrestee may be booked in advance of the conclusion of the three (3) hour waiting period in the following situations:

1. The arrestee states he/she will be unable to post bail irrespective of the three (3) hour time period.

2. The arrestee has been in continuous custody for three (3) or more hours and has been given the opportunity by the arresting agency to arrange bail. If this applies, request that the arresting agency make a notation of it on the Booking Authority.

3. The bail on one or all warrants is “No Bail”

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.07
	RELATED ORDERS: PC 825, *Riverside v. McLaughlin*, 500 U.S. 44 (1991) *Hughes* (2002) 27 Cal. 4th 287, 326 *Jenkins* (2004) 122 Cal.App.4th 1160, 1175-1178), *Gerstein v. Pugh*, 420 U.S. 103 (1975), California Peace Officer's Legal Sourcebook	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Compliance with PC 825 (PC Decs)	

I. POLICY

A. The Custody Services Bureau will ensure that proper judicial review of all arrests takes place within 48 hours per PC 825. This includes warrant arrests and warrantless arrests.

B. Arresting officers shall submit an electronic probable cause declaration for all warrantless arrests at or prior to the time of booking.

C. Custody Services Bureau personnel shall ensure an electronic probable cause declaration has been received from all arresting officers prior to completing the booking process.

II. PROCEDURE

A. Arresting officers will complete an electronic probable cause declaration through an electronic submittal system on all warrantless arrests, felony and misdemeanor.

B. The probable cause declarations are reviewed by the duty judge.

1. If the duty judge determines there is sufficient probable cause to detain the arrestee, the shift supervisor will detain the individual for arraignment pursuant to section 825 of the penal code and in accordance with the schedule listed in section C of this policy.

2. If the duty judge determines there is not sufficient cause to detain the arrestee, the shift supervisor shall ensure the arrestee is processed for release on the warrantless charges upon discovery of the rejected by the duty judge.

a. The shift supervisor may at their discression make a courtesy call to the arresting agency to notify that their probable cause declaration has been denied by the judge and the arrestee is being released.

- Exception – PC 647f

C. The arraignment deadlines shall be followed as directed by the California Attorney General's Office through the California Peace Officer's Legal Sourcebook:

1. MONDAYS: For arrests occurring between 12:00 a.m. and 5:00 p.m. on a Monday, the arraignment may take place anytime on Wednesday by 1700 hours. For arrests occurring after 5:00 p.m. on a Monday, the arraignment may be anytime that the court is in session on Thursday by 1700 hours.

2. TUESDAYS: For arrests occurring between 12:00 a.m. and 5:00 p.m. on a Tuesday, the arraignment may take place anytime that the court is in session on Thursday by 1700 hours. For arrests occurring after 5:00 p.m. on a Tuesday, the arraignment may be anytime that the court is in session on Friday by 1700 hours.

3. WEDNESDAYS: For arrests occurring anytime on a Wednesday (12:00 a.m. till 11:59 p.m.), the arraignment must occur by close of business on Friday by 1700 hours.

4. THURSDAYS: For arrests occurring between 12:00 a.m. and 5:00 p.m. on a Thursday, the arraignment may take place during the court's regular session the following Monday by 1700 hours. For arrests occurring after 5:00 p.m. on a Thursday, the arraignment may be anytime that the court is in session on Tuesday by 1700 hours.

5. FRIDAYS: For arrests occurring between 12:00 a.m. and 5:00 p.m. on a Friday, the arraignment may take place during the court's regular session the following Tuesday by 1700 hours. For arrests occurring after 5:00 p.m. on a Friday, the arraignment may be anytime that the court is in session on Wednesday by 1700 hours.

6. SATURDAYS: For arrests occurring anytime on a Saturday (12:00 a.m. until 11:59 p.m.), the arraignment may occur anytime that the court is in session on Wednesday by 1700 hours.

7. SUNDAYS: For arrests occurring anytime on a Sunday (12:00 a.m. until 11:59 p.m.), the arraignment may occur anytime that the court is in session on Wednesday by 1700 hours.

8. Holiday Rule: If a weekday court holiday falls on or between the arrest time and the above arraignment deadline, add 24 hours for each holiday to the above arraignment deadline. The new deadline is the holiday-adjusted deadline.

9. If the holiday-adjusted deadline falls on a Saturday or Sunday, add an additional 24 hours for Saturday and 24 hours for Sunday to the holiday adjusted deadline.

D. Warrant arrests shall be scheduled for the next available court date without exception to comply with the 48 hour requirement of Penal Code section 825.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.08
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 02-09-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Self-Surrenders	

I. POLICY

A. Self-surrenders will be accepted and processed at the Martinez Detention Facility.

II. PROCEDURE

A. When people approach the Reception Lobby clerk to surrender themselves into custody, the clerk shall call for the on-duty Shift Supervisor.

1. This includes the acceptance of any person surrendering under a court order, except weekenders.

B. The Shift Supervisor will dispatch a deputy to contact the person surrendering. The deputy shall determine if there are legal grounds to accept the person by checking:

1. JMS records

2. Active suspense files

3. PIN, WPS and NCIC warrants

4. Authenticity of any documents provided by said person

5. Court commitment verification

6. Other sources as may be indicated

C. If documentation or information is substantial enough to affect an arrest, the deputy shall take the surrendered person into custody.

1. Appropriate arrest documents shall be generated and the subject booked per JMS procedures.

D. The subject will be processed the same as a law enforcement arrest and will be taken to the Intake area for processing.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.09
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 04-15-05 **REVIEW DATE:** 02-09-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Bail Surrender	

I. POLICY

A. The Custody Services Bureau will accept bail surrenders that comply with 1300 PC and 1301 PC as follows:

1. Bail surrenders will be accepted anytime before the forfeiture of bail, when the depositor may surrender the defendant or the defendant may surrender him/herself.

2. Bail surrenders will be accepted when the bail bondsman provides appropriate forms and records staff provides verification.

3. Bail surrenders will not be accepted for out-of-county warrants.

4. Bail surrenders will not be accepted on a case the subject is already in custody on.

II. PROCEDURE

A. BAIL SURRENDER ON AN IN-CUSTODY DEFENDANT

1. The Reception Lobby staff will notify the Clerical Supervisor or Shift Supervisor.

2. The Clerical Supervisor or designee will respond to the lobby and review all paperwork prior to accepting the surrender. Required forms are:

a. If cash bail was posted, a copy of the cash bail receipt is needed.

b. If posted bond surrender:

- A certified copy of the bond or
- Affidavit by bail licensee or surety company to include:
  - Name of defendant

- County charge(s)
- Security bond amount
- Docket/Case number
- Surety bond expiration date

3. All paperwork will be brought to the records office and the case will be booked in compliance with clerical procedures.

4. Court dates will be assigned at the time of booking, if possible, preferably the next court day, but never more than two (2) court days away.

5. All bail surrender papers will be placed inside the booking folder until the date of court appearance. The bond and surrender papers will then be sent to the appropriate court, with one (1) copy of the surrender papers remaining in the booking folder.

B. BAIL SURRENDER OF AN OUT-OF-CUSTODY DEFENDANT

1. Lobby staff will notify the Clerical Supervisor or Shift Supervisor.

2. The Clerical Supervisor and sergeant or designated deputy will respond to the lobby and review all paperwork prior to accepting the subject and surrender paperwork.

3. Required paperwork is the same as bail surrender on in-custody defendants.

4. The subject will then be processed as a new arrestee. The booking process will be the same as that of a not-in-custody surrender.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.10
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 2-05-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Courtesy Housing	

I. POLICY

A. The Custody Services Bureau will make every attempt to honor all requests from non-Contra Costa County law enforcement agencies for overnight inmate housing.

II. DEFINITIONS

A. COURTESY HOUSING- The temporary care and custody of an inmate(s) at the request of a non-Contra Costa County law enforcement agency.

III. PROCEDURE

A. Personnel receiving a request to courtesy house a prisoner(s) will notify the Shift Supervisor.

B. The Shift Supervisor will grant the request, unless unusual circumstances prevent us from housing the prisoner(s).

C. Intake staff will have the requesting officer complete a Detainer to provide the authority to hold the prisoner(s)

1. Intake staff will ensure that they obtain all of the requesting officer's contact information in the event of a problem with the prisoner(s).

D. Prisoner(s) being housed on a courtesy basis will only be entered into JMS, as a prisoner type "Other".

E. The prisoner(s) will be medically screened and classified.

F. The release portion of the courtesy housing form will be completed when the prisoner(s) is picked up.

1. The completed form will be forwarded to Operations, who will maintain it in the courtesy housing file. The form will be purged and destroyed after one (1) year.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.11
	RELATED ORDERS: CSB 2.11.03, 2.13.03,2.17.01 P.C. 4011	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-15-19 **REVIEW DATE:** 08-20-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Release	

I. POLICY

A. All inmates who are determined to be eligible for release, will be processed as quickly as possible.

B. No inmate will be released from physical custody to the street without the Shift Supervisor's approval.

C. Inmates being released who are indigent, have clothing inadequate for climatic conditions, do not have clothing available at the time of release, or who can no longer fit in their clothing, will be provided appropriate welfare clothing.

II. PROCEDURE

A. Operations office staff will ensure the inmate is eligible for release and all paperwork is completed correctly, including bail forms and citations.

1. The booking file and all paperwork will be brought to the Shift Supervisor for verification. The sergeant will verify the information, initial the booking file and return it to Operations office staff for processing.

B. Operations office staff will perform a warrant check on all inmates being released.

C. Operations office staff will notify the housing deputy, property, clothing, and accounting of inmates cleared for release.

D. The Escort Deputy will ensure the inmate turns in all county clothing prior to returning the inmate's personal clothing.

1. The Escort Deputy may not view the individual without clothing unless reasonable suspicion exists to conduct a strip search.

E. Escort Deputy will determine an individual's need for welfare clothing at the time of release.

1. The Escort Deputy will issue the clothing from the Friends Outside clothing room, as needed.

2. The Inmate Welfare Clothing will be inventoried and stocked by Friends Outside.

3. If no inmate welfare clothing is available or a reasonable size cannot be found, a paper suit will be issued to the inmate in exchange for their inmate clothing.

F. The Shift Supervisor will confirm the inmate's identity through the following means:

1. Inspecting their armband

2. Verifying their identity by use of the Iris Scan Device and by comparing the Intake print with the Release print

3. Asking the inmate for confirming information such as

a. Date of birth

b. Social security number

c. Place of birth

4. Compares the inmate's facial features to the Booking Photo.

5. The Shift Supervisor will not release an inmate until satisfied with the inmate's identification and any and all discrepancies have been resolved.

6. When the inmate's identity is confirmed, the Shift Supervisor will have the inmate sign all the necessary custody release paperwork.

7. The Shift Supervisor will ensure that all inmate identification is removed from the inmate.

8. All money and property will be released to the inmate.

a. Inmates may not open any container or bag containing property until they have left the facility.

9. Sworn Personnel will escort the released individual to the un-secure area of the lobby upon Shift Supervisor approval.

G. RETURNING INMATE'S MONEY AND PERSONAL PROPERTY

1. Martinez Detention Facility (MDF)

a. The release clerk will prepare the funds and personal property for disbursement.

b. All money, up to $50.00 cash, will be disbursed as cash and placed in an envelope.

c. All money, above $50.00, will be disbursed in the form of a check.

d. Personal Property will be pulled from the assigned property bin/shelf.

e. All funds and property will be given to the Shift Supervisor for disbursement.

2. The Shift Supervisor will have the inmate sign the property receipt, cash receipt and check voucher, and return the inmate's funds and personal property.

a. The signed money and property receipts will be placed into the booking.

H. INMATES BEING RELEASED TO OTHER LAW ENFORCEMENTAGENCIES

a. The release process will be conducted the same as above with the following exceptions:

- All funds and property will be given to the transporting officer.
- In addition to the inmate, the transporting officer will sign and date the booking before taking the released individual into custody.

I. PENDING ACTIONS

1. In the event that an inmate's grievance is still pending at the time of release, the discovery of personal property missing at the time of release, or an inmate's mail is delivered after their release, the following procedures will apply:

a. Grievances

- The assigned staff member will complete all grievance investigations.

- Grievances resolved and/or completed after an inmate has been released from custody, will be properly documented, and the released inmate will be contacted at his or her last known address, and advised of the disposition of the grievance investigation.

- Refer to CSB Policy and Procedure 2.16.04, Inmate Grievances for additional information.

b. Missing property

- Should it be determined that property is missing; the release clerk is to stop the inmate's release process immediately, and institute a search for the property.

- If the search fails to locate the property, the clerk is to notify the Shift Supervisor of the problem and request a deputy or Sheriff's aide to conduct an investigation and complete an informational report.

- The Shift Supervisor will offer the individual being released a claim for lost/missing property if the property in not located in a timely manner.

- After the completing the investigation and interviewing the inmate, the remainder of the release process may be completed.

c. Mail

I. All mail delivered to detention facilities after an inmate's release shall be returned to the U.S. Postal Service to be forwarded back to the original sender pursuant to Inmate Correspondence and Mail Regulations Policy and Procedure.

J. INMATE BOOKING (S)

1. No inmates will be released from custody on a duplicate booking without a supervisor's approval.

2. All means should be exhausted to locate lost or misplaced booking prior to generating a duplicate booking.

3. A supervisor's approval will be required prior to reproducing a duplicate booking.

4. If a duplicate booking is produced, both the employee and the supervisor who authorized the duplication will initial and date the new booking.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.12
	RELATED ORDERS: P.C. 148, 827.1	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Citation Release	

I. POLICY

A. No inmate will be released from physical custody to the street, without sworn supervisor approval.

B. Any person arrested on charges in accordance with current cite release policy, i.e., infractions, misdemeanor on-views and/or misdemeanor warrants, shall be released from custody on his or her signed promise to appear in a court at a specified date and time.

II. PROCEDURE

A. ON VIEW AND CITIZEN'S ARRESTS

1. Prisoners received and booked on misdemeanor offenses will be released on a citation following booking except in the following instances:

   a. A reasonable likelihood that the offense would continue, or when a person, property or evidence directly relating to the arrest would be endangered by the arrested person's release.

   b. The person arrested demands to be taken immediately before a magistrate or refuses to sign a citation.

   c. The arrest was for domestic violence.

B. WARRANTS FOR INFRACTIONS AND MISDEMEANORS

1. Individuals who are subject to arrest under the authority of a warrant may be issued a citation, in lieu of physical arrest, unless one of the following conditions exists, pursuant to 827.1 PC.

   a. The misdemeanor is for violence.

   b. The misdemeanor involves a firearm.

c. The misdemeanor is for resisting arrest.

d. The misdemeanor is for giving false information to a peace officer.

e. The person arrested is a danger to him/herself or others due to intoxication or being under the influence of drugs or narcotics.

f. The person has other ineligible charges against him/her.

g. The person requires medical examination or medical care, or was otherwise unable to care for his/her own safety.

h. There is a reasonable likelihood that the offense or offenses would continue or resume, or that the safety of persons or property would be immediately endangered by the release of the person.

i. The person refuses to sign the notice to appear.

j. The warrant of arrest indicates that the person is not eligible to be released on a citation.

2. ADDITIONAL CONSIDERATIONS FOR CITATION REFUSAL

a. A citation shall not be issued if the person arrested requires medical examination, or medical care, or if he/she is unable to care for his/her own safety.

b. When it is necessary to transport the arrested person to a hospital for medical treatment, a citation may be issued at the hospital.

c. Individuals arrested due to being a danger to themselves or others while under the influence of alcohol or drugs may be released when sober, provided no other limitations exist.

d. A citation shall not be issued if the person cannot or will not offer satisfactory evidence of identity.

"Satisfactory evidence of identity", is defined as the degree of evidence required to reasonably assure the departmental member that the person is who he/she claims to be, taking into consideration the nature of the identification presented, and the circumstances of the misdemeanor offense involved.

When the person cannot offer satisfactory evidence of his/her identity, the departmental member should attempt to verify the person’s identity by independent means, if it is practical to do so.

This provision shall be considered met if after fingerprinting the subject, he/she is linked to a known person (CCIN or AFIS) or the subject provides adequate identification to the booking officers.

e. In the event a person is refused cite release for any condition beyond those listed in this policy section, supervisors shall document the reasons and circumstances for refusal.

f. All related documentation relating to the refusal will be forwarded to the Facility Commander for review.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.13
	RELATED ORDERS: CSB 2.11.12	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 06-22-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Citation Release Form Procedures	

I. POLICY

A. If all release criteria have been met, pursuant to Policy and Procedure 2.11.12 "Citation Release", the jail citation shall be used.

B. Custody Services Bureau staff involved in the issuing of citations for the release of inmates from custody shall document all information legibly when completing the jail citation release form.

II. PROCEDURE

A. USE AND DISTRIBUTION OF JAIL CITATIONS

1. The jail citation shall be used for inmates being released on their promise to appear, pursuant to 853.6 PC.

    a. The jail citation shall not be used for non-custody matters, i.e. parking ticket.

2. The jail citation will be distributed as specified on the form.

    a. White, original, to appropriate court.

    b. Yellow, to arresting agency.

    c. Pink, copy for released person.

    d. Goldenrod, copy for booking folder.

B. TELEPHONIC OR'S

1. The jail citation form will be used in accordance with this procedure for telephonic OR's, as specified in the Policy and Procedure 2.11.28 "Disposition of Court Proceedings

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.14
	RELATED ORDERS: P.C. 849, 849.5, 851.6 CCCSO 1.06.65 CSB 2.11.11	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-17-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** P.C. 849(b) Release Procedure	

I. POLICY

A. The staff at Martinez Detention Facility (MDF) will release prisoners to "police officer's release" when appropriate, and in compliance with Sections 849 PC and 851.6 PC.

B. No inmate will be released from physical custody, without sworn supervisor approval.

II. DEFINITIONS

A. PENAL CODE SECTION 849: This Penal Code Section reads in part:

1. 849(a): When an arrest is made without a warrant by a peace officer or private person, the person arrested, if not otherwise released, shall without unnecessary delay, be taken before the nearest or most accessible magistrate in the county in which the offense is triable, and a complaint stating the charge against the arrested person shall be laid before such magistrate.

2. 849(b): Any peace officer may release from custody, instead of taking such person before a magistrate, any person arrested without a warrant in the following circumstances: (1) The officer is satisfied there are insufficient grounds for making a criminal complaint against the person arrested. (2) The person arrested was arrested for intoxication only, and no further proceedings are desirable. (3) The person was arrested only for being under the influence of a controlled substance or drugs and the person is delivered to a facility or hospital for treatment, and no further proceedings are desirable. (4) The person arrested was arrested for driving under the influence of alcohol or drugs and the person is delivered to a hospital for medical treatment that prohibits immediate delivery before a magistrate.

3. 849(c): Any record of arrest of a person released pursuant to paragraphs (1) and (3) of subdivision (b) shall include a record of release. Thereafter, such arrest shall not be deemed an arrest, but a detention only.

B. PENAL CODE SECTION 849.5: This Penal Code Section reads in part:

1. 849.5(a): In any case in which a person is arrested and released and no accusatory pleading is filed charging him/her with an offense, any record of arrest of the person shall include a record of release. Thereafter, the arrest shall not be deemed an arrest, but a detention only.

C. PENAL CODE SECTION 851.6: This Penal Code Section reads in part:

1. 851.6(a): In any case in which a person is arrested and released pursuant to Paragraphs (1) or (3) of subdivision (b) of Section 849, the person shall be issued a certificate, signed by the releasing officer or his/her superior officer, describing the action as a detention.

2. 851.6(b): In any case in which a person is arrested and released and no accusatory pleading is filed charging him/her with an offense, the person shall be issued a certificate by the law enforcement agency which arrested him/her describing the action as a detention.

III. PROCEDURE

RELEASE UNDER SECTION 849(b)

1. Only the arresting officer, or other member of the arresting officer's agency, will authorize release under PC 849(b).

2. The officer requesting the release will be asked to indicate "Release Per 849(b) PC" by filling out "Certificate of Release" form and adding it to the booking.

3. Telephone requests to release must be referred to the Shift Supervisor for approval.

   a. A faxed request must be received from the Arresting Agency indicating the name, case number, and the specific charges the inmate is being released by P.C. 849(b).

4. The arresting officer will complete the 849(b) form when possible.

B. Operations staff receiving notification of a release pursuant to 849(B) PC Will:

1. Complete the "Certificate of Release" form for the detainee upon release. The custody sergeant will sign the certificate

   a. Give the suspect the original

   b. Forward a copy to Sheriff's Records

   c. Attach a copy to the booking

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.15
	RELATED ORDERS: P.C. 4024.1	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 02-05-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake Transfer, Release and Records	**SUBJECT:** Accelerated Release (P.C. 4024.1)	

I. POLICY

A. The Custody Services Bureau will take all reasonable steps to reduce jail population to below mandated capacities.

B. The objective of this policy is to establish a procedure for the early release from custody of inmates pursuant to 4024.1 PC.

C. This procedure shall only apply to Contra Costa County Court sentences.

D. No inmate will be released from physical custody, without sworn supervisor approval.

II. DEFINITIONS

A. PENAL CODE SECTION 4024.1: This Penal Code Section reads as follows:

1. 4024.1(a): The Sheriff, Chief of Police, or any other person responsible for a County or City Jail may apply to the presiding Judge of the Justice, Municipal or Superior Court to receive general authorization for a period of 30-days to release inmates pursuant to the provisions of this Section.

2. 4024.1(b): Whenever, after being authorized by a Court pursuant to subdivision (a), the actual inmate count exceeds the actual bed capacity of a County or City Jail, the Sheriff, Chief of Police, or other person responsible for such County or City Jail may accelerate the release, discharge, or expiration of sentence date of sentenced inmates up to a maximum of five days.

3. 4024.1(c): The total number of inmates released pursuant to this Section shall not exceed a number necessary to balance the inmate count and actual bed capacity.

4. 4024.1(d): Inmates closest to their normal release, discharge, or expiration of sentence date shall be given accelerated release priority.

5. 4024.1(e): The number of days that release, discharge, or expiration of sentence is accelerated shall in no case exceed 10 percent of the particular inmate=s

original sentence, prior to the application thereto of any other credits or benefits authorized by law.

III. PROCEDURE

A. The Facility Commander is considered the capacities coordinator and on-duty director for decisions associated with adjusting inmate populations when the population of the facility exceeds the established capacity.

B. If the Agency is operating under a valid accelerated release procedure, either judicial order or pursuant to 4024.1 PC, the following guidelines will apply:

1. Whenever an accelerated release order is implemented, all releases identified, are to be equitably released, with the following exceptions.

a. This shall not apply to Work Furlough inmates, who have volunteered for the program in order to maintain their employment, vocational training, and/or education.

b. In the event that only females or only males exceed the capacities for 4024.1 PC releases, then only prisoners of those sexes will be released.

- It is not necessary to release inmates of both sexes if only inmates of one sex exceed the capacities.

C. RELEASE PROCESS

1. When it is determined that a release under Section 4024.1 PC is necessary, the timekeeper will request a JMS release list.

2. The bookings will be pulled by an MDF Operations clerk and examined by the day shift Supervisor to determine which inmates are eligible.

a. All sentenced inmates who have 10% or 5-days remaining on their sentence, (whichever is less), are eligible for early release.

3. After the Shift Supervisor determines which inmates are to be released, the release clerk will prepare and distribute a release list.

a. The morning shift will ensure the paperwork, property and money is ready and the inmates are moved to ITR, along with the regularly scheduled releases.

b. The inmates will then be released on the following day shift.

c. A copy of the release order will be placed in the booking.

d. The reason for release will be documented as 4024.1 PC.

e. JMS reason for release shall show “13-Other.”

D. SPECIAL CIRCUMSTANCES

1. Whenever the accelerated release order is required and numbers above ten inmates are released a written notice is to be affixed to the Public Information Log and the Press Log.

2. Whenever an excessive number of releases are to occur, the Facility Commander will:

   a. Ensure that sufficient accounting funds are available to avoid potential cash shortages.

   b. Ensure enough BART/bus tickets are available for the releases.

   c. Attempt to conduct actual releases during the day shift

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.16
	RELATED ORDERS: P.C. 4011.5, 4011.6 W&I 5150	
ISSUE DATE: 07-04-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Removal for Medical/Mental Health Treatment, Per P.C. 4011.5 and 4011.6	

I. POLICY

A. All 4011.5 PC and 4011.6 PC orders will be completed as directed by the court.

II. DEFINITIONS

A. PENAL CODE SECTION 4011.5- Pertains to removing an inmate from a county or city jail for immediate medical or hospital care.

B. PENAL CODE SECTION 4011.6- Pertains to the removal from a county or city jail of a disordered inmate, for 72-hour treatment and evaluation pursuant to 5150 W&I.

III. PROCEDURE

A. Whenever an order for 4011.6 PC is made, the original paperwork from the court will remain in the custody of the Martinez Detention Facility (MDF) records.

B. The documents to be held in the Records Office during the examination include but are not limited to; hard copy dispositions, consolidated arrest reports, commitments, etc.

C. The Operations clerk will make a photocopy of the court disposition or other related document and attach it to the original 4011.6 PC court order.

D. The clerk will make a photocopy of the 4011.6 PC order and attach it to the holding authority documents maintained in the Booking.

E. Under no circumstances are the original court dispositions and other holding authorities to be transported to the treating mental health facility.

F. The transportation section will handle forthwith 4011.5 PC and 4011.6 PC orders.

1. Court orders being issued after the Transportation Office is no longer staffed will be referred to the Shift Supervisor who will arrange transportation or secure the court's permission to have the evaluation completed the following day.

G. Upon receipt of a non-forthwith 4011.5 PC or 4011.6 PC order, Booking/ITR staff receiving such order will:

1. Date/time stamp the order.

2. Make a copy of the order and place the copy in the booking.

3. Forward the original order to the treating facility.

4. Refer any possible special handling/housing requirements to classification.

H. Upon completion of the examination or evaluation and the inmates return to the facility, the Intake deputy will:

1. Accept the inmate back into the facility.

2. If taken forthwith from court, receive the disposition/custody form.

   a. Ensure that the paperwork matches the inmate being returned.

   b. Ensure that the transporting officer has signed on the back of the disposition/custody form that the 4011.5/4011.6 PC is completed, including date/time and badge number.

3. Refer any possible special handling/housing requirements to classification and/or medical staff.

I. Upon completion of a 4011.5 PC or 4011.6 PC, with the inmate being admitted to a hospital and the paperwork being returned to the facility, the Operation clerk will:

1. If taken from court forthwith, receive the disposition/custody form.

2. Ensure the transporting officer has signed on the back of the disposition/custody form, the 4011.5/4011.6 PC has been completed, including date/time and badge number, and that the inmate has been admitted.

3. Inform the appropriate housing area of the inmate's admittance and request that the inmate be dropped from the count and all property by forwarded to the property room for holding.

4. Ensure the action is documented in the inmate’s booking.

5. Forward all cell property to the property room for inventory.

6. File the booking in the hospital file cabinet.

7. Track the inmate’s custody and make changes as needed.

8. When the inmate is returned to the MDF, the inmate will be placed back into active status, at the MDF, in JMS.

J. HEALTH CARE PROVIDER

1. Court-ordered procedures at MDF:

    a. Court orders will be delivered directly to medical staff.

    b. All court orders received by medical staff will be forwarded to the facility physician.

    c. The inmate's medical record will be pulled and evaluated by the facility physician.

    d. Forthwith court orders are handled in the same manner.

    e. A court order that requires a response to the judge will be answered as soon as the inmate/patient is evaluated. Responses will be addressed to the appropriate judge and court utilizing the Health Services stationery and forwarded, via U.S. mail.

2. Court-ordered evaluations

    a. All court-ordered evaluations that are not forthwith will be taken directly to the medical staff and subsequent evaluation of the patient will be made in an appropriate time frame.

    b. Upon the issuance of a court-ordered medical evaluation forthwith, the order will be taken to the MDF medical staff for review and to schedule the inmate for an evaluation as soon as possible.

    c. Upon arrival at the MDF, the medical department will be immediately notified of a court-ordered medical evaluation forthwith and the inmate/patient will be taken to medical.

    d. The medical evaluation will be done by any of the following qualified individuals: Physician, Physician's Assistant, or Nurse Practitioner.

    e. If a physician is not present on the premises, then following an initial evaluation by a nurse or the physician's assistant, the on call physician will be notified of the initial findings and a treatment plan established.

    f. If the inmate/patient requires transport to an outside medical facility for further evaluation and/or therapy, medical staff will order it. Detention facility personnel will handle further transportation.

    g. In those instances wherein the medical provider is unable to comply with the court order, or compliance with the order would circumvent sound medical practices, or wherein the medical procedure is unnecessary, or the procedure is determined to be inappropriate, the medical director/physician will contact the appropriate judge to provide a response.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.17
	RELATED ORDERS: P.C. 4011, 4011.6, 4011.7, 4011.9	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** 4011.7 and 4011.9 Hospital Releases	

I. POLICY

A. Facility Commanders may remove the guard from inmates confined to hospitals in compliance with 4011.7 PC or 4011.9 PC and the following procedure.

B. No inmate will be released from physical custody to the street, without sworn supervisor approval.

II. DEFINITIONS

A. PENAL CODE SECTION 4011.7 (IN PART)- "Not withstanding the provisions of sections 4011 PC and 4011.5 PC, when it appears that the prisoner in need of medical or surgical treatment necessitating hospitalization or in need of medical or hospital care was arrested for, charged with, or convicted of an offense constituting a misdemeanor,...The Sheriff or Jailer in action taken under 4011.5 PC may direct that the guard be removed from the prisoner while he/she is in the hospital."

B. PENAL CODE SECTION 4011.9 (IN PART)- "Not withstanding the provisions of sections 4011 PC and 4011.6 PC, when it appears that the prisoner in need of medical or surgical treatment necessitating hospitalization or in need of medical or hospital care was arrested for, charged with, or convicted of an offense constituting a felony,...The Sheriff or Jailer in action taken under 4011.5 PC may direct that the guard be removed from the prisoner while he/she is in the hospital, if it reasonably appears that the prisoner is physically unable to effectuate an escape or the prisoner does not constitute a danger to life or property."

III. PROCEDURE

A. When advised of an inmate being admitted, under guard, to a location or hospital ward:

1. The Operations Clerk will:

a. Obtain all pertinent information about the inmate, including, but not limited to: booking, classification, disciplinary information and officer input.

b. Contact the hospital to determine the inmate's length of stay.

c. Inform the Shift Supervisor of the inmate's status.

Including the above information and condition of the inmate.

2. The Shift Supervisor will:

a. Review information pertaining to the inmate.

b. Ensure that it reasonably appears the inmate is physically unable to escape.

c. Inform the Facility Commander of the inmate's status, and if practical, request the inmate's release pursuant to 4011.7 PC or 4011.9 PC as appropriate.

d. If the guard is to be removed, the deputy guarding the inmate will be instructed to complete a "Police Hold" form.

One copy will be given to the hospital and one copy will be placed into the inmates booking.

The deputy must read the form to the inmate, explain that he/she is not released from custody and will be charged with escape if he/she leaves.

The deputy will write the jail telephone number on the form and instruct both nurse and inmate to call that number if there are problems, and when the inmate is ready to be discharged.

The deputy will instruct the nurse or hospital staff that the inmate is not to be told when he/she will be discharged.

The guard shall be removed after the above is completed.

e. Advise the Custody Sergeant.

3. When notified by the Custody Sergeant that the guard has been removed, the Operations clerk will:

a. Indicate in the booking, in the appropriate area, "Pursuant to 4011.7 PC or 4011.9 PC", (Specify location of hospital).

b. Update the inmate's housing status.

c. Operations staff will place the Inmate Management card (headcard) into the booking

d. If still assigned to a housing unit cell, the housing unit deputy will collect all cell property.

The housing unit deputy will give the collected property to the Sheriff's Aide assigned to property for assignment to a property shelf.

If no Sheriff's Aide is available, the housing unit deputy will ensure that the property is assigned and placed on a shelf in the property room.

The deputy will update the inmate's JMS property records and provide a copy to operations clerks for placement into the inmate's booking.

4. Inmate Escapes

   a. Any person receiving notification or being made aware of an inmates escape from the hospital shall immediately inform the Shift Supervisor of the incident.

   b. Complete all required reports relative to the escape.

B. INTAKE PROCEDURE

1. When notified of an inmate's return from 4011.7 PC or 4011.9 PC, Booking/ITR staff will:

   a. Inform the Release clerk and Medical staff of the inmates return.

   b. The Release Clerk will place the inmate in MDF x-status in JMS.

   c. The inmate will be interviewed/evaluated by medical staff.

   d. The inmate will be re-housed.

2. Intake Deputies will ensure the inmate's property is returned to the inmate prior to receiving their housing unit assignment.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.18
	RELATED ORDERS: Jail Pass Policy Agreement, Contra Costa County Superior Court (Appendix 17) PC 4018.6	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-05-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Temporary Release and Removal	

I. POLICY

A. Inmates may be Temporarily Released from the Custody of Contra Costa County Office of the Sheriff under the following conditions:

1. Court Order
2. Removal Order by another agency or jurisdiction
3. Out of county contractual housing
4. Medical and mental treatment
5. Family emergencies

B. Any Inmate that is a Temporary Release from the custody of the Sheriff to another institution for a period of one (1) day or longer, upon their return to the custody of the Sheriff, will have a new photo taken and a new charge sheet generated which will be forwarded to the Classification Unit.

II. PROCEDURE

A. RELEASES TO OTHER AGENCIES OR JURISDICTIONS OVER 24 HOURS

1. Any inmate being temporarily released from any Contra Costa County Detention Facility for more than one (1) day shall be released in accordance with CSB 2.11.11, Inmate Release Process, with the following exception:

   a. The Release Clerk will stamp “Temporary Release” on the booking sheet and shall fill in all required information.

   b. The Inmate’s booking folder will be marked as “Temporary Release” and placed in the “Temporary Release” files.

2. An inmate who is released from the custody of the Sheriff to another city, county or state facility for a period of one (1) day or longer will adhere to the following:

   a. The transporting agency will return the inmate to the MDF.

   b. Transportation will deliver the inmate to the Booking area and ensure that the inmate has a new photo taken (If the inmate's physical appearance has changed, etc.) and a new charge sheet is generated and a copy forwarded to the Classification Unit.

B. RELEASES TO OTHER AGENCIES OR JUSRISDICTIONS LESS THAN 24 HOURS

1. Any inmate being temporarily released for less than One (1) day from any Contra Costa Detention Facility under direct escort (i.e. Police or Sheriff's Detectives, Parole or Probation Officer, etc) will remain in facility issued clothing and will not be eligible to change into civilian clothing or receive any personal property.

   a. The Release Clerk will stamp "Temporary Release" on the booking sheet and shall fill in all required information.

   b. The Inmate's booking folder will be marked as "Temporary Release" and placed in the "Temporary Release" files, in the release area at the MDF only.

2. The escorting agency shall be responsible for returning the inmate to the location in which they were temporarily released from.

C. INMATE FAMILY EMERGENCIES

1. Inmates requesting a temporary release due to a family emergency must receive approval from the Facility Commander or Detention Division Captain.

2. The following considerations shall be applied to any request regarding family emergency temporary releases:

   a. For sentenced prisoners, the Facility Commanders will reasonably exercise the Sheriff's statutory discretion for family emergency passes under PC 4018.6, which means that the judges approached for "court ordered passes" on behalf of sentenced persons should refer them back to the Sheriff's Office.

   b. Consideration of passes for unsentenced prisoners will be the responsibility of the judges, who hold discretion to grant OR. Each judge-granted pass will specify a date/time and place to surrender, and the Sheriff's Office will report any failures to surrender to the judge on their standard one-page form. "Escape" incident reports will not be necessary.

   c. Both the Sheriff's Office and the judges will limit passes to persons presenting low or no risk to the public (primarily considering the charges) and will conduct reasonable inquiry to verify the claimed emergency.

Pre-sentenced persons for whom the felony calendar department has indicated a state prison position will not receive passes. Nor will a pass be considered for anyone who is held on parole or out-of-county-warrant.

d. Note: It is recommended by the Contra Costa Superior Courts that appropriate additional conditions on passes/OR releases be imposed. Such conditions might include limiting the release to the minimum time necessary to attend the emergency situation, "no drugs or alcohol", "search" and/or "testing" conditions on return to custody, and waiver of extradition.

3. Any inmate being temporarily released from any Contra Costa County Detention Facility for more than one (1) day shall be released in accordance with CSB 2.11.11, Inmate Release Process, with the following exception:

a. The Shift Supervisor will read the inmate the admonishment on the Temporary Release Form (DET 003) and have the inmate sign upon agreement to the conditions in the appropriate areas.

b. The Shift Supervisor will stamp "Temporary Release" on the booking sheet and shall fill in all required information.

c. The Inmate's booking folder will be marked as "Temporary Release" and placed in the "Temporary Release" files.

d. If the inmate refuses to accept the conditions of the temporary release as outlined on the back of DET Form 003, the pass will be denied.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.19
	RELATED ORDERS: MJS 1041-1264	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 07-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Clothing, Property and Records Storage Areas	

I. POLICY

A. All inmate property shall be stored in a secure location accessible only to Sheriff's Office personnel.

B. All records storage areas shall be restricted only to those personnel authorized by the Custody Services Bureau Assistant Sheriff.

II. PROCEDURE

A. Restricted Areas

1. Clothing Exchange, Clothing Storage Rooms and Records Storage

a. Inmates will not be permitted access to these areas.

b. Non-Sheriff's Office personnel shall not enter these areas. Access is restricted to the assigned Sheriff's Office staff for that shift.

- Assigned GSD staff/contractors entering the area for maintenance purposes.

c. Custody Staff will not allow:

- Other personnel to use their keys for entry into restricted areas
- Entry of non-Sheriff's Office personnel without the express permission of the Shift Supervisor

2. Property Room

a. There shall be a minimum of one (1) Sheriff's Aide on each shift assigned to the property room. In the absence of a Sheriff's Aide**,** a deputy will be assigned. Only the designated person shall have access to the property storage area.

B. Storage, Handling and Inventory of Inmate Clothing and Property

1. Inmate Personal Property and Clothing Inventory

a. Sheriff's Aides will inventory inmate Property and Clothing storage areas at least once each week.

b. An informational report will be generated to confirm the completion of inventory and will be routed to the Support Services Aide at the West County Detention Facility.

c. Any items found which do not appear to belong to a present inmate shall be collected and forwarded to the Support Services Aide at the West County Detention Facility and the Facility Commander with the investigational incident report.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.20
	RELATED ORDERS: MJS 1041, MJS 1264	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-31-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Property Receipt and Storage	

I. POLICY

A. All accepted inmate property will be inventoried, documented and stored in a secure location(s).

II. DEFINITIONS

A. BULKY ITEMS: Articles that will not fit into the assigned inmate-clothing bag. Items must have been in possession of the inmate at the time of placement at Martinez Detention Facility (i.e. backpacks, sleeping bags, etc)

B. PERSONAL PROPERTY: Inmates valuables, excluding money, clothing or bulky items. (I.e. wallets, jewelry, etc.)

III. PROCEDURE

A. PROPERTY RECEIVED-NEW ARRESTS

1. Accepting Property: All property, money and clothing shall be recorded on a Contra Costa County Property/Clothing Receipt (DET: 065). The property will be sealed in a clear plastic property bag by the arresting officer/agency prior to acceptance of the arrestee.

a. The following property will not be accepted:

- Perishables: Foods, candies and beverages.
- Weapons: Guns, bullets, explosive devices (to include loose matches), or instruments with sharp points or edges.
    - Only folding knives will be accepted if taped closed.
- Any property that, in sum, will not fit in a standard 8”x 7”x 3” storage box.

- Exceptions: Bulky items that are property of new arrestee's of Detention staff only. (i.e. Transportation Inter Agency Transfers or Commitments taken into custody at the MDF)

- Any clothing item that, in sum, will not fit in a standard size clothing property bag.

b. In the event a discrepancy occurs, the intake officer will provide the arresting/transporting officer with an opportunity to remove items causing the discrepancy or to retain all arrestee property and return it to their agency for control and disposition.

1. If the property bag is opened and its contents are altered, the bag shall be resealed by the arresting agency prior to accepting the arrestee.

2. The Property Receipt will be updated by the transporting officer/agency.

c. Upon acceptance of property and before distributing the receipts, the intake officer or escort deputy shall pat-search the inmate to ensure all property has been removed. Any additional items found are to be added to the receipt as appropriate by the arresting agency. The transporting officer will then seal the property bag. Any contraband items are to be returned to the arresting officer for disposition.

1. If additional property is discovered after the arresting agency has left, the staff member who found the property will fill out an additional property receipt. The staff member will insert the original property bag into another property bag along with the newly found property. The new property bag will then be sealed along with a copy of the additional property receipt.

2. Packaging and Transfer of Property

a. Personal property is to be stored in permanently sealed plastic bags.

- Property will be placed in a single plastic bag with the pink copy of the property receipt (DET065:FRM) inserted into the bag and facing outward.

- The bag containing property will be inserted into a second plastic bag.

- The inmate will sign the computer generated property receipt and the pink copy of will be inserted into the second bag and the bag will be sealed. The white copy of the computer generated property receipt will be stapled to the outside of the sealed bag.

- An adhesive tag containing the inmate's name and booking number will be attached to the outside of the bag.

- The tag will be dated and signed by the intake officer or escort deputy accepting the property.

- The person filing the property for storage shall also date and sign the tag.

b. All property will be marked legibly with the inmate's name and booking number. If no booking number is available, the CCIN number may be used until a booking number is issued.

c. Clothing and shoes will be bagged, and stored pursuant to Policy and Procedure 2.15.06, Cleaning and Storage of Inmate Personal Clothing.

3. Packaging and Transfer of Money

a. The arresting/transporting officer will be responsible for inventory and documentation of all money removed from the arrestee on the Contra Costa County Clothing/Property Receipt (DET065: FRM).

b. The intake officer or escort deputy will count all money turned in at the time of booking with any money recovered during the booking pat-search and will ensure the amount reconciles with what is recorded on the receipt. Any corrections to the receipt shall have the arresting/transporting officer's initials next to the corrected amount.

c. The intake officer or escort deputy will place the money into a plastic bag. The computer generated money receipt will be placed into the moneybag and sealed.

d. If the amount does not exceed $200, the intake deputy or escort deputy will place the sealed moneybag in the locked money safe.

- The release clerk will periodically go to intake and collect the moneybags from the safe for processing.

e. If the amount is $200 or more, the intake deputy or escort deputy will deliver the moneybag to the release clerk, by hand.

4. Distribution of Receipts

a. All white copies of the personal property and money receipts shall be placed inside the arrestees booking.

b. All pink copies will be either attached or inserted with property being transferred for accounting/storage.

c. The yellow and goldenrod copies will be offered to the arrestee and transporting officer, respectively, and may be discarded if refused.

B. HANDLING AND STORAGE OF PROPERTY

1. Upon completion of the Pre-Booking process, Inmate personal property will be placed in the locked property safe. The release clerk will periodically go to intake to collect the property bags and store them in the assigned bin.

2. The Operations Clerical Supervisor will ensure all inmate property is properly stored and accounted for.

3. Bulky items brought into the facility by detention staff will be searched, bagged, sealed, and marked with an adhesive tag with the inmate's name and booking number.

    a. Bulky items will be immediately delivered to the property room for storage by the assigned Sheriff's Aide.

4. Clothing: inmate clothing will be placed into one (1) issued clothing bag and stored in the facility property rooms.

5. Soiled Clothing

    a. Soiled arrestee clothing will be disposed of.

        - Option to dispose-Soiled clothing will be placed into a "Red Bag" and given to the DSW for disposal.

        - An incident report will be submitted regarding the disposal to include nature of the contamination, clothing description, etc.

    b. The Booking/ITR Deputy will make a detailed notation in the Pre-Booking notes regarding the final disposition of the soiled clothing.

    c. The Deputy responsible for handling the soiled clothing will complete an Information Only Incident Report regarding the final disposition of the clothing.

    d. The Booking ITR Deputy will notify the Shift Supervisor of the incident.

        - The Shift Supervisor will review and forward a copy of the incident report to the Property Room Sheriff's Aide for records.

    e. Inmates entering the facility with soiled clothing will be issued a paper suit upon their release.

    f. Soiled clothing will not be stored in any Detention Facility.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.21
	RELATED ORDERS: MJS 1041-1264	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-24-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Property Exchange, Transfer and Release	

I. POLICY

A. All inmate property in the care of jail staff will be properly receipted and stored in a secure location(s).

B. All inmate property either permanently released or in exchange for another item will be accompanied with a receipt and/or incident report.

II. DEFINITIONS

A. BULKY ITEMS: Articles that will not fit into the assigned inmate-clothing bag. Items must have been in possession of the inmate at the time of placement at Martinez Detention Facility (i.e. backpacks, sleeping bags, etc)

B. PERSONAL PROPERTY: Inmates valuables, excluding money, clothing or bulky items. (i.e. wallets, jewelry, etc.)

III. PROCEDURE

A. CLOTHING EXCHANGE

1. Inmate Civilian Clothing Exchange

a. No exchange of civilian clothing will be accepted unless:

- The exchange is on a ONE-FOR-ONE basis. (i.e. one pair of pants for one pair of pants, etc.)
- The visitor must both deliver and accept all civilian clothing being exchanged.
- Visitors conducting a clothing exchange must possess a valid form of identification.

b. The following items of clothing will not be accepted for civilian clothing

exchange:

- Jewelry
- Belts with large, heavy or sharp buckles
- Hats
- High-top boots (above ankle)
- Topcoats or raincoats

2. Jury Trial Civilian Clothing Exchange

   a. Refer to CSB Policy 2.11.22, Inmate Trial Court Dress Outs, for additional details.

B. PROPERTY TRANSFER OR RELEASE

1. Inmates Transferred between Facilities

   a. The Shift Supervisor at each facility will oversee the arrival and departure of all inmates and their property.

   b. The housing unit deputy from the releasing facility will ensure that all inmate property is labeled with the inmate's full name and booking number before the inmate is removed from their assigned housing unit.

   c. The Shift Supervisor or his/her designee will:

      - Accept the inmate into facility custody.
      - Inventory, search, store and account for inmate clothing, bulky items, personal property, and booking file.

   d. Each designee, including Transportation Deputy, will have a copy of the movement list.

   e. Each designee will legibly sign and place their employee number on their copy of the movement list upon completion of their delegated task.

   f. Each designee will return the completed, signed, and dated movement list to the Shift Supervisor supervising the action.

   g. Transportation Deputies will return their completed, signed, and dated movement list to the Transportation Sergeant.

   h. All Completed movement lists will be signed and dated by the Shift and Transportation Sergeants and forwarded to the Facility Commanders of the receiving facilities.

   i. Any discrepancies concerning inmate personal clothing or property

should be brought to the attention of the Shift and Transportation Sergeants immediately.

- The Shift Sergeant will initiate an investigation prior to the inmate being accepted into facility custody.

- If the discrepancy cannot be immediately resolved, the Shift and Transportation Sergeants will evaluate the need to return or receive the inmate.

- In the event the items are not located, the Processing Sergeant will document the incident and forward to the Facility Commander.

2. Inmates released or transferred to another jurisdiction including Temporary Releases.

   a. The Release Clerk will generate and distribute the Inmate Release List to the Shift Supervisor, Property Room Sheriff's Aide and Escort Deputy.

   b. The Property Room Sheriff's Aide/Escort Deputy will gather all clothing and bulky property stored in the property room. These items will be delivered to the dressing rooms next to the release window.

   c. The Release Clerk will collect and prepare all inmate personal property stored in the property bins located in Operations for release.

   d. Sheriff's Aides will gather all property for Marsh Creek and West County Detention Facility transfers.

   e. Sheriff's Aides will collect all property for inmates being transferred to San Quentin Prison.

      - Sheriff's Aides will document the collection and disposition of state inmate property through an Information Only Incident Report.

   f. The inmate will inventory all personal clothing and bulky items and acknowledge receipt of his/her items.

      - Inmates with no personal clothing will be issued either a paper suit or clothing provided by donation.

        - Paper suits are located in the property room.

   g. Escort Deputies will ensure that all returned facility clothing is free of malicious damage or alterations. Escort Deputies will note any damage to facility property in an Incident Report and notify the Shift Supervisor.

   h. Escort Deputies will place all clothing that is not damaged in the soiled clothing cart, next to the dress out rooms for cleaning.

i. The Shift Supervisor will provide the inmate with all personal property previously stored for them while in custody.

- The inmate will be responsible for the inventory of all personal property returned by the Shift Supervisor and noting any discrepancies prior to their release.
    - Due to commonly stored valuables, small items and knives upon entering the facility, clear plastic sealed bags will not be opened until the inmate has been released from the facility.
- The inmate must sign for receipt for all property being returned prior to their release.

j. The Shift Supervisor will provide all Funds, Personal Property and Bulky Items for inmates to the transporting officer of the jurisdiction receiving the inmate.

3. Lost or Missing Property

a. Any time it is discovered that an inmate's property is lost or missing, the following actions will occur:

- The Shift Supervisor will conduct a complete investigation in an attempt to determine the location of the property (i.e. bin search, review of booking, interview with Transportation/Clerical staff, etc).
- An incident report will be submitted detailing the investigative steps and disposition (if known) of the inmate's property.

4. Property Release

a. Inmate may release their property at any time by signing a property release form. Inmates choosing to release their property must release the entire contents of their property.

b. The person receiving the property must be present, have a valid form of identification, and accept the entire contents of the property being released.

c. The property release form must have the following information:

- Inmate's name and signature
- Description of property being released
- Witness/Deputy's name
- Name of person or bail company receiving property

C. STATE INMATE CLOTHING

1. Newly sentenced state inmates may release all their personal clothing to a family member or friend prior to leaving for state prison.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.22
	RELATED ORDERS: MJS 1041-1264	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-26-12 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Jury Trial Court Dress Outs	

I. POLICY

A. Custody staff will allow any inmate appearing before a Jury Trial Court to dress in approved civilian clothing.

B. Custody staff will ensure that all of the inmates civilian clothing is accounted for and returned to the Jury Trial Court Dress Out rack upon their return from court.

C. Jury Trial inmates are allowed up to (2) sets of civilian clothing while in Jury Trial status.

II. PROCEDURE

A. Jury Trial civilian clothing exchange/receipt

1. A Sheriff's Aide or Escort Deputy will proceed to the lobby with the clothing bag of the inmate.

2. The Sheriff's Aide or Escort Deputy will meet with the visitor and will inventory and inspect all incoming clothing for contraband in the visitor's presence.

3. The Sheriff's Aide or Escort Deputy will complete a Receipt and Waiver for Inmate Clothing Exchange Form listing the accepted incoming clothing and/or exchanged clothing. State on the form whether the Inmate has (1) or (2) sets of clothing in our custody.

   Note: Receipt of a second set of civilian jury trial clothes can be done without conducting a one-for-one exchange.

4. The visitor must sign and date the Receipt and Waiver for Inmate Clothing Exchange Form for verification of receipt/exchange. A Copy of the Receipt and Waiver will be provided to the:

   a. Visitor

b. inmate booking

c. inmate

5. The Sheriff's Aide or Escort Deputy conducting the receipt/exchange will document the activity in the JMS property-clothing notes of the inmate by noting:

a. Date and time of exchange.

b. Name and DL # or other acceptable form of identification of visitor.

c. Initials and employee number of Sheriff's Aide or Deputy receiving the clothing.

d. State whether the Inmate has (1) or (2) sets of clothing in our custody.

Note: Inmate authorization is not necessary on a one-for-one clothing exchange.

6. The Sheriff's Aide or Escort Deputy, upon receipt of civilian court clothing, will place the clothing into a Jury Trial clothing bag, in lieu of a traditional clothing bag.

B. Inmate Jury Trial Court Dress Outs

1. Inmates will only be allowed to change into civilian clothing for court trial.

2. Operations Supervising Clerk will generate a list of inmates to be dressed out for court from the Court Master Schedule.

3. The MDF Operations Court Clerk will confirm the list and make any additions or changes as necessary.

a. The Operations Clerk will forward a copy to the Shift Supervisor, the Property Room Sheriff's Aide and Escort Deputies.

b. The Shift Supervisor will be responsible for reviewing the list and posting the information at the release window prior to the start of court movements.

c. The Property Room Sheriff's Aide will put only the inmate's civilian clothing (no personal property) on the Trial Courts Dress Out Rack.

d. The deputy transporting the inmate to the dressing room will conduct clothing exchange and ensure that all facility issued clothing is returned

e. Once the clothing exchange has been completed, the transporting deputy will return the clothing bag to the Trial Courts Dress Out Rack.

C. Inmate Refusal to Dress for Jury Trial Court

1. When an inmate refuses to dress out for a Jury Trial Court appearance, the following should occur:

    a. The clothing will be sent with the inmate to the court.

    b. A copy of an incident report detailing the refusal will be sent to the court with inmate.

    c. In the event the incident report is not completed at the time of inmate transport, the Shift Supervisor will fax a copy of the report to the court immediately upon completion.

    d. The Shift Supervisor, where the refusal occurred will telephone the court and advise the bailiff of the inmate's refusal to dress for Jury Trial.

D. Inmate Returning from Jury Trial Court-

1. Upon returning from court, the deputy transporting the inmate to the dressing room will ensure that a full clothing exchange is conducted and the inmate is searched in accordance with CSB Policy and Procedure.

2. The transporting deputy will verify all the inmate's civilian clothing is contained inside the Jury Trial clothing bag.

3. The deputy conducting the clothing exchange will ensure that the inmate's trial clothing is returned to the Trial Courts Dress Out Rack.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.23
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Obtaining Evidence from Inmate Personal Property	

I. POLICY

A. Personal property or clothing may be released to any law enforcement agency or court officer after signing a receipt for that property.

II. PROCEDURE

A. Prior to releasing any inmate's property as evidence to a law enforcement agency, the following must occur:

1. The on-duty Shift Supervisor will be notified.

2. The representative must agree to take all inmate property or clothing.

3. The representative must be present upon removal of the evidence.

    a. No evidence will be seized and sent to the representative.

B. Upon any property being seized, the following will occur:

1. A written receipt of those articles seized will be prepared by custody staff and signed by the person receiving the property.

    a. The receipt shall be legible and will list the representatives identifying employee number and agency.

    b. A copy of the receipt will be sent to the inmate.

2. It shall be the responsibility of the individual releasing the property to ensure that an incident report is completed regarding the release.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.24
	RELATED ORDERS: P.C. 1300, 1301 CCR 26642	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-19-19 **REVIEW DATE:** 08-20-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Unclaimed Inmate Property Purging	

I. POLICY

A. Unclaimed property will be disposed of in accordance with Section 26642 of the California Code of Regulations.

II. DEFINITIONS

A. CALIFORNIA CODE OF REGULATIONS SECTION 26642- "The Sheriff shall pay into the general fund for the use and benefit of the county any money of a prisoner or the proceeds of the sale of his or her valuables remaining unclaimed for a period of one year after his or her release, or 30 days with signed Detention form 042 (San Quentin Property only), or five years after his or her death, or 120 days after a notice has been sent to his or her last known address or, in the event of his or her death, one year after a notice has been sent to his or her last known next of kin."

III. PROCEDURE

A. RELEASE

1. Ongoing purges of the property storage areas shall be conducted with at least one purge a month.

   a. An active inmate list will be used to obtain a property purge list.

      - This list is sorted by name, booking number, and storage location.

   b. Listing shall be run against all property in storage, including property in the bulk storage room and on clothing racks.

2. The property Aide shall handle any property found to be unclaimed as follows:

   a. Research booking number for last date of custody and current address.

   b. Consolidate property with clothing, label and mark with suspense date.

   c. Forward property to Warehouse Aide at the West County Detention Facility.

3. The Sheriff's Aide assigned to the Warehouse will complete the following:

    a. Prepare a "Found Property Letter." Mail the original letter and retain one office copy.

    b. Supervise the removal of property not claimed after a 120-day waiting period.

    c. The Sheriff's Aide assigned to the Warehouse will repeat this process at least once per month.

4. All unclaimed property is taken to County property where the items will be destroyed, auctioned, or donated. The warehouse aide will record the following information

    a. Name of person receiving property

    b. Date and time property turned over

5. Claimed Property

    a. The Owner or his or her designated agent may pick up property that has been located and claimed.

        - The individual picking up the property must have a valid identification and be in possession of the "Found Property Letter" at the time of pick up.

    b. The individual handling the claim will retrieve a copy of the letter and property receipt from the property clerk's file.

        - The staff member will ensure the person picking up the property signs the receipt prior to the property being released.

        - Attach the original letter recovered, to the copy and property receipts and file.

        - The property clerk's copy of letter is to be destroyed.

B. IN CUSTODY DEATH

1. All property will be turned over to the Coroner's Office on any in-custody death at the time of pick-up of the deceased.

    a. The coroner will issue a receipt for the property.

2. When property is discovered after the deceased has been removed, the procedure for purging property shall be the same as listed above with the following exception.

a. The time limit is increased from 120-days to one (1) year from when notification is sent.

b. The form letter cannot be used for notification. An individual letter following the form letter format shall be sent to the next of kin.

- The coroner will usually have a contact person and address for the deceased individual.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.25
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-20-18 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Bail/Fine or Paid in Full	

I. POLICY

A. Bails shall be accepted in all cases were applicable, and the subject is not eligible for other pre-arraignment release.

B. Fines and balance of fines are those penalties set by the court and payments are accepted in a similar manner as bail.

II. PROCEDURE

A. ACCEPTABLE LEGAL TENDER FOR PAYMENT OF BAILS AND FINES:

1. Cash - U.S. currency only (only negotiable paper acceptable for payment of fines).

2. Surety/Bail Bond.

3. Certified Bank Cashier checks.

4. Money Orders

B. ACCEPTABLE NEGOTIABLE PAYMENT, OTHER THAN CASH:

1. Certified Bank Cashier:

a. Must be payable to the Contra Costa County Office of the Sheriff.

b. It must be for the exact amount.

c. No change will be given or checks cashed by the Reception Lobby staff.

d. Questions or concerns about the validity of a Cashier's Check will be referred to the Shift Supervisor.

C. BAIL/SURETY BOND

1. The Bond must be complete and correct in the following areas:

    a. Inmate's full name

    b. Booking number

    c. Case or docket number

    d. Charge(s)

    e. Bail Amount

    f. Court date and time

    g. Must contain the surety of the bond on the face or page two

    h. Date of surety and corporate seal must be checked

    i. Expiration date of the surety

    j. Must be signed by the bondsman

    k. Surety of the bond must be for the exact amount posted on the disposition or more, if less, the bond is invalid

    l. If any of the above is missing or inaccurate, the bond is not valid.

D. MULTIPLE ARRESTS

1. Each arrest will be considered a separate bond.

2. If one bond is valid and one or more are not, accept only the one valid bond.

3. If an outstanding warrant is located and confirmed, you may still accept the original valid bond.

4. All invalid bonds are to be returned to the person posting bail.

E. RECEIVING BONDS

1. The Clerk receiving the bond will:

    a. Review the bond to ensure proper information.

    b. Forward bond to Shift Supervisor for review and approval.

    c. Place the original and a photocopy of the bond in the booking folder after the bond is signed by the Shift Supervisor.

2. Upon approval of the bond and prior to the release of the inmate, the inmates booking will be checked for accuracy by the Release Clerk and signed by the Shift Supervisor.

F. REPORTING OF BAILS OF $10,000 CASH OR MORE

1. Reporting requirements: Per section 26 USC 1.60501-2T, any clerk who receives more than $10,000 in cash as bail for any individual charged with a criminal offense, must complete IRS Form 8300 with respect to that cash receipt.

   a. The information must be reported on IRS Form 8300, and is required under the Violent Crime Control and Law Enforcement Act of 1994.

   b. The bank submits the IRS Form 8300 when a cashier's check is used.

   c. Upon receiving $10,000 or more (U.S. Currency) as bail, the clerk will issue a receipt and obtain from the depositor the information for purposes of completing the attached form (IRS Form 8300-refer to appendix). The clerk shall complete the following:

      - Part I: The name, address, and taxpayer identification number (TIN) of each person posting the bail (payor of bail), other than a person posting bail who is licensed as a bail bondsman in the jurisdiction in which the bail is received.

        - Verification must be made of the identity of each payor of bail listed on the return. Driver's license or comparable documentation with photograph thereon, i.e., passport, DMV registration card is acceptable.

      - Part II: the name, address, and taxpayer identification number (TIN) of the individual charged with the specified criminal offense.

      - Part III: The date the cash was received, the amount of cash received, type of transaction, description of service (bail) and criminal offense.

      - Part IV: Business that received cash:

        - Contra Costa County Office of the Sheriff
        - Facility Name
        - Facility Address
        - Employer identification number: 94-6000509
        - Nature of business: Law Enforcement

      - The clerk will sign and date the form, indicate their title and include the phone number.

- Original IRS form 8300 will be forwarded to the Fiscal Accounting Office with a copy of the cash deposit receipt.

d. A photocopy of the IRS Form 8300 will be placed into the inmate's booking.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.26
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 3-05-19 **REVIEW DATE:** 3-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Bail/Fine-Discrepancies	

I. POLICY

A. In the event there is a discrepancy in the bail and/or fine between the inmate's JMS information and the court disposition paperwork in the inmate's booking, all attempts will be made to identify and resolve the discrepancy.

B. No inmate will be released until the Facility Commander or designee is satisfied that the discrepancy has been resolved.

II. PROCEDURE

A. To determine the correct bail or fine:

1. During normal business hours, the Operations clerk will call the appropriate court for confirmation.

2. If the court is closed and the booking contains no court document confirming a change in the bail status, the following shall be done:

   a. RUMBA will be checked for the amount of the bail/fine. A copy of the court docket will be printed.

   b. The Minute Order will be checked for the amount of bail/fine.

   c. A comparison of the RUMBA printout and Minute Order will be made.

   d. Attach the copy of the RUMBA court docket to the Minute Order and place in the booking with a memorandum detailing the discrepancy, and which method was used to determine the bail/fine amount.

3. Inform the on-duty Shift Supervisor of the discrepancy and obtain his/her approval for the release.

4. Process as directed by the Shift Supervisor.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.27
	RELATED ORDERS: P.C. 13300, 13302, 13303	
ISSUE DATE: 07-01-04 **REVISION DATE:** 6-05-19 **REVIEW DATE:** 6-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Release of Inmate Information	

I. POLICY

A. The Custody Services Bureau will provide the public with information about individuals in custody providing it meets the guidelines listed below and does not infringe upon an individual's right to privacy.

B. Only authorized staff trained relative to records security and the use of records information systems may access inmate information.

C. Release of state and local information derived from CII and RUMBA rap sheets will comply with state, local statutes and regulations.

D. The office of the Sheriff contributes to, and has access to, current booking, housing, classification, court, and prior offender information through participation in local, state, and federal computer information systems.

E. These systems shall only be used by personnel authorized and trained in their use, and the information so accessed, shall only be used for official purposes including, but not limited to, processing inmate and operational requirements, research, and assisting in decision making processes necessary to the proper functioning of the facility.

II. PROCEDURE

A. CONFIDENTIALITY

1. In order to protect the confidentiality of inmate booking files, only facility personnel with a "need to know" basis are authorized access to the files, except with permission from the Shift Supervisor.

2. The majority of the information contained in an inmate's booking record is considered confidential and is released only on a "need to know" basis.

3. All staff will be advised of the laws and regulations relating to confidentiality of inmate booking information.

4. Any person who knowingly furnishes a record of information to someone not authorized by law to receive such record of information, is guilty of a misdemeanor pursuant to 13302 PC.

    a. Employees shall not reveal police information outside or within the Department as required by law, or competent authority.

    b. Names of informants, complainants, witnesses, suspects, and other persons known to the police are considered confidential.

5. Any person, knowing he/she is not authorized by law to receive a record of information, who knowingly buys, receives or possesses the record of information, is guilty of a misdemeanor pursuant to 13303 PC.

6. Pursuant to 13000 PC, some agencies which are authorized to receive information are:

    a. Courts of the State

    b. Peace Officers

    c. District Attorneys of the State

    d. Prosecuting Attorneys

    e. Probation Officers

    f. Parole Officers

7. To protect the confidentiality of inmate information, while maintaining a mechanism to release information authorized by the inmate to specific persons or entities, the facility shall have Information Release Consent Form(s) available for release of interview, personal, medical or mental health information.

8. The inmate authorizing the release, prior to the release of any information, shall sign the release of information form.

    a. A copy of the release of information form will be placed in the inmate's booking.

    b. Contra Costa County Health Services is the only entity authorized to release medical/mental health information.

B. The following information is considered to be public information and may be released to the public, except to the extent that disclosure of a particular item of information would endanger the safety of a person involved in an investigation or would endanger the successful completion of the investigation or a related investigation.

C. All other information contained in the inmate's jail record(s) is not for disclosure except with the Facility Commander's approval or the inmate's written signed release.

1. The information that may be released is as follows:

    a. Name and date of birth

    b. Booking name (if different)

    c. Arrestee's physical description:

        - Sex
        - Hair color
        - Eye color
        - Weight
        - Height

    d. Date and time of arrest

    e. Date and time of booking

    f. City of arrest

    g. Booking Number

    h. Charges

    i. Bail

    j. Facility currently housing individual

    k. Release Date:

        - If prior to release, disclose the scheduled release date.
        - If following the inmates release, disclose the actual date of release and manner of release.
        - Staff will provide this information in person, over the phone, or direct the requester to the Sheriff's webpage

    l. Arresting agency (Not officer's name).

D. Staff will refer requests for the following information to the appropriate source:

1. All inquires for more detailed court information to be referred to the District Attorney or Clerk of Court, of appropriate jurisdiction.

2. All inquires for detailed arrest information shall be directed to the agency making

the arrest.

3. Requests for disciplinary information will be referred to Custody Administrative Services.

4. Refer formal record requests to Custody Services Bureau Administrative Services.

5. Refer requests for medical information to the Contra Costa County Health Services.

6. Non-Contra Costa County holds shall be confirmed as existing, the status i.e., bail amounts, charges, etc. However, refer specific information requests to the agency placing the hold.

7. All questions regarding the acquisition, use or release of state and local summary criminal record information will be referred to Custody Administrative Services.

8. No information shall be given, relative to court or transportation times either external or internal.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.29
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE**: 3-21-19 **REVIEW DATE:** 07-31-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Processing of State Parole Violators	

I. POLICY

A. It is the policy of the Custody Services Bureau facilities to return all State prisoners to the appropriate State institution as soon as possible.

II. PROCEDURE

A. All inmates in County custody for State charges only will be returned to the custody of the State.

B. There are five (5) categories of prisoners affected:

1. 6253b PC prisoners
2. 1767.3 W&I prisoners
3. 3151 W&I prisoners
4. 4530 PC prisoners
5. 5054.1 PC prisoners.

C. All prisoners that have no pending local charges and possess only a state hold, shall be transported to the appropriate authority as soon as possible.

1. The Transportation Unit will be responsible for coordinating the transportation of all inmates that apply.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.30
	RELATED ORDERS: P.C. 4019, 4019(b)	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-12-19 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake Transfer, Release and Records	**SUBJECT:** Civil Commitments	

I. POLICY

A. Individuals committed under only Civil Code Sections will be accepted, processed and housed separately from criminal commitments.

II. PROCEDURE

A. CIVIL CHARGES

1. Civil commitments can be for civil contempt, 1209 PC and in conjunction with criminal charges.

   a. The inmate does not have to be isolated and handled separately while in custody on both criminal and civil charges.

2. If the individual is held solely on civil charges, they must be processed, transported, housed and fed separately.

B. WITNESS ORDERED HELD

1. Witnesses are often held for their own protection because they will be a witness in a criminal case.

2. They are to be processed, housed, transported, and fed separately.

3. Witnesses held should have no contact with criminal inmates.

4. If the individual is a witness in a criminal case and has other criminal charges pending, the individual will be housed according to Procedure II. 1(a) listed above and does not need to be isolated.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.31
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Service of Civil Process on Inmates	

I. POLICY

A. Staff will receive and serve all legal process that complies with 4013 PC and 415.20b Code of Civil Procedure (CCP) for those persons in custody.

II. PROCEDURE

A. Service of process upon inmates shall be made in the following manner:

1. A private process server or any other person attempting to serve civil process upon an inmate must appear at the lobby of the appropriate detention facility.

2. The clerk shall determine if the inmate being served is in the facility, and if so, shall accept the papers for the named inmate in accordance with 415.20b CCP.

   a. The civil paper must be delivered to the inmate at the earliest opportunity in accordance with 4013 PC.

   b. Failure to comply with this procedure in a timely manner will subject the Office of the Sheriff to liability for any damages suffered by the inmate.

3. The clerk will notify Shift Supervisor that there are papers to serve an inmate.

   a. The Shift Supervisor will review the document and assign a deputy to serve the civil papers to the inmate forthwith.

   b. The deputy serving the civil papers to the inmate shall read the document to the inmate.

   c. The deputy serving the civil papers shall submit an Incident Report, detailing the time and date of service and any additional details that may be pertinent.

4. The deputy accepting service will fill out the “proof of service” section on the papers.

a. The deputy will serve a copy of the papers to the named inmate.

b. If a copy of the service is requested, the deputy will return a copy to the clerk. The clerk will ensure a copy of the service is provided to the requesting party.

5. Under no circumstances will civil process be accepted by mail.

a. All civil process received by mail for service upon an inmate will be promptly returned to the sender, with a notation that 4013 PC and 415.20b CCP have not been complied with.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.32
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-20-18 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Sentence Computation	

I. POLICY:

A. An accurate record of sentence related information will be established for each inmate committed to this facility as part of the inmate's record. This is to provide that inmate time is accurately computed and recorded in conformance with applicable statutes and regulations.

B. The record shall be designed to allow for computation of earned or forfeited good time and work time credits and projected release date.

II. DEFINITIONS:

A. PROJECTED RELEASE DATE: Date the inmate will be released if all variables remain unchanged including deductions for good/work time or the addition of school credits or conditions of accelerated release.

B. COMMITMENT PAPERS: Documents signed by the sentencing judge or clerk of the court ordering imprisonment of the inmate.

C. PENAL CODE SECTION 4019, READS IN PART:

1. "The provisions of this section shall apply…when a prisoner is confined in a county jail…including all days in custody from the date of arrest to the day on which the serving of the sentence commences…"

2. (Good Time): "For each four day period in which a prisoner is committed…one day shall be deducted from the period of confinement unless it appears by the record that the prisoner has not satisfactorily complied with the reasonable rules and regulations established by the Sheriff…"

3. (Work Time): "For each four day period in which a prisoner is committed…one day shall be deducted from the period of confinement unless it appears by the record that the prisoner has refused to satisfactorily perform labor as assigned by the Sheriff…"

III. PROCEDURE:

A. A prisoner is entitled to full "Good Time" and "Work Time" credits from the date of arrest so long as he/she does not violate reasonable rules and regulations or does not refuse to work.

B. Pre-sentenced good time and work time credits may be forfeited by disciplinary action in the same manner as post-sentenced credits. Forfeiture of good time and work time credits will be in accordance with the guidelines established by the California Minimum Jail Standards for Local Detention Facilities, and in compliance with Agency Orders.

C. When a sentence is imposed upon an inmate, the face of the booking folder will be appropriately marked by the clerk computing the sentence. This will be done by placing the terms of the sentence in the box called "Sentence" and the date of the sentence in the box called "Sentence Date." The updating clerk will place their initials in the appropriate box on the custodial file.

D. The Clerk, prior to the completion of his/her shift, shall complete time computations using the procedures set forth in the Automated Jail Information System Manual. When the computer is not operating, the records officer shall manually determine a tentative release date to determine if the subject will be due for release on the date the sentence was imposed, or the following day(s) before the records officer returns to work.

E. It shall be the graveyard clerk's responsibility, to ensure that the "Due For Release" list is generated on a daily basis and all scheduled inmates due for immediate release are processed accordingly.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.33
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-05-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Processing 1381 PC Requests	

I. POLICY

A. It shall be the clerk's responsibility, to determine those inmates who are eligible for processing in accordance with 1381 PC.

II. PROCEDURE

A. 1381 PC provides a speedy trial for sentenced inmates in this county, who have un-sentenced holds in another county, providing:

1. Subject is sentenced for 90-days or more in this county.

2. 1381 PC does not apply to any of the following holds:

a. 3056 PC (Parole Violator, adult).

b. 3151 W& I (Parole Violator, narcotic offense).

c. 1767.3 W& I (Parole Violator, youth authority).

d. 1551.1 PC (Out of State holds, extradition).

B. Whenever a subject is found who fits the criteria as indicated above, the inmate shall initiate the 1381 PC process as follows:

1. Complete the 1381 PC notification form in triplicate and forward it to Operations.

2. The deputy delivering the form to the inmate shall inform the inmate that he/she is to sign the forms and return forms to Operations for mailing.

a. If the inmate elects to mail the form his/herself, one (1) copy will be returned to records for filing in the booking folder with the notification that the inmate will mail forms.

b. If the inmate elects to have Operations mail the form, one (1) copy will be given to the inmate, and the other two (2) copies shall be returned to Operations, where the original is mailed to the appropriate location and one copy is placed in the inmate's booking folder.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.34
	RELATED ORDERS: P.C. 821, 822, 850, 976	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 02-04-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake Transfer, Release and Records	**SUBJECT:** In-Custody Warrant Service	

I. POLICY

A. Whenever a warrant is found on a subject that is in custody, sections 821, 822, 850 and 976 PC will be complied with.

II. PROCEDURE

A. LOCAL (CONTRA COSTA COUNTY): Whenever a warrant is served, wherein the court of jurisdiction is in Contra Costa County, the following procedure shall be followed:

1. The warrant will be added to the inmate's booking, in accordance with appropriate booking procedures.

2. The inmate will be fingerprinted and the fingerprints verified through Central Identification Services (CIS).

3. The inmate will be assigned a future court date, to the appropriate court, that is not in conflict with already assigned court dates.

B. INTRA-STATE, (OTHER COUNTIES IN CALIFORNIA): Whenever a warrant is served, wherein the court of jurisdiction is within California, but not Contra Costa County, the following procedure shall apply:

1. The warrant will be added to the inmate's booking, in accordance with appropriate booking procedures.

2. The inmate will be fingerprinted and the fingerprints verified through CIS.

3. An enroute card will be attached to the front of the booking folder and an 821/822 PC form attached to the warrant.

a. The inmate will have the option to make a local court appearance on the warrant. If a court appearance in Contra Costa County is chosen, no action is to be taken until directed by the court after said appearance.

b. If the inmate does not request a local court appearance or the local judge orders the inmate be sent to the other jurisdiction, a teletype will be sent.

- Whenever the inmate has more than one warrant under 821 and 822 PC, the agencies closest to our county shall be considered first. The date and time the teletype is sent will be recorded on the face of the booking folder and a hard copy of the notification will be placed inside the booking folder.

- Teletype format is to include:

  - Inmate's name and booking number
  - Date of birth
  - Warrant number
  - Charges
  - Court jurisdiction
  - Date the inmate is available for pick-up
  - Request notification of date/time to be picked-up

- It shall be the clerk's responsibility to ensure all notifications are made.

c. The responding agency must comply within the following time parameters. If they fail to comply, notification to that affect will be sent to the agency of jurisdiction. If no other holds exist, the subject will be released from custody.

- Whenever the agency of jurisdiction is more than 400 miles from the arresting jurisdiction and the warrant is for a felony, five (5) court days will be allotted for pick-up.

- When mileage is less than 400 miles or any misdemeanor, five (5) calendar days are allowed for pick-up.

4. If the out-of-county warrant is the only charge for the inmate, an "Out-of-County Warrant Only" paper will be attached to the front of the booking folder.

C. INTER-STATE, (STATES OUTSIDE CALIFORNIA): Whenever a warrant is served wherein the court of jurisdiction is outside the state of California, the following procedure shall be followed:

1. A booking authority will be completed, the inmate fingerprinted and the fingerprints verified by CIS.

2. The charge section of the booking authority is to read "1551.1 PC" with no bail. The charge and bail portion of the warrant abstract are to be ignored.

3. The Probable Cause Declaration will be faxed to the on-call judge.

4. The warrant will be faxed to the civil unit.

5. If the Out-of-State warrant is the only charge for the inmate, an “Out-of-State Warrant Only” paper will be attached to the front

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.35
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer and Release	**SUBJECT:** Removal Orders	

I. POLICY

A. All demands for removal orders by outside agencies will be accepted and processed with the following exceptions:

1. The inmate has been sentenced to state prison. He/she will be transported to state prison, and the demanding agency can obtain him/her from the state prison facility.

2. If a conflict with our County's unsentenced case is apparent. All conflicts will be referred to the Shift Supervisor for resolution.

II. DEFINITIONS

A. REMOVAL ORDER: An official court order from the court of one County to another County or state prison facility demanding that a specific inmate be released to the Sheriff of the demanding County for the purpose of transfer to that County for trial.

B. DETAINER: A written document issued by the submitting County or state prison facility that describes the type(s) of want(s) or hold(s) from that County or state prison facility. It further gives the status of those cases.

III. PROCEDURE

A. The removal order is turned over to the Sheriff of the requesting County or the Warden of the state prison facility for execution, and is normally coordinated by transportation units. The following will apply when receiving and releasing inmates on removal orders.

1. RECEIVING

a. Contra Costa County Sheriff's Transportation Unit, after receiving a removal order, will pick-up the inmate.

b. Transportation will deliver the inmate to booking, with the appropriate booking forms filled out, a copy of the removal order and detainer(s) from the submitting County or state prison facility.

Whenever an inmate has an active case(s) pending in the submitting County, our transportation will track the inmate to ensure his/her return prior to the scheduled court date. If the case(s) are sentenced matters, records will track for compliance of release dates.

c. The inmate, upon intake, shall be processed as a new arrest. All property, clothing and money will be receipted. Medical screening and classification will be completed the same as other new arrests.

d. The inmate may not be booked on the removal order unless a valid warrant is received or the subject is remanded on the case.

e. If the court remands the subject, and our transportation returns the subject to the original county, and CCCSO detainer shall be sent informing the agency that we have a further want.

2. Inmates shall remain as enroute until:

a. The inmate is returned to the agency or state prison facility received from.

b. The agency received from detainer has expired or the release date from the state prison facility has passed.

The clerk will contact the agency to confirm their release date.

If correct, request that agency to send a teletype confirming their hold is dropped.

If no other holds exist, the inmate is to be physically released.

B. RELEASE

1. Normally, an agency wanting to make a pick-up on a removal order will call ahead to arrange for pick-up. The release clerk shall handle all such calls.

a. The release clerk will check the inmate's status, approve or deny the request, and advise the requesting agency.

2. Approved requests for pick-up shall be scheduled to include, reason for removal order, and name of demanding agency.

3. A detainer for each case the inmate is in custody on will be filled out and placed in the booking folder.

4. On a release to a removal order, all property and money will be signed for and released to the demanding agency.

5. The booking release code used for removal orders shall be “TREL”. All custodial file(s) with a copy of the detainers shall be placed in the temporary release file in the operations office.

    a. It shall be the Clerical Supervisor’s responsibility to ensure that all temporary release files are reviewed and verified with the holding agency on at least a monthly basis.

C. RETURN BY DEMANDING AGENCY

1. Remove the booking folder from the temporary release file.

2. Re-activate the booking in JMS.

3. The booking process consists of a new medical screening completed and a new booking photo, which are added to the current booking folder.

4. If a court date was missed, schedule the inmate for the next available court date.

5. If the subject is sentenced in this County, make sure the booking folder is returned to a clerk who will re-calculate the release date in JMS.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.36
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:**	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Technical Escapes	

I. POLICY

A. It is the policy of the Contra Costa County Sheriff's Office to return to custody any inmate who is released in error as quickly as possible.

II. DEFINITIONS

A. TECHNICAL ESCAPE: A release of an inmate in error due to an interpretation of paperwork or identification, an inmate in constructive custody (i.e. sentenced misdemeanants at the hospital, etc.) who leaves constructive custody without permission or authorization.

III. PROCEDURE

A. When it is discovered that an inmate has been released in error, on-duty personnel will take the following steps.

1. The employee who discovers that an inmate has been released in error will immediately notify the on-duty Shift Supervisor.

    a. The Shift Supervisor will in turn notify the Facility Commander.

2. The Shift Supervisor will ensure the following actions are taken:

    a. If, there is a possibility that the released inmate is still in the area, a search of the immediate area surrounding the jail will be conducted.

    b. The Shift Supervisor will attempt to contact the subject by telephone and have him/her return voluntarily.

    c. The Shift Supervisor will assign a deputy sheriff to write a report which outlines the details of the technical escape.

3. The Facility Commander shall prepare a press release when appropriate.

B. The Shift Supervisor will take the following steps to ensure the proper police agencies are notified:

1. The Field Operations Bureau (FOB) Lieutenant of Investigations will be notified if the escape occurs during the weekdays (0800-1700 hours). The Officer of the Day will be advised through Sheriff's Dispatch of escapes at all other times.

[redacted]

C. In the event the inmate was in custody on a warrant/warrants only and had not yet appeared in court on the warrant(s), the following will be done:

[redacted]

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.37
	RELATED ORDERS: P.C. 849b P.C. 851.5	
ISSUE DATE: 07-01-04 **REVISION DATE:** 03-17-19 **REVIEW DATE:** 03-17-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer and Release and Records	**SUBJECT:** Timely Booking	

I. POLICY

A. The Custody Services Bureau will book all new arrestees into the facility in a timely manner.

II. PROCEDURE

A. BOOKING/ITR STAFF WILL:

1. Pre-book each arrestee one at a time by conducting the following actions:

   a. Review all arrest paperwork for completeness and accuracy. If paperwork is accepted, a booking number will be issued.

   b. Verify with medical staff the inmate is cleared to stay in the facility.

   c. Remove any additional personal property from the arrestee.

   d. Photograph the inmate and issue a JMS Identification Wristband. Direct the inmate to an appropriate room/seating area for housing during the booking process.

2. Formally book the arrestee by entering the information from the arrest paperwork into JMS to create the necessary printouts for the booking folder.

3. Ensure the following has occurred:

   a. All arrestees have been fingerprinted.

   b. All arrestees have received access to a telephone as soon as practicable and have signed the acknowledgement form in the booking folder.

   c. All arrestees have received the inmate video orientation and have signed the acknowledgment form in the booking folder.

d. A completed medical questionnaire with appropriate signatures is in the booking folder.

- If the medical clearance form indicates the arrestee requires a mental health evaluation, the arrestee shall see Mental Health during the intake process.

~~e.~~ If the arrestee needs to be dressed out for housing or court, check to see if the arrestee has been authorized for a strip search on JMS.

- If a strip search is performed, document in JMS whether contraband was found.

f. Confirmation from Central Identification Services (CIS) of fingerprints is in the booking folder.

4. Completed booking folders will be placed next to the pneumatic tube waiting for sergeant's approval.

B. DELAYS IN BOOKING PROCESS

1. Intake staff will notify the Shift Supervisor upon discovering any circumstances that may exist for a particular arrestee that will delay the timely booking process.

   a. A delay is considered to be over four (4) hours.

2. If the delay is due to the arrestee's refusal to comply with any portion of the booking process, the following shall occur:

   a. Staff will continue to monitor and document via incident report the arrestee's refusal to comply

   b. In the event the arrestee continues to refuse, they will be scheduled for the next available court appearance

   c. The arrestee shall only be forced to comply with the booking process at the direction of the court.

3. The Shift Supervisor will review all documentation pertaining to an inmate who has been in custody for a period of four (4) or more hours to determine:

   a. The actual amount of time in custody within the jail.

   b. Type of charge and status of the arrestee, e.g., release to citation, 849b PC, court appointment, etc.

   c. Completeness and accuracy of Arrest Summary/booking.

   d. Proper number and quality of fingerprints taken.

4. If a delay is due to the confirmation of an arrestee's fingerprints, the Shift Supervisor will assign a Booking/ITR staff member to telephone CIS to determine

the status of the prints and obtain confirmation if available.

a. If confirmation is received, continue the normal booking process.

b. If the confirmation is not obtained, proceed as follows:

c. Ensure enough fingerprints are obtained on the arrestee to create a new CCIN.

d. Instruct the Booking/ITR staff to book the arrestee on a new CCIN whenever possible, and to continue the booking process.

e. Instruct the Booking/ITR staff to book under an existing CCIN when the incarceration was the result of a warrant arrest, and the warrant number (Court docket/Case Number) is already attached to an existing CCIN.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.38
	RELATED ORDERS: P.C. 2623 C.C.P. 1995-96-97	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Interviews and Depositions In Civil Matters	

I. POLICY

A. An attorney or his/her investigator may interview a consenting inmate regarding a civil matter, provided that the appropriate policies and procedures are followed.

B. An inmate is not required to participate in an interview.

C. The inmate may consult with his/her counsel, if any, prior to consenting to an interview or deposition.

D. It is this department's policy to facilitate an examination upon deposition in the jail pursuant to the Code of Civil Procedure (CCP) and when required by court order.

II. PROCEDURE

A. A licensed attorney with a bar card or his/her investigator may meet with an inmate under the following conditions:

1. The inmate must consent to the interview and shall be permitted to consult with his/her attorney, if any, prior to agreeing to the interview.

2. The interview must not have a detrimental effect on the safety of the inmate or staff, and must not constitute a risk to the security of the jail.

3. DEPOSITIONS

a. An examination upon deposition of an inmate regarding a civil matter shall be preceded by a properly issued court order.

b. Depositions will be limited to weekdays during normal business hours, excluding holidays.

c. Depositions can only occur at a time which does not interfere with the operations of the facility, the inmate's court date appearances, or the inmate's movement schedule.

4. The deposition must be scheduled with the Facility Commander at least 24 hours in advance.

5. The Facility Commander or his/her Designee is responsible for scheduling the interview and for coordinating other arrangements as necessary.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.39
	RELATED ORDERS: MJS 1041, 1207 P.C. 1412	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Inmate Jewelry	

I. POLICY

A. Every effort will be made by staff to have the inmate remove his/her jewelry to prevent loss or theft while in custody.

II. PROCEDURE

A. The following procedures will be adhered to when handling inmates with jewelry.

1. All inmates in possession of jewelry that is removable will have the item(s) removed, listed and described on the property receipt, and placed into a property storage bag.

2. Inmates in possession of jewelry that is not removable but who consent to have the item(s) cut off, will have the jewelry listed and described on the property receipt, initial the receipt and have the jewelry placed into a property storage envelope.

3. Inmates in possession of jewelry that cannot be removed by using hand cleaner, lotion, or soap will not have the jewelry cut off unless:

   a. The jewelry, by its design could cause injuries to staff, another inmate, or the inmate themselves.

   b. Classification determines the inmate has a documented past history of self-mutilation and the jewelry could be used to self-inflict injuries.

   c. Medical staff determines the inmate has the potential to injure themselves because of the nature of the charges, past history, or other relevant factors.

4. A receipt will be provided for any jewelry removed and the item placed into the inmates property.

5. In cases where jewelry is not cut off, the item(s) will not be listed in the property receipt.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.40
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** Artificial Hairpieces	

I. POLICY

A. Inmates will not be allowed to possess any type of artificial hairpieces, including wigs, hairpieces, hair extensions, braids, or hair ornaments of any kind.

II. DEFINITIONS

A. WOVEN IN/SEMI-PERMANENT HAIRPIECES: Any artificial hairpiece simulating actual head hair and used for lengthening and/or thickening existing head hair, and which is attached by weaving the artificial strands singly or otherwise with existing hair strands, or by attachment with a mastic that requires (by manufacture's standards and recommendations) multiple washings to free the mastic attaching the artificial strands to the existing head hair.

III. PROCEDURE

A. All inmates will be required to remove all artificial hairpieces at the time of booking.

B. Artificial hair and hair ornaments that are brought to the jail by visitors or sent through the U.S. mail will not be accepted.

C. A receipt will be issued for their artificial hairpiece.

1. The item(s) will be listed on the property receipt form, and placed into their property.

D. REFUSALS TO REMOVE HAIRPIECES

1. Intake staff shall take the following steps in the event an inmate refuses to remove their hairpiece:

a. The Intake Deputy will notify the Shift Supervisor to determine the outcome of the inmate's hairpiece.

- Permanent Hairpieces: The inmate will be allowed to keep the

artificial hairpiece.

- An informational report will be written to document the inmate's ability to keep the artificial hairpiece.

- Non-Permanent Hairpieces: Inmates will be required to remove the artificial hairpiece prior to being assigned to a housing unit.

b. Inmates, who refuse to remove their artificial hairpiece, after being advised by a Sergeant, will be disciplined until they have removed the hairpiece.

- An Incident report documenting the events will be submitted to the appropriate supervisor.

E. Only the Facility Commander may make any exception to these guidelines on an individual basis.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.41
	RELATED ORDERS: P.C. 1275	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-22-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer, Release and Records	**SUBJECT:** 1275 PC Orders	

I. POLICY

A. The Contra Costa County Office of the Sheriff will honor, and leave in effect, all 1275 PC orders until rescinded by a court.

II. DEFINITIONS

A. PENAL CODE SECTION 1275-An order issued by the court that directs the Sheriff not to accept bail for an individual until the court has been convinced that no portion of the consideration was feloniously obtained by the defendant.

III. PROCEDURE

A. ACCEPTANCE

1. Upon the 1275 PC order arriving at records, the person accepting the order will:

   a. Confirm that the order is correct.

   b. Update the booking to reflect "No Bail"

2. The person receiving the order will immediately notify the Shift Supervisor.

B. REMOVAL

1. To remove a 1275 PC order, a rescinding order must be received from the court.

2. Upon receipt of an order rescinding the original 1275 PC order, the accepting person will:

   a. Time stamp the document immediately.

   b. Remove the reduced copy of the 1275 order from the face of the appropriate custodial file.

c. Attach the original 1275 PC order to the rescinding order and place both in the appropriate custodial file.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.42
	RELATED ORDERS: 1963 Vienna Convention	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Intake, Transfer and Release and Records	**SUBJECT:** Compliance with 834 (c) PC	

I. POLICY

A. When foreign nationals are arrested or detained, they must be advised of the right to have their consular officials notified.

B. In some cases, the nearest consular officials must be notified of the arrest or detention of a foreign national, **regardless of the national's wishes**.

C. Consular officials are entitled access to their nationals in detention, and are entitled to provide consular assistance.

D. Foreign National Consular notifications are mutual obligations that also pertain to American citizens abroad.

1. In general, you should treat a foreign national as you would want an American citizen to be treated in a similar situation in a foreign country. This means prompt, courteous notification to the foreign national of the possibility of consular assistance, and prompt, courteous notification to the foreign national's nearest consular officials so that they can provide whatever consular services they deem appropriate.

E. The Facility Commander shall ensure that the arrestee is allowed to communicate with, correspond with, and be visited by, a consular officer of his or her country.

II. PROCEDURE

A. BOOKING FOREIGN NATIONALS

1. The United States Department of State must be contacted immediately when an arrestee claims to be a foreign national (diplomat or consular). Customary international law requires if a detainee is a national of any foreign country that their government must be notified if requested.

2. Sworn staff members shall take the following steps when it is determined a foreign national is in custody:

a. Determine the foreign national's country. In the absence of other information, assume this is the country on whose passport or other travel document the foreign national travels.
b. The Booking Officer shall ensure that the questions on the Booking Authority pertaining to a Foreign National wanting Consulate notification are checked.

c. If the questions pertaining to Consulate notification on the Booking Authority were not asked, the Intake Officer will ensure the Foreign National is asked if they would like their Consulate notified.

3. If the foreign national's country is **not** on the mandatory notification list:

   a. Offer, without delay, to notify the foreign national's consular officials of the arrest/detention.

4. If the foreign national asks that consular notification be given, notify the nearest consular officials of the foreign national's country without delay.

5. If the foreign national's country **is** on the list of mandatory notification countries:

   a. Notify that country's nearest consular officials, without delay, of the arrest/detention.

   b. Tell the foreign national that you are making this notification.

6. The sworn staff member making the notification will ensure an Incident Report is written and submitted that the provisions of notification and appropriate actions had been taken.

7. The Booking Authority shall be stamped with the “CONSULATE NOTIFIED” stamp and the employee shall place their employee number with in the stamp area.

8. The Facility Commander or designee will ensure that proper notification has been made and that documentation of the event has been placed in the inmate’s booking folder.

9. Refer to next page for mandatory notification listings.

B. **Mandatory Notification Countries and Jurisdictions**

Mandatory Notification Countries and Jurisdictions	
Algeria	Malta
Antigua and Barbuda	Mauritius
Armenia	Moldova
Azerbaijan	Mongolia
Bahamas, The	Nigeria
Barbados	Philippines
Belarus	Poland (non-permanent residents only)
Belize	Romania
Brunei	Russia
Bulgaria	Saint Kitts and Nevis
China	Saint Lucia
Costa Rica	Saint Vincent and the Grenadines
Cyprus	Seychelles
Czech Republic	Sierra Leone
Dominica	Singapore
Fiji	Slovakia
Gambia, The	Tajikistan
Georgia	Tanzania
Ghana	Tonga
Grenada	Trinidad and Tobago
Guyana	Tunisia
Hong Kong	Turkmenistan
Hungary	Tuvalu
Jamaica	Ukraine
Kazakhstan	United Kingdom
Kiribati	U.S.S.R.
Kuwait	Uzbekistan
Kyrgyzstan	Zambia
Malaysia	Zimbabwe

1. Refer to California Penal Code section 834(c) for additional details

C. Suggested Statements to Arrested or Detained Foreign Nationals

1. Statement 1-When Consular Notification is at the Foreign National's Option

   a. “As a non-U.S. citizen who is being arrested or detained, you are entitled to have us notify your country's consular representatives here in the United States. A consular official from your country may be able to help you obtain legal counsel, and may contact your family and visit you in detention, among other things. If you want us to notify your country's

consular officials, you can request this notification now, or at any time in the future. After your consular officials are notified, they may call or visit you. Do you want us to notify your country's consular officials? “

2. Statement 2-When Consular Notification is Mandatory

a. “Because of your nationality, we are required to notify your country's consular representatives here in the United States that you have been arrested or detained. After your consular officials are notified, they may call or visit you. You are not required to accept their assistance, but they may be able to help you obtain legal counsel and may contact your family and visit you in detention, among other things. We will be notifying your country's consular officials as soon as possible. “

D. Notification to Consulate by Fax

1. The Shift Supervisor should provide the following when faxing foreign national information to the appropriate consulate:

a. Date

b. Time

c. ATTN: Embassy/Consulate of:

- Country
- City
- State

d. Subject: NOTIFICATION OF ARREST/DETENTION OF A NATIONAL OF YOUR COUNTRY

e. Supervisor Name

f. Detention Facility

g. Street Address

h. City

i. State

j. ZIP Code

k. Telephone

l. Fax

m. Foreign National Detainee Information

- Comment:
    - "We arrested/detained the following foreign national, whom we understand to be a national of your country, on (Date and Time)."
    - To arrange for consular access, please call the shift supervisor at (detention facility) in Contra Costa County, California. Please refer to booking number (number) and request to speak to (point of contact).
- Detainee's full name
- Date of birth
- Place of birth
- Passport number
- Date of passport issuance
- Place of passport issuance
- Additional information

2. Any problems encountered with this notification process shall be immediately brought to the attention of the Facility Commander.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.11.43
	RELATED ORDERS: Victim Information Notification Everyday System (VINES)	
ISSUE DATE: 06-08-11 **REVISION DATE:** **REVIEW DATE:** 08-19-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Custody Operations	**SUBJECT:** Victim Notification	

I. POLICY

A. The Custody Services Bureau shall have access information pertaining to Victim Information Notification Everyday System (VINES) available to the public through the custody services phone tree system or via the Sheriff's Office Web Site.

II. PROCEDURE

A. Custody staff shall attempt to make victim notification of a suspect's release when;

1. Requested by the victim.

2. Requested by the arresting agency.

B. Custody staff are encouraged to notify the arresting agency of a suspect's release when no request has been made for the following charges;

1. Domestic Violence.

2. Stalking.

3. Sex Crimes.

4. Kidnapping.

5. Arson.

6. Threats of Violence.

7. Any other Crimes of Extreme Violence.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.01
	RELATED ORDERS: MJS 1050 P.C. 4002 CSB Policy 2.08.49	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-04-19 **REVIEW DATE:** 12-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Intake Classification	

I. POLICY

A. A continual objective process for determining all newly received inmates' levels of custody and program suitability shall be maintained and will be based on personal, criminal, medical and social history.

B. Minimum Jail Standards 1050 for local detention facilities mandate that all inmates shall be classified prior to being housed.

1. The Classification Unit uses an "Objective Classification" system pursuant to Title 15, to ensure appropriate housing and programming of inmates.

2. The general guidelines for application of the classification procedures shall be followed as designated in Chapter 12 of this manual.

C. Classification or placing an inmate in Administrative Management status will not be based solely on race, religion, disability or national origin.

D. All inmates, including those with disabilities and transgender/gender-variant inmates will be housed in a manner that provides for their safety, security and participation in programs and activities in the most integrated setting appropriate for their needs

II. PROCEDURE FOR INMATES REQUESTING PROTECTIVE CUSTODY OR DISCLOSING GANG AFFILIATIONS

A. When an inmate is received into Booking as an arrestee or remand from court, or transferred from an outside detention facility, the booking personnel receiving the inmate shall determine the inmate's custody status, separating those inmates who are potentially violent from inmates who are non-violent.

B. The classification of inmates begins in Intake by the Booking Deputy.

1. The Booking Deputy will ask the following three classification pre-screening questions:

a. "Do you have any gang affiliations?"

b. "Do you fear for your safety?"

c. "Have you been here before?"

2. If the inmate discloses gang affiliation or fears for his or her safety, the Booking Deputy will take the following actions:

a. Place the inmate into a protected area separate from the inmate general population.

b. Attach the appropriate label on the Inmate Management Card.

- No other notation regarding the inmate's classification will be written on the Inmate Management Card.

c. Immediately notify the Classification Unit.

d. Booking Deputy will document the interaction in a JMS incident report.

C. The Classification Unit will screen and assign all inmates housing.

Screening and assignment will be based on the following information:

a. Current charge severity.

b. Prior criminal conviction severity.

c. Escape history or attempts to escape.

d. Disciplinary history and history of institutional violence.

e. Prior felony convictions.

f. Current age.

g. Residency.

h. Medical or other special housing needs identified by county medical or mental health staff.

i. Current booking data (hard copy and/or computer visual).

j. Jail Management System (JMS), confidential classification information.

k. Department of Justice Criminal History (RAP).

l. Active or prior gang affiliations.

m. Potential for victimization.

2. Classification Interview

a. Prior to housing, all inmates will be interviewed. The classification interview should be completed in an area where the inmate feels at ease in discussing sensitive information.

- If possible, the interview should be held in the Classification Unit office. The "Classification Questionnaire" (DET 043) shall be used for gang interviews; the results will be entered into the JMS system.

b. The inmate will then be Classified based on the totality of assessment factors and the objective criteria of 4002 PC to include, but not limited to:

- Criminal sophistication.
- Seriousness of the charged crime.
- Presence or absence of assaultive behavior.
- Age.
- Any other criteria that provide for the safety of the inmate and staff.

c. In the event the inmate refuses to cooperate during the classification interview, the Deputy will explain the need for the interview, and give the inmate every opportunity to comply.

- If the inmate still refuses, the inmate will be assigned to maximum security subjective override or placed in administrative management to ensure their safety.
- This housing status will remain pending satisfactory completion of the "Initial inmate Questionnaire/Interview" and will be reviewed per policy.

3. An Initial Custody Assessment Scale will be calculated on a sliding scale of 0 to 10+, to determine a security rating and level of custody within the security rating, that the inmate will be assigned.

a. This will be based on the objective classification assessment factors pursuant to of 4002 PC.

b. Any Subjective Override Justification (raising or lowering the inmate's numerical scale) based on applicable management concerns, hazard code(s), related issues will be documented via input into the JMS system.

4. Upon completion of the interview, the Classification Unit will generate a "Movement List" for the inmate to be transferred to the appropriate housing unit.

a. The movement list, after approved by Classification, will be provided to county medical and mental health staff for further assessment. The movement list will then be returned to custody staff to initiate the transfer process.

III. PROCEDURE FOR IDENTIFYING POTENTIAL INMATE SEXUAL VICTIMS AND/OR SEXUAL AGGRESSORS

A. Intake and Initial Classification

1. Identifying potential sexual aggressors or inmates at risk of sexual victimization.

a. An intake deputy will screen the inmate by asking the PREA questions provided on the back of the "Intake Live Scan Verification" form. The intake deputy will refer the inmate to classification if the inmate answers "Yes" to any of the PREA questions provided.

- The inmate has the right to refuse to answer the PREA questions. However, if the inmate does refuse to answer the PREA questions during inmate orientation, the deputy can still make a classification referral for a PREA review if it is believed the inmate may be at risk for victimization or sexual aggression.

- If a referral is made to the Classification Unit for reasons related to potential sexual victimization or aggression and the deputy believes that it is necessary to separate the inmate from the general population for his or her safety, the deputy will place the inmate in a separate holding cell.

b. Classification Deputy will screen the inmate further to determine if placing the inmate in Administrative Management or a special housing consideration is necessary to protect the inmate.

- The Classification screening form shall be maintained by the classification unit.

- Any actions taken by the Classification Deputy must be documented in the inmate's classification notes.

- The potential at risk inmate may be placed in involuntary Administrative Management housing for no longer than 24 hours while the risk assessment is being completed.

- If an inmate has been a victim of sexual abuse in the past, the Classification Deputy shall refer the inmate to Mental Health for a screening within 14 days of intake.

2. Identifying Transgender/Gender-Variant Inmates

a. When determining if an inmate is transgender/gender-variant, the following should be taken into consideration:

- Inmate's appearance or behavior does not match the gender marker on the inmate's arresting/transportation paperwork or identification.

- Inmate self-reports.
- If there is doubt or a question concerning the validity of the self-report, the Booking Deputy shall consult with a supervisor.
- Arresting/transporting agency has alerted the Booking staff to the inmate's transgender/gender-variant status.
- Inmate's past history, if known.
- Booking Deputy discretion.

b. Inmates shall not be searched for the sole purpose of determining genital status.

c. Medical Staff Notification

- When a transgender/gender-variant inmate has been identified, the Booking Deputy will be responsible for notifying the medical staff.

B. Long-term Housing and Classification

1. Housing assignments of inmates who are at risk of sexual victimization or sexual aggression may not be determined based solely on being identified as being a potential victim or aggressor.

2. At risk inmates may not be placed in involuntary Administrative Management housing unless an assessment of all available housing alternatives has been made. If there are no available alternative housing assignments for identified inmates, classification of these inmates shall be made in accordance with CSB policies 2.09.02-2.09.04, and 2.08.49.

3. If an involuntary Administrative Management housing assignment is made for an at risk inmate, the Classification Sergeant shall ensure a review is performed every 30 days to determine if there is a continuing need for separation from the general inmate population.

4. Transgender/gender-variant inmates must be housed safely and in the least restrictive setting possible.

5. Requests from a transgender/gender-variant inmate to be placed in the same cell with another transgender/gender-variant inmate should be considered when possible.

6. Classification staff shall document in the Jail Management System (JMS) the choices and specific reasons regarding housing and any additional safety precautions for all at risk inmates.

a. If the reasons are due to a facility limitation:

- Document what the limitation is.

- Length of the limitation is to be expected.
- Reasons for the limitation.

7. Whenever possible, at risk inmates who are placed in Administrative Management or protective custody for their safety and security shall have the same access to services and programs as any other inmate of the same housing status.

8. At risk inmates shall have the right to request their housing assignment be re-evaluated.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.02
	RELATED ORDERS: MJS 1050	
ISSUE DATE: 07-01-04 **REVISION DATE:** 10-30-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Re-Classification	

I. POLICY

A. Minimum Jail Standards 1050 directs that an inmate may request a review of his/her status if sentenced to more than 60 days, and that such requests are to be honored every 30 days.

B. Re-classification is an ongoing process to maintain the correct level of custody on the inmate population.

1. Re-Classification may be initiated by inmate or staff request, custody upgrade due to disciplinary sanctions, 60-day routine review, or by other specific means and is the responsibility of the classification sworn personnel.

II. PROCEDURE

A. CASE STATUS CHANGE

1. Whenever an in-custody inmate has a significant change in his/her status, the on-duty classification deputy shall be notified to determine whether re-classification/housing changes are necessary. The status changes shall include, but not be limited to:

a. New charge(s).

b. Going from unsentenced to sentenced status or the reverse.

c. Extremely large bail movement either up or down.

2. The on-duty classification deputy who authorizes the re-housing of an inmate will note the move in the JMS classification chronological notes prior to the end of their shift.

B. INCIDENT STATUS CHANGES

1. Whenever an inmate is involved in an incident that causes disciplinary action or administrative action to be taken within the facility, or the inmate is involved in criminal activities, re-classification may take place.

2. In all cases, documentation must accompany re-classification in the form of either an Incident Report, crime report or memorandum.

3. Re-classification shall include, but not be limited to:

   a. Disciplinary Isolation

   b. Administrative Segregation

   c. Medical isolation.

C. RE-HOUSING

1. The on-duty classification officer shall ensure that the proper justification exists prior to any re-classification or re-housing of an inmate.

2. Only the Facility Commander or designee may re-house an inmate in the absence of a classification deputy.

   a. The Facility Commander or designee shall provide information to the Classification Unit outlining the move and the circumstances involved.

D. EMERGENCY SITUATIONS

1. This guideline does not restrict the Facility Commander or his designee from suspending any classification procedure in the event of an emergency.

2. When a situation arises which necessitates immediate action to protect the security of the facility or the safety of the inmates or staff, re-housing and temporary re-classification may be undertaken without compliance with the classification procedure.

3. As soon as practical, a listing of all movements and pertinent information will be forwarded to the Classification Unit in order that appropriate re-classification and updates can be made.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.03
	RELATED ORDERS: MJS 1050	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Facility Classification and Capacities	

I. POLICY

A. Inmates will be assigned to housing buildings based on existing laws and regulations, the facility classification plan, the needs of the facility and pursuant to Minimum Jail Standards 1050.

II. PROCEDURE

A. Housing locations will fluctuate from building to building based on inmate population, staffing levels, maintenance procedures and facility needs:

WEST COUNTY DETENTION FACILITY

Housing Unit	***Capacity***				***Security Level***
	CCCSO		BOC		
	Male	Female	BRC	Notes	
Building 4	**74**	**22**	96		Medium/Maximum
Building 5A	**119**		124		Medium
Building 5B	**119**		124		Medium
Building 6A	**119**		124		Medium
Building 6B	**119**		124		Medium
Building 7A	**119**		124	Workers	Medium
Building 7B	**119**		124		Medium
Building 8A		**119**	128		Medium/Maximum
Building 8B		**119**	128		Medium/Maximum
TOTAL	**1048**				

MARTINEZ DETENTION FACILITY

Housing Unit	Capacity				Security Level
	CCCSO		BOC		
	Male	Female	BRC	Notes	
A Module	**92**				Maximum
B Module	**96**				Maximum
C Module	**92**				Maximum
D Module	**53**				Maximum
A-Side	*32*				
B-Side	*12*				
C-Side	*9*				
E Module	**90**				Maximum
Level 1	*36*			PRGs	
Level 2	*54*			PRCs	
F Module	**96**				Maximum
A-Side	*70*	82	2 Med		
B-Side	*22*				
Medical Isolation	*4*				
M Module	**56 Total**		2 Med	2 Obs Rm	Maximum
Q Module	**82**	89			Maximum
T Module	**58**			Workers	Maximum
TOTAL	**715**				

MARSH CREEK DETENTION FACILITY

Housing Unit	Capacity				Security Level
	CCCSO		BOC		
	Male	Female	BRC	Notes	
Dorm D	**64**			Sentenced	Minimum
Dorm E	**64**			Sentenced	Minimum
TOTAL	**128**				

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.04
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-04-19 **REVIEW DATE:** 12-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Classification Records	

I. POLICY

A. Classification reports and interviews will be stored in the main Classification Office.

B. All active or in-custody files will be on the automated Jail Management System, JMS, and accessible only by Classification Personnel or those persons given authorization by the Division Captain.

C. All secured files will contain the classification report, all pertinent information used in the initial classification process, and any additional reports, such as:

1. Disciplinary reports
2. Crime reports
3. Memoranda
4. Inmate grievances that affect the classification status of the subject while in custody.

II. PROCEDURE

A. SECURITY

1. The Classification Office is to remain locked at all times when staff is not present.
2. All Classification deputies/clerks on duty are responsible for maintaining record security.
3. It is the responsibility of the Classification Sergeant to ensure the appropriate security measures are adhered to by all Classification deputies/clerks.
4. Any file printed from the computer and removed for other than updating shall be logged out.

5. No classification file will be removed from the Classification Office by anyone not assigned to that office without permission from the Classification Sergeant.

6. The log shall contain the following information:

   a. Staff person's name removing the file

   b. Inmate name and booking number

   c. Date file was removed.

B. DISSEMINATION

1. Whenever classification information critical to the operation of the facility is discovered, it shall be the Classification deputy's responsibility to advise the Classification Sergeant or, in his/her absence, the Facility Commander or their designee of said information pursuant to Minimum Jail Standards 1050.

2. The Classification Sergeant, Facility Commander or designee shall take appropriate action determined by the information received.

3. Any information or documents of a sensitive/confidential nature will be immediately brought to the attention of the Classification Sergeant or in his/her absence, the Facility Commander or designee.

4. Classification files and records will only be released in accordance with applicable California State Statutes.

C. CLASSIFICATION RECORDS

1. Classification records shall include the following reports if available:

   a. Classification Questionnaire

      - May be completed for any inmate and/or each inmate whose detention is to be for more than seventy-two (72) hours. This record may include past county and state incarceration information, gang involvement, and personal history.

   b. JMS Criminal History

      - This allows for on- screen visual or hard copy report of the inmate's Contra Costa Sheriff's booking history. This record will be used to supplement a DOJ/FBI Rap Sheet, or in lieu of a DOJ/FBI Rap Sheet, should that system not be available at the time of data gathering or if the DOJ Rap is "manual".

   c. DOJ Criminal Rap Sheet

      - Obtained via CLETS, indicates automated criminal history, FBI record alert, and DOJ Manual Rap record.

d. FBI Criminal History Rap Sheet

- Obtained via CLETS, indicates out-of-state arrest and criminal history data.

e. Initial Custody Assessment Scale

- A Classification Deputy will evaluate all pertinent data, fill in the appropriate scores with an end result being an objective custody level rating, or a justifiable documented reason for override.

f. Custody Reassessment

- A Classification Deputy will enter the assessment screen and evaluate old and new data. The appropriate scores will be filled in with the end result being an objective custody level, or a justifiable documented reason for override.

g. Classification Records

- May be automated and/or hard copy and will contain at a minimum:
  - Objective or documented subjective override justifiable for initial custody or reassessment custody levels.
  - Reports of disciplinary actions, grievances, incidents and crimes committed while in custody.
  - Medical and Mental Health information relative to classification.
  - When applicable, information relevant to program and Custody Alternative eligibility.

D. DISCIPLINARY REPORTS

1. A copy of all disciplinary reports will be forwarded to the Classification Office.

   a. This copy of the report will be reviewed by classification and pertinent information pertaining to sanctions, loss of privileges and relocation of the inmate will be entered in to the classification notes on the inmates JMS automated classification file.

   b. It shall be the responsibility of the classification deputy assigned by the Classification Sergeant to track all disciplinary isolations and loss of privileges reports, to ensure that proper care is taken in the completion of the disciplinary action.

   c. This includes insuring the inmate is moved to and from disciplinary isolation, and input of the proper disciplinary information into the JMS computer system.

E. COMPUTER INPUT

1. All classification information shall be input into JMS.

2. The Classification deputies are responsible for ensuring that all information in the JMS is current and accurate.

    a. This includes all initial and update information.

F. INMATE MANAGEMENT CARDS

1. All pertinent classification information will be stamped on the custody card by a Classification deputy.

2. All notations and housing assignments will be made by the Classification Unit.

G. PURGE

1. The classification records shall be retained in file/computer database, for at least five (5) years.

2. If a classification file has been inactive for a minimum of five (5) years it may be purged at the discretion of the Classification Sergeant.

H. TRANSFER

1. When an inmate is transferred to the West County Detention Facility or the Marsh Creek Detention Facility, their Classification File will be accessible by Classification personnel via the JMS computer system for evaluation and update purposes.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.05
	RELATED ORDERS: MJS 1050	
ISSUE DATE: 07-01-04 **REVISION DATE:** 12-04-19 **REVIEW DATE:** 12-11-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Assignment of Hazard Codes	

I. POLICY

A. The Classification Unit shall be responsible for the Hazard code entries in the JMS system and on the inmate management card. Hazard codes are based on the inmate history and degree of classification evaluation pursuant to Minimum Jail Standards 1050.

B. The codes are intended to identify specific reasons inmates are classified or reclassified to higher level of custody.

1. They may act as a warning to anyone who could come in contact with the inmate to be cautious when handling the person, that the person has enemies in the facility or requires medical or mental health treatment.

C. This information shall be available to the jail staff, transportation and court personnel, on the JMS System as well as noted on the individual inmate management card.

D. The hazard code shall appear as stamped abbreviation on the management card and in the JMS System.

E. Only the Classification Unit may authorize the addition or deletion of an inmate's hazard code(s) on the inmate management cards and have the sole responsibility for updating hazard code data in the JMS system.

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Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.06
	RELATED ORDERS: MJS 1067 18 U.S.C. 2511 (1)(a); (4) P.C. 631, 632, 632.7, 633, 633.5, 636 California Evidence Code Sections 950-962 US Code Title 18, Part I, Chapter 119, Section 2511	
ISSUE DATE: 07-01-04 **REVISION DATE:** 10-30-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Inmate Telephone Monitoring / Recording	

I. POLICY

The Office of the Sheriff affords inmates the privilege of legitimate telephone communications with individuals from the community. While providing this privilege, the Office of the Sheriff also has the responsibility to protect society from harm, including criminal activity, harassment, threats, the introduction of contraband, intimidation, and to prevent escape attempts facilitated using the facility telephone system. The monitoring, recording, and analysis of inmate telephone calls is done for the security of the facility, staff and the public. All recordings will be done in accordance with current law.

II. APPLICABLE CASE LAW

A. Lanza v. New York, 370 US 139 (1962)
B. People v. Windham, 145 Cal.App.4th 881 (2006)
C. People v. Loyd, 83 Cal.App.4th 1166
D. People v. Sanchez, Case 80449-2; Order and Opinion 80039-1

III. DEFINITIONS

A. **Blocked Number Database**: Refers to the database of telephone numbers that inmates cannot call. This database can be accessed and updated by both CAS and GTL personnel. When a blocked telephone number is dialed by an inmate, the telephone call will not be completed - no connection will be made.

B. **Confidential Communication:** Any communication that is considered confidential under the law or by policy, including communication: between an attorney-client; between physician-patient; or with a psychologist, psychiatrist, minister, priest, or clergy. Calls initiated by pro-per inmates, using the provided pro-per telephone are recognized as privileged communications (Pro-per inmates are permitted to make unmonitored and unrecorded calls on legal matters when they have court documents that verify that they are representing themselves.)

C. **Global/Tel*Link (GTL)**: The vendor that provides inmate telephone service and manages the hardware and software that manages, records, stores, and monitors inmate telephone communications.

D. **GTL Workstation:** A computer terminal that provides access to the GTL System as a primary function. These terminals are owned and serviced by GTL.

E. **Monitoring:** A staff function of listening, with or without monitoring equipment, to inmate telephone calls to ensure that prohibited activities are not coordinated using the telephone system.

F. **Privileged Number Database**: Refers to the database of privileged telephone numbers. This database can be accessed and updated by both Custody Administrative Services (CAS) and GTL personnel. When a privileged telephone number is called from an inmate telephone, the conversation will not be recorded by the GTL System.

G. **Records:** Refers to either the digital recordings of telephone calls originating from facility telephones, the corresponding computer-generated records of the telephonic activity, or both.

IV. PROCEDURE

A. System Installation / Maintenance / Repair / Security

1. Management of the GTL Contract within the Detention Facilities is the responsibility of the Director of the Inmate Welfare Fund.

2. GTL is responsible for the installation and maintenance of the inmate telephone systems used within the Detention Facilities operated by the Office of the Sheriff.

3. GTL is responsible for the physical security of the data recorded from the inmate telephones and stored on the GTL System.

4. Recordings maintained on the GTL System are Official Records of the Office of the Sheriff. These records will not be accessed by unauthorized users. Access to these records by unauthorized personnel may result in criminal prosecution.

5. GTL System Users will not modify, change, or alter GTL installations unless requested to do so by a GTL Technician and approved through the Chain of Command.

6. Management and maintenance of user accounts, the privileged number database, the blocked number database, and user training is the responsibility of CAS.

7. Users have the responsibility to ensure that their user name/passwords are kept confidential. User names and passwords will not be used by anyone other than the issued user. Users are responsible for controlling access to the inmate telephone system using their terminal/user account. Users who divulge access to the telephone system will have their access to the system suspended and may be subject to criminal prosecution.

B. System Management / Access Control

1. Custody Administrative Services is responsible for the management of user training and user accounts. CAS will maintain a database of user accounts and contact information. Two types of account access are authorized to this system:

    a. **Administrator Accounts**. Administrator Accounts allow for the creation of user names, user passwords and detailed system permissions. The CAS Lieutenant will approve the establishment of all Administrator Accounts and identify the specific capabilities for each administrator. Administrator accounts will only be issued to members of CAS.

    b. **User Accounts**. User accounts allow for authorized individuals to access, monitor and reproduce telephone calls made using the inmate telephone system. The CAS Lieutenant will approve the establishment of all User Accounts and define the restrictions for each user.

2. The Custody Administrative Services (CAS) Unit is responsible for monitoring and auditing user access and activity using the telephone recording system. Like the CLETS System, all activities of users are logged within the GTL System. Call monitoring, recording, and downloading are all activities that can be tracked by the CAS Unit.

3. The Custody Administrative Services Unit is responsible for deactivating accounts of personnel who fail to meet current user certification standards or who fail to complete administrative requests.

4. At least three times each calendar year, CAS will:

    a. Audit administrator and user accounts, deactivating access when appropriate.

    b. Update the privileged number database (by adding and deleting users/telephone numbers).

    c. Conduct an audit of system access to ensure that only authorized users are accessing the system and that proper procedures are being followed.

    d. Validate that inmate notifications about monitoring are still in place.

        1. Orientation Video

        2. Telephone Admonishment Booking Form

        3. Signs at every inmate telephone

        4. Inmate telephone message "branding" for both inmate and call recipient.

    e. Validate that signs notifying attorneys of the process to add their telephone number to the privileged number database are posted at jail facilities.

C. User Authorization / Training / Certification

1. In order to access the Inmate Telephone System, users must:

   a. Be an employee of a law enforcement agency or GTL with a need to access the inmate telephone recording system.

   b. Sign and submit the completed GTL Use Admonishment Form to the CAS Office.

   c. Submit a business card with their name, telephone number and email address upon it.

   d. Agree to follow the guidance provided by this policy and procedure section.

   e. Complete user training during the next scheduled GTL User Training Course.

2. Requests for access will be forwarded for approval to the CAS Unit Lieutenant.

3. Approved Users will be granted access by a CAS Unit System Administrator. All user accounts issued by CAS will contain the prefix "CSB" to indicate the account was created by CAS Staff.

4. Copies of all administrative and training records for system users will be maintained by CAS.

D. System Training

1. System training requirements will be managed by CAS.

2. All system administrators and users will complete a course of instruction regarding the inmate telephone recording system that includes:

   a. Operation of recording and listening devices;

   b. Preservation and collection of evidence;

   c. Orientation to applicable state statutes;

   d. Confidentiality requirements of the system; and

   e. System security.

E. Authorized Monitoring Locations

1. The Custody Services Bureau Assistant Sheriff will approve all locations where the inmate telephone monitoring system may be accessed from. Inmate telephone recordings or records will not be accessed from any location that is not an approved location.

2. Inmate telephone calls will be accessed in a private setting, where conversations cannot be overhead by non-law enforcement personnel. Inmate telephone calls will not be shared with other non-law enforcement or judicial system personnel.

3. Access to the inmate telephone system will not be made via the internet.

F. Privileged Number Database

1. The telephone numbers of individuals who are authorized by law or policy to conduct confidential communications will be stored in the privileged number database. The purpose of the privileged number database is to ensure that certain telephone conversations are not recorded, nor monitored by law enforcement.

2. The privileged telephone number database will be populated from the following sources:

   a. Telephone numbers of practicing attorneys listed within the Contra Costa County BAR Telephone Directory.

   b. Telephone numbers assigned to the Public Defenders Office.

   c. Telephone numbers assigned to the Alternate Defenders Office.

   d. Telephone numbers assigned to the Contra Costa County Courts.

   e. Telephone numbers of practicing attorneys from local telephone directories.

   f. Telephone numbers from attorneys who request that their numbers be added to the privileged telephone number database. These numbers will only be added upon the verification that the individual is a practicing attorney.

   g. Telephone numbers from the Contra Costa County District Attorneys Office.

   h. Telephone numbers of medical and mental health professionals who request that their numbers be blocked because of their professional relationships with inmates.

   i. Telephone numbers of custody services religious advisors work phone numbers.

   j. Telephone numbers identified by inmates in pro-per status

   k. Other telephone numbers approved for addition to the privileged telephone number database by the CAS Lieutenant.

3. GTL representatives will provide assistance by adding telephone numbers to the privileged number database upon the approval of CAS Staff.

4. Prior to the removal of privileged telephone numbers from the database (other than pro-per inmates), written approval will be obtained from the Detention Division Captain. Because pro-per inmates change telephone numbers frequently, members of CAS may change or delete those numbers when needed, without permission.

5. Complaints about the management of the Privileged Telephone Database will be directed to CAS.

G. Blocked Number Database

1. The blocked number database contains the telephone numbers of individuals who do not wish to receive telephone calls from inmates housed in the Sheriff's Detention Facilities. Because of the system denies inmates from connecting with these telephone numbers, there is little maintenance that is required.

   a. Adding Numbers to the Blocked Number Database. Numbers may be added to the blocked number database upon request to either the Classification Unit or CAS. Typically, requests for blocking are made by crime victims, families, or other persons who do not wish to have inmates calling specific telephone numbers. GTL representatives may also add telephone numbers to the blocked database without permission - as they receive complaints through their billing system.

   b. Removing Numbers from the Blocked Number Database. The removal of telephone numbers from the blocked number database will be done upon a verified request to either the Classification Unit or CAS. GTL representatives may also remove telephone numbers from the blocked database without permission.

2. Complaints about the management of the Blocked Number Database will be made to CAS.

H. Inmate Notification

1. Inmate non-privileged conversations conducted on telephones provided specifically for their use are not considered to be private and may be monitored and/or recorded.

2. Inmates using monitored phone lines within the Sheriff's Detention Facilities will be made aware that their calls may be monitored, analyzed, and reviewed by law enforcement. Notification to inmates will be done by:

   a. During the booking process, inmates will be shown the orientation video. The video does and will contain information that inmate telephone calls are subjected to recording and monitoring.

   b. During the booking process, inmates will sign a form that acknowledges that their telephone calls may be monitored and recorded by law enforcement.

c. All inmate telephones intended for non-privileged conversations will have a sign posted near the telephone that identifies that inmate telephone calls may be monitored and recorded by law enforcement.

d. All inmate telephones will provide an automated message to both the inmate and the telephone call recipient that calls are subject to monitoring and recording by law enforcement. The receiver of the telephone call must be given an option to refuse the receipt of the telephone call (thus refusing to consent to monitoring by law enforcement).

I. Attorney Notification

1. Signs will be posted in detention facility lobbies and court screening areas to notify attorneys of their ability to identify telephone numbers that should be added to the privileged telephone number database.

2. Custody Administrative Services will maintain records indicating attempts to obtain updated telephone rosters from entities that are likely to request privileged telephone access.

J. Inmate Telephone Call Review / Monitoring / Recording

1. Only those persons authorized by law will monitor inmate telephone conversations.

2. Only those personnel who have been issued a user name / password from CAS will be allowed to review inmate telephone calls from the Sheriff's Detention Facilities using the GTL System.

3. Legally recognized privileged communications will not be monitored (PC 636(a)). Any court order for monitoring of privileged conversations by any law enforcement agency will be approved by both County Counsel and the District Attorney's Office.

4. Telephone calls made on pro-per telephones are privileged communications and will not be monitored or recorded without a court order (as described in 3 above).

5. Employee conversations cannot be recorded using the inmate telephone recording system, unless an employee uses an inmate telephone. Employees will not use the inmate telephone system to complete personal telephone calls.

6. Authorized Allied Agency Law Enforcement Officers may monitor recorded inmate telephone calls

7. Authorized Allied Agency Law Enforcement Officers will not disconnect inmate telephone calls. Only personnel assigned to the Classification Unit are authorized to disconnect active inmate telephone calls.

8. Authorized Allied Agency Law Enforcement Officers will have a valid law enforcement investigatory reason to access specific inmate telephone calls. Only Authorized Sheriff's Office Personnel may conduct random monitoring of inmate telephone calls, in accordance with this policy and procedure. Non-Sheriff's

Office Users who are identified as performing random screening will be removed from the system and subject to disciplinary action, including criminal prosecution.

9. When High-Profile Inmates are housed in the Sheriff's Detention Facilities, CAS will monitor those accounts to ensure that telephone calls are monitored for legitimate law enforcement reasons only. CAS will notify system users of telephone numbers that are not to be accessed to avoid accidental monitoring.

10. When inmate telephone calls are recorded from the system, the original recording should be locked - to ensure that it is archived and not erased. Recordings of inmate telephone calls that are downloaded from the system will be safeguarded like other forms of law enforcement evidence. All recordings will be reviewed prior to downloading to ensure no privileged conversations are downloaded, recorded, or released.

11. Users are prohibited from discussing or commenting on the contents of any recorded / monitored interception except to safeguard facilities, in response to a court order, or in the prosecution / investigation of any crime.

K. Releasing Inmate Telephone Calls Records

1. Custody Administrative Services is the custodian of record for recordings made using the inmate telephone system. Official Requests or Subpoenas for records from this system will be directed to CAS.

2. The contents of a recorded/monitored telephone call shall be divulged only when necessary to safeguard the orderly operation of the facility, in response to a court order, or in the prosecution/investigation of any crime.

L. Allied Law Enforcement Agency Requests for Monitoring / Recording

1. All requests for telephone recordings from Allied Law Enforcement Agencies shall be addressed to CSBRecords@so.cccounty.us. Allied Law Enforcement Agencies will not release telephone recordings to other Law Enforcement Agencies. All approved requests will be forward to MDF/WCDF Classification Unit.

2. Allied Law Enforcement Agencies that request to monitor telephone calls may do so at the MDF/WCDF Classification Unit.

3. Only Authorized Users will be authorized access to the inmate telephone recording system in the Classification Unit.

M. Compromised Privileged Communications

1. Every effort will be taken to avoid intercepting any confidential communications by users of the Inmate Telephone System.

2. If a confidential communication is accessed, monitoring of that conversation should be terminated immediately.

3. Regardless of the length of the monitoring that is done, the mere access to this type of telephone call requires immediate reporting:

   a. Users will immediately notify the Classification and CAS units.

   b. A memo to the Detention Division Captain will be generated, identifying the reason for the user was performing monitoring, the length of time the call was monitored, and the identification of the specific record that was accessed.

   c. The Detention Division Captain will notify the Bureau Assistant Sheriff.

   d. The Detention Division Captain, or their designee, will contact the District Attorney's Office, the Privileged Party, and the Presiding Judge, notifying them of the violation.

   e. A member of CAS will lock the telephone recording and identify the exact length of the violation. A copy of the recording will be burned to a CD and safeguarded as evidence.

   f. A Corrective Action Plan (CAP) regarding the access to the recording will be completed, to identify how the intrusion occurred.

   g. Custody Administrative Services will maintain a log and records of any compromises of privileged communications.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.12.07
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 10-30-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Classification	**SUBJECT:** Selection of Housing Unit Inmate Workers	

I. POLICY

A. Custody Services Bureau personnel will ensure that inmate worker applicants have been properly screened prior to being selected.

B. The Classification Unit shall conduct a review of the inmate's jail records and criminal history to determine the inmate's eligibility to work.

C. The Classification Unit will have the final authority in the selection of all permanent inmate workers.

II. PROCEDURE

A. Any housing unit deputy receiving an inmate request slip from an inmate desiring to be a module worker will concur/not concur before submitting the request to the Classification Unit for review.

1. Housing Unit Deputies will select module workers and will submit names to the Classification Unit for approval.
2. Housing Unit Deputies may assign Temporary Workers prior to receiving classification approval.

3. Temporary Module Workers will not be assigned more than one (1) day.

B. The Classification Unit will conduct a review of the selected inmate's information, including, but not limited to:

1. JMS print out of:

a. Custody Status and Charges

b. Classification Profile

c. Disciplinary Review

d. Release Date (if sentenced)

e. Inmate's Account Transactions

C. The Classification Unit will research their records to make the following assessments:

1. Propensity towards violence or gang affiliation.

2. Psychiatric history for unstable behavior.

3. Escape risk factors, i.e., 3-strike clause enhancement.

4. Special circumstances/death penalty.

5. Complete classification review (prior profile).

D. If the Classification Unit's review deems the inmate suitable for selection as an inmate worker:

1. The inmate request form will be stamped APPROVED, signed by the Classification Deputy and returned to the housing unit via mailroom procedures.

2. The approving Classification Deputy will contact the housing unit to advise the housing unit deputy of the approval.

3. The Classification Deputy will place all information used to determine the inmate's eligibility in the inmate's classification file.

E. If Classification's review deems the inmate not suitable for selection:

1. The denying classification deputy will update the Classification Detail Report to state, "Not cleared to work."

F. The Classification Unit's decision is the final authority.

Section Three - Inmate Rights, Services, and Programs

Contents

Chapter Thirteen **Medical and Mental Health Services**
Chapter Fourteen **Food Services**
Chapter Fifteen **Sanitation and Hygiene**
Chapter Sixteen **Inmate Rights, Rules, and Discipline**
Chapter Seventeen **Inmate Communication and Visiting**
Chapter Eighteen **Inmate Services and Programs**

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.01
	RELATED ORDERS: M.J.S. -1051, 1200-1230 Contra Costa County Detention Facility Health Services Policy and Procedures Manual	
ISSUE DATE: 01-13-04 **REVISION DATE:** 05-04-17 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Medical and Mental Health Care	

I. POLICY

A. Health Services will be provided for all inmates who are in need of treatment and care to reduce suffering from medical/mental problems.

B. Policies, procedures and programs in the Health Care Program will be reviewed at least annually and updated as necessary by the Medical Director/Nurse Manager and Mental Health Program Supervisor.

C. The Medical Director/Nurse Manager and/or designee will meet with the Division Commander/designee at least quarterly (January, April, July, October) to confer on the Health Care Delivery System and an annual statistical report.

II. DEFINITIONS

A. TRIAGE: The sorting and allocation of treatment to patients according to priorities of need.

B. SERIOUS INJURY: Any injury causing the inmate to be admitted to a medical facility.

C. CO-PAYMENT: A charge for medical services paid by inmates for self-initiated, non-emergency medical visits.

D. CUSTODY HEALTH SERVICES M.O.U.: An agreement between Health Services Department and the Sheriff regarding Medical and Mental Health services to be provided in adult jail facilities.

E. DETENTION HEALTH SERVICES ADMINISTRATOR: The Detention Health Services Administrator (DHSA) serves as the Health Authority for Contra Costa County Detention facilities. The DHSA is responsible for coordinating the provision of inmate Medical, Psychiatric, Dental, Pharmaceutical, and Psychiatric health care for inmates in the county's detention system. Additionally, the DHSA is responsible for executive oversight of health services operations, policies and procedures, quality assurance and program evaluation. The DHSA shall be under the direction of the Contra Costa Regional Medical Center's Executive Director.

F. NURSING PROGRAM MANAGER: The Nursing Program Manager, under direction, plans, organizes and supervises the delivery of nursing services for the MDF, MCDF and WCDF; participates in special nursing assignments or study projects; and performs other related work as required. The Nursing Program Manager reports directly to the Director of Psychiatric Nursing.

G. CHARGE NURSES: The Charge Nurse receives direction from and reports to the Nurse Program Manager. The Charge Nurse directs staff nurses, LVNs and clerical staff. The Health Services Charge Nurse assumes responsibility for medical operations in the Facility in the absence of the Nursing Program Manager.

H. STAFF NURSE: The Staff Nurse position at the Contra Costa County Detention Facility receives direction from the Charge Nurse and the Nursing Program Manager, supervises the LVNs and other ward clerk's positions and coordinates with clerical and other Department personnel.

1. The Staff Nurse is responsible for screening of patients in triage examinations, obtaining patient histories and acting in a supportive role to the M.D. in direct patient care.

I. MENTAL HEALTH CLINICAL SPECIALIST: A clinician who by education, training and experience is qualified to provide clinical and evaluative psychological services.

1. Must possess a Masters Degree with a major in social work, psychology or psychiatric nursing and a valid California clinical license:

a. PhD

b. LCSW

c. MFCC

d. MFT

III. PROCEDURE

A. HEALTH SERVICES

1. Matters of judgment regarding health services will be the sole province of the Health Services staff.

2. Security regulations will be adhered to at all times by Health Services staff.

a. If a situation arises where a medical emergency conflicts with a security requirement and no practical alternative exists, the situation will be resolved in favor of the medical emergency.

3. Health Services personnel will not be asked to provide inappropriate non-medical duties such as body cavity searches.

4. The primary responsibility of medical personnel is to provide required health

services for the entire inmate population.

5. Detention medical services include:

   a. Screening of all newly received inmates

   b. Inmate Sick Call (every day)

   c. Medical and psychiatric availability

   d. Referral service for hospitalization and specialty clinics as needed

   e. Dental services

   f. Optical services

   g. Administering medications

6. No sterilization procedures are to be performed on any inmate except in the presence of exigent circumstances that are life threatening, emergency in nature, or as a part of an evidence-based treatment plan for a diagnosed condition.

   a. In the presence of exigent circumstances, the following conditions shall all be met:

      - Less invasive measures to address the medical need are nonexistent, unsuccessful, or have been refused by the inmate.

      - An independent physician has been consulted and confirms the need for medical intervention.

      - Inmate consent for sterilization is obtained after receiving all pertinent information and has been made aware of the full and permanent impact of the medical procedure.

   b. Any staff member, contractor, volunteer, or inmate who reports that an unlawful sterilization has been performed is entitled to the protection available under the California Whistle Blower Protection Act.

7. In reference to M.J.S. 1051 of Title 15, any inmate identified as having a communicable disease shall be housed as set forth in the Contra Costa Detention Facility Health Services Policies and Procedures Manual.

8. Health care services, including medical, dental and mental health, will be under the control of the Contra Costa County Health Services Department pursuant to an inter-departmental agreement between the Health Services Department and the Sheriff's Department (M.O.U. Appendix).

9. Inmates will not be used for the following duties:

   a. Performing direct patient care services

b. Scheduling health care appointments

c. Determining access of other inmates to Health Care services

d. Handling or having access to:

- Surgical instruments
- Syringes
- Needles
- Medications/Self-Medication
- Health Records

10. Scheduled health care appointments will be conducted in designated exam rooms.

11. Sobering of inmates will be done under the supervision of medical staff. (Refer to Contra Costa County Detention Facility Health Services Policy and Procedures Manual.)

12. Medical and dental prostheses will be provided when the health of the inmate would otherwise be adversely affected, as determined by the responsible physician or dentist.

13. The Facility Commander or designee and the Nurse Manager/Mental Health Program Supervisor or designee will consult with each other regarding inmates who are diagnosed as having psychiatric illness prior to:

a. Housing assignments

b. Program assignments

c. Disciplinary measures

d. Transfers in and out of the Facility

14. Medical staff will be available on a daily basis for all housing units.

15. Inmates will not be used for medical, pharmaceutical or cosmetic experiments.

16. Inmates desiring the full name of a Health Services employee should be given the first name and employee number only. This will allow the inmate to file his writs, but will afford the employee protection and privacy.

B. MANAGEMENT OF PHARMACEUTICALS

1. The prescribing, dispensing and administering of drugs will be done in compliance with appropriate federal and state laws.

2. All medication administered to inmates must be taken immediately with liquid and in front of Health Services personnel unless the inmate is on the self-administration program in accordance with CSB Policy and Procedure 2.13.08, Sick, Dental and Pill Call.

3. Inmates will be allowed to carry certain prescribed medication and their inhaler as determined by medical staff. Inmates must possess a "Permission to Carry Medication" card with the specific medication, inmate's name, authorizing Medical staff, expiration date and maximum amount of medication to be carried by inmate.

    a. Exception: M Module inmates placed for mental health considerations will not be permitted to carry prescribed medications.

4. Inmates are to keep their prescribed medications secured in their assigned living area or on their person at all times.

5. Psychotropic medications are prescribed only when clinically indicated as one facet of a program of therapy. They will not be used as a means of chemical restraint.

6. Medical staff prescribing medication to inmates will include a "stop order" date for the medication and re-evaluate the prescription prior to renewal.

7. All controlled substances, syringes and needles will be stored in the Medical Room (nurse's station) when not in use.

8. The Nurse Manager/designee will be responsible for assigning a staff member to conduct a weekly inventory of syringes, needles and blades in the Medical Services Unit and count syringes daily.

9. First Aid kits are available at designated areas, approved by the Medical Director. The day shift supervisors of each working post will be responsible for checking and ordering supplies for the First Aid kits on a monthly basis and on an as need basis.

10. Unless indigent, inmates who desire over-the-counter medicines such as Aspirin, Tylenol, etc., can purchase these items through Commissary, at the inmates' expense.

    a. Indigent inmates may request over the counter medications via Inmate Commissary.

C. INMATE MEDICAL RECORDS (CONFIDENTIALITY)

1. Contra Costa County Health Services will establish written policy and procedure regarding the transfer of health records and information within the following requirements:

    a. Summaries or copies of the health record are routinely sent to the facility to which the inmate is transferred.

b. Written authorization by the inmate is necessary for transfer of health record and information unless otherwise provided by law or administrative regulation having the force and effect of law.

c. Health record information is also transmitted to specific and designated physicians or medical facilities in the community upon the written authorization of the inmate.

2. Compilation and completion of medical records data shall be completed in a uniform manner as directed by the medical director.

a. Qualified health personnel shall collect all health data and history.

b. Health Services will control access to the inmate medical records.

3. Health service staff will advise the classification unit of any information that affects the management of an inmate's security status or ability to participate in jail programs.

4. Health Services staff will share with the Division and/or Facility Commander or designee any information which the Health Services staff determines to be necessary for the management of inmate's security status and ability to participate in programs.

5. The inmate's consent is required for transfer of health services records unless the records are transferred directly from one health services provider to another for the express purpose of providing continued patient care. Other release of confidential information will be controlled by patient informed consent, unless otherwise stated by law.

6. Summaries or copies of inmate health services records will be routinely sent in a confidential manner to the Facility Health Services Unit to which the inmate is transferred.

a. Custody staff will notify Medical of pending transfers as soon as they are known, in order to allow them time to prepare transfer paperwork.

- Transfer paperwork shall be completed and delivered to custody staff in a timely manner.

b. A medical transfer envelope will accompany all inmates being transferred out.

c. Medical information arriving with a transferred inmate will be handed to a nurse upon arrival.

D. EMERGENCY CONTACT OF INMATE'S NEXT OF KIN

1. The Facility Commander or designee will make all notifications to a seriously injured or ill inmate's next of kin.

2. Should an inmate desire notification of next of kin in an emergency situation, the

inmate must provide information of whom to contact.

3. The inmate's willingness to provide emergency contact information indicates the inmate's permission for emergency notification of next of kin by Facility staff.

4. The Operations personnel will only notify an inmate's next of kin in cases where the inmate is hospitalized or not physically able or mentally capable to make the notification on their own volition.

5. The individual making the emergency contact notification will complete an Incident Report regarding the contact.

E. SELF-INITIATED MEDICAL SERVICES CO-PAYMENT

1. A $3.00 co-payment charge may be charged to the inmate's personal account at the Facility for the following:

   a. Each prescription

   b. Each issuance of over the counter medication

   c. Each nursing sick call

   d. Cancellation of scheduled outside medical appointments without valid reason

   e. Any rescheduled required hospital appointments

2. Exceptions:

   a. Health Services shall waive all fees in any life-threatening or emergency situation.

   b. Follow-up visits at the direction of the Medical staff shall not be charged a co-payment.

3. Inmate initiated medical contacts and other required services resulting in the dispensing of over-the-counter (OTC) meds will result in a co-payment charge.

4. All monies received by the Sheriff shall be deposited into the County General Fund.

5. No inmate will be denied medical care due to lack of funds in their accounts.

F. CO-PAYMENT ELIGIBILITY

1. ***All inmates requesting to be seen by Health Services staff will be charged a $3.00 co-payment for their initial contact. Subsequent contacts for the same condition will not require a co-payment during treatment.***

2. ***Should the symptoms return after a reasonable time of good health and the inmate require further contacts, they may again be charged a co-payment for the initial visit.***

3. Personal contact is required for any co-payment

   a. Telephone triage is not chargeable.

G. CO-PAYMENT AUTHORIZATION

1. Health Services personnel will advise the inmate of the co-payment requirement prior to performing any services.

2. The Accounting Office will verify the inmate's account balance and make the appropriate adjustments or begin a no-cash ledger for those without adequate funds.

3. Each week, prior to the Facility's scheduled commissary day, the Facility Account Clerk will review the inmate's current account balance.

4. If the account shows a balance, the outstanding medical co-payment charge will be deducted prior to any commissary transaction.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.02
	RELATED ORDERS: NCCHC Standard J-2, AMA Standard 112, CCCDFHS P&P M-125	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-31-19 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Inmate, Staff and Public Medical Emergencies	

I. POLICY

A. A prompt response to acute medical problems will be provided for non-urgent, urgent and emergency situations by means of an appropriate notification system.

B. Custody Services Bureau Staff shall work in concert with the medical staff to provide the best medical care.

C. In every instance where an emergency medical incident has occurred, or a weapon, chemical agent or force is used; an immediate medical examination and treatment shall be performed.

II. DEFINITIONS

A. CODE ONE MEDICAL ASSISTANCE REQUEST: A non-urgent medical/mental health problem to include, but not limited to the following:

1. An injury not immediately threatening to life or limb

2. Severe back pain without obvious injury or paralysis

3. Sudden headache but without history of head trauma or loss of consciousness

4. The individual gives history of mental problems but is not experiencing any symptoms

B. CODE TWO MEDICAL ASSISTANCE REQUEST: An urgent problem to include, but not limited to the following:

1. An acute injury with head trauma to include temporary loss of consciousness

2. Suspected seizure but patient breathing

3. An individual suffering severe hallucinations

4. An individual threatening to commit suicide

C. CODE THREE MEDICAL ASSISTANCE REQUEST: A medical emergency to include, but not limited to the following:

1. An individual in the act of committing suicide

2. Uncontrolled bleeding

3. Any individual unconscious/unresponsive

4. Cardiopulmonary arrest/severe chest pains

D. CODE THREE MEDICAL-TRANSPORT ONLY REQUEST: An urgent medical problem (Code-2 situation) where medical staff has requested a code-3 ambulance for transport to CCRMC.

III. PROCEDURE

A. COMMUNICATIONS

1. Staff members initiating any request shall provide descriptive information (i.e. tier, room number, etc.) regarding all incidents requiring response.

2. All communications should be relayed in calm, even tone to ensure an accurate and appropriate response.

3. All location descriptions will be announced using the approved CCCSO phonetic alphabet ("Adam" for A Module, "Boy" for B Module, etc.) when applicable.

4. Shift Sergeants will be responsible for monitoring and controlling staff response and needs through incident conclusion.

B. MEDICAL EMERGENCY RESPONSE

1. Medical staff will respond and handle all medical calls within the Facility and the lobby.

2. Central Control will give priority to requests from medical staff during a medical emergency.

3. Custody Staff should refrain from contacting central control unless an emergency exists.

4. Housing Unit Deputies will notify Central Control via portable radio to expedite medical staff leaving the housing unit in order to respond to the emergency.

5. Sworn staff will advise Central Control when situation is secure (Code 4) and/or if additional assistance is required.

C. CODE ONE MEDICAL ASSISTANCE REQUEST

1. Code One Medical Assistance requests should be generated only via telephone or intercom system.

    a. West County Detention Facility may utilize the radio for non-urgent Requests for Assistance.

    b. The Housing Unit Deputy will call Health Services staff and confer with the appropriate Health personnel regarding the inmate's problem and/or action to take, if any.

2. If the Deputy be unable to make contact with appropriate Health personnel, the Deputy will call Central Control who, in turn, will page Health personnel, i.e., "Medical staff contact (location)"

D. CODE TWO MEDICAL ASSISTANCE REQUEST

1. Code Two Medical Assistance Requests should be generated by telephone or intercom when possible and by radio only when necessary.

    a. West County Detention Facility utilizes the radio for all Requests for Assistance.

2. Central Control will announce all Code Two Medical Assistance requests by depressing the tone button one time and announcing, “Attention in the Facility: Code Two Medical Assistance Requested at (location).” (Repeat once).

3. All available Health Services nurses will respond to the location of the request.

4. The requesting deputy will ensure that Central Control is notified when no other assistance is required (Code 4).

5. Central Control will announce the conclusion of the incident by stating and repeating, “(location) Code 4.” (Repeat once).

E. CODE THREE MEDICAL ASSISTANCE REQUEST

1. Code Three Medical Assistance Requests will be generated via any form of communication.

2. Central Control will announce all Code Three Medical Assistance requests by depressing the tone button one time and announcing, “Attention in the Facility: Code Three Medical Assistance Requested at (location).” (Repeat once).

3. The Shift Supervisor will respond to the location.

4. All available Sheriff’s Aides will respond to Central control to provide assistance.

5. Central Control staff will request fire and ambulance respond code 3 to the facility.

6. All custodial activities will be terminated immediately in the affected area.

    a. Inmates in areas not directly affected will be locked down until the incident has been called “Code 4” by central control.

    b. Deputies transporting inmates will stop movement in the closest location where emergency response would not be hindered.

7. All custodial phone lines and radios will be cleared for any traffic being initiated by the area requesting the emergency assistance.

8. Central Control will open the intercom channel to the entry area of the emergency in order to monitor approaching staff and allow access as quickly as possible.

9. All Medical personnel will immediately respond to the scene in the following manner:

    a. The charge nurse (designated Medical Housing Unit nurse) will respond to the site of the emergency.

    b. One nurse will respond to Medical Housing Unit, obtain emergency equipment and transport to the scene.

    c. The physician or family nurse practitioner (if in the Facility) will respond to the scene.

    d. All otherwise unassigned medical staff shall report to the location of the emergency to assist as necessary.

10. Available deputies will respond to provide assistance if necessary.

    a. Deputies on housing units not affected by the emergency shall not respond unless directed to by their shift supervisor.

    b. Deputies wearing civilian clothes should not respond.

11. Deputies arriving at the location should approach with caution and from as many points as tactically possible to help identify and address unexpected hazards.

12. Deputies will control their response to an appropriate level based on the request and within the guidelines as set forth in departmental policies.

13. The requesting deputy or his/her designee will ensure that Central Control is notified when no other assistance is required (Code 4).

14. Central Control will announce the conclusion of the incident by depressing the tone button one time and stating and repeating, “(location) Code 4.” (Repeat once).

F. REQUESTS FOR FIRE AND AMBULANCE

1. Custody staff shall contact Central Control once a medical assessment is made to advise if additional emergency medical assistance or transport will be required.

    a. In the event an Ambulance is requested by medical staff, Central Control will contact Central Dispatch and request an Ambulance respond Code Three to the Facility and will provide any known details of the injuries and number of people requiring emergency transportation.

    b. Central Control will announce, "Code-3 Medical-Transport only."

    c. Custody staff will respond in the same manner as a code-3 medical (refer to section E).

    d. Medical staff will respond according to the code-2 procedure (refer to section D).

    e. An ambulance may also be requested if Medical staff has determined based on the nature of the injury and the inmate's medical status that there is a risk of spreading an infectious disease to others.

    f. If a Code-2 Medical situation is elevated to a Code-3 level, normal Code-3 procedures shall be followed.

G. AMBULANCE DISPATCH

1. All ambulance calls to the facility for medical codes will be directed to respond to the Vehicle Sally Port. Any exceptions will be at the discretion of the Shift Supervisor or Custody Sergeant requesting the ambulance call-out.

2. If and ambulance arrives at the facility to transport an inmate and Central Control has no prior knowledge of their arrival, the Central Control Operator will:

    a. Notify the Shift Supervisor or Custody Sergeant.

    b. Hold the ambulance crew in the vehicle sally port until receiving additional instructions.

    c. The Custody Sergeant or designee will respond to location of ambulance arrival and wait to escort the ambulance crew to and from the location of the inmate.

H. NON-AMBULANCE DISPATCH

1. All urgent problems requiring assessment treatment at the hospital will be handled during the shift the problem was identified. Examples of urgent problems are: suturing and/or x-ray for trauma conditions that become unstable.

2. When an inmate requires transport to the hospital, but does not require an ambulance:

a. The Charge Nurse will contact and advise the Shift Supervisor of the following:

- Injured party's status
- Transportation needs
- Estimate of how soon they should be transported

3. The Shift Supervisor or Custody Sergeant shall make the appropriate transportation arrangements.

I. DOCUMENTATION OF CODE TWO AND THREE MEDICAL ASSIST REQUESTS

1. Central Control will make the following log entries:

a. Time and location of emergency.

b. Time medical staff was called/arrived at scene.

c. Name of person requesting an ambulance.

d. Injured person's name, booking number if applicable and nature of medical problem.

e. Time ambulance was called and estimated time of arrival.

f. Time ambulance and/or Fire/Rescue arrive at facility.

g. Time ambulance and/or Fire/Rescue leave facility.

h. Log any other information pertinent to the emergency i.e., cancellation of ambulance, delays in arrival of ambulance or any changes in medical condition of injured person.

2. The deputy requesting a code two or three medical assist shall provide the following in both JMS Redbook, Activity Logs and an Incident Report:

a. Date and time the medical emergency occurred

b. Inmates name, booking number, and housing location

c. If the medical emergency is involving a civilian or staff member, document the individuals name and badge number, if applicable

d. Time medical complaint was originally reported

e. Time the inmate, civilian, or staff member was contacted by the first responder

f. Initial complaint, i.e., reason for the medical emergency

g. Responding staff members

3. A copy of all reports and log entries shall be provided to medical services via the Facility Commander for training and review purposes.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.03
	RELATED ORDERS: MJS 1051, 1205, 1206, 1207, 1210, 1213, 1215, 1220 P.C. 4011.6 H&S 3110 - 3125	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Inmate Medical/Health Appraisal Screening	

I. POLICY

A. Inmates are provided medical care from the time of admission and throughout their period of incarceration. This continuous care requires timely physical examinations that include medical screening and clinical history for each admission and a complete physical examination of each inmate within 14 days, following admission.

B. Inmates will receive periodic examinations as deemed necessary by the medical director.

C. Medical staff will provide community care referral information as necessary upon discharge.

D. Medical programs and services shall provide separate management aid for males and females, inmates with chemical dependencies, inmates in administrative segregation and disciplinary isolation, mentally disturbed and physically handicapped inmates, and inmates with communicable diseases.

II. DEFINITIONS

A. PHYSICAL EXAMINATION- A thorough evaluation of a patient's current physical condition and medical histories conducted by a licensed professional.

B. MEDICAL SCREENING- An examination of a patient conducted by a member of the health care staff. The examination is intended to identify obvious ailments or injuries and reduce aggravation of the condition.

III. PROCEDURE

A. NEW ADMISSIONS

1. Physical examinations shall be completed for each inmate newly committed to the facility or transferred from another facility.

2. Receiving screening

a. Prior to placement in the general population, a member of the medical

staff shall screen each inmate.

In the absence of medically trained personnel at the time of intake into the facility, ITR staff will immediately notify the shift supervisor.

At the direction of the shift supervisor, ITR staff will complete the medical questionnaire.

b. Findings of the screening shall be recorded on the Medical Intake Screening Form that is approved by the facility medical director.

c. The receiving screening shall include at least the following inquiries:

Current illness and health problems

Dental problems

Venereal diseases and other infectious diseases

Medications taken

Special health requirements

Use of alcohol, and other drugs including types of drugs used, amounts, frequency, date of last use, and history of problems occurring from withdrawal

Past and present treatment or hospitalization for mental disturbance or suicide and other health problems as designated by the medical director.

d. Inmates who have, or are suspected of having developmental disabilities shall be separated from the general population pending assessment, to prevent their being victimized by potential predators.

The health authority or designee shall contact the Regional Center of the East Bay on any inmate suspected or confirmed to be developmentally disabled for the purposes of diagnosis and/or treatment within 24 hours of such determination, excluding holidays and weekends.

e. Observation of general behavior including state of consciousness, mental status, appearance, tremor or sweating, body deformities and ease of movement, condition of skin including trauma, bruises, lesions, jaundice, rashes, infestations, needle marks or other signs of drug abuse.

f. Female inmate screening shall include an inquiry whether she is pregnant and/or using any drugs.

The Intake Deputy shall notify the nursing and mental health staff of any female who has been charged with the murder or attempted murder of her child or children. The nurse will

immediately notify Mental Health Staff so that an immediate psychiatric evaluation may be made before the patient is housed.

Nursing and Mental Health staff shall provide recommendations for disposition to general population, with referral to the appropriate physician or other staff member.

g. The intake health screening record shall become part of the inmate's permanent medical record.

All inmates will be scheduled for testing for tuberculosis by use of the purified protein derivative (PPD) skin test within 10 days of their incarceration.

3. 14-Day health appraisal

a. Each inmate shall receive a medical examination by qualified health personnel within 14 days of admission to the facility.

This examination shall include a review of the receiving screening information and the medical history report, in addition to the procedures required for physical examination as specified in this policy.

A new appraisal will not be required if there is documented evidence of a health appraisal within the previous 90 days.

4. Sobering

a. When screening and examination result in a diagnosis of chemical dependency, requirements for sobering from alcohol, opiates, stimulants, or sedative hypnotic drugs, appropriate medical/mental health plans will be developed and instituted for the individual.

B. PREGNANCY CARE

1. The health provider must provide pregnancy management specific to the following:

a. Pregnancy testing

b. Routine prenatal care

c. High-risk prenatal care

d. Management of the chemically addicted pregnant inmate

e. Postpartum follow-up

f. Counseling

C. FACILITIES FOR PHYSICAL EXAMINATIONS AND SPECIAL CLINICS

1. The clinic is staffed by clinically trained Health Services professionals and offers the following support services and special clinics:

    a. Screening of new bookings and Intra System Transfers

    b. History and Physical examinations

    c. Administration of Medication

    d. Sick call

    e. Emergency medical care (24 hours, 7-day/week)

    f. Referral service for hospitalization and specialty clinic (as needed)

    g. Dental care

2. Examinations for Communicable Disease

    a. Health Services will ensure any inmate suspected of having contracted a communicable disease is medically examined.

    b. Staff and inmates should use universal precautions and protection from infectious diseases:

        Gloves shall be worn for touching blood and body fluids and should be changed after each contact.

        Hands should be washed between each glove change.

        Wherever practical, masks and protective eyewear, gowns or aprons should be worn during procedures that generate splashes of blood or other body fluids.

        Hands and skin surfaces should be washed immediately and thoroughly if contaminated with blood or other body fluids.

        Hands should be washed immediately after gloves are removed.

        Needles shall be secured in a puncture-resistant container.

        Deputies and staff shall use a ventilation device should resuscitation be needed.

        Inmates with a contagious disease must be kept separate from other inmates.

D. QUARANTINES

1. Custody Services Bureau Personnel shall adhere to the following guidelines when made aware of the existence of contagious, infectious or communicable diseases for which the Health Officer deems the need for strict isolation or quarantine necessary:

a. Ensure the adequate isolation of each case and appropriate quarantine of the contacts and premises.

Secure inmate movement in or out of the affected housing unit(s) for the prescribed time period.

Establish lists of inmates having court appearances from the affected housing unit(s) and notify the court of the non-appearances.

Court appearances via telephonic procedure from the jail will be utilized when possible.

Inmates assigned to quarantine areas will not be permitted visits.

Separation of inmates within the affected housing unit(s) when classification matters arise will be accommodated within the housing unit(s) if at all possible.

b. Follow local rules and regulations, all general and special rules, regulations and orders of the medical officer in carrying out the quarantine or isolation.

c. Personnel assigned to work in the affected quarantine area will be those previously inoculated for the contagious disease, if possible.

d. Any disputes or conflicts regarding quarantine issues shall be immediately brought to the attention of the Shift Supervisor.

E. CLINICAL MANAGEMENT OF CHEMICALLY DEPENDENT INMATES

1. Health Services staff will be responsible for the following:

a. Diagnosis of chemical dependency.

b. Determination as to whether an individual requires non-pharmacologically or pharmacologically supported care.

c. Individualized treatment plans developed and implemented by a multi disciplinary team.

d. Referrals to specified community resources on release, when appropriate.

F. MENTAL HEALTH SERVICES

1. On-site services include evaluations of mental health needs, crisis intervention, counseling through routine appointments, medication administration and monitoring of patient status. Specifically, these services are to include, but not be limited to:

a. Evaluation, including pre-screening for mental disorders

b. Counseling

c. Group Therapy

d. Suicide Prevention

e. Medication Management

f. Crisis Intervention

g. Substance Abuse Counseling

h. 4011.6 PC Treatment and Evaluation

G. PSYCHIATRIC TRANSFERS

1. Whenever an inmate is transferred to and from any Contra Costa County Detention Facility for urgent and/or emergency psychiatric evaluation or possible admission to the a psychiatric unit, the inmate must be medically screened prior to being transferred.

2. Copies of all pertinent medical and psychiatric paper work will accompany the inmate.

3. The following receiving staff will be notified:

   a. Facility Commander

   b. Shift Supervisor

   c. Classification Unit

   d. Health Services Staff

   e. Mental Health Staff

4. Health Services and Mental Health staff shall determine if the inmate should be transported via CCCSO Transportation Unit vehicle or ambulance.

5. The inmate will be medically screened once they arrive at their destination to ascertain their current medical condition.

H. HOUSING OF MENTALLY OR PHYSICALLY IMPAIRED INMATES

1. Seriously ill inmates not requiring hospitalization shall be housed on a housing unit consistent with their classification status.

2. Inmates who are mentally disordered, or who demonstrate unusual or bizarre behavior, shall be housed on M Module.

3. Inmates with less serious injuries and illnesses may be housed on any general population module.

   a. Inmates with injuries requiring the use of mobility assistance devices such

as canes, crutches, walkers, etc., should be housed on F Module or at West County Detention Facility.

4. Custody staff is responsible for an inmate's specific housing assignment within the housing unit.

   a. Medical instructions regarding housing unit placement will be clearly written on the Inmate Management Card and recorded the inmate's JMS history under "Blue".

   b. Instructions may be recorded for the following requirements:

      Lower tier of the housing unit

      Lower bunk of a cell

   c. Medical Permission slips or "Blue Cards" may not be written for bunk assignments that are not within a cell.

I. TERMINALLY ILL INMATES

1. In cases where an inmate has been diagnosed as being terminally ill, the following may occur:

   a. The Facility Commander or designee may, after confirmation from the medical provider, notify the inmate's next of kin.

   b. Special visits may be arranged at the discretion of the Facility Commander.

2. The Facility Commander will contact the court and notify them of the inmate's medical status.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.04
	RELATED ORDERS: P.C. 4023	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 01-08-2019	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Private Medical Treatment for Inmates	

I. POLICY

A. The Custody Services Bureau shall permit inmates to be removed from their assigned detention facility to be transported to privately owned and operated medical facilities or hospitals for medical treatment per PC 4023.

B. The Office of the Sheriff will require a court order directing them to transport the inmate to a private medical facility within Contra Costa County.

C. The court order must contain the following:

1. Name
2. Booking number
3. Case number
4. Date and time of the appointment
5. Address, city and telephone number of the medical facility
6. Attending physician's name

D. Inmates shall bear the cost of the medical treatment, transportation and security in its entirety.

II. PROCEDURE

A. The inmate will provide a court order from a Contra Costa County Superior Court judge. The order will provide that the inmate is responsible for all expenses associated with the transportation and medical treatment. The order will also specify the physician and facility of treatment and it must be located within the county.

B. The Custody Administrative Services Lieutenant or designee will receive the order and forward the information to the Classification, Transportation and Operations Sergeant for review.

C. The Classification Sergeant will determine the staffing level needed for the individual and forward the recommendation to the Operations Sergeant.

D. The Operations Sergeant will ensure that the necessary personnel needed for the assignment are available.

E. The inmate must be scheduled in the external appointment schedule 24-hours in advance of the actual removal.

F. The Operations Sergeant will contact the treating physician, and facility, to confirm the appointment and their willingness to treat the inmate and direct payment of services from the inmate.

1. Should the private medical treatment for inmates involve a high security or high profile inmate, the Operations Sergeant will advise the court and attorney of record that a confidential appointment is needed for security reasons.

2. The Operations Sergeant will then contact the attending physician reschedule the appointment and advise the physician that the information is to be maintained in strict confidence because of high security issues.

G. Payments for medical treatment, examinations or related procedures are not the responsibility of Contra Costa County, the Office of the Sheriff or the current health care provider.

1. Costs for treatment under these conditions are between the inmate and his/her physician.

H. The Office of the Sheriff will not transport any medical records from the jail or return records to the jail from the inmates private care provider.

I. The Operations Sergeant is responsible for the completion and appropriate documentation to recover costs.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.05
	RELATED ORDERS: PC 296 PC 298.1 15 CCR 1059	
ISSUE DATE: 06-27-05 **REVISION DATE:** 08-21-19 **REVIEW DATE:** 08-21-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** DNA Collection & Forced Blood Withdrawal	

I. POLICY

A. This policy and procedure applies only to the above Penal Code sections listed under Related Orders.

B. The Contra Costa County Office of the Sheriff will comply with the provisions of PC 298.1 and 15 CCR Section 1059 for forced blood withdrawals from arrestees who refuse buccal testing procedures.

C. Health Services staff does not draw blood for forensic purposes.

II. PROCEDURE

A. COURT ORDER IN-CUSTODY

1. When the Court issues an order that directs a specifically named inmate to submit a DNA sample the following shall occur:

   a. The Court Clerk will forward the order to the Processing Sergeant at the appropriate Detention Facility.

   b. The Processing Sergeant will verify the order is valid and the proper DOJ information is contained on the Court Order.

   c. The Processing Sergeant will assign a Deputy to locate the inmate, complete the buccal DNA testing and obtain two palm print cards if necessary. This procedure can be performed on the housing unit or in intake.

   d. The Deputy collecting the sample will complete the compliance section and sign and date the appropriate box for each specimen collected. [redacted]

   e. The completed Court Order will be forwarded to the facility CAS for entry

into JMS.

[redacted]

g. All outside agencies are responsible for delivery of the DNA sample collection kits to DOJ.

B. IN-CUSTODY CONVICTED FELONY OFFENDERS

1. Adults who are convicted or adjudicated of any felony crime and are currently in custody in conjunction with that conviction or adjudication are required to provide a buccal DNA sample.

   a. Absent a court order, the Classification Unit will run a daily report to determine these qualifying offenders.

   b. Classification will provide this list along with the inmate's CII number to the Processing Sergeant of the appropriate detention facility.

   c. The Processing Sergeant will assign a Deputy to locate the inmate, complete the buccal DNA testing and obtain two palm print cards if necessary. This procedure can be performed on the housing unit or in intake.

   d. The Deputy collecting the sample will complete the compliance section and sign and date the appropriate box for each specimen collected. The completed sample kit when then be sealed and stored in the DNA box in the Sergeants office.

C. ARRESTED OFFENDERS

1. Defendant arrested on or after November 03, 2004 for Felony PC 290 sex crimes, murder, voluntary manslaughter, or attempts to commit those crimes are required to provide a DNA buccal sample.

   a. The arresting agency will complete the buccal testing prior to transporting the Defendant to the Martinez Detention Facility.

   b. Sheriff's Office employees, who arrest a qualifying subject, will conduct all buccal DNA testing at the Martinez Detention Facility.

   c. If the Arrestee refuses to submit to the DNA buccal testing for the arresting agency the arrestee will be transported to the Martinez Detention Facility and the refusal policy in this section, will be followed.

D. OUT OF CUSTODY-APPOINTMENTS

1. Qualified offenders will report to the lobby of the Martinez Detention Facility or the West County Detention Facility during the designated hours.

   a. The qualifying offender will bring a copy of the court order authorizing collection of the DNA buccal sample. The MDF/WCDF Processing Sergeant should have a duplicate copy on file for verification.

   b. The assigned deputy will verify the identity of the offender via California driver's license/California identification card, valid out of state licenses or a current passport.

   c. The deputy will complete the buccal DNA testing and obtain two palm print cards.

   d. The Deputy collecting the sample will complete the compliance section and sign and date the appropriate box for each specimen collected. The completed sample kit when then be sealed and stored in the DNA box in the Sergeants office.

   e. If the offender fails to appear for his appointment, the deputy will indicate such on the appropriate line. The form will forwarded to CAS for tracking

   f. The PC 296 Sample Collection Order will be returned to the issuing court for processing.

E. PALM PRINTS

   a. When palm prints are required, two palm prints cards will be obtained.
      - One palm card will be forwarded to the Office of the Sheriff, Central Identification Bureau.
      - The additional card will be mailed to the Automated Latent Print Section (DOJ), 4949 Broadway Room D107D Sacramento, CA 94820 Attn: CAPPS.
      - Each week CAS Staff will ensure palm print cards are mailed to the DOJ.

F. REFUSALS

1. Penal code 298.1 authorizes law enforcement personnel to employ reasonable force to collect blood samples from individuals who are required to provide such samples under PC 296 and who refuse following a written or an oral request. A Deputy/Officer must have a supervisors written authorization before the forced blood sample is obtained.

2. If the use of reasonable force includes a cell extraction, the extraction will be videotaped.

3. The subject's refusal and forced withdrawal shall be videotaped. If the refusal or

withdrawal is not videotaped a report will document why the procedure was not videotaped.

a. The subject will be transported to the Martinez Detention Facility (MDF) and booked for the qualifying offense. The arresting agency's supervisor will sign the *PC 298.1Admonishment Form* acknowledging the refusal and authorizing the forced blood withdrawal. (This constitutes written authorization)

b. Once at the MDF, the Processing Sergeant will admonish the subject again to comply with buccal testing procedures. If the subject refuses, the arresting officer will complete the 298.1 Admonishment Form and the PC 298.1 Data Collection Form. The Processing Sergeant will also witness and sign the forms.

c. A BAD Nurse will be requested by the arresting agency and respond to the MDF and perform the blood withdrawal. The BAD Nurse will complete the DNA kit, seal it and mail the kit to the DOJ Laboratory.

d. Each occurrence, the Detention Facility Supervisor will insure the force used to complete the blood withdrawal is done in accordance with Department Policy as outlined in CCCSO Patrol Manual 7-1.

e. The videotape of the admonishment and blood withdrawal will be submitted into CCCSO evidence. The witnessing CCCSO Deputy will document the collection of the videotape on a Crime Report and reference the arresting agency's report number. A supplemental report will be written if the arresting agency is the Office of the Sheriff.

f. In custody refusals will be handled at the current housing facility. The Deputy will document the refusal on a crime report for Penal Code 298.1(a) Refusal to provide specimens, samples or prints. The Deputy will also write an Incident Report for Incident type 046 Refuse to obey order.

g. Upon completion of the forced withdrawal the data collection sheet will be completed by the Facility Commander and sent to the Board of Corrections within 10 days. The data collection sheet shall document the use of reasonable force if necessary, the type of force used the efforts undertaken to obtain voluntary compliance and whether medical attention was needed by the inmate or other person as a result of reasonable force being used.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.06
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Fasting Inmates	

I. POLICY

A. Custody Services Bureau personnel will work in concert with the medical staff to ensure that any fasting inmate is medically supervised during the fast.

II. PROCEDURE

A. The following procedures will be followed for management of the fasting inmate who continues to refuse nourishment for a prolonged period:

1. The medical staff will be notified of the fasting inmate and the notification shall be documented. Medical staff will then initiate the medical protocol.

2. The Facility Commander will be notified via incident report of the fasting inmate and the reason for the fast.

3. The fasting inmate can remain in their classified housing unit until such time the medical staff deems it necessary for the inmate to be moved for medical reasons.

4. The fasting inmate will be required to attend each regular meal.

5. Custody staff will make efforts to observe the inmate's eating habits and will make an entry into their Inmate History recording any consumption of liquid or solid foods.

6. The Medical Director will provide a status of the fasting inmate via weekly report to the Facility Commander.

B. The Facility Commander will be advised of all changes in the status of the inmate via incident report, including termination of fast, behavior problems, transfer to a hospital, etc.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.07
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 03-26-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Phone Triage	

I. POLICY

A. Each inmate will have a confidential means to contact the Triage Nurse for personal medical issues, if requested.

II. PROCEDURE

A. Phone Triage Hours:

1. **Martinez Detention Facility**

   a. Between 0730 and 1000 hours daily.

2. **West County Detention Facility**

   a. Building 4: between 0800 and 0830 hours daily.

   b. Building 5, 6, 7, and 8: between 0930-1030 and 1830-2030 hours daily.

3. **Marsh Creek Detention Facility**

   a. D and E Dorms: between 0900 and 0930 hours daily

B. The MDF and WCDF Morning Shift Housing Unit Deputy will be responsible for compiling a list of inmates requesting to speak with medical staff on the following dayshift.

1. The Triage nurse will contact the Housing Unit Deputy when ready to accept calls from that specific Housing Unit.

C. The MDF and WCDF Day Shift Housing Unit deputy will allow each inmate that has requested triage to make one call to the Triage Nurse in a timely manner.

1. **Martinez Detention Facility**

a. Inmates may call from the inmate phones by dialing 1-#-25.

2. **West County Detention Facility**

a. Inmates may call from the inmate phones by dialing:

Men's medical: #23

Female medical: #24

3. **Marsh Creek Detention Facility**

a. MCDF Inmates may use the triage telephone between the listed hours on a first come, first serve basis.

b. Inmates may call from the inmate triage phone(s) by picking up the receiver.

c. Medical staff will contact custody staff when they are ready to have the inmate respond to their office.

D. Calls to the Triage Nurse will be made one at a time by each inmate.

E. The inmate will return to their bunk/room after completing their call to the Triage Nurse.

F. D and Q Modules and Administrative Segregation/Disciplinary housing Triage will be conducted through Inmate Request Forms only.

G. All Inmate Request Forms for medical and mental health services will be forwarded to the medical and mental health staff.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.08
	RELATED ORDERS: MJS 1206, 1207, 1208, 1211, 1215	
ISSUE DATE: 01-13-04 **REVISION DATE:** 04-11-19 **REVIEW DATE:** 07-31-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Medical and Health Care Services	**SUBJECT:** Sick Call and Administration of Medication	

I. POLICY

A. Sick call (screening rounds, nursing examination and physician referrals) will be made available seven days a week.

B. Sick call rounds and examinations will be determined through Phone Triage appointments, medical referrals and custody staff requests.

C. Medical staff will be responsible for the proper administration of all medication within the custody setting.

II. DEFINITIONS

1. Self-Administration - Following instructions for self-administration of medications by the Medical Staff, eligible inmates will be expected to take responsibility for the storage and administration of certain medications prescribed for them.

2. Nurse Supervised Administration - Medical staff will administer medication prescribed to inmates who are unable to meet the self-administration criteria or are prescribed prescriptions that may not be self-administered.

III. PROCEDURE

A. INMATE REQUEST FOR HEALTH CARE

1. Inmates will use the Triage Phone to access the medical health care system.

a. Inmates on D module will fill out an inmate medical request form directed to the nurse.

- Even though a Medical Request Form has been submitted that does not mean an inmate will automatically be seen the next day. Inmates should be told their request(s) will be evaluated and they will be scheduled to be seen by medical staff according to the

seriousness of the complaint.

B. SICK CALL

1. The main sick call will be conducted in each housing unit in compliance with the master Post Order schedule.

2. Inmates requiring dental care, special health care, or special treatments that cannot be done in the housing unit sick call office, will be referred to the MDF medical office or Contra Costa Medical Regional Center.

   a. Inmates requiring x-rays will be brought to CCCRMC not withstanding other options available to be determined by medical.

   b. If a Deputy believes that a non-life threatening emergency exists then he/she can call the on-duty nurse to notify them.

   c. Deputies are primarily responsible for moving inmates to and from medical appointments.

C. DENTAL SERVICES

1. All newly Federal admitted inmates shall receive a dental screening within 14 days of admission. This dental examination shall be included within the medical screening conducted by the jail medical staff.

2. Priority appointments will be given to inmates with emergency conditions requiring immediate evaluative treatment.

3. All Medical Request Forms received by custody staff shall be turned into medical staff daily.

4. Treatment for dental problems that existed prior to the inmate's incarceration shall not always be considered necessary once the inmate is incarcerated.

5. If the dentist determines that a request for dental prostheses is not warranted, and that the inmate's health would not be adversely affected, services will not be provided by the facilities.

D. PILL CALL

1. Inmates are required to bring a cup at least ½ full of water to nurse for pill call.

2. Inmates will be required to provide identification by displaying their JMS inmate wrist band.

3. All dispensed medications are to be taken immediately, and in front of health services personnel and the Deputy, after they have confirmed identity of the inmate.

4. Inmates will be required to show proof to the Deputy and Nurse that they

consumed their medications.

5. Inmates prescribed methadone shall be placed in a non contact visiting room for at least twenty (20) minutes. The Deputy will ensure that the visiting room has been searched both before and after the inmate placement and removal from the room.

6. Medication rounds or pill call will be conducted at least twice daily, to all housing units at MDF and WCDF only.

E. NURSE ADMINISTERED MEDICATION

1. Medical staff will administer inmate medication when the following applies:

a. The prescription does not permit self-administration.

b. The inmate has failed to follow the self-administration rules.

c. Inmates with the following conditions are ineligible for self administration:

- Currently on anti-psychotic medications with debilitating mental health history.
- Organic Brain Syndrome
- Physical handicaps making storage and administration of medications difficult
- Demonstrated inability to understand procedure
- Patients who have a history of repeated failure with the self-medication procedure
- Inmates considered to be a mental health risk

d. The following types of medication shall be administered by medical staff:

- Psychotropic
- Narcotics
- Hypnotic
- Court Ordered Medications
- Insulin (Must be Supervised)
- Other Injectables
- Tuberculosis Medications

F. SELF ADMINISTERED MEDICATION

1. The medical staff writing the order will review the inmate's chart for appropriateness of self-administration of medications and also will review diagnoses, treatment, duration of treatment, medication of choice, any contraindications and dosing schedule with inmate.

2. Medical staff may authorize an inmate’s self administration of prescribed medication under the following conditions:

    a. The inmate is able to take responsibility for their prescription(s).

    b. The inmate is able to secure and store their prescription(s) properly.

    c. The inmate follows the direction of their prescription(s).

3. Prior to giving the prescription to the inmate, the pill call nurse will review self-administration rules, side effects or contraindications of medication, and duration and dosing schedule with the inmate.

4. After the advisement, the nurse will document the inmate's understanding of procedure and medication. Both the inmate and the nurse will initial understanding of procedure.

5. The Pill Call nurse will give the inmate a copy of self-administration rules, pharmacy information sheet and Blue Card for "Permission to Carry" when giving prescription.

6. Any inmates unable to comprehend and reiterate the advisement and medications rules will not be eligible for self-administration of medications.

7. Random spot checks of patient compliance will be done at least once per week by the A.M./P.M. nurses and results will be documented.

8. Inmates may be re-evaluated for self-administration status by a charge nurse. Blatant misuse of medications and or violations of self-administration rules may result in disciplinary action.

9. Inmates who claim their medications were stolen will be instructed to notify the Module Deputy who will investigate the theft. The inmate will then contact telephone triage.

10. Inmates found having excessive medication or giving their medication to other inmates may receive disciplinary action.

11. Copies of all medical related Incident Reports will be routed to the Medical Director.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.09
	RELATED ORDERS: MJS 1051,1206	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Health Care Services	**SUBJECT:** Infectious Disease Notification Requirements	

I. POLICY

A. Sheriff's Office staff working in a Custody Services Bureau detention facility will be attentive for observable symptoms of communicable diseases and report any concerns to medical staff for evaluation.

B. Contra Costa County Health Services shall notify custody staff on a need to know basis of any inmates who have tested positive for infection with HIV or have been diagnosed as having AIDS or AIDS-related conditions or any communicable disease.

C. Custody staff shall always exercise standard precautions when dealing with inmates.

II. DEFINITION

A. COMMUNICABLE DISEASE: A respiratory, blood borne, or other infectious disease.

III. PROCEDURE

A. MEDICAL ISOLATION AND SPECIAL PRECAUTIONS

1. The Facility Commander or Shift Supervisor is responsible for seeing that the inmate is housed according to his or her medical needs.

2. The Classification Unit will ensure the inmate has been housed accordingly.

3. An inmate's medical information is confidential in nature. Therefore, sworn personnel are limited in the kind and amount of information they may have regarding an inmate's medical condition.

   a. It is incumbent on sworn personnel to strictly adhere to directions set forth by Health Services Staff.

   b. In the event personnel need clarification about a specific situation, they should contact Health Services Staff. Sworn personnel who have a need

for clarification, must adhere to the confidentiality requirement.

B. SYMPTOM OBSERVATIONS BY SHERIFF'S OFFICE STAFF

1. The following is a list of observable symptoms that Sheriff's Office staff shall watch for while working in the detention facility.

   a. Severe itching

   b. Skin rashes, lesions, or open sores

   c. Puss or fluid drainage

   d. Fever and/or night sweats

   e. Persistent severe headache

   f. Persistent upset stomach

   g. Sore throat

   h. Significant loss of appetite and weight

   i. Jaundice (yellowing of skin and/or eyes)

   j. Noticeable change in behavior

   k. Chronic fatigue

   l. Eye redness with fluid

   m. Intense itching

   n. Persistent coughing

2. If it is observed that an inmate is displaying any of the above symptoms, staff should:

   a. Immediately separate the inmate from the rest of the inmate population.

   b. Contact Health Services Staff for evaluation.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.10
	RELATED ORDERS: MJS 1029(a)(7), 1206, 1219	
ISSUE DATE: 07-01-04 **REVISION DATE:** 09-23-19 **REVIEW DATE:** 09-23-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Health Services	**SUBJECT:** Suicide Prevention	

I. POLICY

A. A written suicide prevention and intervention program will be maintained, reviewed and approved by a qualified medical or mental health professional.

B. All staff with responsibility for inmate supervision will receive training in the implementation of the program including identification of suicidal inmate(s).

C. Every effort will be made by custody staff to recognize the signs and symptoms of suicidal behavior and to deter inmate suicide threats and attempts.

II. PROCEDURE

A. SUICIDE RISK IDENTIFICATION TRAINING

1. All security staff, who are responsible for supervising inmates in a custodial setting to include a Court holding facility, will receive regular training in recognizing the signs and symptoms of mental illness and depression that could lead to suicidal behavior.

2. All jail personnel, sworn and non-sworn, with regular inmate contact must remain constantly alert to any behavioral changes which might indicate increasing depression and/or expressing thoughts of suicide. Good communication between custody and medical/mental health personnel will ensure cooperation in this surveillance.

    a. Certain times during confinement represent more serious threat (i.e., holidays, after arrest, after court dispositions, during domestic upheaval in the inmate's family).

3. Any inmate reported or suspected of being depressed or having a mental disorder will be evaluated immediately by mental health and/or medical personnel.

B. SUICIDE IDEATION

1. Custody staff shall take the following action in the event an inmate has expressed or appears to express through actions or gestures (physical or verbal) the desire to harm themselves.

   a. Call for mental health staff immediately

   b. Request medical staff as necessary

   c. Notify the Shift Supervisor

   d. Stay with the inmate until mental health staff arrives. If mental health staff is unavailable, medical staff should be summoned.

   e. Mental Health staff will determine if a referral to CCRMC In-Patient Psychiatric Unit is required.

2. If the inmate is not referred to a hospital by health care staff, one of three alternative actions will be employed. These alternative actions are as follows:

   a. Open observation

      - At the Martinez Detention Facility the inmate will be re-housed on M Module in Observation Rooms 7 or 8.

      - At West County Detention Facility, all high suicide risk inmates will be re-housed at the Martinez Detention Facility.

      - Inmates placed on any level of suicide precaution/observation should not be permitted to hold any medications until evaluated by Mental Health Staff.

      - If Mental Health staff determines the inmate can be housed with other inmates, the inmate may be housed at MDF or WCDF and shall be based on Mental Health staff's recommendation.

      - Mental Health staff will see inmates within twenty-four (24) hours of notification from medical staff. If possible, the inmate should interact with other inmates during meals, recreation, etc.

         - Deputies will report any changes in behavior to Mental Health staff. If mental health staff is unavailable, medical staff should be notified.

   b. Safety cell

      - Based on the severity of the inmate's condition, he/she may be placed into a safety cell.

      - While housed in a safety cell, all medications will be unit dosage. No clothing, linen, water cups or JMS Identification Wristband

will be allowed into the cell, with the exception of a modesty garment.

c. If there are no safety cells or observation rooms available, Rooms 3 and 4 on "M" Module may be utilized as overflow. If rooms 3 or 4 are utilized, the Custody Sergeant and Classification must be notified.

d. In all cases in which an inmate has been deemed to be a suicide risk, an observation log shall be initiated pursuant to CSB Observation Log Policy and Procedures.

e. Custody staff will complete an incident report regarding the incident.

C. SUICIDE ATTEMPTS

1. The following procedures shall be followed in the handling of suicide attempts:

a. Call for medical aid immediately

b. Notify Shift Supervisor

c. Stay with inmate until medical staff arrives.

d. Medical personnel will treat the inmate and may refer him/her to CCRMC or an alternate appropriate hospital, if necessary.

e. Custody staff will complete an incident report regarding the incident.

f. In the event that mental health staff or medical health staff is not able to respond, sworn staff may increase the level of suicide precaution.

2. Mental Health staff shall review all inmates at risk of harming themselves or others to determine if the inmate meets 5150 W.I. criteria.

a. If the inmate meets 5150 W&I criteria, Mental Health staff shall coordinate with the Shift Supervisor and CCRMC Psychiatric Unit to ensure the inmate receives appropriate care and continuous observation by medical/mental health staff.

b. An inmate shall not be downgraded or discharged from suicidal precautions until the mental health staff has thoroughly reviewed the inmate's health care record, as well as confer with correctional personnel regarding the inmate's stability.

3. All incidents involving suicide or suicide attempts will be administratively reviewed by mental health and custody staff.

a. The review will determine the following, but not limited to:

- Was appropriate mental health care provided

- Were policies and procedures followed
- Whether modification to policy(ies) and procedures are needed
- To identify issues that require further attention

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.11
	RELATED ORDERS: MJS 1214	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 11-28-2018	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Transportation of Inmates to Scheduled Mental and/or Medical Appointments	

I. POLICY

A. Custody Services Bureau staff shall transport inmates to scheduled mental and/or medical appointments.

II. PROCEDURE

A. All inmates scheduled for mental and/or medical health appointments will be transported to the appropriate mental and/or medical facility as scheduled.

B. Inmate Refusals

1. Inmates have a right to refuse medical treatment after medical staff is consulted.

2. Custody staff will notify medical staff upon any inmate's refusal for medical treatment.

3. Medical staff will make a determination as to whether the need for the inmate's treatment is necessary and immediate.

a. MDF

- Medical Staff will respond to the housing unit to assess the inmate's needs as appropriate.

b. WCDF

- All inmates will be sent to Intake or the Transportation area to consult with medical staff regarding the medical treatment.

c. MCDF

- [redacted]

4. A signed waiver for treatment must accompany inmate refusals of appointments on the prescribed Inmate Medical Waiver form.

5. The original waiver form is to be forwarded to the facility clinic office for inclusion with the medical records. A copy is to be filed with the inmate's custody file.

4. Medical staff will advise the Shift Supervisor of their recommendation.

5. The Shift Supervisor will take the appropriate action based on Medical staff's recommendation, the security concerns of the facilities and the interests of the inmate.

6. An incident report will be submitted in all cases.

7. Inmates refusing to comply with the refusal process may be subject to disciplinary action.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 02.13.12
	RELATED ORDERS: PC 4011, PC 4011.5, 4011.7, 4011.9, PC 5007.7, PC 6030 (f), 3407 V.C. 21057 CSB Policy 2.08.35	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-24-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Security and Control	**SUBJECT:** Emergency/Unscheduled Medical Inmate Transportation	

I. POLICY

The Office of the Sheriff recognizes that emergency and unscheduled medical transports occur for inmates within our custody. The transportation of an inmate to a medical appointment is a recognized security risk. The objective of the transport is to perform it in a safe and secure manner. The safety and security of staff, inmates, medical staff, and the general public will be considered in the planning and conduct of all transports - both scheduled and emergency. Unless otherwise directed within this policy, inmates will be restrained during emergency/unscheduled medical appointments.

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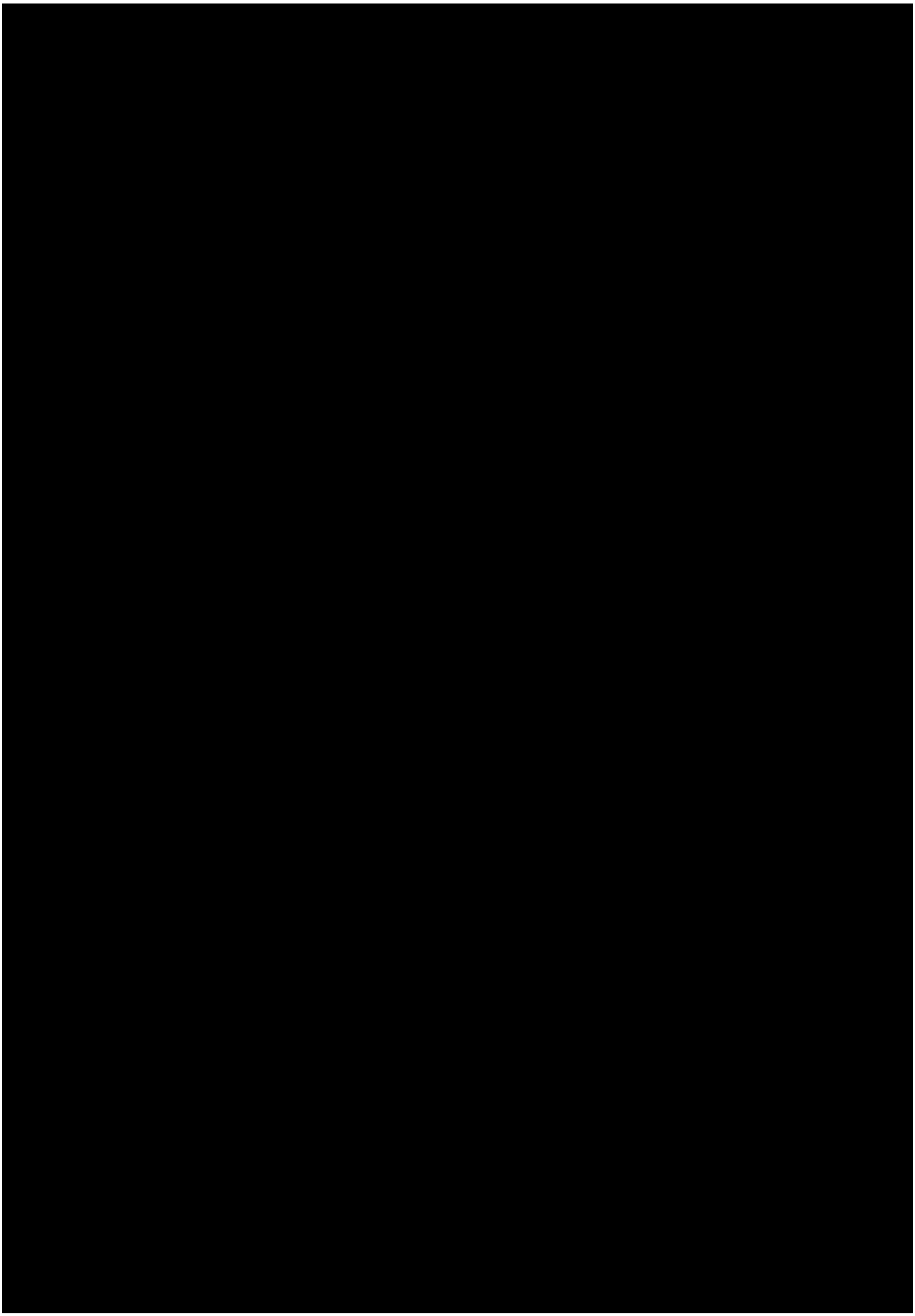

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Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.13
	RELATED ORDERS: P.C. 2656	
ISSUE DATE: 07-01-04 **REVISION DATE:** 04-06-15 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Orthopedic or Prosthetic Appliances	

I. POLICY

A. Inmates shall not be deprived of the possession or use of any orthopedic or prosthetic appliance if the appliance has been prescribed or recommended and fitted by a physician, unless cause exists to believe possession of the device constitutes an immediate risk of bodily harm to any person in the facility or threatens the security of the facility.

B. Any inmate having a prosthesis containing metal shall not be permitted.

II. PROCEDURE

A. REMOVAL OF APPLIANCE FOR CAUSE

1. If custody staff deems an appliance an immediate risk of bodily harm to others or a threat to the security of the facility, they will immediately notify the Facility Commander/designee.

    a. A follow up incident report will be submitted by the reporting staff member.

2. The Facility Commander or designee may remove any orthopedic or prosthetic device from any individual's possession if they have cause to believe possession of the appliance by an inmate constitutes an immediate risk of bodily harm to anyone in the facility.

    a. Only the inmate or approved medical staff will remove the appliance from the inmate.

3. If the appliance is removed, the inmate will be deprived of the appliance only during such time as the facts which constituted the cause for removal exists.

    a. If the facts cease to exist, the appliance will be returned to the inmate.

4. If the appliance is removed, the inmate must be examined by a physician within 24-hours.

5. If the physician determines removal is, or will be injurious to the health or safety of the inmate, he/she shall inform the Facility Commander or his/her designee.

   a. The Facility Commander will make a determination as to the final disposition of the appliance.

   b. Both the physician and inmate shall be informed of the reasons for such refusal by the Facility Commander.

   c. The Facility Commander or designee will promptly provide the inmate with a form as specified in 2656 PC Sub-Division (c) so the inmate may petition superior court for return of the appliance.

      The court's decision will be based upon the evidence received from the interested parties as explained in 2656 PC Sub-Division (b).

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.13.14
	RELATED ORDERS: P.C. 2656	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Medical and Mental Health Services	**SUBJECT:** Wheelchair Bound Inmates	

I. POLICY

A. Inmates restricted to wheelchairs shall be provided one issued by the Contra Costa County Health Services Department.

B. Wheelchairs are the property of the Contra Costa County Health Services Department and shall not be removed from their assigned facility.

1. Exceptions:

a. Inmate court appearances

b. Inmate medical appointments

c. Transfer to another Contra Costa County Detention Facility until the receiving facility can provide a wheelchair.

II. PROCEDURE

A. All Martinez Detention Facility wheelchairs will be marked by the Health Services Department.

B. RELEASES

1. When the situation arises, the medical staff will evaluate the need of an individual and determine whether or not the individual being released should be wheeled to the awaiting vehicle.

a. This process will be accomplished in a timely manner so as not to delay the release process.

2. A member of the medical staff will take those individuals requiring wheelchair assistance to the vehicle. The staff member will return the wheelchair to the facility.

C. SPECIAL TRANSPORTS

1. Custody staff will provide transportation of all wheelchair bound inmates, unless otherwise requested by medical staff. (i.e. those vehicles equipped with a wheelchair lift, etc.)

    a. Any requests for transportation via ambulatory vehicles will be made by medical staff.

2. When private transportation is utilized to move the inmate: e.g., an ambulance, ambulatory type vehicles, etc., the deputy sheriff in the follow-vehicle is responsible for the MDF or WCDF wheelchair and its return.

3. When Sheriff's Office vehicles are used to transport an inmate requiring wheelchair assistance to the hospital, that deputy is responsible for the return of the wheelchair.

    a. If the original deputy is relieved of his or her duties by another deputy, the relieving deputy now becomes responsible for the return of the MDF or WCDF wheelchair.

4. Inmates taken to court or outside appointments may occasionally require wheelchair assistance. Notations will be made on disposition slips and/or appointment slips that the MDF or WCDF wheelchair is to be returned.

5. Wheelchairs brought in from arresting agencies, other correctional institutions or jails are not permitted and shall be returned to the agency for disposition.

    a. Exception: Incoming wheelchairs from outside agencies may be accepted and placed in property if the following conditions occur:

        A thorough inspection of the wheelchair shall be performed prior to acceptance.

        Staff conducting the inspection shall document the activity in an incident report.

        A secure place is provided that the wheelchair can be locked at the storage location.

        Conditions indicate that it would be more reasonable to store the wheelchair at the detention facility than return it to the transporting agency.

        Approval of the Facility Commander

6. Personally owned wheelchairs shall not be permitted in any Contra Costa County Detention Facility without the approval of both medical staff and the Facility Commander.

    a. A thorough inspection of the wheelchair shall be performed prior to acceptance.

b. Staff conducting the inspection shall document the activity in an incident report.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.14.01
	RELATED ORDERS: MJS 1243, 1249	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Food Services	**SUBJECT:** Food Service Program	

I. POLICY

A. The Bureau of Food Services will operate under a Director technically trained in Food Services with proven experiences and abilities in organizing and administering a complex food services management system.

B. The Director of Food Services shall have the resources, authority and responsibility to provide complete food service, including three nutritionally adequate, palatable and attractive meals a day, produced under sanitary conditions and at reasonable costs.

C. The Director will:

1. Plan menus
2. Provide a portion control system
3. Supervise kitchen personnel
4. Train inmate food services staff
5. Prepare a yearly food budget
6. Plan logistical support system for the food services function
7. Provide a food cost accounting system

II. PROCEDURE

A. BUDGETING, PURCHASING AND RECORD KEEPING

1. The Director of Food Services will maintain records of budgeting, purchasing and accounting, which will include the following:

   a. Food expenditure cost accounting designed to determine the cost per meal, per inmate.

b. Estimation of food service requirements.

c. Purchase of supplies at wholesale and other favorable prices and conditions, when possible.

d. Determination of and responsiveness to inmate eating preferences.

e. Refrigeration of food, with specific storage periods.

f. Accurate records maintained of all meals served.

- The Director of Food Services will maintain a uniform system to record the number, cost and type of meals being served to inmates, employees, guests, and visitors.
    - Such records will be required for fiscal accounting, dietary purposes and budget planning.
    - Food service records will also include published menus, information on waste, food costs, and nutritional accounting.

B. MENU PLANNING

1. The Director of Food Services will ensure a planned menu is substantially followed, and that the planning and preparation of all meals take into consideration food, flavor, texture, temperature, appearance, and palatability.

2. All menus, including special diets, will be planned, dated and available for review at least five weeks in advance of their use.

3. Any substitutions in the meals actually served will be noted and will be of equal nutritional value.

4. The Food Service Manager will maintain a file of tested recipes, adjusted to a yield appropriate for the facility's size.

5. Food will be served as soon as possible after preparation and at an appropriate temperature.

6. Clinical diets will be approved by a qualified nutritionist or dietician and documented accordingly.

C. DIETARY ALLOWANCES

1. The Director of Food Services will ensure the facilities dietary allowances are reviewed at least annually, by a qualified nutritionist or dietician to ensure they meet the nationally recommended allowances for basic nutrition, and maintain a record of the review.

    a. Menu evaluations shall be conducted at least quarterly for facility food

service supervisory staff, to verify adherence to the established basic daily servings.

b. Dietary allowances, as adjusted for age, sex and activity should meet or exceed the recommended dietary allowances published by the National Academy of Sciences.

D. TRAINING

1. The Director of Food Services, in conjunction with Inmate Services, will ensure his/her staff and the inmate workers are properly trained in the use of kitchen equipment and safety procedures within the kitchen.

a. The Director of Food Services shall schedule regular meetings with food service personnel to discuss accident prevention, and analyze major accidents to prevent recurrence.

- There will be documentation on file that this occurs.

2. Both inmate and civilian staff will be trained in the proper and safe operation of all equipment, large and small.

3. All safety training will be documented in training records. Retraining will occur annually, or as necessary.

4. In-service training will include, but not be limited to the following:

a. Accident prevention and proper lifting techniques.

b. First aid for cuts and burns.

c. Equipment safety and maintenance.

d. Use of fire extinguishers.

e. Knife safety and count procedures.

f. Proper storage, preparation and service of food.

g. Proper sanitation and floor care.

E. INSPECTIONS

1. There will be documentation by an independent outside source that food services facilities and equipment meet established governmental health and safety codes.

a. The Contra Costa County Environmental Health Agency will conduct annual and quarterly facility inspections, to ensure that all established governmental health and safety codes are met.

- Documentation of this will be kept on file at the inspected facility.

b. In the event deficiencies are noted, corrective action will be taken.

- A report on all deficiencies, along with their corrections, will be placed with the original inspection report and kept on file.

2. The Director of Food Services will ensure that weekly inspections are conducted of all food service areas, including dining, food preparation areas, and all equipment. The following is a list of those entities participating in the inspection:

   a. Food Service Management

   b. The Contra Costa County Office of the Sheriff

   c. General Services Department (GSD)

3. In conjunction with weekly inspections, daily reading and recordings of refrigeration and water temperatures are to be conducted by qualified food service employees and reviewed by food service management.

   a. Shelf goods are to be maintained at 45 degrees to 80 degrees Fahrenheit, refrigerated goods at 34 degrees to 40 degrees Fahrenheit, and frozen goods at, or below 0 degrees Fahrenheit.

   b. Water temperature on final dishwasher rinse should be 180 degrees Fahrenheit; between 140 and/or above 140 degrees Fahrenheit is appropriate if a sanitizer is used on the final rinse.

4. Documentation of all inspections will be on file and maintained by the Director of Food Services and Bureau Administrative Services.

F. HEALTH AND SAFETY REGULATIONS

1. Adequate health protection for all inmates and staff in the facility, and inmates and other persons working in food service shall be maintained.

   a. As part of the health protection process, the food service manager and the Contra Costa County Office of the Sheriff will ensure the following:

      - Where required by the laws and/or regulations applicable to food service employees in the community, all persons involved in the preparation of food receive a pre-assignment medical examination and periodic re-examination to ensure freedom from diarrhea, skin infections and other illnesses transmissible by food or utensils.

      - All examinations are to be conducted in accordance with local requirements.

   b. All food handlers will be instructed to wash their hands upon reporting to duty, and after using lavatory facilities.

c. The Director of Food Services or designee will monitor inmates and other persons working in food service each day for health and cleanliness. This will include inspecting the following areas:

- Cleanliness of hands and fingernails.
- Ensuring that hairnets and/or caps are worn.
- Ensuring that washable garments are worn.
- Ensuring that all personnel employ hygienic food handling techniques.

d. All food service personnel shall be in good health and free from the following physical ailments:

- Communicable diseases.
- Open infected wounds.
- Acute or chronic inflammatory condition of the respiratory system.
- Acute or chronic infection or skin disease.
- Acute or chronic intestinal infection.

2. The Director of Food Services shall provide the Contra Costa County Office of the Sheriff with written verification that his/her parent agency complies with all local and state regulations regarding food service.

a. This document will be kept on file by the Director of Food Services.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.14.02
	RELATED ORDERS: MJS 1240, 1246 RDA, NAS, CDFG	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Food Services	**SUBJECT:** Inmate Meal Service	

I. POLICY

A. The Custody Services Bureau will provide all inmates with meals that are nutritionally adequate and properly prepared pursuant to Minimum Jail Standards Section 1246.

B. All meals will be served under the direct supervision of staff, and in a manner that ensures safety, proper food handling, the least amount of regimentation and equal treatment of all inmates.

C. All inmates will be provided at least three (3) meals, at regular times, two (2) of which will be served hot. At no time shall there be more than fourteen (14) hours between the evening and breakfast meal.

D. Withholding of food, or any change in the normal menu, as a form of punishment and is strictly forbidden.

1. This does not preclude the service of approved special management diets or approved medical diets.

II. PROCEDURE

A. Inmate meals will be delivered to the housing areas and booking, per the Master Event Schedule at MDF and WCDF.

1. MCDF meals are served at the dining hall.

B. Upon receipt of a food cart, food is to be served as soon as the following occurs.

1. The housing unit deputy will conduct an inventory of the meal cart to ensure the following:

a. No contraband is on the cart

b. A correct amount of meals and food items has been delivered

c. Excess issue is removed and returned to the kitchen

d. Special meals are noted and signed off.

C. The housing unit deputy will complete a Housing Unit Meal Log sheet when the cart is satisfactory for food service.

a. The kitchen will be notified immediately of all discrepancies shortages and contraband.

b. The completed Housing Unit Meal Log will be returned to the kitchen with the meal cart at the end of shift.

2. **Martinez Detention Facility**

a. Inmate meals will be served in the cells of each housing unit, under the direct supervision of a deputy.

3. **West County Detention Facility**

a. Inmate meals will be served in the common areas of each housing unit, under the direct supervision of a deputy.

- Exception: Building 4 inmate meals will be served in each inmate cell.

4. **Marsh Creek Detention Facility**

a. Inmate meals will be served in the facility cafeteria, under the direct supervision of a deputy.

5. Inmates shall be given approximately fifteen (15) minutes to consume their meal.

6. Deputies will ensure that proper food handling is practiced at all times by the inmate workers.

7. Deputies will ensure that inmate workers return all items received to the food carts as soon as the meal has been completed and that all service areas are cleaned between each feeding.

a. A total of forty-five (45) minutes will be allowed from start to finish of each feeding cycle.

8. Meals not consumed shall be returned to the kitchen in the food service carts separate from soiled trays.

    a. The kitchen shall be closed between 1900-0315 hours. Housing unit deputies are to contact the Shift Supervisor for any emergency bag meals during the hours the kitchen is closed.

9. Transportation staff will ensure that all inmates in their custody at regular food service times are properly fed prior to returning the inmate to their housing unit.

D. INTAKE MEALS

1. Intake Deputies shall conduct food service while conducting formal count.

    a. Once an inmate's presence is verified through the formal count process, the counting deputy will advance the inmate through the line to accept their meal.

    b. All inmates being processed in intake will be provided a cold meal.

E. KITCHEN MEAL COUNT

1. Kitchen staff will contact individual housing unit deputies to determine how many meals will be required for the next food service.

2. Deputies will determine the number of meals needed by making the following considerations:

    a. Total inmate population

    b. Inmates remaining out to court or appointments during meal service

    c. Anticipated facility movements to and from the housing unit

3. The meals will be delivered to booking and the housing floors.

4. Each inmate will be allowed one (1) meal, with all extras being returned to the kitchen.

    a. Module Workers may have a second meal at the discretion of the housing unit deputy.

        - All module workers must be treated fairly when making considerations for meals.

- The meal must be heated and consumed at the time of service.

F. TRANSIT MEALS

1. The Food Services Director will ensure that all cold meals are nutritionally sound and based upon the Recommended Dietary Allowances (RDA) of the National Academy of Sciences (1989) and generally upon the California Daily Food Guide.

2. Each transit meal will contain a fresh, quality meal containing the menu developed by the Director of Food Services or designee.

3. Each transit meal shall meet the standards established by the California Department of Corrections

4. The Director of Food Services or designee will be responsible for the preparation of the required number of transit meals for both the facility and appropriate courts.

5. The Director of Food Services or designee, in conjunction with custody staff, shall inspect the transit meals to ensure acceptable levels of freshness, quality and quantity are being met.

6. If these meals are not used for the same day, they may be used for the next day, provided the transit meal is properly and continuously refrigerated until used.

   a. Lunches not refrigerated and not used shall be discarded.

7. Transit meals requested by deputies or other personnel for inmate work crews must be requested in advance. The following information will be required:

   a. Number of lunches needed.

   b. Destination of lunches.

   c. Deputy signature.

   d. Date and time.

G. COURT TRANSIT MEALS

1. The kitchen will supply transit meals for inmates at court facilities and in Booking/ITR.

2. Transportation staff will ensure that the total number of transit meals required for morning courts is communicated to food service staff by 0400 hours, each day.

a. These numbers shall be derived from the daily court list generated in Booking/ITR.

H. MAIN LINE FOOD SAMPLING

1. The Supervising Cook shall be responsible for sampling/ testing inmate meals daily.

2. Special attention should be on the temperature, quality and portion size.

3. Equipment such as thermometers and measuring cups will be used to sample the food.

4. The results of all completed tests shall be placed on a Main Line Sampling Sheet Form.

a. The form shall be forwarded to the Director of Food Services for review and filing.

I. FOOD AS PUNISHMENT

1. Withholding of food or any change in the normal menu, as a form of punishment, is strictly forbidden.

2. This does not preclude the service of approved special management diets or approved medical diets.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.14.03
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11/28/2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Food Services	**SUBJECT:** Inmate Special Diets	

I. POLICY

A. It shall be the policy of the Custody Services Bureau to provide inmates with special diets as prescribed by appropriate medical or dental personnel.

B. Special diets relating to religious beliefs or religious dietary laws will be honored, by providing an alternative to the regular menu.

C. The requesting party shall forward all Special Diet requests to the Director of Food Services.

II. DEFINITIONS

A. THERAPEUTIC DIET: Special meals or foods prescribed by a physician or dentist as part of a patient's treatment.

B. RELIGIOUS DIET: An alternative diet offered in lieu of the regular menu that is consistent with a recognized religious order and approved by the Facility Chaplin.

III. PROCEDURE

A. SPECIAL DIETS

1. Therapeutic diets shall be made available to inmates upon medical authorization only.

2. Specific diets should be prepared and served to inmates according to the orders of the treating physician, dentist, or as directed by the responsible health authority.

3. Medical diet prescriptions should be specific and complete, furnished in writing to the Director of Food Services.

4. Special diets should be kept as simple as possible and should conform as closely as possible to the foods served to other inmates.

B. RELIGIOUS DIETS

1. Advise the inmate requesting a religious diet to fill out an inmate request slip requesting placement on a religious/vegetarian diet.

   a. The request form shall be addressed to the facility Chaplin.

   b. The request slip is then routed the same as all other request slips and shall be forwarded to the Chaplin.

   c. The facility Chaplin will verify the legitimacy of the request.

   d. Religious diet prescriptions should be specific and complete, furnished in writing to the Food Service Manager.

2. Cancellation of a religious diet will be done at the request of the inmate.

   a. Notification of cancellation shall be done via an inmate request slip.

C. INMATE SPECIAL DIET RECEIPT

1. The housing unit deputy shall ensure that each special diet delivered to the housing unit is handed directly to the requesting inmate.

2. The housing unit deputy will direct the inmate to sign for receipt of the meal on the meal cart log.

   a. In the event the inmate refuses the meal or refuses to sign for receipt of the meal, the housing unit deputy shall submit an incident report documenting the refusal.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.01
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 02-12-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Sanitation Schedule	

I. POLICY

A. A regular schedule of housekeeping will be performed to maintain an acceptable level of cleanliness throughout the facility pursuant to Minimum Jail Standards Section 1280.

II. PROCEDURE

A. INFORMAL INSPECTIONS

1. Housing unit deputies will inspect their respective housing areas during each shift. Any cleanliness or maintenance problems will be immediately corrected.

    a. If the problem cannot be corrected, the housing unit deputy will notify their sergeant and the appropriate action will be taken.

2. The Custody Sergeants will inspect all housing units and other areas under their control at least once per shift, including weekends and holidays, and report their findings to the Facility Commander.

    a. Cleanliness or maintenance problems will be brought to the attention of the housing deputy and the appropriate action will be taken.

3. The Facility Commander, acting as chief security officer, or designee, shall conduct at least weekly inspections of all security devices needing repair or maintenance and report the results of the inspecting in writing.

    a. Refer to CSB Facility Inspection Policy for additional details.

4. The Booking/ITR Deputies will inspect booking during each shift.

    a. Any cleanliness or maintenance problems will be immediately corrected.

    b. If the problem cannot be corrected, the Booking/ITR Deputy will notify the Shift Supervisor and the appropriate action will be taken.

5. The Shift Supervisor will inspect all areas under their supervision at least once during each shift.

    a. Cleanliness or maintenance problems will be brought to the attention of the deputy responsible for the problem area or referred to the Watch Commander for appropriate action.

6. DSWs will inspect public areas and administrative areas of the facility for cleanliness or maintenance problems.

    a. Cleanliness or maintenance problems will be corrected as soon as possible.

    b. The cook will forward repair requests to BAS.

7. The Director of Food Services or designee will inspect the kitchen and staff dining area during each shift.

8. The Director of Food Services will conduct weekly kitchen inspections.

    a. Cleanliness or maintenance problems will be corrected as soon as possible.

    b. The cook will forward repair requests to BAS.

9. All Sheriff's Aides assigned to Central Control, Property or the Reception/Lobby Areas will inspect their space daily.

    a. Cleanliness or maintenance problems will be corrected as soon as possible.

    b. Repair requests will be forwarded to the facility janitorial staff or GSD.

B. CIVILIAN HOUSEKEEPING RESPONSIBILITIES

1. DSW staff will be responsible for the cleanliness of all offices, lobbies, public and staff restrooms, hallways, control points, housing control units, libraries, classrooms, holding areas, and any other areas as designated by the Facility Commander.

2. The following housekeeping schedules will be performed in all staff and visitor areas within the facility by civilian staff.

    a. Facility floors will be kept clean, dry, and free of hazardous substances at all times, pursuant to CSB Hazardous Substance Policy.

        - Daily Service for offices, hallways, Operations, multi-purpose rooms and public areas:

            - Empty wastebaskets and remove trash.

            - Vacuum/buff tile floors.

- Spot mop for spillage.
- Vacuum carpets, stairs, and elevators.
- Spot clean carpets.
- Dust desks, file cabinets, and furniture.
- Clean and disinfect drinking fountains.
- Spot clean glass for fingerprints and smudges.

- Daily Service for public restrooms and staff locker rooms:
  - Clean and disinfect all fixtures.
  - Refill all dispensers.
  - Clean and disinfect toilets, urinals and showers.
  - Spot clean walls and partitions.
  - Clean mirrors.
  - Empty wastebaskets, remove trash.
  - Dust lockers, return air vents.
  - Mop floors.
  - Empty exterior cigarette urns.

- Weekly Service for offices, lobbies, hallways, Operations, Booking and multi-purpose rooms:
  - Scrub and sanitize showers.
  - Replace plastic liners in wastebaskets when applicable.
  - Clean doormats, thresholds, and entrance areas.
  - Spray and buff tile, damp mop stairs and elevators.

- General (As deemed necessary by Janitorial Supervisor.)
  - Dust door ledges, partitions, and moldings.
  - Spot clean doors, walls, and doorframes.
  - Vacuum and dust, clean Venetian blinds.

- Damp wipe wastebaskets.
- Clean all interior windows.
- Shampoo/steam clean carpet.
- Wash windows.
- Clean air vents.

- Semi-Annual
  - Clean all light fixtures and luminaries.
  - Shampoo/steam clean all carpets.

- Annual
  - Strip and wax tile pursuant to contract or established procedures.

C. SANITATION OF CELLS AND ROOMS

1. Each inmate is required to maintain sanitary living area conditions as follows:

2. Each inmate shall be responsible for the cleanliness of his or her cell or living area including walls, floors, sink, toilet, windows, and other property within the cell, room, or living area.

3. The housing floor/unit deputy shall provide cleaning materials and articles for cleaning to each inmate. The inmate is responsible for the proper usage and care of these articles.

4. Before leaving the cell/dorm area, each inmate shall sweep and mop the floor of their living areas, and deposit the trash in the trashcan located near the entrance of the unit.

5. No curtains, screen, paper, cellophane, cardboard or clothing, etc., shall be hung in the cell or on room doors.

6. The deputy shall issue the inmate a verbal warning or a disciplinary report in cases of continued noncompliance with cell/dorm cleaning.

D. The inmate workers will be responsible for the cleanliness of the common area within each pod, multi-purpose rooms, showers, quasi yards, and hallways.

1. The following housekeeping schedules will be performed in all pods/living areas by inmate workers daily:

   a. Clean all tabletops in common area.

   b. Clean pantry and mop floors.

c. Ensure that all trash is staged for pick up by 1900 hours.

d. Vacuum carpets in all common areas.

e. Sweep and mop inmate side of visiting room, the multi-purpose rooms, courtyards, and corridors leading to sally ports.

f. Spot clean all windows where needed.

g. Wipe down telephones.

h. Dust all TV's, bookcases, and other furniture.

i. Clean and disinfect inmate showers.

j. Clean marks from doors and walls.

2. Additional cleaning before and after meals

a. The pantry area will be cleaned prior to serving meals. Any juice or coffee spillage will be wiped up.

b. All tables where eating will occur will be wiped off.

c. After meals have been served, the tables will be cleaned before recreation and social activities resume.

d. Any spillage on the carpet will be cleaned immediately.

3. Other housing unit rooms (visiting, storage, showers, etc.)

a. Showers will be cleaned daily.

b. The storage rooms will be straightened, dusted and mopped as directed by shift deputies.

c. The inmate side of the non-contact visiting rooms will be dusted, windows cleaned and the floor mopped and buffed after visiting.

4. Common area

a. Shift deputies are responsible for supervising the inmate workers and ensuring cleaning assignments are accomplished in a timely and satisfactory manner.

b. Vacuum all carpets.

c. Spot clean soiled spots on carpet.

d. Dust or wipe down all recreation equipment and furniture.

e. Clean all tabletops and wipe down pedestals.

f. Clean all windows accessible from inside the housing unit.

g. Clean outside of windows from courtyard.

h. Straighten books in bookshelves and dust.

i. Dust windowsills, over doors, stairs, and railings.

5. Pantry Area

a. Clean pantry counter top.

b. Straighten and dust inside of cabinets and drawers.

6. All necessary cleaning material (cleaner/disinfectant, cleanser, brooms, mops, etc.) will be stored in a locked closet within each housing unit.

a. These are to be issued to each housing unit and used by inmates to clean their living areas daily under the supervision.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.02
	RELATED ORDERS: CCCSO Hazards Communication Program CSB 2.08.05	
ISSUE DATE: 07-01-04 **REVISION DATE:**1-08-2019 **REVIEW DATE:** 3-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Trash Procedure and Schedule	

I. POLICY

A. The Custody Services Bureau will maintain a waste disposal program that conforms to appropriate jurisdictional requirements and protects the health and safety of staff and inmates will be adhered to.

B. Liquid and solid trash and rubbish will be collected daily to avoid creating a menace to health, and to maintain good sanitary conditions pursuant to CCCSO Hazard Communication Program Policies.

II. DEFINITIONS

A. SECURITY SENSITIVE TRASH: Sensitive trash items are Security Hazards if left accessible to the inmate population. This would include soft drink cans, bottles, broken pieces of metal or porcelain and similar items. Secure garbage does not refer to security hazards of evidentiary value.

III. PROCEDURE

A. GENERAL

1. All staff is responsible for keeping their work areas free of trash, litter and garbage.

2. Security personnel are also responsible for ensuring that refuse is promptly removed from the inmate living areas.

3. All refuse will be disposed of in the proper receptacles.

4. The DSW staff shall maintain and insure the safe and sanitary operation of the Garbage Disposal Program for the facility.

B. MARTINEZ DETENTION FACILITY GARBAGE COLLECTION

1. The following units will place full trash carts at the appropriate pick-up points at

0700, 1300 and 1900 hours daily:

a. All Housing Floors

b. Booking

c. Medical Floor

d. Staff Dining

C. WEST COUNTY DETENTION FACILITY GARBAGE COLLECTION

1. All buildings will place full trash carts at the appropriate pick-up points at 0700, 1300 and 1900 hours daily:

D. KITCHEN AND SERVICE AREA/BUILDING PICK-UP

1. DSWs will place food services and main kitchen waste in the compactor.

2. Trash for the service area/building will be delivered by the inmates to the trash staging area under the supervision of an escort deputy.

3. The escort deputy will inspect all outgoing trash by removing each trash bag from the bin it is placed in and placing it into a previously unused bin.

4. DSWs will take the trash from the staging area to the loading dock/compactor unit only after an escort deputy has inspected all trash and containers.

E. SECURITY SENSITVE TRASH

1. Security sensitive trash will be collected by the on-duty housing floor/unit deputy when found.

2. Inmates may not have contact with secure garbage.

3. The staff member responsible for the secure garbage will contact the Shift Supervisor.

a. The Shift Supervisor will direct an escort deputy to respond to the location and recover the garbage.

b. The Escort Deputy will remove the secure garbage from the facility and place it directly into the compactor for destruction.

4. Staff members bringing items fitting the Secure Garbage description into the facility are responsible for removing them at the end of their shift.

F. Flammable, toxic, caustic and hazardous waste will be handled pursuant to CSB Hazardous Substance Program Policy and Procedure.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.03
	RELATED ORDERS: MJS 1280	
ISSUE DATE: 07-01-04 **REVISION DATE:** 1/8/2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Facility Housecleaning Responsibilities	

I. POLICY

A. A regular schedule of housekeeping will be performed to maintain an acceptable level of cleanliness throughout the Facilities.

II. PROCEDURE

A. HOUSEKEEPING-MDF and WCDF

1. DSW staff will be responsible for the cleanliness of the following:

   a. All offices

   b. Lobbies

   c. Public and staff restrooms

   d. Hallways

   e. Libraries

   f. Classrooms

   g. Court holding areas

   h. Other areas as directed by the Facility Commander or designee

2. DSW staff will ensure all facility floors are clean, dry and free of hazardous substances at all times.

B. HOUSEKEEPING SCHEDULE-MDF and WCDF

1. DAILY SERVICE

   a. Office, lobby, hallways, Central Control, and court holding.

- Second floor offices cleaned on weekdays only.
- Empty wastebaskets - remove trash.
- DSWs will place solid wastes into the trash compactor.
- Empty and clean **(outside)** ashtrays
- Sweep and mop tile floors
- Spot mop for spillage
- Vacuum carpets
- Sweep and mop stairs and elevators
- Spot clean carpets
- Dust desks, file cabinets and furniture
- Clean and disinfect drinking fountains
- Spot clean glass for fingerprints and smudges
- Public restrooms, staff locker rooms
- Clean and disinfect all fixtures
- Refill all dispensers
- Clean and disinfect toilets, urinals and showers
- Spot clean walls and partitions
- Clean mirrors
- Empty waste baskets - remove trash
- Dust front of lockers - return air vents
- Mop floors

2. WEEKLY SERVICE

a. Offices, lobbies, hallways, and court holding

- Replace plastic liners in waste baskets, when applicable
- Clean doormats, thresholds and entrance areas

- Mop and buff tile
- Public restrooms, change rooms
- Scrub showers
- Sanitize showers
- Staff Locker Rooms
    - Remove all excess clothing hangers
- Trash Compactor
    - DSWs will place solid wastes into the trash compactor.
    - The Bay Shore Sanitary Service removes contents of trash compactor as necessary.

3. MONTHLY SERVICE

a. General Facility Duties

- Dust door ledges, partitions and moldings
- Spot clean doors, walls and door frames
- Vacuum and dust, clean Venetian blinds
- Damp wipe waste baskets
- Clean all interior windows
- Staff Locker Rooms
    - Notify Operations Sergeant when preparing to clean tops of lockers.
    - If staff has not removed all items from the top of the lockers, notify the Operations Sergeant and request an escort to remove all items from tops of lockers.
    - Clean and disinfect tops and fronts of lockers

4. QUARTERLY

a. General duties, coordinate scheduling of cleaning with B.A.S Fire and Life Safety Officer.

- Sweep Fire Evacuation Stairwells
- Dust, Mop and disinfect Fire Evacuation Stairwells

- Sweep and Mop Evacuation Stairway and Walkway on Roof of Court Annex (access through the Bray Building Link Sally port by the Transportation Hallway).

- Other assignments as directed by the Facility Commander.

5. SEMI-ANNUAL

a. General duties

- Clean all light fixtures and luminaries

- Shampoo/steam clean all carpets

- Strip and wax all tile & non-carpeted floors

C. HOUSEKEEPING-MCDF

1. DSW staff will be responsible for the cleanliness of the following:

a. Administration Office

b. Staff restrooms

c. Locker rooms

d. School offices

e. Range classroom

f. Medical office

g. Property room

h. Any other areas when directed by the Facility Commander.

2. DSW staff will ensure all facility floors are clean, dry and free of hazardous substances at all times.

D. HOUSEKEEPING SCHEDULE-MCDF

1. DAILY

a. Empty wastebaskets - remove trash

b. Empty and damp wipe ashtrays

c. Vacuum/buff tile floors

d. Spot mop for spillage

e. Vacuum carpets, stairs and elevators

f. Dust desks, file cabinets and furniture

g. Clean and disinfect drinking fountains

h. Spot clean glass for fingerprints and smudges

i. Inmate workers under the direct supervision of a DSW are responsible for the cleanliness of inmate classrooms, chapel and laundry.

j. Inmate KP's, under the supervision of the Lead Cook, will be responsible for housekeeping duties in the cafeteria and adjacent grounds.

k. The Officer Orderly will clean the holding cell.

l. Shop Complex

- All flammable liquids, i.e., paint, thinner, gasoline, oil, etc., will be kept in the secured flammable liquid storage locker at the shop.

- All rags and other refuse containing flammable liquids will be placed in the flammable waste receptacle located at the shop. This receptacle will be emptied and cleaned daily.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.04
	RELATED ORDERS: MJS 1280 P.C. 6031.1 H.S. 101045	
ISSUE DATE: 07-01-04 **REVISION DATE:** 08-28-18 **REVIEW DATE:** 03-07-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Safety and Sanitation Inspections	

I. POLICY

A. The Custody Services Bureau shall ensure the following:

1. Inspections of the facility shall be conducted to ensure a high degree of cleanliness, sanitation and safety throughout the facility.

2. Weekly safety sanitation inspections of all facility areas shall be done by qualified staff members, with emphasis on security devises.

3. A monthly comprehensive and thorough inspection of all facility areas will be completed by the facility Fire/Life Safety Officer(s) for compliance with safety and fire prevention standards.

   a. There is a weekly fire and safety inspection of the facility by a qualified departmental staff member. This policy and procedure is reviewed annually and updated as necessary.

4. The facility will be inspected at least annually by state or local sanitation and health officials.

5. The facility complies with all applicable laws and regulations of the governing jurisdiction and shall have documentation by an independent, outside source that any past deficiencies noted in annual inspections have been corrected.

II. PROCEDURE

A. INFORMAL INSPECTIONS

1. All personnel will inspect their assigned work areas during each shift. Any cleanliness or maintenance problems will be immediately documented on a work order for correction.

   a. If the problem cannot be corrected, personnel will notify their supervisor to ensure appropriate action is taken.

2. Supervisors will inspect all housing units and other areas under their control at least once per shift.

    a. Appropriate action will be taken to ensure that cleanliness or maintenance problems are corrected.

3. The DSW supervisor will inspect public areas, program areas and administrative areas of the facility for cleanliness or maintenance problems. Cleanliness or maintenance problems will be corrected as soon as possible.

4. Custody staff and the Director of Food Services or designee assigned to the kitchen will inspect the kitchen and staff dining area on a daily basis.

    a. Cleanliness or maintenance problems will be corrected as soon as possible.

5. GSD supervisors and staff will inspect those areas in the service building they are directly responsible for on a daily basis.

6. The landscape supervisor will inspect areas of responsibility weekly.

7. Booking/ITR deputies will inspect Booking/ITR during each shift.

    a. Any cleanliness or maintenance problems will be immediately documented via work order for correction.

    b. If the problem cannot be corrected, the Booking/ITR deputy will notify the Shift Supervisor and the appropriate action will be taken.

8. The Shift Supervisor will inspect all areas under his/her supervision at least once during each shift.

    a. Cleanliness or maintenance problems will be brought to the attention of the deputy responsible for the problem area.

B. FORMAL INSPECTIONS

1. A weekly safety/security device/sanitation inspection of all facility areas will be conducted by the appropriate area supervisor, in accordance with CSB Facility Commander Post Orders and Facility Inspection Policy.

    a. The weekly inspection reports will be completed by a qualified departmental staff member as designated by the Facility Commander.

    b. All inspection reports will be returned to the CAS Lieutenant.

    c. The CAS Lieutenant will ensure that all discrepancies noted during the inspection have been assigned corrective action.

    d. The supervisor or designated staff member will then report back to the

CAS Lieutenant, indicating the completed and/or initiated corrective action taken.

2. The Administrative Services will conduct a comprehensive and thorough monthly safety/sanitation inspection of all facility areas.

   a. The Administrative Services shall submit the monthly inspection reports to Custody Administrative Services for records.

      - The CAS Lieutenant shall notify the Facility Commander of all discrepancies noted during the Fire/Life Safety and Sanitation Inspection.

3. The facility will be inspected biannually by the State Board of Corrections as specified in the 6031.1 PC.

4. The facility will be inspected annually by the Environmental Health Services Agency as specified in 101045 H&S.

   a. Water samples from both drinking and wastewater will be tested annually by the Environmental Health Services Agency to ensure that the facility's water meets all applicable laws.

5. The facility will be inspected annually by the designated Fire Marshal of jurisdiction.

C. VERMIN/PEST CONTROL INSPECTION:

1. The CAS Specialist will be the liaison between the facility and the Director of Food Services or designee for vermin/pest control.

   a. GSD will ensure that vermin/pest control professionals are readily available to the facility.

   b. Regular weekly inspections will be conducted to identify any such conditions, and to eradicate by whatever means is necessary.

   c. Follow-up monthly inspections will be conducted by the CAS Lieutenant during the monthly Fire/Life Safety Sanitation facility-wide inspection.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.05
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Housing Unit Cleaning Chemical Procedures	

I. POLICY

A. Custody Services Bureau personnel will store and distribute housing unit cleaning chemicals in such a manner that security and inventory control can be maintained while ensuring inmate workers do not retain unused chemicals after use.

II. PROCEDURE

A. CHEMICAL DISTRIBUTION

1. Cleaning chemicals will be mixed to their proper and safe dilution ratio automatically by the dispensing systems.

2. Diluted cleaning chemicals will only be stored in their respective and appropriate labeled containers.

3. DSW staff will maintain an adequate inventory of approved cleaning chemicals and shall maintain the appropriate chemical storage jugs in the individual housing floors/units janitor's closets, filling and/or replacing them as necessary.

B. CHEMICAL DISTRIBUTION TO INMATE WORKERS

1. The housing floor/unit deputy shall keep the janitor's closet containing the cleaning chemicals in a constant locked condition.

   a. At no time shall an unescorted inmate be allowed in the janitor's closet.

2. The appropriate, diluted cleaning chemical in its properly marked dispensing container, shall be given to the housing unit worker or individual inmate (if cleaning an individual cell).

   a. The deputy distributing the chemical(s) shall instruct the inmate to return the dispensing container with the unused cleaning chemical upon completion of the cleaning task.

3. Upon return of the dispensing container, the deputy shall return it to the janitor's closet and ensure that the closet is secured.

    a. No cleaning chemical is to be stored outside of the locked janitor's closet or left unattended anywhere within the housing floor/unit.

4. At no time, is any inmate allowed to retain or store any cleaning chemical, either in the original dispensing container or in any other container.

5. At no time, are any inmates to be in contact with, or exposed to, any concentrated cleaning chemical.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.06
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Control of Flammable and Caustic Materials	

I. POLICY

A. Flammable, toxic or caustic materials will be stored in an area inaccessible to inmates to ensure facility security and the safety of staff and inmates.

II. DEFINITIONS

A. Flammable Materials: Any product which will ignite when contacted with flame or spark, or at below 100 degrees Fahrenheit.

B. Toxic: A poisonous material that can destroy the life or health of a living animal or plant.

C. Caustic: A material able to burn or corrode persons or objects by chemical action.

III. PROCEDURE

A. USE OF FLAMMABLE, TOXIC AND CAUSTIC MATERIALS

1. Inmates will only be authorized to use flammable, toxic or caustic materials under the constant supervision of sworn, Food Service, Support Service personnel or other personnel as designated by the Facility Commanders.

2. All flammable, toxic or caustic materials will be stored in accordance with all applicable laws and regulations governing the Detention Facility.

3. Facility DSWs will be responsible for obtaining any flammable, toxic and caustic material within the Detention Facility for delivery to the modules.

4. Any personnel using flammable, toxic or caustic materials must use protective clothing, i.e., elbow length rubber gloves and knee length aprons.

B. CONTROL OF FLAMMABLE, TOXIC AND CAUSTIC MATERIALS

1. All personnel obtaining/using any flammable, toxic or caustic materials that are stored in the kitchen, laundry and/or DSW's office will sign the respective

Hazardous Substance Log.

a. The Hazardous Substance Log will contain the following information:

- CHECK OUT
- Date/Time
- Quantity
- Item
- Destination
- Employee's Name
- CHECK IN
- Time - Qty - Initial

2. West County and Marsh Creek Detention Facilities

a. Gasoline, fertilizers and other restricted chemicals will be stored in the landscape storage room next to the Maintenance Shop.

b. Gasoline will be stored in approved containers in the flammable liquids cabinet.

c. Fertilizers and other materials will be stored in their original packaging. The safe handling and storage guidelines printed on the packaging will be adhered to.

d. Gasoline which has been poured into the fuel tank of power equipment (i.e., lawn mower) may remain within the security perimeter provided the power equipment is stored in a secured location.

e. Power equipment will not be refilled at the end of the workday so as to minimize the amount of flammable liquid within the security perimeter.

3. Marsh Creek Detention Facility Only

a. Gasoline for emergency power generators will be stored in approved containers in the supply locker area on the south side of B and C dormitory complex, near the generator storage.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 02-15-07
	RELATED ORDERS: CA Admin. Code, Title 22 EPA Resource Conservation Recovery Act, November 1984 Cal OSHA, Title 8 CCCSO 1.06.34, Appendix 10	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-26-05 **REVIEW DATE:** 02-12-18	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Bio Hazard Materials Handling and Disposal	

I. POLICY

A. Disposal of all hazardous/infectious liquid and solid waste shall conform to the appropriate Federal, State and local regulations:

1. BIO-HAZARDOUS LIQUID WASTES

a. All bio-hazardous liquid waste shall be stored in appropriate containers and removed from the Facility by a State registered materials waste hauler.

2. BIO-HAZARDOUS SOLID WASTE

a. All bio-hazardous solid waste shall be placed and stored in appropriate double-bagged, bio-hazardous marked containers and removed from the Facility by a State registered materials waste hauler.

II. DEFINITIONS

A. Bio-Hazardous Waste: A waste or combination of wastes, which because of its quantity, concentration or physical, chemical or infectious characteristics may either:

1. Cause, or significantly contribute to, an increase in serious irreversible or incapacitating reversible illness or

2. Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed.

B. Infectious Waste: Laboratory wastes which include cultures of disease causing agents which pose a substantial threat to health due to their volume and virulence:

1. Pathologic specimens, including human or animal tissues, blood elements, excreta and secretions which contain disease causing agents and attendant disposable

fomites.

2. Equipment, instruments, utensils, food containers and other disposable materials, which are likely to transmit disease-causing agents from the rooms of inmates that have been isolated because of, suspected or diagnosed communicable disease.

3. Any other material that, in the determination of the Facility medical staff, presents a significant danger of infection because it is contaminated with, or may reasonably be expected to be contaminated with, etiologic agents.

4. Etiologic Agents - A type of micro-organism, helmink or virus which causes, or significantly contributes to, the cause of increased morbidity or mortality of human beings.

III. PROCEDURE

A. INCIDENTS INVOLVING BIO-HAZARDOUS SPILLS OR POTENTIAL EXPOSURES

1. Any staff member discovering any possible hazardous or infectious waste that may pose a potential hazard to any staff or inmate will attempt to identify what the material is. Identification shall be limited to visual inspection.

2. The staff member will contact the Shift Supervisor and advise him/her of the discovery and the circumstances of the incident if known.

3. The Shift Supervisor shall assess the situation to determine the severity of the hazard and what type of resources will be required.

   a. The Shift Supervisor should make the following considerations:

      - Type of incident
      - Risk of exposure/injury to staff and/or inmates
      - Quantity of waste/size of affected area
      - Availability and response time of outside resources

   b. The Shift Supervisor will determine if the waste material may be reasonably cleaned up by resources within the facility.

      - Considerations for protective equipment shall be made for facility staff and inmate work crews in accordance with Sheriff's Office Policy 6-3.4 and Appendix 10.

   c. The Shift Supervisor will advise Central Control of the incident and make requests as needed for professional bio-hazard cleaning services.

      - Central Control Staff will contact the current State registered materials waste hauler.

d. All hazardous/infectious waste shall be disposed of only in a double red plastic bag.

- The Housing Unit Deputy will notify a D.S.W., via Central Control, that there is contaminated trash ready for pickup outside the housing unit.

- The D.S.W. will pull the contaminated, double red-bagged trash from the housing unit and place it in the special locked bio-hazardous materials container.

e. A professional contractor designated by Contra Costa Health Services shall pick up the material from the special trash box for final disposal.

f. Additional Red Bags may be obtained at the following locations:

- MDF and MCDF: DSW offices

- WCDF: Facility Medical offices

B. DISPOSAL OF ETIOLOGICAL AGENTS

1. Medical staff shall identify which inmate rooms are the source of etiologic agents.

2. Medical Staff will notify the Shift Supervisor of any situation requiring the removal of etiological agents.

a. The Shift Supervisor will advise Central Control to contact the current State registered materials waste hauler.

C. HAZARDOUS/INFECTIOUS WASTE ON INMATE LINENS AND CLOTHING

1. All clothing and/or linen items with hazardous or infectious waste on the item shall be disposed of.

a. This does not apply to items contaminated with vermin infestations. Refer to CSB Policy 15.08, Contaminated Clothing Bedding and Linen Procedure for additional information.

2. The housing unit inmate workers, wearing protective throwaway gloves and apron, shall hold an open red plastic bag by the unit door.

3. The infectious inmate will deposit their soiled clothing and/or bedding into the bag.

4. The housing unit worker will remove their protective clothing and place them into a doubled red plastic bag.

5. The red bag shall be disposed of in accordance with Procedure A.3.d of this policy.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 02.15.08
	RELATED ORDERS: MJS 1262, 1271	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Contaminated Clothing, Bedding and Linen Procedure	

I. POLICY

A. All inmates will exchange clothing, bedding and linen at least weekly, or as needed, to control the contamination and/or spread of vermin.

B. Contaminated items will be sealed in red plastic bags.

C. Bags containing contaminated articles will be sent to the laundry for cleaning, disinfecting, or disposal.

II. PROCEDURE

A. The following procedures are to be used when handling contaminated clothing, bedding or linen:

1. The medical staff will be notified of all cases of suspected vermin infestation for confirmation and treatment.

2. Inmates in possession of contaminated articles shall have those items replaced in a timely manner.

3. All persons handling contaminated clothing, bedding or linen will wear disposable gloves.

4. The inmate shall place contaminated clothing, bedding and linen in red plastic bags at the time of treatment and clothing exchange.

   a. The bags shall be sealed and marked on the outside as follows:

      Description of contents (i.e., 2 sheets, 1 blanket, 1 top and pants).

      Type of contamination (i.e., lice, etc.).

      Location of recovery (i.e., A Module Cell 1, etc.).

Sealed bags will then be placed in laundry carts with normally soiled laundry that is destined for the laundry.

Personnel recovering contaminated laundry shall notify the laundry that contaminated laundry is enroute.

b. The laundry supervisor will evaluate the contaminated articles for either laundering or disposal. To minimize handling, evaluation may in most situations result from reading exterior label.

5. Inmates instructed to handle contaminated articles shall be supervised to ensure compliance with proper safety techniques.

6. An adequate supply of red contamination bags shall be maintained in Booking/ITR, housing units, and the laundry.

7. The bags may be reordered through the Detention Service Worker Office at each facility.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.09
	RELATED ORDERS: MJS 1264	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Cleaning and Storage of Inmate Personal Clothing	

I. POLICY

A. All inmate personal clothing received at the time of intake will be inspected and properly stored and cleaned when required, pursuant to Minimum Jail Standard 1264.

II. PROCEDURE

A. The clothing room clerk will give incoming inmates one hanger style mesh clothing storage bag.

B. Inmates will be instructed to place all clothing into the mesh bag.

C. The clothing room clerk will then inspect the clothing:

1. Acceptable Clothing:

   a. The mesh bag will then be covered with a clear plastic bag.

   b. The bag will then be marked with the inmate's name and booking number, and placed on the appropriate rack.

2. Soiled Clothing:

   a. If the clothing appears to be severely soiled, the ITR/Booking Sergeant will be notified.

   b. If the ITR/Booking Sergeant determines the clothing is soiled to the point of being unacceptable for storage with other inmate personal clothing, the clothing shall be placed in a red bag, sealed, and tagged on the outside as follows:

      Inmate's name and Booking Number

      Description of contents.

c. The bagged clothing shall be packaged and released to the inmate's family or authorized receiving party.

3. Vermin Infested Clothing:

a. If the clothing is believed to be contaminated with body vermin:

Notify the ITR/Booking Sergeant and the medical staff.

Upon confirmation from the medical staff that vermin are present, all clothing shall be placed into a red bag, sealed and tagged on the outside as follows:

Inmate's name and Booking Number.

Description of contents.

The bagged clothing shall be packaged and released to the inmate's family or authorized receiving party.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.10
	RELATED ORDERS: MJS 1265, 1266,1267 CSB 2.18.04 P.C. 6030 Title 16, Division 9, Section 979, 980	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Inmate Hygiene	

I. POLICY

A. Each inmate to be held over 24 hours who is unable to supply himself/herself with personal care items, because of either indigency or the absence of an inmate canteen, shall be issued a hygiene kit.

B. Inmates will not be required to share any personal care items that are not designated for use by multiple inmates. Items that are designed to be used by multiple inmates will be disinfected using supplied materials between uses.

C. Inmates will be allowed freedom in personal grooming except when a valid facility interest justifies otherwise.

D. Inmates, except those who may not shave for reasons of identification in court, shall be allowed to shave daily and receive hair care services at least once a month. The facility administrator may suspend this requirement in relation to inmates who are considered to be a danger to themselves or others or because of facility security concerns.

E. Inmates shall be permitted to shower upon assignment to a housing unit and at least every other day, or more often, if possible.

II. DEFINITIONS

A. Hygiene Kit – A hygiene kit will contain: toothbrush, dentifrice, soap, and a comb.

B. Hair Clippers - Hair cutting device that can be checked out by inmates for the purpose of cutting their hair.

C. Electric razor – Shaving device that can be checked out by inmates for the purpose of shaving.

III. PROCEDURE

A. HYGIENE KITS. Indigent inmates may receive one hygiene kit per week through the inmate commissary program.

1. Each inmate will receive a hygiene kit during the booking process

2. Additional hygiene kits are available to inmates through commissary.

B. SHOWERS

1. Pursuant to Minimum Jail Standard 1266, deputies will provide shower availability for inmates as follows:

   a. Upon assignment to a housing unit.

   b. When confined to a housing unit, showers are available on a daily basis, during free-time.

   c. Inmates are required to shower a minimum of three times per week.

   d. Water temperature for showers will be thermostatically controlled and set not to exceed 105 degrees Fahrenheit to ensure the safety of inmates.

C. HAIR CARE EQUIPMENT

1. Hair care equipment is purchased using the Inmate Welfare Fund.

2. Each housing unit will be issued one (1) complete set of hair clippers. All hair care equipment will be kept in the storage areas of each housing unit. Housing Units at WCDF with inmate counts exceeding 100 may have two (2) complete sets of hair clippers.

3. At the start of each shift, module deputies will count the number of hair clippers and electric razors and place the count in the Module Notes.

4. All hair care equipment will be stored in the provided container, which will be maintained in a sanitary manner.

5. Hair care equipment will be controlled by the use of an inventory sheet.

   a. The module deputy will ensure that the inmate signs the inventory sheet upon being issued an electric razor or hair clipper. The deputy will also ensure that the inmate signs the inventory sheet upon returning the equipment.

   b. The inventory shall indicate the number and type of items present in the container and will be updated each time a change in container content occurs.

   c. Each time the items are issued, the deputy shall check the container to ensure the issued items are returned.

   d. The deputy will inspect the electric razor or hair clipper for damage or missing parts each time it is returned.

e. The inventory sheet shall be kept in the container until the equipment is issued. The sheet shall be kept in the deputy's station until the equipment is returned.

f. In the event of a discrepancy in the inventory, the deputy shall notify their supervisor.

g. Any broken hair clippers, electric razors, or removable electric razor parts shall be forwarded to DSW Staff for disposal. All parts will be accounted for.

6. The housing unit deputy is responsible for contacting the Detention Service Worker Supervisor when new equipment is needed.

7. Inmates will be monitored when using hair care equipment.

8. Blatant misuse of hair care equipment by inmates will result in a disciplinary report.

9. The housing unit deputy will complete an appropriate report when equipment is destroyed.

D. HAIR CARE SERVICES

1. Hair Clippers and electric razors shall only be used during free time or prior to going to court. In instances where modules or inmates are locked down for the entire day (eliminating the possibility of free-time) housing unit deputies will allow electric razor use upon the request of inmates, unless inmates are considered to be a danger to themselves or others.

2. Hair cutting supplies will be disinfected after each use.

   a. First, remove foreign matter from the electrical instrument.

   b. Disinfect with an EPA-registered disinfectant with demonstrated bactericidal, fungicidal and virucidal activity used according to the manufacturer's instructions.

   c. All disinfected electrical instruments will be stored in a clean covered place.

3. After each use, the inmate will clean the electric razor and head and will return the clean electric razor or hair clipper to the module deputy.

4. Bactericide and hair care implements will be secured by the housing unit deputy when not in use.

E. DISPOSABLE RAZORS AND NAIL CLIPPERS

1. Inmates may not possess more than three (3) disposable razors, which are

available for purchase through commissary.

2. Nail clippers are available for use through the housing unit deputy.

3. Administrative Segregation and inmates on observation logs may NOT purchase disposable razors. Electric razors are available for loan through the housing unit deputy.

4. Inmates housed on D, M and Q Modules at the MDF housing units will not be permitted to possess disposable razors.

F. SPECIAL HYGIENE ARTICLES

1. Special hygiene articles (i.e., special soaps, dentifrice, etc.) will be issued by medical staff.

2. Sanitary napkins and tampons for female inmates will be made available upon request.

G. ADMINISTRATIVE SEGREGATION AND DISCIPLINARY INMATES

1. Inmates housed in Administrative Segregation and Disciplinary will be afforded ten (10) minutes to shower and/or shave at least every other day. This time will be in addition to any regularly scheduled recreation time the inmate receives.

2. If requested by an inmate, the inmate shall be afforded reasonable opportunity and time to shave, on days in which they are not scheduled for recreation time, so long as it is in accordance with the operational needs of the facility.

3. Inmates in jury trial shall be afforded the opportunity to shower and shave daily so long as it does not jeopardize the safety and security and/ or operations of the module.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.15.11
	RELATED ORDERS: Infection Control Department Recommendations	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Sanitation and Hygiene	**SUBJECT:** Inmate Infection Control and Sanitation	

I. POLICY

A. The Custody Services Bureau shall ensure that all inmates with skin or soft tissue infections, or identified with Multiple Drug Resistant Organism colonization or infection shall clean their own cells, associated bedding and furniture on a daily basis.

II. PROCEDURE

A. Deputies will provide all inmates with skin or soft tissue infections, or identified with Multiple Drug Resistant Organism colonization or infection on a daily basis.

B. Materials

1. Sanitizing Cleaning Agent

2. Disposable cleaning cloths are preferred, but available cleaning cloths within the facility are considered acceptable.

    a. All disposable cloths may be thrown away in a normal garbage receptacle.

    b. Used reusable cloths should be placed in a outgoing laundry container for cleaning.

    c. No cleaning material should be left lying on the housing unit or disinfected area.

    d. New cleaning cloths should be used every day.

C. Inmates will be responsible for applying the product and wiping down the following items within their assigned cell:

1. Bed frames

2. Sink

3. Door knobs

4. All handles

5. Cell Walls

D. Inmates will allow the product to air dry on all surfaces.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.01
	RELATED ORDERS: MJS 1061, 1063, 1064, 1065, 1066, 1067, 1068, 1070, 1071, 1072, 1073	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Rights and Privileges	

I. POLICY

A. The Custody Services Bureau recognizes inmates have certain rights relative to conditions of their confinement.

B. Inmates are recognized to have the following rights:

1. Supervised sleeping accommodations.
2. Clean and orderly surroundings.
3. Adequate toilet, bathing and laundering facilities.
4. Adequate lighting, heating and ventilation.
5. Compliance with federal, state and local fire safety laws and regulations.
6. Basic medical and dental services.
7. Properly prepared wholesome and nutritious diets.
8. Clean and seasonable clothing.
9. Recreation and exercise opportunities.
10. Access to clergy and legitimate religious practices.
    a. Limited only by facility order and security.
11. Visitation with family and friends
12. Confidential visitation with attorneys and representatives
    a. Limited only by facility order and security

13. Confidential correspondence with officials of the court, government authorities, and administrators of the confining authority without fear of reprisal or punitive action

14. Correspondence and telephone privileges

15. Propia Persona (Pro-Per) privileges as granted by local courts

16. Freedom from discrimination based on race, religion, national origin, sex, age, handicap or beliefs

17. Protection from personal abuse, corporal punishment, personal injury, disease, property damage and harassment

18. Protections under the Fourth Amendment of the Constitution of the United States of America when a new offense is suspected

19. To be treated with dignity and respect

20. Personal grooming choices

    a. Limited only by facility requirements for safety, security, identification and hygiene.

21. Access to approved and allowable supplies and services at the inmate's expense.

    a. Reasonable supplies will be provided to inmates if they are considered indigent.

22. Voting in accordance with local, state and federal election codes.

    a. Inmates may request an absentee ballot registration form via inmate request form to C.A.S..

23. Written grievance procedure that includes at least one level of appeal

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.02
	RELATED ORDERS: MJS 1230, 1260, 1261, 1262, 1280 P.C. 6030	
ISSUE DATE: 01-13-04 **REVISION DATE:** 10-15-19 **REVIEW DATE:** 10-18-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Rules and Information	

I. POLICY

A. Upon entering the facility, all inmates will be provided with a video inmate orientation pursuant to Minimum Jail Standard 1080, in either English or Spanish.

B. The Inmate Orientation video will be shown once per hour in the intake booking areas.

C. Deputies conducting final booking review will ensure that the inmate understands the information contained in the Inmate Orientation and that he/she has no other questions.

D. Inmates will sign for receipt of the orientation following the completion of their booking and prior to their assignment to a permanent housing unit.

E. Deputies will ensure that any inmate with impairments, or inmates who are not fluent in English or Spanish are familiar with the rules and regulations of the facility. Deputies will inform the Shift Supervisor of any inmate that failed to receive a proper orientation so proper arrangement can be made.

F. The following policies and information will be available to all inmates on the housing unit for review:

1. Correspondence, visiting and telephone usage rules
2. Disciplinary procedures
3. Inmate grievance procedures
4. Programs and activities available and method of application
5. Medical services
6. Classification and housing assignments
7. Court appearance information

G. Any information listed above that is not conspicuously posted will be available through the housing unit deputy.

H. All inmates will be responsible for knowing the facility rules and regulations. Violation of any rule may result in disciplinary action. Violation of any local, state, or federal law may result in criminal prosecution.

I. A copy of inmate disciplinary records may be sent to State Prison, parole, probation department, or any other agency upon inmate transfer from any Contra Costa County Sheriff's facility.

J. Inmate rules are reviewed annually and updated as necessary.

II. DEFINITIONS

A. Contraband: Any item that is not issued by the facility in which the inmate is being housed, has been issued by the facility or purchased through commissary but is not being used for its intended purpose, is a threat to the security of the facility, is in excess, or is no longer in its original form.

III. PROCEDURE

A. INMATE FACILITY ORDERS

1. Inmates are required to:

   a. Obey all verbal and written orders.

   b. Maintain a clean appearance and remain free of offensive odors that are within personal control.

2. Inmates are not permitted to:

   a. Commit any criminal act(s)

   b. Possess contraband

   c. Participate in any action that will endanger the safety of a staff member, visitor, or another inmate

   d. Fight, mock fight, horseplay, or instruct or participate in activities related to martial arts or any other defensive or offensive tactics

   e. Violate the security or proper running of any facility, (includes courtrooms and court holding facilities.)

   f. Be loud or disruptive by yelling, pounding, singing, whistling, etc.

   g. Falsify, alter or remove facility issued identification

   h. Destroy, damage or deface any property not specifically belonging to the inmate

i. Smoke any product

j. Make, possess, drink or be under the influence of any narcotic, drug, intoxicant, non-prescribed medication or abused prescribed medication.

k. Gamble

l. Communicate with visitor unless authorized by the housing unit deputy

m. Communicate with any inmate on another housing unit

n. Litter

o. Speak when transported

p. Engage in sexual activity

q. Be disrespectful to any staff member assigned to or serving this facility

B. INMATE LIVING AREAS

1. Inmates are required to:

a. Follow the directions of the housing unit deputy.

b. Obey all posted “out of bounds” signs.

c. Account for all items in their room.

d. Make their bed and clean their room and living area prior to leaving their room each day.

e. Keep desks placed length-wise against the wall.

f. Report to their rooms and stand facing the inspecting deputy for all formal counts.

g. Store all property in a single drawer or bin provided.

- Items will not exceed the lip level of any drawer or bin.
- Items stored on the floor will be considered contraband.

2. Inmates are not permitted to:

a. Enter a room that is not assigned to them.

b. Change housing assignments without the housing unit deputy’s authorization.

c. Talk through doors during formal counts or any time after 2300 hours.

d. Have room lights on between 2300 and 0600 hours.

e. Create makeshift tables, chairs or shelves.

f. Cover their room lights at any time.

g. Write on, cover, adhere, stick, wedge or hang any item to doors, walls, windows, floors, ceilings, furniture, mirrors, fixtures, vents, or security grating.

- This includes items hanging from bunks that prevent the deputy's view of the room occupant(s).

h. Place any item on or in room or door windows.

i. Display pictures revealing nudity or sexual acts.

j. Display or possess any gang related drawings, writings or photographs.

C. INMATE POSSESSIONS

1. Inmates may possess the following miscellaneous items in their room:

a. One (1) cup

b. One (1) hairbrush

c. One (1) comb

d. One (1) tube of toothpaste

e. One (1) toothbrush

f. One (1) Medic-Alert bracelet or necklace

g. One (1) address book

h. One (1) facility issued bag of chips (not permitted at MCDF)

i. One (1) piece of fruit (not permitted at MCDF)

j. One (1) facility issued bowl

k. One (1) plastic spoon

l. One (1) personal subscription newspaper

m. Seven (7) books and/or magazines including Bible and necessary schoolbooks. Books will be soft cover only.

1. **Exception**: One hardbound schoolbook per inmate is allowed provided the schoolbook is issued by Schools and is kept in the inmate's room unless it is being used in a class with the teacher present.

2. No hardbound schoolbooks are allowed on D Module or M Module.

n. Ten (10) of one type of food commissary item

- Example: 10 candy bars, 10 sodas, 10 bags of chips, etc.
- Items that cannot be stored within the inmate's single drawer or bin will be considered contraband.
- Commissary items that exceed any other restriction within CSB policy (i.e. cups, hairbrushes, etc.) will be considered contraband.

o. Inmate property found to be in excess, damaged or used for any purpose other than its intended use is prohibited and will be confiscated and/or destroyed.

2. INMATE BEDDING

a. Each inmate may possess:

- One (1) mattress
- Two (2) blankets
- Two (2) sheets

3. INMATE CLOTHING AND LINEN

1. Each inmate at MDF will be permitted to possess two (2) of each of the following items:

    a. Towels

    b. T-Shirts

    c. Underwear

    d. Socks

    e. Gold tops

    f. Gold bottoms

2. Protective Custody (PC) inmates at WCDF will be permitted to possess two (2) of each of the following:

    a. Towel

b. T-Shirt

c. Underwear

d. Socks

e. Lime-green tops

f. Lime-green bottoms

3. Module workers at MDF and inmates at WCDF will be permitted to possess three (3) of each item of the following items:

    a. Towels

    b. T-Shirts

    c. Underwear

    d. Socks

    e. Gold tops

    f. Gold Bottoms

4. Module Workers at WCDF and MCDF will be permitted to possess the following clothing items:

    a. Five (5) towels

    b. Four (4) t-shirts

    c. Four (4) pair of underwear

    d. Four (4) pair of socks

    e. Three (3) gold tops

    f. Three (3) gold Bottoms

    g. One (1) sweatshirt (seasonal)

    h. One (1) pair Work Boots (MCDF Only)

a. Inmates are required to wear the following clothing while in the housing unit common areas:

- T-Shirt
- Underwear
- Pants

- Sandals/tennis shoes

b. Male inmates may remove their shirts while exercising in the courtyard but must be properly dressed when returning into the housing unit.

c. Inmates will not exit their rooms' bare-chested or wearing only underwear or wrapped in a towel.

- This includes going to and from showers/restrooms.

d. Baggy clothing and clothing that is worn improperly will be considered contraband and could result in the loss of the particular item and disciplinary action.

- This includes:
  - Altered clothing
  - Clothing not used for it's intended purpose
  - Clothing worn backwards or displayed in specific, non-uniform ways.

D. INMATE HOUSING UNIT SERVERY AREAS

1. Inmates may not access any items stored in the servery cabinets without the permission of the housing unit deputy.

2. Inmates not assigned as module workers will not use the facility microwave ovens.

3. Inmates may use and operate the smaller microwave ovens issued by commissary.

E. INMATE RECREATIONAL AREAS

1. Television areas

a. Television areas will be kept clean or will be subject to removal for up to 24 hours.

2. Games

a. Games at MDF may be checked out for use in rooms during lock down through the housing unit deputy.

b. Inmates may not slap or slam dominos/game pieces, etc., onto any surface.

3. Exercise

a. Large coordinated group workouts are forbidden. Any coordinated

workouts shall consist of no more than 3 inmates. This does not include sport activities such as basketball, soccer and handball.

F. INMATE TRANSPORTATION and COURT APPEARANCES

1. Inmates are required to:

a. Follow the directions of the transporting deputy.

b. Be prepared for the transportation deputy upon their arrival.

- Any delay of facility movements may result in disciplinary action.

c. Walk with their hands in the small of their back when being transported.

d. Face the back of the elevator when being transported between levels.

e. Remain in a single file line while being transported.

f. Wear the following clothing before leaving their assigned housing area for any reason:

- T-Shirt
- Shirt
- Underwear
- Pants
- Socks
- Sandals/tennis shoes

2. Inmates are not permitted to:

a. Speak while being transported.

b. Obstruct any access or hallway at any time.

3. Inmates are permitted to take the following items to court:

a. One (1) paperback book

b. Legal papers

c. Prescription eyeglasses

d. Authorized medication with medical blue slip

G. INMATE MEDICATION

1. Inmates will not possess any medication or pills without approval from medical staff.

2. Approval must be in writing on a blue slip.

3. The inmate must possess the blue slip if in possession of any medication.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.03
	RELATED ORDERS: MJS 1083, 1084, 1247 P.C. 4019 CSB Appendix	
ISSUE DATE: 01-13-04 **REVISION DATE:** 09-18-14 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Incidents and Discipline	

I. POLICY

A. The Sheriff is responsible for the safety, and well-being of all inmates held within the detention facilities operated by the Contra Costa County Sheriff's Office. Discipline and inmate rules of conduct will be fairly and objectively enforced and shall not be capricious or retaliatory.

B. This policy and procedures in this directive shall apply to all inmates without regard to sex, race, religion or housing status within the Custody Services Bureau. It shall be universally applied and enforced.

C. All criminal acts that violate state or Federal Law will be investigated. Any criminal offenses committed by an inmate in or on jail property are subject to criminal prosecution as well as administrative disciplinary sanctions for violation(s) of facility rules. There is no double jeopardy pursuant to Minimum Jail Standard 1081.

D. Inmates will not be disciplined for circumstances beyond their control.

E. Inmate discipline will not involve the following:

1. Cruel, corporal or unusual punishment

2. Denial of health care

3. Deprivation of clothing, bedding, necessary hygiene or nutritional food unless there are items which pose a direct threat to the safety of the inmate, other inmates, staff or the security of the facility

   a. Items withheld from an inmate must be approved in advance and reviewed every 24 hours by the Facility Commander or Designee.

   b. An incident report must be submitted detailing reasons for the action.

4. Loss of correspondence privileges (unless violation pertains to correspondence)

5. Delegation of punishment to inmates

6. Placement in a safety cell for disciplinary action

7. Denial of access to Counsel

8. Placement into disciplinary segregation for more than 10 days without new charges and findings

9. Placement in disciplinary segregation for more than 30 consecutive days without the review and approval of the Facility Commander

F. Punitive action shall be directly related to the severity of the rule infraction and prior disciplinary history.

G. The Facility Commander or Designee will review all disciplinary hearing reports and may overturn imposed disciplinary actions if they determine due process was not afforded.

II. DEFINITIONS

A. FORMAL DISCIPLINE-A process that occurs in response to a written incident report and formal disciplinary hearing. Major rule violations and repetitive minor violations require formal discipline.

B. INFORMAL DISCIPLINE-An immediate, corrective action taken by Facility Staff to correct the inmate's behavior without resulting in a loss of privileges to the inmate. Verbal counseling or reprimand, extra work detail, or removal from a work assignment without losing work credits are actions that can be taken without a written incident report. Single, minor rule violations may be handled through informal discipline.

C. MINOR VIOLATIONS-Rule violations that *are not* likely to affect the health or safety of other inmates, or staff, or affect the security of the facility.

D. MAJOR VIOLATIONS-Rule violations that *are* likely to affect the health or safety of other inmates or staff, or are likely to affect the security of the facility.

III. PROCEDURE

A. INFORMAL DISCIPLINE

1. Deputies are encouraged to use informal discipline whenever a single, minor rule violation has been observed.

2. Inmates will not be removed from the housing unit as any part of informal discipline.

3. Deputies will document all informal discipline in the housing unit Redbook Notes and the inmate's history.

B. FORMAL DISCIPLINE

1. PRE-HEARING ACTIONS

a. Deputies will submit an incident report whenever major rule violations or repetitive minor violations have been observed.

b. Deputies will not remove an inmate from their assigned housing unless the inmate is disruptive or threatens the safety and security of other inmates or staff and with the approval of the Shift Supervisor.

c. If an inmate needs to be moved from their current housing assignment, the housing Deputy shall determine the following conditions are met:

The inmate is a direct threat to the safety and security of other inmates, staff or the facility.

The Sergeant is advised and approves of the housing change.

The incident report is completed by the end of the reporting Deputy's shift.

If the move is solely for disciplinary purposes, the Sergeant must provide the inmate with a disciplinary hearing notification within 24 hours of the incident.

2. REPORTING REQUIREMENTS AND INVESTIGATION

a. Deputies will prepare and complete an incident report prior to the end of their shift in the following circumstances:

Incidents involving possible criminal acts.

Incidents requiring an inmate's immediate inmate housing change prior to a disciplinary hearing.

When the Reporting Deputy is not expected to return to work within the next 24 hours.

b. Deputies will prepare and submit all other incident reports to the Sergeant within 24 hours of the act being observed.

This is to include discipline and non-discipline / informational reports of incidents that result in physical harm, or serious threat of physical harm to an employee, inmate or other person.

Deputies shall not recommend disciplinary action in their report.

c. The Sergeant will begin conducting an appropriate investigation within 24 hours of the time the incident report has been submitted.

Any exceptional circumstances delaying the investigation must be documented and forwarded to the Facility Commander for review and approval.

3. INMATE DISCIPLINARY HEARING NOTIFICATION

a. After taking the necessary time to complete any required investigation, the Sergeant will provide the inmate with a Disciplinary Hearing Report Form providing the inmate at least 24 hours advanced notice of the scheduled hearing.

The Sergeant will advise the inmate of the incident and the specific rules that were allegedly violated.

The Sergeant will provide the inmate with an opportunity to request that witnesses, evidence, or records be available at the time of their hearing.

The Sergeant providing the notification will be responsible for reviewing and/or collecting the relevant material prior to the inmate's hearing.

Relevant material (i.e. incident report) shall be given to the inmate for review, provided no compromise is made in confidentiality or security of any person(s) or the facility.

The Sergeant will advise the inmate of their hearing rights and schedule the inmate for a hearing.

The hearing must take place no less than 24 hours and no later than 72 hours from the time the inmate is notified of the charges in writing (unless waived by the inmate or for good cause).

Any exceptional circumstances resulting in the delay of the hearing must be documented and forwarded to the Facility Commander for review and approval.

The Sergeant may conduct the hearing at the time of inmate notification **if** the inmate has provided their written consent to waive the 24-hour notice *and* no other investigation of the incident is required.

b. Inmate Request for Assistance during the Disciplinary Hearing

The Sergeant will provide the inmate an opportunity to request assistance relating to the disciplinary hearing.

Hearing assistants may be staff members who are not directly related in the incident.

An inmate may refuse the offer of any assigned assistant one (1) time. A second refusal will result in no assistant being present.

Staff members serving as assistants shall inform the

inmate that all evidence and information developed in the disciplinary process may be used against them in court if the same violation is also being considered for criminal prosecution.

Staff members serving as assistants shall have full investigative powers throughout the facility.

An inmate may be used to assist in hearings requiring interpretive skills when no staff representative with similar skills can be arranged.

The Sergeant should make the following considerations before granting or appointing an assistant:

Literacy of the inmate

Ability to speak English

Complexity of the issues combined with the inmate's overall intelligence and mental/emotional status

Ability to articulate and present the case

Location of the inmate in relation to the location of the incident

c. Uncooperative or Non-participative Inmates

If at any point during the pre-hearing and notification process the inmate refuses to participate by remaining silent or by refusing to sign the necessary paperwork, the Sergeant shall wait 24 hrs before proceeding with the disciplinary hearing.

4. DISCIPLINARY HEARING

a. The Shift Sergeant shall be responsible for conducting all hearings that are scheduled and/or occur on their shift.

b. Sworn staff member(s) who were involved in the incident being heard shall not take part in the hearing process.

c. The Sergeant will conduct an interview with the inmate prior to disciplinary action taking place.

Inmates charged with rule violations have the right to be present at the hearing, unless they waive that right or the inmate's presence is considered a threat to the security of the facility.

Any action that does not permit the charged inmate to be present for the hearing must be documented on the disciplinary hearing report.

d. The Sergeant will explain to the inmate that the disciplinary hearing is an administrative, rather than a judicial process.

Inmates do not have the right to be represented by a lawyer in an administrative process (*WOLFF V. MCDONNELL 418 U.S. 539, Ohio, Op. 2d 336 [1974]*).

Formal rules of evidence will not govern the administrative hearing. The sergeant will be responsible for ruling on all issues of relevancy and evidence without formal restrictions.

e. The Sergeant will provide the inmate an opportunity to make a statement and present evidence at the time of the hearing.

f. The Sergeant, inmate, or inmate staff representative may produce any witness or material relevant to the incident at the time of the hearing.

This request must be made by the inmate prior to the Sergeant scheduling the hearing (at the time of hearing notification).

In the event that requested witnesses are not available, or in doing so would jeopardize the safety of other inmates, staff or the security of the facility, a written statement may be accepted in their behalf.

The Sergeant will document the reasons for the denial for a witness' physical presence on the hearing report.

5. DISCIPLINARY HEARING SANCTIONS

a. The Sergeant, upon hearing all relevant information will make a determination of guilt or innocence and what sanctions, if any, are to be imposed.

b. The Sergeant should consider what sanctions, if any, the inmate may already be under due to previous incidents prior to determining what sanction to impose in the current violation(s).

c. The degree of punitive actions taken by the Sergeant shall be directly related to the severity of the violation.

d. The Sergeant will specify on the hearing form which privileges will be suspended.

e. Sanctions for singular minor violations handled through the formal disciplinary process are limited to the following restrictions per incident:

Loss of visiting privileges for up to seven (7) days

Loss of commissary ordering privileges for up to seven (7) days

Loss of correspondence privileges for up to 72 hours if:

The incident involves a violation of correspondence rules
The Facility Commander may approve additional restrictions of correspondence beyond 72 hours.

Removal from programs or activities that were scheduled at the time of the incident

Lock-down for up to 48 hours

Extra work detail

Loss of social telephone use for up to seven (7) days

Transfer from housing unit (with Classification Unit review)

f. Sanctions for major or repetitive minor violations handled through the formal disciplinary process are limited to the following restrictions per incident:

Loss of visiting privileges for up to 21 days

Loss of commissary ordering privileges for up to 21 days

Loss of correspondence privileges for up to 72 hours if:

The incident involves a violation of correspondence rules

The Facility Commander may approve additional restrictions of correspondence beyond 72 hours.

Removal from programs or activities that were scheduled at the time of the incident

Removal from programs for the duration of disciplinary confinement

Lock-down for up to 10 days

Lock-downs may be conducted on any housing unit for up to 10 days.

Inmates will receive one hour of free time every other day for any lockdowns which exceed a consecutive forty-eight (48) hour period.

Inmates shall be afforded reasonable opportunity to shave daily.

Placement in disciplinary segregation for up to 10 days

Loss of social telephone use for up to 14 days

Loss of good time credits in accordance with PC 4019(c)

Loss of work time credits in accordance with PC 4019(b)

The inmate must be sentenced

The offense must be work related

The Sergeant conducting the hearing must specifically recommend the action

Loss of future good time or work time credits for un-sentenced inmates upon sentencing

Loss of position as facility or housing unit worker for up to 30 days

Transfer from the housing unit (with classification review)

Restitution of damages

6. COMPLETION OF DISCIPLINARY HEARING AND FINAL DISPOSITION

a. The Sergeant will conclude the hearing by completing and signing the disciplinary hearing section of the disciplinary hearing report form.

b. Prior to imposing punishment or sanctions by the Hearing Officer (Sergeant), the disciplinary actions shall be reviewed and signed off by the Facility Commander or secondary Sergeant assigned to the same or subsequent shift.

c. Upon completion of the disciplinary actions review, the inmate shall be notified of the disposition without delay, by receiving a copy of the completed disciplinary hearing report form.

7. POST-DISCIPLINARY HEARING

a. The Sergeant will advise the Housing Unit Deputy of the disposition and sanctions (if any), and provide the Deputy with a copy of the disciplinary hearing report form to be placed on the housing unit log.

b. The Housing Unit Deputy will update the housing unit log, JMS status board and JMS inmate history in detail.

The JMS history will include the following:

Incident number

Findings

Sanctions

Start and end dates of any sanctions

If the sanctions are consecutive or concurrent to any other sanctions from previous incidents.

c. The Housing Unit Deputy will ensure that all inmates on disciplinary status have inmate history logs properly maintained in JMS.

d. The Sergeant will update the JMS incident report to reflect the final disposition of the hearing, any sanctions imposed and any other notes relevant to the hearing.

The Sergeant will approve the report and remove it from the JMS pending hearings status board.

The Sergeant will print a copy of the incident report for the lineup board if the incident is relevant to the safety and security of the facility.

e. The Sergeant will ensure copies of the completed disciplinary hearing report form are routed to the following:

Inmate booking folder as required by PC 4019.5

Housing Unit where inmate is housed

Inmate

– Classification Unit

Facility Commander

8. APPEALS TO DISCIPLINARY HEARINGS

a. The inmate has the right to appeal any decision made by the investigating staff member.

Appeals procedures can be located in CSB section 2.16.05.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.04
	RELATED ORDERS: MJS 1073 *Porer v. Nussle, 534 U.S. 516, 122 Ct. 983, 152 L. Ed. Ed (2002)* *Morgan v. Maricopa County (2003)*	
ISSUE DATE: 01-13-04 **REVISION DATE:** 3-22-17 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Grievance Procedures	

I. POLICY

A. Inmates are entitled to utilize the inmate grievance procedure to resolve disputes and receive a written response in a timely manner without fear of reprisal or punitive action.

B. Any action identified as directly affecting the inmate's conditions of confinement, may be grievable. Grievance procedures will apply to questions concerning:

1. Medical care
2. Conditions of confinement
3. General classification procedures
4. General disciplinary procedures
5. Inmate programs participation
6. Telephone, mail and visiting procedures
7. Food, clothing and bedding
8. Religious preference

II. PROCEDURE

A. INFORMAL GRIEVANCES:

1. Inmates will attempt to resolve any grievance informally with housing unit deputies or supervising staff prior to submitting a formal written grievance.

B. FORMAL GRIEVANCE GUIDELINES:

1. Inmate Grievances must be submitted within 48 hours of the date of the incident or condition.

    a. ICE Detainees will be allowed to submit inmate grievances within five days of the event that is precipitating the grievance.

2. Inmates will submit all grievances on facility issued Inmate Request Forms.

3. A grievance must be specific and pertain to a single subject matter.

4. Only one (1) grievance per incident per inmate will be allowed.

5. The grieving inmate must be personally involved by the incident/problem.

6. An inmate may not submit a group grievance that represent other inmates, or act as a spokesperson for other inmates.

7. Repetitive grievances on an issue which has already been addressed will not be processed.

8. Grievances that use profanity, threats, or abusive/demeaning language will be rejected.

9. A staff member's response to a grievance may require more time than the listed time requirements. In such cases, this delay in response is not grounds for a new grievance by the inmate.

C. FORMAL GRIEVANCE PROCEDURE:

1. Inmates must fill out the Inmate Request Form in its entirety to ensure the grievance is handled in a timely manner.

2. Inmates must ensure the grievance is given to a deputy for signature and receipt.

3. Deputies will legibly sign their name and employee number and date all grievances upon receipt and return a receipt to the inmate.

4. Deputies receiving the Inmate Grievance will attempt to resolve the grievance prior to routing.

    a. If the deputy is unable to resolve the grievance within their shift assignment, the deputy will write a brief description of what attempts were made to resolve the issue.

    b. The deputy will forward the grievance to the most appropriate authority capable of resolving the grievance.

        - The deputy will be responsible for routing grievances based on its nature and not whom the grievance is addressed to.

        - The deputy will route all grievances to their shift supervisor in the event they are not able to determine proper routing.

- The deputy will write the date and to whom the grievance was routed on the inmate grievance prior to forwarding.

c. A grievance alleging an emergency which threatens an inmate's immediate health or safety will be responded to immediately by the first line staff member/supervisor who receives the grievance.

5. The staff member investigating the grievance will notify the inmate if it appears the investigation will take more then seven (7) days from the time of submission.

6. The staff member will provide a written response to the inmate stating the final disposition of the grievance.

a. Reasons must be provided if any grievance is denied.

b. Corrective action must be provided if any grievance has been validated.

c. Corrective actions taken against staff members named in any grievance will not be provided.

7. The staff member will place all remaining copies of the grievance into the inmate's booking.

8. If the inmate is dissatisfied with the level one, line supervisor/first response disposition, the inmate may appeal within three (3) days (Refer to Inmate Appeals Process CSB section 2.16.05)

9. The Facility Commander or Administrative Lieutenant will be responsible for reviewing all grievances upon final disposition.

D. INMATE ABUSE OF THE GRIEVANCE SYSTEM

1. Except for grievances of a medical nature, the Facility Commander or Administrative Lieutenant or designee may restrict excessive, repetitive, and/or frivolous grievances.

a. Grievances filed by inmates for non-productive purposes, including but not limited to, excessive number and previously answered grievances, filed with the intent to overburden staff will be rejected.

b. The word "rejected" will be written on the inmate request slip with an explanation of cause. A copy will be returned to the inmate and a copy placed in the inmate booking folder.

2. Future grievances demonstrating a continued pattern of abuse will result in a memo to the inmate, issued by CAS restricting all grievances, except medical, to one grievance per week. The notice will contain specific reasons for the decision. This notice will not be subject to appeal.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.05
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 05-21-13 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Appeals Process	

I. POLICY

A. An inmate may appeal informal or formal disciplinary actions, or any grievance disposition.

II. PROCEDURE

A. If an inmate is dissatisfied with the level one, line supervisor/first response disposition of their grievance, the inmate may appeal as outlined below.

1. The inmate must submit the appeal on an inmate request form to the Facility Commander or designee within three (3) days of the disciplinary hearing or grievance disposition being completed.

2. The Facility Commander's considerations will be based on the following:

a. Disciplinary Actions

The disciplinary hearing process.

Evidence relevant to the incident and disciplinary hearing.

Proportionate sanctions to the offense(s).

b. Grievance Dispositions

The grievance process.

Information and material related to the grievance.

3. The Facility Commander or designee will respond in writing within ten (10) days of the inmate appeal.

a. Disciplinary sanctions during an appeal will not be stayed.

b. The response will either sustain or overrule the original decision in disciplinary actions.

Additional sanctions are not permitted.
In the event the disciplinary decision is overruled, the Facility Commander will determine what steps are reasonable to eliminate the effect of the sanctions.

4. The inmate shall have the right to appeal previous decisions until they have been satisfied or the detention division chain of command has been exhausted. Consecutive appeals for the same incident should be routed to the Division Captain for final review.

5. A copy of the appeal(s) and results will be forwarded to the Facility Commander and the inmate's booking.

6. The Facility Captain will have final review of all appeals.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.06
	RELATED ORDERS: MJS 1073	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-28-2018 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Request Procedures	

I. POLICY

A. Deputies will ensure that all inmate requests for service are processed properly and in a timely manner.

B. Inmates shall use an inmate request form to request or provide information or services for the following:

1. Custody status
2. Medical triage requests (in the absence of triage phones)
3. Housing assignments
4. Work assignments
5. Inmate programs and services
6. Legal materials
7. Correspondence discrepancies

II. PROCEDURE

A. INMATE REQUESTS

1. Inmates should attempt to have their request answered informally prior to submitting a written inmate request.
2. Inmates will submit all Inmate Request Forms to the housing unit deputy.

a. Inmates must fill out the Inmate Request Form in its entirety to ensure the request is handled in a timely manner.

- Deputies will not route incomplete Inmate Request Forms and

shall return it to the inmate for correction.

b. Inmates must ensure that the request is given to a deputy for signature and receipt.

3. Deputies will legibly sign their name and employee number and date all requests upon receipt and return a receipt to the inmate.

4. Deputies receiving the Inmate Request will attempt to answer the request prior to further routing.

   a. If the deputy is unable to answer the request within their shift assignment, the deputy will write a brief description of what attempts were made to complete the task.

   b. The deputy will forward the request to the most appropriate authority capable of answering it.

      - Housing unit deputies will answer all requests in which the information is available by JMS or through contact with operations staff.

      - The deputy will be responsible for routing requests based on its nature and not whom the request is addressed to.

        - This will prevent unnecessary delay in the inmate request process.

      - The deputy will route all requests to their shift supervisor in the event they are not able to determine proper routing.

      - The deputy will write the date and to whom the request was routed on the Inmate Request Form prior to forwarding.

5. The staff member answering the request will provide a written response to the inmate's request within two (2) days.

   a. Reasons must be provided if any request is denied.

6. The staff member answering the request will place a copy of the inmate request response in the appropriate housing unit mailroom box. Remaining copies of the inmate request will be placed into the inmate's booking.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.16.07
	RELATED ORDERS: P.C. 1473	
ISSUE DATE: 01-13-04 **REVISION DATE:** 03-15-12 **REVIEW DATE: 03-22**-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Rights, Rules and Discipline	**SUBJECT:** Inmate Habeas Corpus Writs	

I. POLICY

A. All inmate Habeas Corpus Writs shall be handled and routed to appropriate locations in an expeditious manner.

II. DEFINITION

A. HABEUS CORPUS WRIT: A type of action under California and federal constitutional and statutory law to obtain prior judicial release from illegal restraint or challenge conditions of confinement.

III. PROCEDURE

A. Writ Forms shall be supplied to all inmates, via the, Legal Research Associates (LRA), upon request.

B. Inmates can obtain writ forms by completing an Inmate Request Form and forwarding it to Custody Administrative Services (CAS).

C. Inmates may turn in completed writ forms to any staff member.

D. Staff receiving completed writ forms shall forward them to CAS for appropriate copying.

1. CAS will make three (3) copies and distribute as follows:

   a. One (1) copy will be returned to the inmate.

   b. One (1) copy will be forwarded to Operations for filing in the inmate's booking file.

   c. One (1) copy will be retained in the CAS Office files.

2. CAS will forward the original writ to the appropriate court via court security inter-office mail.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.17.01
	RELATED ORDERS: MJS 1063; CCR Title 15 Section 3006 P.C. 311, 2601(b)	
ISSUE DATE: 01-13-04 **REVISION DATE:** 04-12-11	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Communications and Visiting	**SUBJECT:** Inmate Correspondence and Mail Regulations	

I. POLICY

A. The Office of the Sheriff encourages correspondence between inmates and persons outside of its detention facilities. The privacy of correspondence between inmates and persons outside of facilities shall not be invaded except as may be necessary to prevent physical injury to persons and to maintain security of Sheriff's Facilities and the community. Mail will be delivered to inmates in an expeditious manner.

II. DEFINITIONS

A. PRIVILEGED CORRESPONDENCE: Mail between an inmate and attorneys, legal aid services, other agencies providing legal services to inmates, or para-professionals having a bona-fide association with such agencies; attorneys, judges, and clerks of federal, state and local courts; public officials and their authorized representatives acting in their official capacities; and the Facility Commander and higher ranking Sheriff's Office Officials.

B. SPECIAL CORRESPONDENCE: Written communications between a Federal Detainee and a private attorney and other legal representatives; government attorneys; judges; courts; embassies and consulates; the President and Vice President of the United States, members of congress, The Department of Justice (including ICE and the Office of Inspector General) the U.S. Health Department; administrators of grievance systems; and representatives of the news media.

C. FOREIGN NATIONAL: Any person not having United States citizenship.

D. DIPLOMATIC REPRESENTATIVE: An official representative of a government who conducts relations with another individual, official, or government.

E. SEXUALLY EXPLICIT MATERIAL: Material including, but not limited to, professional publications, personal photographs or drawings, that shows frontal nudity of either gender, including the exposed female breast(s) and/or the genitalia of either gender. *(CCR 3006 (c) (17(a))*.

F. UNSOLICITED COMMERCIAL MAIL: Mail that is not addressed to a specific inmate.

G. MAIL WATCH. A process where a specific inmate's in-coming and out-going mail are inspected for contraband or illegal activity.

III. PROCEDURE

A. GENERAL MAIL PROCEDURES.

1. Policies and procedures governing inmate correspondence shall be made available to all inmates and staff, and shall be reviewed annually and updated as necessary.

2. All mail addressed to inmates will have the inmate's full first and last name (as given at the time of booking) and their booking number written clearly upon the face of the envelope. All received mail will have an identified return address listed upon the face of the envelope.

3. All out-going mail will have the inmate's full first and last name (as given at the time of booking), their booking number and the address of the facility where they are housed in the return address area of the envelope. Out-going postage paid USPS letters may be sealed by the inmate for mailing.

4. All non-privileged mail for inmates will be routed through the United States Postal Service (USPS). Staff will not accept, nor deliver, mail for an inmate that is not processed by the USPS.

5. Mail that is not addressed to a specific inmate will be returned to the USPS.

6. Envelopes with drawings or markings other than the return address and the name of the addressee will not be accepted.

7. All non-privileged incoming packages and mail addressed to an inmate will be opened and inspected, without the presence of the inmate, before being delivered to an inmate. All non-privileged incoming mail is subject to being read in its' entirety, or in part, by custody staff before it is delivered. Inmate mail will be inspected and read to locate the following:

a. Contraband and other unauthorized materials, to include:

1. Materials that are deemed to be a threat to legitimate penological interests.

2. Electronic greeting cards;

3. Padded cards;

4. Polaroid and double sided photographs;

5. Hair, body fluids and other biological materials;

6. Sexually explicit, obscene or pornographic materials and information about where, how, or from whom these materials may be obtained. This includes images that depict frontal nudity

in personal photographs, drawings, magazines or other pictorial format (excluding educational, medical/scientific or artistic materials, including anatomical medical reference books, general practitioner reference books and/or guides, National Geographic magazine, or artistic reference material depicting historical, modern and/or post modern era art textbooks).

7. Small artifacts and items;

8. Plans for blackmail and extortion;

9. Plans to escape or assist in an escape;

10. Plans for activities, which violate the law, these regulations, or local procedures.

11. Coded messages;

12. A description of the making of any weapon, explosive, poison or destructive device.

13. Illustrations, explanations, and/or descriptions of how to sabotage or disrupt computers, communications or electronic devices.

14. Unsolicited commercial mailings such as catalogs, advertisements, brochures and materials whose primary purpose is to sell a product(s) or service(s) and when taken as a whole, lacks serious literary, artistic, political, educational, or scientific value.

15. Maps depicting any area within a ten-mile radius of any detention facility and court.

16. Gambling or lottery materials;

17. Any tobacco product or any tobacco cessation product that contains nicotine.

18. Cellular telephones or other communication devices;

19. Alcohol, prescription drugs, or controlled substances;

20. Items that advocate, encourage, depict, or otherwise condones violence, the use of weapons, gang related activities, or other conduct which jeopardizes jail security.

21. Items that advocate racial, religious, or national hatred or which otherwise contain matter of a character tending to incite murder, arson, riot or any other form of violence.

22. Writing materials, stamps, pens and pencils;

23. Is oversized and not likely to reasonably fit in an inmate's personal storage drawer/bin.

24. Contain any writing/drawings in crayon, marker or colored pencils.

25. Contain any stains or unidentifiable marks;

26. Hardbound books;

27. Negotiable instruments and cash;

28. Food items.

8. Inmates may correspond, confidentially, with state and federal courts, any member of the State Bar or holder of public office, and the State Board of Corrections. This mail will be identified as privileged correspondence under this policy. Privileged correspondence may be opened only to inspect for contraband, and done so only in the presence of the addressed inmate. Staff may not read privileged correspondence, without permission from the Bureau Commander, who may not delegate this authority.

   a. The inmates will write, "Legal mail", on the front of the envelope signifying the envelope contains privileged correspondence.

   b. Outgoing privilege correspondence will be delivered to the mailroom by housing unit staff.

9. Federal Detainees may correspond confidentially with the entities and individuals detailed in the definitions section of this policy. "Special Correspondence" may be opened only to inspect for contraband, and done so only in the presence of the addressed detainee. Staff may not read privileged correspondence, without permission from the Bureau Commander, who may not delegate this authority.

   a. The detainees will write, "Special Correspondence" on the front of the envelope contains confidential correspondence.

   b. Outgoing "Special Correspondence" will be delivered to the mailroom by housing unit staff.

10. Inmates may correspond, confidentially, with the facility manager. Such correspondence will not require postage, but should be marked "Confidential" on the exterior of the letter. These letters will not be inspected prior to delivery by staff.

11. All inmates are permitted to have unlimited correspondence with their attorney and the courts at their own expense. Indigent inmates will be provided unlimited privileged communications at county expense.

12. There is no limitation on the volume of mail that an inmate may send (at their own expense) or receive. There is no limitation to the number of pages that comprise a letter. Those inmates who are without funds shall be permitted at least two postage paid letters each week to permit correspondence with family members and friends, without limitation on the number of postage paid envelopes and sheets of paper to his or her attorney and to the courts.

13. Inmates may receive correspondence from any non-incarcerated person, in any language. However, the delivery of non-English in-coming mail may be delayed for up to forty-eight hours, until it can be screened by an interpreter.

14. Inmates may subscribe to newspapers, periodicals, and purchase softcover books. All publications shall be sent directly from the publisher or from a recognized internet-based book seller (Amazon.com, BarnesandNoble.com, etc.). Inmate possession of subscription materials are subject to storage restrictions within their housing units.

15. Inmates housed in disciplinary status may have their privileges of receiving magazines, newspapers and photographs suspended by order of the Facility Commander.

16. Inmates are not allowed to correspond with inmates in any other detention facility or prison without the written approval of the Facility Commander.

17. In-coming postage due mail will be refused or returned to the USPS. Inmate authored postage due mail will be returned to the inmate, after inspection, to ensure no contraband is contained in the returned letter.

18. No collect-on-delivery (COD) packages or letters of any kind will be accepted for any inmate.

19. Staff members will not have their personal mail delivered to a detention facility without the permission of the Facility Commander.

20. Authority for the destruction and disposal of mail addressed to a specific person rests with the United States Postal Service (USPS).

21. In-coming controlled mail (registered, certified, FEDEX, etc.) will be handled as standard in-coming mail. If a piece of any in-coming controlled mail is lost, or misplaced, or a problem occurs with a money order, it is the responsibility of the sender to initiate traces and follow-up actions with the USPS or private carrier. The sender is in the best position to initiate tracing activities because the sender paid the fees, completed the forms, and knows the mailing circumstances.

22. Housing unit staff will pick up out-going mail and deliver it to the mailroom at least once per day.

23. Use of inmate mail for business purposes shall be only with the prior written approval of the Facility Commander.

24. Inmates may obtain writing materials and stamps through commissary. Indigent inmates will be provided writing materials and envelopes.

25. All undeliverable mail will be returned to the USPS for forwarding/destruction.

26. All indigent mail will be forwarded to Sheriff's Fiscal for accounting and postal metering.

27. Foreign nationals held in custody in Contra Costa County Sheriff's Facilities may write the diplomatic representative of their country of origin, utilizing U.S. Mail. In the case of indigent foreign nationals, where regularly provided postage is insufficient to cover postage to a foreign country, Sheriff's Fiscal will provide sufficient additional postage to cover the postal costs of such correspondence.

B. MAIL DELIVERY TO FACILITY

1. All mail will be delivered to the Operations Unit of each facility.

2. Facility Commanders are responsible for developing procedures for screening inmate mail at each facility. Only mail for inmates currently housed within any facility will be accepted and screened. Mail for inmates who have changed facilities will be forwarded to them. All mail will be screened following the procedures listed in section (A) above.

3. Mail for inmates who are no longer in custody will be returned to the USPS to return to the original sender.

4. Mail that is refused due to contraband (other than unlawful contraband) will be resealed, refused, and returned to the sender via USPS. The rejected envelope shall be accompanied with the Return of Unauthorized Correspondence Form. Mail that contains unlawful contraband will be given to the Custody Sergeant for reporting.

5. Processing funds received through incoming mail.

    a. Funds to inmates will only be accepted in the form of money orders, cashiers checks, government checks, and traveler's checks.

    b. Personal checks or cash will result in the envelope and all its contents being returned to the sender. The rejected envelope shall be accompanied with the Return of Unauthorized Correspondence Form.

    c. Money Orders must be made out to the Contra Costa County Sheriff's Office and display the inmate's name and booking number. Money orders that have only first initials instead of a first name will be accepted if there is a legible booking number on the money order.

    d. The account copy of the receipt shall be forwarded with the money to the accounting office, where the money will be credited to the inmate's account.

6. Privileged mail will not be opened or inspected. It will be routed sealed for delivery to the appropriate housing unit.

a. If privileged mail is accidentally opened the staff member will fill out a Write-It-Don't-Say it form explaining why the mail was opened. A copy of the form will be placed in the inmate's booking folder and another in the letter and the letter will be re-sealed.

b. The staff member will mark the outside of the privileged envelope with their initials, employee number and date and re-seal the envelope.

c. The third copy of the Write-It-Don't-Say-It will be forwarded to the Facility Commander.

C. IN-COMING MAIL DELIVERY TO HOUSING UNIT

1. The housing unit deputy is responsible for picking up mail from the facility mailroom at the beginning of each shift

2. The housing unit deputy will distribute mail to all inmates as close to the beginning of the shift as practical.

3. The housing unit deputy will deliver mail to the addressee only and will verify the identity of the inmate prior to delivery.

4. In-coming privileged communications.

a. Housing unit deputies will ensure that privileged correspondence is received unopened from operations. The housing unit deputy will then open the privileged correspondence in front of the addressee.

b. Housing unit deputies will not read the material, but simply inspect the correspondence and it's container for the presence of contraband. If no contraband is found, the correspondence will be provided to the inmate. If, during inspection, contraband is located, both the correspondence and the contraband will be removed from the housing unit. The correspondence will be inspected by the on-duty facility manager who will determine if the correspondence and contraband will be held for further investigation. Privileged correspondence that is not held for evidentiary purposes will be returned to the addressed inmate without delay.

D. OUT-GOING MAIL FROM HOUSING UNITS

1. Housing unit deputies will ensure that all out-going mail meets the requirements of the "General Mail Rules" listed within this section. Housing unit deputies will ensure that all outgoing mail has the inmate's full name, booking number, housing assignment and facility address affixed upon them. Mail that is not correctly return addressed will be returned to the inmate for correction.

2. Housing unit deputies will stamp all outgoing mail with the "Inmate Mail" stamp.

3. At least once per shift, housing unit deputies will collect and place all outgoing mail into the mail pick-up bin in the mailroom.

4. Out-going mail that is collected in the mailroom will be given to USPS workers each day.

E. MAIL WATCHES

1. A mail watch may be requested using the "Mail Watch Request Form", by the District Attorney's Office, or any Law Enforcement Agency.

2. Mail watches will be approved by the Facility Commander and managed by the Classification Unit.

3. Weekly, the Classification Unit will produce a "mail watch list" for review by all staff members.

4. As in-coming mail is received, and out-going mail processed, it will be forwarded to inmates who are on a mail watch. Identified mail will be forwarded to the Classification Unit.

5. As soon as possible, the mail will be returned to the normal delivery process.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.17.02
	RELATED ORDERS: MJS 1062 – Visiting ADA-1992, Title II, Technical Assistance Manual PC 4575 CSB Policies 2.17.09, 2.01.14, Appendix 12,13,14	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-07-17 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Communication and Visiting	**SUBJECT:** Social Visiting	

I. POLICY

A. The Office of the Sheriff recognizes the value of inmate visiting as a means of increasing safety in our facilities, ensuring inmates' rights to counsel, maintaining family and community connections, and preparing inmates for successful release and rehabilitation. It is the intent of this policy to establish a visiting process that is conducted in as accommodating a manner as possible, subject to the need to maintain order, the safety of persons, the security of the facility, and required facility activities and operations. Visiting will be done in manner that accommodates as many visits and visitors as facility schedules, space, and number of personnel will allow.

B. Each inmate and visitor is responsible for his or her own conduct during visits. Any violation of laws, regulations, or procedures governing visits may result in termination, suspension, restriction, revocation, arrest, or denial of visiting with the person or persons involved. Visitors may be excluded from visiting activities by the Facility Commander because of prior misconduct.

C. Visitors are expected to dress appropriately and maintain a standard of conduct during visiting so that it is not offensive to others and is consistent with the goal of making visiting a safe, positive, and constructive time for families and staff.

D. All regulations pertaining to visiting shall be made available to all visitors, staff and inmates at the time of admission.

E. The privacy of inmates and their visitors shall be respected subject to the need to verify the identity of an inmate or visitor, enforce laws, regulations, and procedures, and/or ensure the safety of persons and facility security. Facility surveillance video-recording devices may be used in visiting areas, excluding areas where confidential attorney consultations occur.

F. Visiting privileges shall be suspended only by order of the Facility Commander or his/her designee, except where the suspension is imposed as part of a formal disciplinary proceeding. Inmates should not be denied access to visits with persons of their choice except when the Facility Commander or designee can present clear and convincing evidence that such visitation jeopardizes the safety and security of the facility or the

visitors. The Classification Unit will be notified of all visiting suspensions.

G. All visits by persons other than those defined as "Official Visitors" in policy section 2.17.09 (Official, Professional, and Program Visitors) will be conducted in non-contact visit rooms/areas, unless otherwise authorized by the Facility Commander.

H. All visitors, regardless of status or profession, are expected to adhere to the rules of conduct.

I. Inmates are eligible to receive at least one hour of visiting each week, not including visits by Professional Visitors, Official Visitors and Clergy Visitors.

II. DEFINITIONS

A. SERVICE ANIMALS: Any animal that is utilized for the purpose of aiding an individual with a disability.

B. EXTENDED VISIT. A visit that is in excess of the regular thirty-minute time allotment for regular visiting. Only the Facility Commander or his/her designee may authorize an extended visit.

C. SPECIAL VISITS: A visit that is requested on a non-scheduled visiting day, upon receipt of a court order, or is of unusual circumstances. Only the Facility Commander or his/her designee may authorize a Special Visit.

III. PROCEDURE

A. ELIGIBILITY

1. All inmates, regardless of classification, are eligible to schedule visits except for the following:

   a. Inmates in Disciplinary Isolation.

   b. Inmates on Disciplinary Loss of Privileges.

2. Inmates in these categories may still receive Official Visitors, other judicial and government visitors, and clergy visits as directed by the Facility Commander.

B. VISITING HOURS

1. Facility Commanders will post approved visiting hours for their facilities that accommodate as many visits and visitors as possible. This will include the days, hours, maximum number of visitors and special rules regarding visitation. Changes or modifications to published visiting hours must be approved by the Division Captain.

C. INTRA-JAIL VISITS

1. When married or immediate family members are housed in the same facility, they may be granted an Intra-jail visit by the Facility Commander. Intra-Jail visits may

be granted under the following circumstances:

a. Both parties are sentenced.

b. Both parties have been in custody for at least thirty days.

c. Neither party has served any disciplinary lockdown or loss of privileges within thirty days from the time of the request.

d. Neither party receives a disciplinary incident report from the time of request to the time of the scheduled visit.

e. At least one party has completed an Inmate Request asking for the visit to take place.

f. Both parties are housed at the same facility.

g. Both parties remain in custody.

h. The Facility Commander is satisfied that a distinct relationship exists between the two parties.

i. Inmates are not co-defendants in a criminal matter.

2. Inmates may be granted one thirty-minute intra-jail visit in a thirty day period. Such visits may (or may not) count toward the inmate's one-hour eligibility for the week.

3. The visit will be conducted at a time and a location where staffing permits a supervised visit.

D. HOSPITAL VISITS

1. Bedside visits require the prior written approval from the Hospital Security Commander or designee at 370-5330, if the inmate has been admitted to the Contra Costa Regional Medical Center (CCRMC). When an inmate is admitted to a hospital other than CCRMC, the Facility Commander who is responsible for the custody of that inmate must give written approval prior to all visits. No social visitation shall be allowed unless the inmate has been admitted to the hospital.

a. Visits may only be approved during regular hospital visiting hours and follow all other visiting rules as per 2.17.02.

b. Visitors will be required to report to the hospital deputy prior to visiting or making contact with the inmate.

Failure to contact the Hospital Deputy prior to making contact with the inmate will result in the immediate termination of the visit.

The Hospital Deputy will verify all visitor identification by ensuring they possess a valid identification.

Visitors without valid identification will not be permitted to visit with the inmate and will be asked to leave the hospital property.

The Hospital Deputy will call the MDF Lobby Receptionist to log the visitors' arrival to the hospital.

The Hospital Deputy will escort the visitor(s) to the inmate's location and observe the visit as closely as possible without compromising the security of other inmates in custody.

Visitors may be searched for contraband including illegal drugs and weapons.

2. Terminal visiting

   a. The Facility Commander or his/her designee may (Providing facility security is not compromised) grant a terminal visit in instances where death is imminent. This is regardless of which hospital the inmate is admitted to, nor to other visiting procedures or rules.

   b. The Facility Commander or his/her designee shall contact the Hospital Security Services to alert them of the approved visit.

E. INMATE VISITORS LIST

1. Inmates may submit a list of up to six names for visiting if one of the following conditions apply:

   a. The inmate has never been previously housed in a Contra Costa County Detention Facility.

   b. The inmate is returning to a Contra Costa County Detention Facility from a non-custodial status.

   c. The inmate has not updated their visiting list in the last year.

   d. The Facility Commander approves a requested change.

2. The inmate will complete and submit an Inmate Visitor List (DET: 080) to the housing unit deputy.

   a. Official and Professional visitors to the inmate do not need to be included on the Inmate Visitor List, unless they are related to the inmate.

   b. Children under 18 do not need to be listed on the Inmate Visitor List; however, all children under 18 must be accompanied by a parent or legal guardian visitor who is listed on the Inmate Visitor List.

   c. All children under 18 must be listed on the inmate's visit request slip when scheduling the social visits.

F. SCHEDULING VISITS

1. Inmates may request to schedule a visit under the following conditions:

   a. General population inmates are permitted two, thirty-minute visits each week (Monday to Sunday).

   b. Work Crew Inmates and Housing Unit Trustees are authorized three thirty-minute visits each week.

   c. Inmates may schedule their visits consecutively if they wish, however staff will be required to separately enter each 30-minute segment of the visit.

   d. Inmates must complete and submit an Inmate Request Form at least forty-eight hours, but not more than seven days in advance asking for the visit.

   e. Requested date and times will be listed upon the Inmate Request Form.

   f. Inmates who receive discipline that includes loss of privileges between the scheduling and receiving of their visit will have their visit cancelled.

2. Any violation of visiting rules may result in disciplinary action.

3. Inmates transferred to other housing units or facilities, or scheduled to appear in court during their scheduled visit may cause scheduled visiting to be cancelled.

G. EXTENDED AND SPECIAL VISITS

1. Requests for extended and special visits shall be submitted to the Facility Commander via the appropriate chain of command for approval.

2. The inmate's name may be submitted to the Classification Section for review and recommendation prior to granting or denying the request.

3. Requests for extended and special visits will be reviewed on an individual basis and will take the following into account:

   a. Inmate's background at the facility.

   b. Visitor's relationship to the inmate.

   c. Visitor's reason for the extended or special visit.

   d. Impact on the safety and security of the facility.

   e. Impact on staffing, visiting room availability and other scheduled inmate visits.

H. VISITING RULES - CONDUCT

1. Any violation of the visitation rules and regulations by an inmate may result in

disciplinary action.

2. Visitors are subject to search of their person and/or property. Inspections may include a search of the visitor's person (physical and/or electronic), personal property, and vehicle(s) when there is probable cause to believe the visitor is attempting to introduce or remove contraband or unauthorized items or substances into, or out of, a facility.

3. Visitors will not be forcibly searched unless the visitor is being detained for unlawful actions or activities.

4. All persons under 18 years of age must be accompanied by their parent or legal guardian. Accompanying adults shall ensure that minors remain under their constant control and supervision.

5. The maximum number of visitors permitted to visit an inmate at one time is determined by the individual facility.

6. Infants and toddlers that must be carried are not considered to be visitors.

7. Nursing mothers shall be discreet and covered when breastfeeding their child in the visiting area if necessary. Failure to do so shall result in termination of visiting for that day.

8. Visitors under the influence of alcohol or drugs will not be allowed to visit and may be subject to arrest.

9. It is prohibited or unlawful for social visitors to carry items such as cell phones, pagers, palm or laptop computers, cameras, tape or digital recorders, purses, bags, briefcases, or any other items into the visiting areas. Personal items should be left at home or locked in the visitor's vehicle. Items may also be locked in the public lockers located in the lobby area.

10. Possession of tobacco or tobacco products within the detention facilities is prohibited.

11. No food or drink is permitted in the visiting areas.

12. Visitors are required to proceed directly to their respective visiting areas and to remain there until their visit is completed. Upon completion of the scheduled visit, the visitors must leave the facility.

13. Visitors found visiting an inmate other than the one scheduled shall have their visiting privileges revoked and will be required to leave the facility.

14. There will be no physical contact between visitor and inmate.

15. Visitors may not give articles or gifts to the inmate. Visitors and inmates attempting to exchange or pass any item shall have their visit terminated immediately.

16. When a deputy announces that the visit is over, the visit will end immediately.

17. An inmate may refuse to see any visitor.

18. Inmates are required to submit to search at the request of a deputy.

19. Visitors are not permitted to loiter in or about vehicles in the parking lot. Visitors refusing to comply may be asked to leave and may be subject to arrest. Special consideration will be made to individuals in designated disabled parking spaces when the vehicle operator and/or passenger displays current disabled license plates and/or a disabled persons placard.

20. Any challenge or dispute of facility visiting rules and regulations will be directed to the immediate attention of the custody sergeant.

I. VISITING RULES – DRESS CODE

1. Visitors shall remain fully clothed at all times while in the facility.

2. Appropriate attire includes undergarments; a dress or blouse blouse/shirt with skirt/pants/or shorts; and shoes or sandals.

3. Prohibited attire consists of:

   a. Clothing that resembles county-issued inmate clothing;

   b. Clothing that resembles law enforcement or military-type clothing, including rain gear;

   c. Clothing that resembles any uniform worn by any department in CSB.

   d. Clothing or garments that:

      Expose the breast/chest area, genitals or buttocks;

      By design or by the manner worn, excessively allows the anatomical detail of body parts or midriff to be clearly viewed;

      Are sheer, transparent or excessively tight;

      Expose more than two inches above the knee, including slits when standing.

4. Undergarments shall be worn beneath translucent clothing.

5. No clothing or accessories displaying obscene or offensive language, drawings or objects will be allowed inside the facility.

6. No gang related clothing, style of dress or items containing gang related symbols or markings will be allowed inside the facility.

7. No head coverings (except clear, see-through rain gear), and readily removable

wigs or hairpieces. The facility commander, or designee, may grant an exception for a visitor to wear gloves, head coverings, and/or readily removable hairpieces or wigs, based upon verification of need. Written approval for dress code exceptions shall be required prior to visiting and subject to staff inspection during any visit.

8. No gloves or scarves.

9. No coats or jackets.

10. No bathing suits.

11. No overalls or coveralls.

12. No exaggerated hairstyles.

J. VISITORS WITH DISABILITIES

1. Reasonable accommodations shall be afforded visitors and inmates with disabilities to facilitate their participation in the various visiting programs offered by the Office of the Sheriff.

2. Visitors with service animals will be allowed access to the facility and will not be denied the use of their service animal.

3. Visitors may be required to state the purpose of the service animal.

4. Any conflict regarding whether an animal is a service animal shall be resolved by the Facility Commander or his/her designee.

5. Visitors with disabilities, who require assistance, will be escorted to the proper visiting area. Wheelchair-bound visitors will receive priority consideration for the use of the non-contact lobby visiting rooms designated and identified for this purpose.

K. VISITOR REGISTRATION

1. All visitors shall arrive 30 minutes prior to their scheduled visit time.

2. Each adult visitor will complete a visitor form before approaching the Visitor Registration Desk. The registration must be complete, legible and include the following:

   a. Visitor's name.

   b. Visitor's address.

   c. Visitor's date of birth.

   d. Driver's license number.

e. Inmate name and Booking Number.

f. Visitor's relationship to inmate.

3. Visitors will approach the Visitor Registration Desk with their completed visitor form and acceptable photo identification. The following are acceptable forms of photo identification:

a. Driver's license with photo.

b. Department of Motor Vehicles identification card with photo.

c. Picture passport.

d. Armed forces identification card with photo.

e. Picture identification cards issued by the United States Department of Justice.

f. Picture identification cards issued by any foreign government agency that also includes physical descriptors and birth date.

g. Parents and/or guardians of minor children will be required to provide a birth certificate or proof of guardianship of minor children during processing of the initial visit.

Upon receipt, the Visiting Aide will note the documentation of the birth certificate in the inmate's visiting file and return the original documents to the visitor.

The inmate will be responsible for advising the parent or guardian of this requirement prior to requesting the visit.

4. Visitors will return to the waiting area until called by the Visitor Registration Desk.

L. VISITOR CLEARANCE

1. The facility representative managing visitation will:

a. Verify there is a scheduled visit between the visitor and the inmate. If no visit has been scheduled, the visitor will be told so as soon as possible and asked to leave the facility.

b. Verify that the visitor is on the inmate's visiting list.

c. Conduct a record check on the visitor.

2. The Facility Commander has the authority to approve or disapprove prospective visitors. Reasons for denying a prospective visitor may include (but are not

limited to):

a. The prospective visitor has outstanding arrests/warrants including a Department of Motor Vehicles Failure to Appear notice with no disposition from the court.

b. Prospective visitors who have served any amount of time in a state or federal prison may not visit without the prior written approval of the Facility Commander. Facility Commanders will deny prospective visitors who have any one conviction of the following types of offenses:

Distributing a controlled substance into or out of a state prison, correctional institution/facility or jail.

Transporting contraband (weapons, alcohol, escape and drug paraphernalia, etc.) in or out of a state prison, correctional institution/facility or jail.

Aiding or attempting to aid in an escape or attempted escape from a state prison, correctional institution/facility or jail.

c. Visitors who have been confined in any Contra Costa County Detention Facility during the past six months will not be permitted to visit.

d. The prospective visitor is a co-offender of the incarcerated inmate.

e. The prospective visitor is a supervised parolee, probationer, or on civil addict outpatient status and has not received written permission of his or her case supervisor and the prior approval of the Facility Commander.

f. The identity of the prospective visitor or any information on the visiting questionnaire is omitted or falsified.

3. Once the visitor has been cleared, the facility person managing visitation will contact the housing unit where the inmate is located. The housing unit deputy will be informed of the visit and asked to have the inmate ready for the visit.

4. Visits will then be logged using the JMS System.

5. Once cleared to conduct the visit, at the approved visit time, the visitor will be recalled to the Visiting Desk for entrance to the facility.

M. VISITOR SCREENING

1. Searches of visitors and personal items may include inspection of a wheelchair, implant, prosthesis or assistive device, and use of metal detection devices prior to being allowed entry to visiting.

2. Visitors who refuse to submit to contraband screening will be denied entry.

3. Visitors who appear to be under the influence of a controlled substance,

intoxicated, or otherwise impaired who present a risk to facility security will be denied entry.

4. Visitors who are not appropriately dressed will be denied entry.

5. Visitors under the age of 18 who are not accompanied by an adult will be denied entry.

6. Visitors who have been screened will then be allowed to proceed into the facility for their visit.

N. VISITOR DEPARTURE

1. Visitors will check-out with the Visiting Desk as they depart the facility.

2. All visitors will be logged out from their visit as they depart the facility.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.17.08
	RELATED ORDERS: MJS 1067 P.C. 851.5 Carlo v. City of Chino, 95-55798 105 F 3d 493 PC 4575	
ISSUE DATE: 01-13-04 **REVISION DATE:** 11-25-08 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Communications and Visiting	**SUBJECT:** Inmate Access to Telephones	

I. POLICY

A. The Office of the Sheriff supports the ability for all inmates confined within its' facilities to maintain contact with friends, family, and legal representatives. Inmates are to have equal and adequate access to use inmate telephones. The use of the telephone is only one of the means that inmates have to communicate, along with family visitation, written correspondence, and visits with their attorney.

II. PROCEDURE

A. GENERAL TELPHONE RULES

1. Inmates will not be allowed to use any facility telephone or public telephone on facility property.

2. It is unlawful for an inmate to possess a cellular telephone within any detention facility. (PC4575)

3. Inmates shall not charge telephone calls to credit cards.

4. Inmates shall not ask the operator to make an emergency interruption of a call.

5. Inmates shall not call inmates at other detention facilities or prisons.

6. Inmates shall not call victims, peace officers, or other persons who have made an official request not to receive telephone calls.

7. Inmates shall not knowingly participate in a forwarded, transferred, or three party calls on an inmate telephone.

8. All calls made on inmate telephones are subject to monitoring and recording at any time. Signs will be posted to indicate this, as well as an announcement on the telephone prior to recording.

9. Restrictions on inmate telephone use may be imposed as a disciplinary sanction

10. Inmates are responsible for any misuse of telephones.

B. TELEPHONE USE FOR NEWLY ARRESTED INDIVIDUALS

1. The Intake Deputy will ensure that newly arrested individuals are advised and have the opportunity to complete at least three (3) local or collect long distance phone calls during the booking process.

2. The Intake Deputies will ensure that at least two of the three phone call opportunities are provided within three (3) hours after the arrest.

3. Recently booked inmates that have been placed in holding cells shall be afforded the same opportunities to use the telephone.

   a. Exception: Violent arrestees will be permitted to make telephone calls only after it is determined that the individual is no longer a threat to other arrestees, inmates, staff or the security of the facility.

   b. The Intake Deputy will complete and submit an incident report for any delay in complying with this procedure.

C. TELEPHONE USE FOR INMATES ON HOUSING UNITS

1. Inmates on housing units may use the telephone during regular free time hours.

2. The housing unit deputy may limit an inmate's telephone call to 10 minutes if other inmates are waiting.

3. Inmates will not be permitted to use the telephone immediately prior to any inmate movement from the housing unit.

D. TELEPHONE USE FOR INMATES WITH HEARING IMPAIRMENTS

1. Hearing impaired inmates will be given access to Telephone Devices for the Deaf (TDD) regardless of where the inmate is assigned. TDD phones are capable of working on any housing unit at the Pro-Per Phone Station.

2. TDD devices will be stored on F Module at the MDF and Building 4 at WCDF when not in use.

3. Inmates using a TDD will be provided additional time to use the telephone, as the TDD device slows communications.

E. PRO-PER TELEPHONE USE FOR INMATES

1. Inmates will only use the Pro-per telephone as detailed in CSB Policy 2.18.13, Pro-Per Inmates.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER: 2.17.09**
	RELATED ORDERS: MJS 1062 ADA-1992, Title II PC 825(A), 825.5, CSB 2.18.12; CSB 2.08.44 CSB 2.17.02	
ISSUE DATE: 1-13-04 **REVISION DATE:** 08-22-18 **REVIEW DATE:** 03-15-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Communications and Visiting	**SUBJECT:** Official, Professional, and Program Visitors	

I. POLICY

A. The Office of the Sheriff recognizes the value of inmate visiting as a means of increasing safety in our facilities, ensuring inmates' rights to counsel, maintaining family and community connections, and preparing inmates for successful release and rehabilitation. It is the intent of this policy to establish a visiting process that is conducted in as accommodating a manner as possible, subject to the need to maintain order, the safety of persons, the security of the facility, and required facility activities and operations. Visiting will be done in manner that accommodates as many visits and visitors as facility schedules, space, and number of personnel will allow.

B. All visits by persons other than those defined as "Official Visitors" will be conducted in non-contact visit rooms/areas, unless otherwise authorized by the Facility Commander.

C. Official, Professional, and Program visitors are not permitted to be social visitors unless they are granted approval from the facility commander.

D. All visitors, regardless of status or profession, are expected to adhere to the rules of conduct identified in this policy.

E. Each inmate and visitor is responsible for his or her own conduct during visits. Any violation of laws, regulations, or procedures governing visits may result in termination, suspension, restriction, revocation, arrest, or denial of visiting with the person or persons involved. Visitors may be excluded from visiting activities by the Facility Commander because of prior misconduct.

F. Visitors are expected to dress appropriately during visiting so that it is not offensive to others and is consistent with the goal of making visiting a safe, positive, and constructive time.

G. All regulations pertaining to visiting shall be made available to all visitors, staff and inmates at the time of admission.

H. The privacy of inmates and their visitors shall be respected and is subject to the need to verify the identity of an inmate or visitor, enforce laws, regulations, and procedures, and/or ensure the safety of persons and facility security. Facility surveillance video-recording devices may be used in visiting areas, excluding areas where confidential attorney consultations occur.

I. Visiting privileges shall be suspended only by order of the Facility Commander or his/her designee.

J. All personnel assigned or visiting the Custody Services Bureau as a condition of their professional duties will display an authorized CSB photo badge or CSB visitor badge prior to entering any secure area of the detention facility.

II. DEFINITIONS

A. CLERGY: Ordained person in a religion as a profession. Clergy members generally visit inmates at the request of a family member or inmate request and shall visit the inmate in the same manner as the general public during regular visiting hours. All Clergy visits are scheduled by the Facility Chaplain, and CAS will add details pertaining to the type of visit on the clearance list.

B. CHAPLAIN VOLUNTEER: Individuals who provide group religious studies or services in the facility and are not paid as a profession. These group sessions are scheduled by the Facility Chaplain and are conducted in a contact visit room. No individual contact visits are allowed between an inmate and a chaplain volunteer.

C. OFFICIAL VISITORS. Inmate visitors who are active law enforcement officers performing an investigation, active probation and parole agents performing their duties, California licensed medical doctors, psychiatrists, psychologists, attorney of record on an active criminal case, or California attorneys working in their official capacity (with court documentation), "Out of State" Attorneys practicing immigration law or Law Students identified on EIOR 27 or 28 being they provide a valid copy, may act as "Official Visitors."

D. OUTSIDE LAW ENFORCEMENT AGENCY VISITOR. Law enforcement officers who are performing official investigations or are guests of CCCSO facility staff.

E. PROFESSIONAL. A person engaged in a specified activity as a paid occupation.

F. PROFESSIONAL VISITORS. Public Defender Investigators (Level I); Private Investigators; Legal Runners; Paralegals; Law Clerks; Professional Interpreters; Notaries; ICE Legal Assistants (without EIOR 27 or 28 documentation); and Agents working on behalf of the government or the court.

III. PROCEDURE

A. VISITING HOURS

1. Official Visitors shall be allowed to enter Contra Costa County Detention Facilities to meet with inmates at any time, unless an emergency situation exists in the facility.

2. An attorney on official business who is entitled to practice in the California Courts, who represents the inmate or who is considering the inmate's representation, may at the request of an inmate or relative of an inmate, visit the inmate as soon as practical.

3. Professional visitors will be afforded non-contact visits during normal visiting hours upon approval of the Facility Commander or his/her designee. Normal visiting hours are posted in the lobby of each facility and outlined in CSB policy 2.17.02.

B. OFFICIAL AND PROFESSIONAL VISITORS

1. Official Visitors are afforded unscheduled contact visits with inmates any time to ensure privacy and confidentiality (dependent upon the emergency and/or operational needs of the facility).

2. Professional Visitors are afforded unscheduled non-contact visits during regular social visiting hours (Excluding Notaries).

3. Notaries must schedule an appointment during designated days/times 24 hours in advance through CAS. Refer to CSB Policy 2.18.12 Notary Public Services.

4. Subject to verification, Professional visitors may be permitted contact visits if they are accompanied by an Official visitor.

5. Official and Professional visitors must be escorted through any secure area of the facilities by Sheriff's Office staff.

    a. Secure areas are identified as:

        - MDF – Inside of the building, excluding the lobby and 2nd floor hallway and visit areas.

        - WCDF – Inside the administration building (Bldg. 1) and inside of locked housing units (bldgs. 4-8).

        - MCDF – Anywhere inside the fenced perimeter of the facility.

6. Official and Professional visitors and ICE legal assistants (with approval) may remain in the facility regardless of facility mealtimes, facility counts, or non-emergency lockdowns.

    a. Any meals missed during Official and Professional visits shall be saved and served to the inmate as soon as possible after the visit, per CSB policy 2.08.44 (Inmate Meal Service).

        - If requested by the inmate, he or she may take his/her meal into the Legal/Professional visit.

7. Official and Professional visits may be suspended, and the visitor(s) asked to leave the facility due to an emergency situation, upon direction of the on-duty facility manager.

8. Official and Professional visitors may not give anything to an inmate without having the item first inspected by the housing unit deputy.

9. Official and Professional visitors are prohibited from bringing in any electronic or digital devices without prior approval of the Facility Commander or his/her designee.

10. The attorney of record, attorneys working in their official capacity (subject to verification), and Investigators (with court order and Facility Commander approval) will be permitted to bring electronic devices into the detention facilities for the sole purpose of viewing digital media directly related to the inmate's current case.

    a. Electronic devices may be examined at the time of check in and at the request of any deputy sheriff at any time.

    b. The attorney will be informed that they are not permitted to use any electronic device to access the Internet while inside the detention facility, unless it is directly related to the inmate's case.

    c. Inmates are not permitted to manipulate or possess any device brought in by Official or Professional visitors.

    d. Any violation of policy or misuse of an electronic device will be grounds to terminate the visit and revoke the attorney's future privilege of bringing an electronic device into Contra Costa County detention facilities.

11. Official and Professional Visitors are subject to searches of their person and property. Papers clearly marked as "Legal" may be searched but not read by staff.

12. The Public Defenders Office may provide to CAS a list of pre-designated investigators in the job classification of "Public Defender Investigator II," who will be afforded Official Visitor privileges. It is the duty of the Public Defenders Office to provide documentation as to the current grade level of their designated investigators.

    a. The list of pre-designated Public Defender Investigators (Level II) shall not exceed 12.

    b. Annually, the CAS Unit will contact the Public Defender's Office and request an updated listing of pre-designated "Public Defender Investigators (Level II)." The Public Defenders Office will submit a listing of those employees (maximum 12), on Department Letterhead, signed by the Public Defender.

c. Pre-designated Public Defender Investigators (Level II) are required to submit a clearance application and will be allowed visitation only after approval by the CAS Lieutenant or his/her designee.

d. It is the responsibility of the Public Defender's Office to provide any "out of cycle" additions or deletions to this listing in writing to the CAS Office.

13. The Conflict Resolution Panel/Alternate Defenders Office (ADO) may provide to CAS a list of pre-designated private contracted investigators who will be afforded Official Visitor privileges.

a. The list of pre-designated private investigators shall not exceed 12.

b. Annually, the CAS Unit will contact the ADO and request an updated listing of pre-designated private investigators. The ADO will submit a listing of those contractors (maximum 12), on Department Letterhead, signed by the ADO Director.

c. It is the responsibility of the ADO to provide any "out of cycle" additions or deletions to this listing in writing to the CAS Office.

14. Professional visitors and pre-designated ADO private investigators will be required to submit documentation identifying them as representing an attorney or government agency to provide services within any of the Contra Costa Detention Facilities.

a. Documentation must include the following:

- Attorney or law firm letterhead.
- Name of person providing services.
- Title of person providing services.
- Name of Inmate.
- Case Number.
- Purpose of visitation.
- If visitation is related to an ADO case, the documentation must indicate so.

b. The document will be delivered to Custody Administrative Services office.

c. “Official Visitor” privileges for pre-designated ADO private investigators only apply to the case identified in the document received by CAS.

d. Professional visitors and pre-designated ADO private investigators are required to submit a clearance application and will be allowed visitation

only after approval by the CAS lieutenant or his/her designee.

C. CLERGY VISITS

1. Inmates will be allowed as many clergy visits as possible each week.

2. Only clergy members who appear on the Facility Clearance List will be granted admission to Contra Costa County Detention Facilities.

3. Clergy members designated as **"Cleared for individual contact visits"** on the clearance list will be allowed contact visits when scheduled by the Facility Chaplain.

4. Clergy members designated as **"non-contact Clergy"** on the clearance list will be allowed non-contact visits on an individual basis and contact visits in scheduled group meetings scheduled by the Facility Chaplain.

5. All Clergy visits are to be scheduled by the Facility Chaplain and updated on the clearance list by CAS.

6. Clergy members, who do not appear on the Facility Clearance List, will be referred to the Facility Chaplain and the Custody Administrative Services Office for clearance, prior to admission.

7. The Facility Chaplain is responsible for obtaining written permission from the Facility Commander for the conduct of group meetings that require the use of contact visit rooms. The Facility Chaplain will give a copy of the monthly program schedule to the Facility Commander, Inmate Services Director, Operations Sergeant, CAS and the Lobby Aides.

8. Clergy visitors may not give anything to an inmate without having the item first inspected by the housing unit deputy or the Facility Commander.

D. HOSPITAL VISITS

1. Professional and Official visits in any hospital may only be approved during regular hospital visiting hours and follow all other visiting rules as outlined in this policy (2.17.09).

2. Professional and Official Visitors will be required to report to the hospital deputy prior to visiting or making contact with the inmate.

   a. Failure to contact the Hospital Deputy prior to making contact with the inmate will result in the immediate termination of the visit.

   b. The Hospital Deputy will verify the identity of all visitors by ensuring they possess valid identification.

   c. Visitors without valid identification will not be permitted to visit with the inmate and will be asked to leave the hospital property.

   d. The Hospital Deputy will call the MDF Lobby Receptionist to verify the

visitor status (Professional or Official) and to log the visitors' arrival to the hospital.

e. The Hospital Deputy will escort the visitors to the inmate's location and observe the visit as closely as possible without compromising the security of other inmates in custody.

f. Visitors may be searched for contraband.

3. Terminal visiting

a. The Facility Commander or his/her designee shall (Providing facility security is not compromised) grant a terminal visit in instances where death is imminent. This is regardless of which hospital the inmate is admitted to, nor to other visiting procedures or rules.

b. The Facility Commander or his/her designee shall contact the Hospital Security Services to alert them of the approved visit.

E. MEDICAL, MENTAL HEALTH, MAINTENANCE, SCHOOLS, PROGRAMS VISITOR

1. These visitors must be escorted throughout the facility by the corresponding group staff assigned to the facility.

2. These visitors may access the facility unescorted with prior approval of the Facility Commander, and as designated by the facility clearance list.

3. These visitors must have permission from the housing unit deputy prior to accessing the housing unit.

4. These visitors must sign in and display the visitor badge issued to them visibly on the upper torso at all times while in the facility

F. IN-CUSTODY DEATH VISITOR

1. These professional visitors must sign in and display the visitor badge issued to them visibly on the upper torso at all times while in the facility.

2. These professional visitors shall be given unrestricted access to the facility within the scope of their investigation duties.

G. VISITING RULES - CONDUCT

1. Any violation of the visitation rules and regulations by an inmate may result in disciplinary action.

2. Visitors are subject to search of their person and/or property. Inspections may include a search of the visitor's person (physical and/or electronic), personal property, and vehicle(s) when there is probable cause to believe the visitor is attempting to introduce or remove contraband or unauthorized items or substances into, or out of a facility.

3. Visitors will not be forcibly searched unless the visitor is being detained for unlawful actions or activities.

4. Searches of visitors and personal items may include inspection of a wheelchair, implant, prosthesis or assistive device, prior to being allowed to visit with an inmate.

5. Visitors under the influence of alcohol or drugs will not be allowed to visit and may be subject to arrest.

6. Unless authorized, it is prohibited or unlawful for visitors to carry items such as cell phones, pagers, tablet or laptop computers, cameras, tape or digital recorders, purses, bags, briefcases, or any other items into the visiting areas. Personal items should be left at home or locked in the visitor's vehicle. Items may also be locked in the public lockers located in the lobby area.

7. Possession of tobacco or tobacco products within the detention facilities is prohibited.

8. No food or drink is permitted in the visiting areas.

9. Visitors are required to proceed directly to their respective visiting areas and to remain there until their visit is completed.

10. Visitors found visiting an inmate other than the one scheduled shall have their visiting privileges revoked and will be required to leave the facility.

11. There will be no physical contact between visitor and inmate.

12. An inmate may refuse to see any visitor.

13. Any challenge or dispute of facility visiting rules and regulations will be directed to the immediate attention of the custody sergeant.

H. VISITING RULES – DRESS CODE

1. Visitors shall remain fully clothed at all times while in the facility.

2. Appropriate attire includes undergarments; a dress or blouse/shirt with skirt/pants/or shorts; and shoes or sandals.

3. Prohibited attire consists of:

   a. Clothing that resembles county-issued inmate clothing;

   b. Clothing or garments that:

      - Expose the breast/chest area, genitals or buttocks;

      - By design or by the manner worn, excessively allows the

anatomical detail of body parts or midriff to be clearly viewed;

- Are sheer, transparent or excessively tight;
- Expose more than two inches above the knee, including slits when standing.

4. Undergarments shall be worn beneath translucent clothing.

5. No clothing or accessories displaying obscene or offensive language, drawings or objects will be allowed inside the facility.

6. No gang related clothing, style of dress or items containing gang related symbols or markings will be allowed inside the facility.

7. No head coverings (except clear, see-through rain gear), and readily removable wigs or hairpieces. The facility commander, or designee, may grant an exception for a visitor to wear gloves, head coverings, and/or readily removable hairpieces or wigs, based upon verification of need. Written approval for dress code exceptions shall be required prior to visiting and subject to staff inspection during any visit.

8. No exaggerated hairstyles

I. VISITOR REGISTRATION

1. The registration must be complete, legible and include the following:

   a. Visitor's name.

   b. Inmate name and Booking Number

   c. Purpose of visit

J. VISITOR DEPARTURE

1. Visitors will check-out with the Visiting Desk as they depart the facility to sign out and return the visitor badge.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.01
	RELATED ORDERS: P.C. 4025, 4026	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Inmate Welfare Fund Administration	

I. POLICY

A. Revenue generated from inmate activities such as collect telephone calls, commissary purchases, etc., will be deposited in the Inmate Welfare Fund (IWF).

B. The Sheriff will expend IWF monies primarily for the benefit, education, and welfare of the inmates confined within Contra Costa County Detention facilities.

C. Funds determined by the Sheriff to be above that level may be expended for maintenance of facilities.

D. Maintenance includes, but is not limited to, the salary and benefits of personnel used in the programs primarily to benefit the inmates including such areas as education, drug and alcohol treatment, welfare, library, accounting, and other programs deemed appropriate by the Sheriff.

II. PROCEDURE

A. The Sheriff, with the recommendation and counsel of the IWF Committee, will administer all IWF activities.

B. The IWF Committee includes the Custody Services Bureau (CSB) Assistant Sheriff, and at-large public members. The public members shall serve terms of one year, commencing on January 1 and ending on December 31 of each year.

C. The Sheriff or his designee will automatically renew public member service terms unless a resignation has been received.

D. Voting members will include:

1. The chair – CSB Assistant Sheriff or designee

2. At-large public members

E. The Detention Division Captain responsible for IWF matters will either be a voting or

non-voting member depending upon the direction of the CSB Assistant Sheriff.

1. If he/she acts as a voting member, the CSB Assistant Sheriff will abstain from voting.

F. Non-voting members include:

1. Director of Inmate Services, and

2. Inmate Welfare's Administrative Assistant III

G. A majority of voting members of the IWF Committee will constitute a quorum necessary to transact business.

H. The IWF Committee will:

1. Hold quarterly meetings during the months of January, April, July, and October.

a. Special meetings will be called when deemed necessary to deal with pressing or priority issues.

b. All meetings will be announced in advance.

c. An agenda will be prepared and Roberts Rules of Order will prevail. Summary notes will be recorded and distributed to IWF Committee members and the Sheriff.

2. Review and make recommendations to the Sheriff regarding, but not limited to, the following:

a. Each February, a proposed IWF budget for the next fiscal year.

- All programs are to present their requests at the January meeting, time permitting.

- This budget will be submitted by the CSB Assistant Sheriff to the Sheriff for final approval.

b. Commissary prices, the sale of commission or non-commission commissary items after approval by Facility Commanders, and weekly commissary spending limits (raw materials purchased for handicrafts are excluded from this limitation).

c. The award of all contracts involving IWF

d. Accounting practices and procedures

e. Expenditures for non-mandated programs and purposes that benefit the inmates, or are for associated maintenance costs.

f. Review and approve the annual IWF fixed asset inventory. Acknowledge the loss of any IWF tagged item and report such loss, in writing, to the

Sheriff.

I. The CSB Assistant Sheriff will:

1. Represent the Sheriff and approve all IWF expenditures

   a. This includes signing all purchase orders or work requests chargeable to the IWF.

   b. This may be delegated to the Detention Division Captain responsible for IWF matters.

2. Maintain the Sheriff's Contingency Fund (organization number 2483) and approve all emergency and/or unfunded expenditures for the contingency fund.

   a. Such emergency and/or unfunded expenditures will be reported to the IWF Committee at its next regular meeting.

J. The Detention Division Captain responsible for IWF matters will:

1. Ensure IWF Committee meetings are held on a regular basis (quarterly) and emergency basis (when required)

2. Ensure agendas are prepared for all scheduled and emergency IWF Committee meetings

3. Ensure a quorum of IWF Committee is present prior to voting on any IWF related matters

K. The Director of Inmate Services will:

1. Act as the IWF Committee's Executive Secretary

2. Notify IWF Committee members of all meetings, including regular quarterly and/or special meetings

3. Take and distribute IWF Committee meeting summary notes to all members of the committee

4. Maintain copies of all IWF Committee documents

5. Develop and manage all contracts chargeable to the IWF

6. Ensure program managers submit a proposed annual expenditure budget to the CSB Assistant Sheriff no later than December 15 of each year

   a. Budget input will include funds for operational expenses such as professional services, office supplies, books or periodicals, equipment rentals, travel, and for capital items (items costing $5,000 or more with a life of three years or more).

   b. Based upon this budget input, the Director of Inmate Services will prepare

and submit an annual budget for IWF Committee review.

- This will include recommendations to balance the proposed budget if expenditures exceed planned revenue.

7. Prepare and submit to the CSB Assistant Sheriff an annual projection of IWF revenue no later than December 15 of each year.

   a. Revenue is comprised of all monies and property generated from the following sources:

      - Inmate telephone commissions
      - Commissary sale commissions
      - Inmate industries
      - Inmate hobby-craft sale activities (when authorized)
      - Other miscellaneous activities such as recycling, and other activities authorized by the Sheriff.

8. Review, initial, and forward all IWF expenditure documents (i.e. demand forms, requisitions, TC-52's, etc.) to the CSB Assistant Sheriff or his/her designee.

9. Ensure indigent inmates (as defined in CSB Policy 2.15.03) are provided, at time of release, with commercial land transportation tickets for transportation to their area of residence within the County, or, if they are residents of an adjacent County, to the closest BART or AC Transit station in that County.

10. Ensure the Senior Clerk responsible for Detention Division procurement maintains file copies of all purchase orders and similar documents chargeable to the IWF.

11. Conduct an annual physical inventory of all IWF fixed assets and maintain the IWF fixed asset inventory database.

    a. The results of the annual inventory including any missing items will be submitted to the IWF Committee for review.

    b. Capital items will be assigned a permanent IWF tag number and entered into the IWF inventory database.

    c. Capital items will be actively managed/tracked for their entire life cycle (i.e., until disposed).

    d. Non-capital items of a durable nature, with a value exceeding $500, will be assigned a permanent IWF tag number and entered into the IWF inventory database.

    e. Non-capital items will be actively managed/tracked for five years from date of acquisition.

f. Furniture will not be tagged; however, it will be entered into the IWF inventory database.

- Furniture will be managed/tracked for its entire life cycle (if $5,000 or more), or for five years from date of acquisition if under $5,000).

12. Prepare and submit in January of each year an itemized report of all IWF revenue and expenditures of the previous fiscal year.

a. This report will be submitted to the Sheriff via the chain-of-command for review, approval, and distribution to the Contra Costa County Board of Supervisors.

b. Copies of this report will be provided to the IWF Committee.

13. Ensure the IWF is audited by the County Auditor-Controller on a bi-annual basis.

14. Ensure all revenue generated from inmate activities (exception is revenue generated by Inmate Industries at WCDF) is forwarded to the Sheriff's Fiscal Officer located at 651 Pine Street, Martinez, CA.

a. Vendor commission checks will be made payable to the Contra Costa County Sheriff's Office – IWF.

b. The assigned Account Clerk will process all revenue generated from Inmate Industries at WCDF.

- This individual will prepare IWF deposit documentation for submission to the Sheriff's Fiscal Officer.

15. Ensure program managers submit quarterly activity reports to the CSB Secretary

a. The Director of Inmate Services will prepare and distribute a Quarterly Program Activity Report to the following individuals:

- Sheriff
- Undersheriff
- CSB Assistant Sheriff
- Detention Division Captains
- Facility Commanders
- Administrative Lieutenants
- Program Managers
- Inmate Welfare Fund Committee Members

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.02
	RELATED ORDERS: MJS 1061, 1064, 1065, 1070, 1072	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-09 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Introduction to Inmate Services & Programs	

I. POLICY

A. It is the policy of Custody Services Bureau to ensure that programs and services are available to inmates may include, but are not limited to, social services, religious services, library services, recreational and leisure time activities, educational services, and vocational training services.

B. Inmates will be afforded equal opportunity to participate in services and programs regardless of their race, religion, national origin, color, creed, sex, economic status, political belief, or disability.

II. PROCEDURE

A. The establishment, coordination, scheduling, and monitoring of inmate programs is the responsibility of the individual program managers with direction and coordination from the Director of Inmate Services.

1. Each staff member is expected to assist in this endeavor by forwarding both positive and negative comments about existing programs, suggestions for improvement, and ideas for additional programs to the CSB Assistant Sheriff who has final approval in all such matters.

B. The Director of Inmate Services will:

1. Establish, coordinate, schedule, and monitor inmate programs (except medical and mental health programs).

a. Facility Commanders and Detention Division Captains are expected to assist in this effort by forwarding to the CSB Assistant Sheriff both positive and negative comments about existing programs, suggestions for improvements, and ideas for additional programs or services.

b. Final authority for new programs rests with the CSB Assistant Sheriff after obtaining further recommendations from the IWF Committee.

2. Ensure a schedule of program activities is posted in each inmate housing unit and made available to staff as necessary.

   a. Information regarding new programs will also be made available to both staff and inmates as they are developed and implemented.

   b. Programs generally will be offered between 8:30 – 11:30 a.m. and 1:30 – 4:30 p.m. daily Monday – Friday.

      - Due to its transitory nature, the Intake area will normally not have programs offered.

      - The Chaplain will respond to Intake at the request of custody staff to handle specific outside problems that might affect an inmate's adjustment to custody.

      - Inmates assigned to specialized Housing Units who are otherwise eligible to participate in general programs, will be offered an opportunity to do so, to the extent possible, on the Housing Units.

3. Ensure that all program volunteers adhere to Sheriff's Office Policy and Procedure 2.17.09 regarding bringing any unauthorized item(s) into the facility.
   a. Exceptions will be clearly noted on the clearance list
   b. All necessary copies will be made for the program volunteers at no cost and will be placed in predesignated locations inside the facility.

C. Custody staff will:

1. Limit or discontinue a specific program or volunteer if they present a threat to the security or safety of the facility, staff, inmates or themselves.

2. Generate an incident report containing all pertinent information if a specific volunteer or volunteer program poses a threat to security.

   a. The report will be forwarded to the CSB Assistant Sheriff via chain of command, with a copy to the Director of Inmate Services for investigation and disposition of the incident.

   b. Facility Commanders maintain the right to curtail, postpone, or discontinue the services of a volunteer or volunteer organization at his/her discretion.

      - The Director of Inmate Services, Detention Division Captain and the CSB Assistant Sheriff will be notified in writing of any action taken.

3. Forward all Inmate Request Forms to the appropriate program (i.e., request for educational class consideration would be forwarded to the Schools Program Director).

D. The Senior Librarian will:

1. Provide a variety of recreational reading material to meet the interests and needs of inmates.

2. Provide a variety of reference material for centralized use.

3. Provide informational services as it pertains to library resources or to locate facts needed.

4. Ensure recreational reading material is available on library shelving in each inmate Housing Unit at MDF and MCDF and that stock is rotated on a frequent basis.

5. Report security or safety issues directly to the applicable Facility Commander.

6. Coordinate other library issues with the Director of Inmate Services.

E. The Law Librarian will:

1. Provide access to a law library at WCDF and MDF.

2. Provide inmate pro-per privileges as outlined by Contra Costa County Superior Court. Refer to CSB Policy and Procedure 2.08.14, Pro Per Inmates.

3. Provide limited duplicating service at WCDF and MDF for inmates requesting legal assistance.

F. The Schools Director will:

1. Ensure all IWF-approved full-time and part-time instructors (Sheriff's Office contract with the Contra Costa County Office of Education) are available to provide academic and vocational courses within the Detention Division.

2. Ensure the educational program reflects the needs of the inmates and will include, at a minimum, basic education courses, general education development courses, and basic survival courses.

3. Ensure academic and vocational instruction is provided to groups or individuals depending on inmate interests, class size, security considerations, etc.

   a. Dedicated classroom locations are available at WCDF and MCDF. Due to building configuration, the MDF is more suitable for independent study.

4. Establish eligibility for education services based on inmate needs and abilities, class size, length of sentence, security considerations, etc.

5. Ensure current class schedules are posted in all inmate Housing Units.

6. Arrange interviews for inmates expressing an interest in attending classes.

7. Remove inmates from class for non-excused absences or inappropriate behavior.

8. Report directly to the Contra Costa County Office of Education for supervision.

9. Report security or safety issues directly to the applicable Facility Commander.

10. Coordinate other school issues with the Director of Inmate Services.

G. The Senior Chaplain will:

1. Ensure all IWF-approved full-time and part-time staff (Sheriff's Office contract with Bay Area Chaplains) is available to provide agreed counseling and chaplain services within Detention Division.

2. Arrange for the conducting of services and counseling by representatives of various organized religions that will meet the diverse spiritual needs of the inmates, subject to the security needs and schedules of the detention facilities.

3. Develop and supervise a volunteer program that will involve local clergy, laity, seminary students, and the community.

4. Make regular visitations throughout detention facility inmate housing units providing counseling to the inmates and their families, subject to the security needs and schedules of the facilities.

5. Respond to crisis and emergencies involving inmates and/or detention facility staff as needed.

6. Assist detention facility staff handle inmate request for religious diets in accordance with CSB Special Diets Policy.

H. The Inmate Industries Supervisor will:

1. Develop, implement, evaluate, supervise, and coordinate all inmate educational or vocational programs outside the auspices of the Office of Education.

   a. This includes the following:

      - WCDF Inmate Industries

2. Maximize the opportunity for offenders to participate in programs that reduce criminal behavior, enhance the offender's reintegration into the community, and provide the tools to allow offenders to become productive members of society.

3. Ensure the following inmate industry objectives are met:

   a. Develop inmate general work habits or skills

   b. Enhance inmate opportunities for employment in a specific vocation

   c. Reduce inmate idleness, tension, and mischief

   d. Reduce costs for program customers by maintaining a pricing structure

that averages 50% less than the private sector

e. Generate IWF revenue.

- The target market is governmental agencies in the Bay Area and non-profit organizations on a limited basis.

- Sheriff's Office employees are also authorized to purchase from inmate industries.

f. Provide positive publicity for Detention Division and the Sheriff's Office.

4. Ensure the following procedures for the sale of inmate industry products or services to government and non-profit agencies are adhered to:

a. All products or services will be itemized on an approved Inmate Industries work order.

- Product or service charges will be based on those contained in the applicable program brochure or quoted separately for those not listed.

- Quantity discounts are available for certain products.

b. All completed work will be picked up by the customer or shipped via a mutually agreed source.

- Shipping costs, if any, will be borne by the customer. Completed work orders will be forwarded to the appropriate accounting staff member.

c. For sales to Contra Costa County departments, ensure the appropriate accounting staff member prepares an Interdepartmental Transfer (T/C 62) charging County departments for services/products provided.

- The total of each Inmate Industries work order (including sales tax) will be charged to the fund/organization number indicated by the department, sub-account 2340 or 2100 and credited to the IWF – Inmate Industries (fund/organization number 2484, sub-account 9945 or 5022 for Intrafund Transfers – sales to other IWF organization numbers).

- A journal voucher (JV) will be used to post the total sales tax charged on a T/C 62.

- The total amount of sales tax collected on a T/C 62 is credited to Sales Tax Payable (fund/organization number 100300, sub-account 0633) and debited to IWF-Inmate Industries (fund/organization 2484, sub-account 9945).

- The explanation for the JV should be "to record sales tax collected on work orders (list all work order numbers included in

the transaction)".

- Once completed, the original T/C 62 and JV are forwarded to the Sheriff's Fiscal Officer for further processing.

- Copies of Deposit Permits will be forwarded to Inmate Industries and retained for future reference.

- The Director of Inmate Services will forward copies of Inmate Industries expenditure detail reports and revenue detail reports to the appropriate accounting staff member to allow reconciliation of outstanding Deposit Permits.

d. Refunds or re-work will only be allowed within thirty (30) days of receipt of order.

e. For sales to non-county departments and non-profit agencies, ensure the appropriate accounting staff member prepares and sends invoices to applicable agencies.

- Invoice numbers will be provided to Inmate Industries for tracking purposes.

- Upon receipt of the payment check made payable to: Office of the Sheriff Contra Costa County – IWF, the Accounting Technician will prepare a Deposit Permit.

- Sales tax collected is posted when payment is deposited.

- When completing the Deposit Permit, the appropriate accounting staff member will post the amount of the sale to IWF-Inmate Industries (fund/organization number 2484, sub-account 9945.

- A journal voucher (JV) will be used to post the total sales tax charged on a T/C 62.

- The amount of the sales tax collected on the sale is posted to Sales Tax Payable (fund/organization number 100300, sub-account 0633).

- If payment for more than one invoice is included on a Deposit Permit, the total sales tax collected from all invoices may be posted as a single entry.

- Copies of Deposit Permits will be forwarded to Inmate Industries and retained for future reference.

- The Director of Inmate Services will forward copies of Inmate Industries expenditure detail reports and revenue detail reports to the appropriate accounting staff member to allow reconciliation of outstanding invoices and Deposit Permits.

- Bank charges associated with bad checks (i.e., insufficient funds, closed accounts, etc.) will be the responsibility of the payer.

f. Refunds or re-work will only be allowed within thirty (30) days of receipt of order.

5. Ensure the following procedures are followed for sale of inmate industry products or services to Sheriff's Office employees (active or retired):

a. All products or services will be itemized on a "yellow" Inmate Industries work order.

- All work desired must be pre-approved by employee signature and date on the work order.

- Product or service charges will be based on those contained in the applicable program brochure or quoted separately for those not listed (same prices charged to government or non-profit agencies).

- Quantity discounts are available for certain products.

b. After itemization and pre-approval, the Inmate Industries Supervisor will place the original work order with the applicable check in a sealed envelope and submit the package to the appropriate accounting staff member for payment.

- A copy of the work order will be provided to the employee.

- Employees must pay by check or money order (cash payments or credit cards will not be accepted) made payable to: Office of the Sheriff Contra Costa County – IWF.

- All orders must be paid in advance and in full.

- The appropriate accounting staff member will accept payment and annotate the "yellow" work order with the check number, the payment date, and an accounting approval signature.

- The appropriate accounting staff member will make a copy of the work order for record purposes.

- The original "yellow" copy of the work order will be forwarded to Inmate Industries to allow commencement of work.

- The appropriate accounting staff member will prepare a Deposit Permit.

- The total of each work order (including sales tax) will be charged to the applicable Sheriff's Office employee and credited to the IWF- Inmate Industries (fund/organization number 2484, sub-account 9945).

- The sales tax portion will be credited to Sales Tax Payable (fund/organization number 100300, sub-account 0633).

- Deposit Permits and checks will be forwarded to the Sheriff's Fiscal Officer for further processing.

- Copies will be forwarded to Inmate Industries and retained for future reference.

- The employee must pick up all completed work at the WCDF Inmate Industries shop.

- The employee will indicate acceptance by signature and date on the "yellow" work order.

- Accepted work orders will be retained for five years.

- The Director of Inmate Services will forward copies of Inmate Industries expenditure detail reports and revenue detail reports to the appropriate accounting staff member to allow reconciliation of outstanding Deposit Permits.

- Bank charges associated with bad checks (i.e., insufficient funds, closed accounts, etc.) and the replacement of bad checks with a money order will be the responsibility of the payer.

c. Refunds or re-work will only be allowed within thirty (30) days of receipt of order.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.03
	RELATED ORDERS: MJS 1069 National Detention Standards CSB 2.08.49	
ISSUE DATE: 01-13-04 **REVISION DATE:** 10-18-16 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Inmate Orientation	

I. POLICY

A. All inmates and Federal detainees shall be provided an Orientation Program.

B. The Orientation Program shall:

1. Assist the inmate in transitioning into the facility.

2. Explain facility rules, regulations, and disciplinary procedures.

3. Explain the Custody Services Bureau Zero Tolerance policy against sexual abuse and sexual harassment.

4. Explain the inmate's options for PREA Reporting

5. Describe the programs available and the application process.

6. Describe correspondence, visiting and telephone usage rules.

7. Describe the inmate grievance procedure.

8. Describe medical and mental health services.

9. Describe the classification/housing assignment process.

C. The Orientation Program shall be reviewed annually and updated if necessary.

II. PROCEDURE

A. The Facility Commander is responsible for implementing, managing and coordinating the program outlined in the policy section of this document.

B. Martinez Detention Facility and West County Detention Facility

1. An Inmate Orientation Video will be shown in the intake area prior to the

inmate/detainee being placed on a housing unit.

2. The Booking Deputy will be responsible for showing the Orientation Video to all new arrivals.

3. The Deputy reviewing the booking paperwork with the inmate shall:

   a. Ensure the inmate/detainee has an opportunity to view the Orientation Video.

   b. Answer questions the inmate/detainee has concerning PREA, inmate rights, rules or procedures.

   c. Ask the inmate the PREA questions on the back of the "Live Scan Verification" form.

      If the inmate answers, "Yes" to any of the PREA questions the deputy shall follow the procedure outlined in 2.12.01.

      It is the inmates right to refuse to answer the PREA question.

4. The Reviewing Deputy will ask the inmate to sign the Orientation Verification Form once ~~both~~ all conditions have been met.

5. In addition to the Orientation Video, inmates/detainees can access and review information regarding inmate rights, rules, PREA information, privileges, and disciplinary procedures on their designated housing units via module kiosks or through the Housing Unit Deputy.

C. Federal Detainees of the Immigration and Customs Enforcement (ICE) Service

1. Federal detainees in the custody of ICE will be processed for housing at the WCDF.

2. Detainees will be processed in the same manner as other inmates to be housed at WCDF.

3. Federal detainees will be provided the opportunity to view the "ICE Intake Video" and will be provided with the "ICE Detainee Handbook".

4. The "ICE Intake Video" and the "ICE Detainee Handbook" will be offered in English and Spanish.

5. The WCDF Escort Deputy will be responsible for showing the "ICE Intake Video" to all new detainees.

6. Once the detainee has been assigned a housing unit, he / she will be provided a copy of the "ICE Detainee Handbook."

7. The Housing Unit Deputy will note that the detainee was given a copy of the "ICE Detainee Handbook" and provided the opportunity to view the "ICE Detainee Video" in the Jail Management System.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.04
	RELATED ORDERS: MJS 1121, 1265 P.C. 4025	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** General Commissary Procedure	

I. POLICY

A. The Custody Services Bureau shall provide a contract commissary operation and procedure to allow inmates to purchase items authorized by the facility.

B. A bag-in order form process will be utilized and governed by strict accounting procedures.

C. Each new inmate shall receive certain personal care items.

D. Each indigent inmate shall be entitled to certain personal care items.

E. If the inmate is considered to be a danger to themselves, staff issuing personal care items will ensure that the inmate does not receive a disposable razor.

F. Hospital inmates are not eligible to receive commissary.

II. DEFINITIONS

A. COMMISSARY: Goods, articles and supplies purchased by inmates.

III. PROCEDURE

A. GENERAL COMMISSARY OPERATIONS

1. Commissary will be scheduled once a week.

2. Commissary order forms will be available on all Housing Units and will list available items and prices.

3. Inmates in Disciplinary Status for violation of Facility rules may lose their Commissary privilege for a specific time.

   a. Inmates who have lost Commissary may still purchase personal hygiene items, medications and stamps via the normal Commissary process.

4. Indigent inmates may request one (1) personal care kit each week, which includes basic hygiene items, a golf pencil and paper.

5. Inmates may have a maximum purchase order of $100.00 per week.

6. M Module inmates will not be permitted to order over-the-counter medications as designated by medical or mental health staff.

7. Commissary must be ordered at the kiosk or the forms must be turned in by inmates no later than the following days and times:

    a. MDF: Wednesday 2200 hours

    b. WCDF: Monday, 2200 hours

    c. MCDF: Monday, 1800-2300 hours

8. The housing unit deputy will:

    a. Check the form to insure it is filled out correctly and signed by the inmate.

    b. Check the accuracy of the inmate's booking number.

9. Commissary forms will be ready for pick-up by:

    a. MDF: Thursday, 0700 hours

    b. WCDF: Tuesday, 0700 hours

    c. MCDF: Tuesday, 0600 hours

10. Completed forms will be delivered to:

    a. MDF: Taken from the food carts and given to DSW.

    b. WCDF: Taken from Housing Unit by Deputy and placed in the mail room slot marked "canteen".

    c. MCDF: Housing Unit Deputy delivers to the office.

B. COMMISSARY VENDOR RESPONSIBILITIES

1. The vendor will pick up order forms accordingly:

    a. MDF: Collected from DSW

    b. WCDF: Collected from the mailroom, slot marked "canteen".

    c. MCDF: Collected from Clerical in the office.

2. The vendor will check the shift change report to ensure that the inmate has

sufficient funds to pay for the items ordered on the Commissary Order form.

3. Check the booking number and correct the additions, extensions and totals, correcting any mistakes.

4. Note the total amounts of each inmate sale and total number of stamps purchased on the Master Weekly Commissary Shift Change Report.

5. Give the master weekly Commissary reports to the Account Clerk.

6. Delivering Commissary to the Housing Unit:

    a. Martinez Detention Facility

        - Vendors will enter the facility via the loading dock sally port and under staff escort.

        - Vendors will deliver housing unit commissary to the unit's activity room, as designated by the deputy.

        - The housing unit vendor will prepare all bags in the inmate's room order.

    b. West County Detention Facility

        - Vendors will enter the facility via the loading dock sally port and under staff escort.

        - Vendors will deliver housing unit commissary to the unit's activity room, as designated by the deputy.

        - The housing unit vendor will prepare all bags in the inmate's room order.

    c. Marsh Creek Detention Facility

        - Vendors will report to the Operations Office

        - Commissary will be delivered to each housing unit and Commissary distributed nearby the Deputy's station.

7. Deliveries will be made to one inmate at a time.

    a. The vendor will ask the inmate their name and room/bunk number, and will use the inmate's identification for verification.

    b. The vendor will show the contents of the bag and inventory the contents against the order form with the inmate.

    c. The vendor will remove any overages. If an item is missing, the vendor will write a note on the reverse side of the order form.

- The Account Clerk will make adjustments to the inmate account.

d. Upon completion of this inventory, the inmate will officially receive his/her Commissary by signing the receipt portion of the Commissary order form.

e. The vendor will compare the signatures, i.e., the signature of the inmate requesting the order with the inmate's signature on the receiving portion of the form.

- If they match, the inmate will be given the bag.

- If they do not match, the vendor will pull the sale and immediately notify the Module Deputy that the inmate is attempting to receive another inmate's commissary.

f. Should the inmate be unavailable (i.e. out of the module, hospital, etc.), the vendor will deliver the Commissary to the Custody Sergeant who will sign for it, and arrange for its delivery to the inmate.

- This re-delivery may occur on swing shift Thursday or Friday.

g. If the inmate is on another module within the Facility, and can still have Commissary, the vendor will deliver the Commissary to the corrected module address.

8. All Commissary items that are not sold will be removed from the facility by the vendor.

9. Vendors will handle completed forms accordingly:

a. MDF: The vendor gives the completed forms to the DSW after deliveries are completed.

b. WCDF: The vendor will place all of the completed Commissary forms in the Account Clerk's mail slot.

c. MCDF: The vendor will place all the completed Commissary forms in the office for the Account Clerk.

10. Departure from the facilities:

a. Vendors at all facilities will report to the Custody Sergeant after all housing unit deliveries are complete.

b. The Custody Sergeant will provide an escort for the vendor to exit the facility.

C. RELEASE CLERK RESPONSIBILITIES

1. Release Clerks must verify the Commissary transaction on Commissary delivery day BEFORE releasing inmates to make sure their Commissary sales were deducted from their account.

D. ACCOUNT CLERK RESPONSIBILITIES

1. Account Clerks will adhere to CSB Policy and Procedure 2.02.10, Commissary Funds.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.05
	RELATED ORDERS: MJS 1072 PC 4027, 5009 *Employment Division, Department of Human Resources v. Smith*	
ISSUE DATE: 03-13-04 **REVISION DATE:** 01-07-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Religious Programs	

I. POLICY

A. Inmates have a constitutional right to participate in practices of their religious faith that are deemed essential by the faith's judicatory, limited only by documentation showing a threat to the safety of persons involved in such activity or that the activity itself disrupts order in the facility.

B. The Custody Services Bureau shall provide adequate space and equipment in order to conduct and administer facility religious programs.

C. Additionally, non-inmate clerical staff shall work in conjunction with the Religious Services Program to process confidential material.

II. DEFINITIONS

A. LEGITIMATE RELIGIOUS PRACTICES: Will be determined by the Chaplain after a review of the literature stating the religious principles that support the practices.

III. PROCEDURE

A. CHAPLAIN

1. The full-time Senior and Assistant Chaplains, in cooperation with the Facility Commander or designee and the Director of Inmate Services, shall plan, direct and supervise all aspects of the religious program, including approval and training of both lay and clergy volunteers from faiths represented by the inmate population.

   a. Chaplain staff shall have physical access to all areas of the facility in order to minister to inmates and staff.

   b. Chaplain staff will ensure that the various religious needs of the inmates are met and that services and counseling are made available on a voluntary basis.

c. Staff supervision of the Assistant Chaplain is the responsibility of the Senior Chaplain.

d. Staff coordination of the Senior Chaplain is the responsibility of the Director of Inmate Services.

e. Religious programs will not be based on race, national origin, color, creed, sex, economic status, or political belief.

2. Chaplain staff shall meet eligibility requirements as established.

   a. A copy of the eligibility requirements is available in the chaplain staff office for review.

3. Chaplain staff will determine the religious needs of the inmates through announcements, interviews, sign-up sheets, request slips, etc., provide liaison with the various denominations as necessary, and supervise religious volunteers in providing services and counseling as needed.

4. Inmates who do not wish to participate in religious counseling or services will not be exposed to such activities.

5. Chaplain staff will maintain statistics as to the number of inmates that attend religious services each day.

6. Chaplain staff will be responsible for providing the Director of Inmate Services and the Bureau Administrative Services with an updated schedule of religious activities and approved visiting lists, which will be distributed to the custody staff as necessary.

7. All religions will be afforded equal status and protection. Provisions will be made for inmate access to appropriate facilities, clergy or spiritual advisors, publications and religious symbols, and other requirements of the various faiths, subject only to the limitations necessary to maintain order and security.

   a. Any requests for special religious diets must be approved by the facility Chaplains, subject to review by the Facility Commander and CAS Lieutenant or designee.

      - Additionally, approved diets will be forwarded to the Director of Food Services.

   b. Any items brought into any Contra Costa County Sheriff's Detention Facility for the purpose of distribution to any inmate shall be provided to and approved by the Director of Inmate Services prior to its distribution. Once approved, the specific item(s) will be noted on the clearance list of the volunteer who has been approved to bring it in the facility.

8. Religious volunteers will be screened and trained to the same degree as all other volunteers and will wear the appropriate identifying badge while working in the facility.

9. Religious counseling/services will be held within the individual housing units, although the specific locations will vary depending on the number of inmates and classifications, and available space.

    a. Religious Services may also be conducted in the MCDF Chapel or Multipurpose/Program Room at WCDF.

10. Regular services, to meet the diverse spiritual needs of the inmates, will be provided. Community resources will be utilized to augment the delivery of appropriate religious services on special occasions or as needed. A number of volunteers will assist the Chaplain staff in providing services to the numerous religious denominations in the area.

11. When a religious leader of an inmate's faith is not represented through the chaplaincy staff or volunteers, the Chaplain staff shall assist the inmate in contacting such a person. That person shall have the appropriate credentials from the faith judicatory and may minister to the inmate under the supervision of the Chaplain.

12. Many outside clergy also have professional counseling degrees in family problems, etc., and are willing to volunteer their services to inmates. The Chaplain will coordinate this one-on-one counseling program, which may require contact visiting subject to the Facility Commander or designees approval.

13. Reasonable space shall be available for congregate worship/religious services, individual counseling, group counseling and/or religious studies and chaplaincy offices. Equipment, office supplies and secretarial help shall be adequate to meet the needs of the religious program. Volunteers are acceptable as clerical support staff. Religious study classes will be provided on a regular basis. This program will depend on lay-volunteers to lead the discussions and will be held in contact visiting areas or multi-purpose areas, to be determined by the Facility Commander. Volunteers with housing unit access will be so designated on the schedule.

14. Special activities of a para-religious nature (for example: seminary student training, musical groups, recreational or entertainment programs, social activities, etc.) may be scheduled at times. The Chaplain staff, Director of Inmate Services and the Facility Commander will review these activities for approval.

15. The Chaplain staff will make arrangements to see most outside visitors in the non-secure areas of the facility with the exception of clergy, who may conduct their business in the Chaplain's office.

    a. The Chaplain staff shall be responsible for notifying the Facility Commander prior to escorting any non-clergy guests into the facility.

    b. The Chaplain staff shall be responsible for notifying any support services of special needs or requests as it relates to meetings, etc.

        - This includes requests for DSW services, Food Services, etc.

16. The Chaplain staff, in cooperation with the Facility Commander or designee, will

develop and maintain communications with faith based communities and approve donations of equipment or materials for use in religious programs.

B. VISITING CLERGY

1. The Chaplain staff shall be responsible for ensuring all visiting clergy members are familiar with facility rules and regulations pertaining to visiting and the provision of services to inmates prior to their entering the facility.

2. Clergy visiting policy can be located in CSB Policy and Procedure 2.17.09.

3. Clergy interested in providing services, instruction and/or counseling to inmates in the facility will be referred to the Chaplain staff.

4. Visiting clergy and regular religious volunteers will provide the facility Chaplains with the number of inmates that attended services for tracking purposes.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.06
	RELATED ORDERS: M.S. 1064 Penal Code 6030	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Library Services	

I. POLICY

A. The Custody Services Bureau will ensure that all entitled inmates have access to library services, including:

1. Current information on community services and resources

2. Educational and recreational reading material.

B. Legal Reference materials may be accessed in accordance with CSB Policy and Procedure 2.18.14, Legal Reference Services.

II. PROCEDURE

A. Selection of books, materials, and programs

1. Materials selected by staff shall serve the interests and needs of the inmates.

2. Reading levels of selections shall be consistent with inmate abilities.

3. Materials shall be selected on the basis of cultural, inspirational, or recreational values.

4. All library books, materials, etc. shall be clearly stamped indicating ownership by Contra Costa County Detention libraries.

   a. Sworn staff shall ensure library materials are returned to staff librarians and not allowed to leave the facility when inmates are transferred or released.

5. Library staff shall endeavor to obtain book or periodical donations from the County Library system, community bookstores, other community organizations, or citizens.

B. Access to reading materials:

1. All inmates may request library materials via the inmate request form.

   a. At MDF, the staff librarian shall fill inmate requests for books and provide service to the separate inmate modules.

      - An approved general service schedule for MDF inmates will be posted in each module.

   b. Full service libraries are available at WCDF and MCDF.

      - At these locations, inmates shall have specific visitation time frames identified. Library hours of operation will be posted in each inmate housing area.

   c. Reference books shall be available for review only.

      - MDF Requests shall be handled on a case-by-case basis

      - WCDF and MCDF Inmates may review reference material during their library period.

   d. Inmates may have a total of seven (7) books checked out at any time. Including magazines, schoolbooks and religious material.

   e. Inmates are responsible for all books checked out to them. Any inmate determined to have destroyed, damaged, injured, etc., any library materials or equipment is subject to criminal prosecution as well as disciplinary measures, including reimbursement for the replacement cost of any materials or equipment affected.

   f. Library staff may provide Internet research on a time-permitting, case-by-case basis for information not available in stock or that is out of date. Internet research shall be limited to:

      - Informational reference materials i.e., vocational/trade school, card game rules, farmers almanac, medical, telephone book information (i.e. yellow pages.com). No informational searches on individual persons will be conducted.

      - No historical, biographical, Newspaper article or periodical searches or otherwise deemed non-reference requests will be fulfilled.

      <u>Inmates are not allowed access to the Internet.</u> Custody staff has final approval on all requests.

   g. Library staff may provide up to three (3) photo copied pages of in-house reference materials not available for checkout from the library. (Not applicable to inmates with special status, I.e. Pro-per)

      - No copies will be completed of inmate personal pictures, drawings, stationary, reading material or personal paperwork etc.

- No inmate will be allowed to use the copy machine, except designated supervised workers.

h. All inmates must follow library rules and polices regarding conduct. Violation of library rules may result in disciplinary action.

2. Delivery of general library materials to inmate housing areas

a. At MDF, the staff librarian shall provide weekly service to all inmate modules for the purpose of filling previous inmate requests and to rotate module bookshelf stock. The exception is " D" module where a rolling book cart rather than a bookshelf shall be rotated weekly.

- Hardbound books are no longer provided at any facility. (Exception to rule is inmates enrolled in school may possess one (1) hardbound book only. The hardbound book must be issued by school services)

b. At WCDF, all requests will be handled during regularly scheduled library hours. The exception is "Building Four" where library staff shall rotate bookshelf stock weekly.

c. At MCDF, the staff librarian shall rotate bookshelf stock on inmate dorms weekly. All other requests will be handled during regularly scheduled library operating hours.

3. Any hardbound books received for an inmate from an outside source, will be modified (hard covered torn off) prior to issuance. Librarian will seek inmate approval prior to book modification. If inmate does not approve of the modification, or in the event the inmate does not respond to Librarian request within five (5) days, books will be returned to sender.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.07
	RELATED ORDERS: MJS 1061, 1070 PC 4019	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-08-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Educational/Vocational Programs	

I. POLICY

A. Contra Costa County Sheriff's Office shall contract with the Contra Costa County Office of Education to provide an accredited and comprehensive educational and/or vocational program to meet the needs of the inmate population.

B. These programs will be made available to inmates on a voluntary basis.

C. Eligibility will be based upon inmate behavior, motivation, and subject to security requirements. This shall include:

1. Weekday and weekend educational programs to allow scheduling flexibility.

2. Accurate records to reflect the inmate's educational achievements toward relevant employment in the community.

3. Formal recognition of an inmate's educational accomplishments such as appropriate diplomas, certificates, and awards.

D. The Contra Costa County Sheriff's Office shall provide adequate training equipment to support program needs. This shall include, at a minimum:

1. Classroom and office space

2. Tables

3. Chairs

4. Utilities

5. Inter-site mail and delivery services

6. Selected equipment

II. PROCEDURE

A. Educational Plan

1. Detention Adult School Program Administrator and staff shall develop an educational plan containing:

   a. Statement of purpose, goals, and objectives for each educational course that is reviewed annually and revised if necessary

   b. Course outlines for each educational course provided

   c. Classes in accordance with the California Education Code, and approved by the County Board of Education.

   d. Classes should include, but not be limited to, the following areas of instruction:

      - Orientation
      - Adult Basic Education (ABE)
      - GED preparation and testing
      - High school diploma preparation and testing
      - Computer literacy
      - Visual arts
      - Independent study
      - DEUCE (Deciding, Educating, Understanding, Counseling, and Evaluation) program
      - Parenting
      - Job development
      - Pre-release/transition program
      - Woodshop program
      - Custodial program

   e. Regular evaluation system for assessing the need of specific educational and/or vocational programs

   f. Schedule of educational and vocational classes

   g. System to obtain and maintain necessary educational/vocational

equipment

h. Method for maintaining academic records

i. Achievement recognition process

B. Accreditation

1. The Detention Adult School Program Administrator shall communicate with the officials of the State Department of Education and maintain up-to-date records required for accreditation purposes.

C. Record keeping and Achievement Recognition

1. The Detention Adult School Program Administrator shall ensure the following:

a. Maintenance of student records to include a file folder, legal attendance documents, transcripts, participation, progress, certificate copies, and diploma copies.

- At the MDF, transcripts from all three Detention sites representing the last three years and other student records from the current year plus two years previous will be stored on site, within the school department areas.

- At WCDF, records from the current school year plus two years previous will be stored on site in the school office.

- At MCDF, records from the current school year plus two years previous will be stored on site in the school office.

b. Periodic teacher evaluation and objective measures of progress on each student.

c. Scheduling of quarterly award ceremonies to recognize educational accomplishments.

- Representatives from the Sheriff's Office, Department of Education, community, and inmate families will be invited to participate.

D. Delivery Methods

1. The Detention Adult School Program Administrator shall utilize the following methods to offer programs to inmates:

a. Classroom instruction

b. Individual instruction (one to one tutoring)

c. Independent study

d. Distance Learning

E. Provisions for Special Education

1. The Detention Adult School Program Administrator shall provide special education in accordance with Section 94-142 of Federal Public Law.

2. Inmates requesting special education are only eligible when:

a. They are under the age of twenty-one (21)

b. They are without a high school diploma

c. They have an active Individualized Education Plan (IEP)

d. The IEP has not lapsed within the last year

e. They can supply their high school transcript or provide means of verification of active IEP

3. Inmates meeting the above criteria may apply for special education classes.

a. Housing classification of the inmate will determine the method of instruction provided.

F. Application Process

1. The Detention Adult School Program Administrator shall ensure inmates are aware of school programs/classes by posting program announcements and weekly program activity schedules in each inmate housing area.

a. It is anticipated that inmates will share "word of mouth" information regarding the availability and/or desirability of programs/classes.

2. Inmates must submit an Inmate Request form to Schools Department for class/program consideration.

3. School instructors will be responsible for interviewing inmates who express an interest in attending classes.

4. Court referrals and referrals from existing Detention programs will also be accepted.

5. Inmates will be required to attend the school program orientation class and submit to initial testing to establish a baseline for future progress prior to participating in one or more classes/programs.

G. Evaluation

1. The Detention Adult School Program Administrator will submit a quarterly progress report to the Director of Inmate Services.

a. This report should highlight contractual services provided, it should capture significant accomplishments such as number of students placed in jobs upon release, and it should note all statistical information that indicates program value.

2. The Detention Adult School Program Administrator shall provide an annual written report of both program and student outcomes.

   a. Criteria for the evaluation of the school program shall be established after consultation with the Director of Inmate Services.

   b. Performance measures shall be based upon established program and course goals and objectives.

3. This annual process will also include a survey of teachers, Detention facility staff, and inmates.

   a. The survey results will be utilized to help establish subsequent year annual goals and objectives, provided they fall within the guidelines of the State Education Code, County Office of Education Policy, budgetary constraints, and are reviewed and approved by the Director of Inmate Services.

H. School Rules

1. Inmates will be responsible for arriving on time to their scheduled classes.

2. All inmates will sign in on class roster at the beginning of their class.

3. Any appointments (i.e., medical, court, etc.) conflicting with classroom schedules will be verified by School Department staff prior to determining if the inmate's absence is legitimate.

4. Three (3) unexcused absences will result in removal from the program.

5. Inmates will participate in class activities and discussions.

6. Inmates should make every effort to schedule their visits around their classroom schedule.

7. Requests or questions regarding school time credits shall be made on an Inmate Request form.

   a. Inmates will not approach teachers regarding this issue before, during, or after class.

8. Inmates must wear issued facility outer garments to class.

   a. Exception: inmates may be allowed to wear special clothing for a physical education class or work project class.

9. Inmates will not bring food or drinks to program areas.

10. Inmates will be removed from class (may also lose school time and/or be written up for a disciplinary rule violation) for:

    a. Non-excused absences

    b. Inappropriate/disruptive behavior

11. Inmates will be responsible for leaving their surrounding desk area clean and orderly.

12. Inmates will not be allowed to remain in the school's area after their last assigned class unless conducting official school business.

13. In addition to the above rules, DEUCE participants must adhere to the following school rules:

    a. Expectations of Project DEUCE

    b. Attendance in an ABE Class should their CASAS reading test score fall below 214

    c. Compliance with breath and/or urine testing for the detection of alcohol and drug use when requested by staff

    d. Attendance in at least one AA or NA meeting each week.

        - Both groups are offered within the Detention facilities.

    e. Attendance in afternoon independent study class or an evening ABE/GED class.

        - Phase three participants may elect a computer applications class or ABE/GED class.

I. School Time Credits

1. Inmates may receive up to thirty (30) days of school credit toward their sentence they are currently incarcerated for.

2. For every fifteen (15) hours of class attendance, inmates will receive a one-day reduction in their sentence.

    a. Up to three (3) days each month may be credited toward the inmates sentence.

    b. Only one (1) day of school time can be earned each week.

3. An inmate may earn ten (10) days off their sentence for the following:

    a. Receiving a GED Certificate

b. Earning a high school diploma

c. Successful completion of the DUECE Program

4. The request to post school time must be on an Inmate Request Form and turned into the school office at least five school days before the inmate's anticipated release date.

   a. School time credits may be posted only once.

   b. It is the inmate's responsibility to request that school time be transferred from one facility to another.

5. Questions regarding school time must be submitted to the school office in writing.

   a. Inmates may not discuss school time issues with staff during class time.

6. Any inmate failing to meet any requirements of the Contra Costa Adult School Policy agreement may be subject to dismissal from the schools program.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.08
	RELATED ORDERS: MJS 1070 (d)	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-19 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Educational/Vocational Programs (Non-CCCOE)	

I. POLICY

A. Vocational courses shall be available to all inmates incarcerated at WCDF and MCDF.

B. The programs will be designed to:

1. Provide job-related skill training that is consistent with the needs of the inmate population.

2. Provide apprenticeship training for certain skills.

3. Prepare inmates for more advance training opportunities following release.

II. PROCEDURE

A. Program Eligibility

1. Acceptance into a vocational program will be based on the following:

a. Interest level

b. Behavioral patterns

c. Desire to learn

d. Length of sentence

B. Types of Vocational Programs:

a. Engraving

b. Sign Making

c. Sublimation

d. Vehicle Decaling

e. Viticulture

f. Landscaping

C. Enrollment

1. Inmates interested in enrolling in a vocational program may submit an Inmate Request form to the Inmate Industries Supervisor, the MCDF Viticulture Instructor (viticulture only), or the WCDF Landscape Instructor (landscape program only).

2. Each inmate submitting a request will be interviewed by the applicable program supervisor/instructor.

D. Record Keeping

1. The Inmate Services Supervisor or instructor designee will maintain progress records for each inmate enrolled in their vocational program.

2. Certificates of accomplishment will be issued to inmates when warranted.

a. Copies will be placed in their program training file.

3. Inmate vocational training program records will be maintained on site for the current year and the previous two years.

4. If an inmate re-enters a vocational program after one (1) year, a new training file will be created.

E. Program Continuation

1. Upon Release

a. At the request of an inmate, the Inmate Services Supervisor or instructor designee will attempt to coordinate the placement of a released inmate in a vocational training program and/or in an employment position.

2. Upon Re-Entry

a. If an inmate is re-arrested within one (1) year, and sentenced to a Contra Costa County Detention Facility, he/she must re-apply in order to participate in the same program or any other.

b. The Inmate Industry Supervisor or instructor designee will be responsible for determining what phase of the program the inmate will re-enter.

F. Evaluation

1. The Inmate Industry Supervisor or instructor designee will submit a quarterly progress report to the Director of Inmate Services.

a. This report should highlight services provided, it should capture significant accomplishments such as number of students placed in jobs upon release, and it should note all statistical information that indicates program value.

2. The Inmate Industry Supervisor instructor designee will conduct an annual evaluation of the vocational training program to ensure courses and curriculums are up to date and consistent with the needs of inmates.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.09
	RELATED ORDERS: MJS 1070	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-09 **REVIEW DATE:** 03-05-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Social Service Programs	

I. POLICY

A. It shall be the policy of the Custody Services Bureau to ensure that all inmates have access to a variety of Social Service Programs while incarcerated in order to prepare for treatment, education, shelter, food, and employment upon release.

B. These programs are educationally focused and shall include, but not be limited to the following:

1. Substance abuse education programs for drug and alcohol addiction

2. Vocational education and preparation for employment

3. Pre-release resource information

4. Parenting

C. Community resources will be solicited to provide those services that cannot be provided by regular staff.

II. DEFINITIONS

A. Social Service Programs: Planned activities designed to promote the inmate's social adjustment and assist in resolving personal or interpersonal problems.

B. D.E.U.C.E. Program (Deciding, Educating, Understanding Counseling): A program providing focused education and group process activities which will prevent further substance abuse and criminal activity that supports addiction.

III. PROCEDURE

A. Requests for Services

1. Inmates may request an education program by submitting a request slip to the Director of Inmate Services.

2. Staff members may initiate a request for an inmate to receive educational services.

3. If a staff member is acting at the request of an inmate, the staff member shall utilize the message request slip procedure.

4. After receiving a request for an inmate to participate in program services, the Director of Inmate Services will refer the inmate request to a program that matches his/her specific eligibility.

B. Drug and Alcohol Services

1. Medical/mental health services personnel in addition to the Inmate Services Section, via the D.E.U.C.E Program, shall jointly provide drug and alcohol services.

2. Substance abuse programs for inmates with drug and alcohol addiction problems contain the following:

a. Staff trained in drug and alcohol education programs will design and supervise the program

b. Selection and training of former addicts and recovering alcoholics to serve as employees or volunteers in these programs

c. Coordination with community substance abuse programs

d. Make efforts to motivate addicts to seek help

e. Set realistic goals for the education of inmates with substance abuse problems

f. Have a variety of approaches to provide flexibility to meet the varying needs of different addictions

3. Services for drug and alcohol related problems are available through:

a. Alcoholics Anonymous

b. Narcotics Anonymous

c. D.E.U.C.E. Program

d. Community-based organizations.

C. Annual Evaluation of Social Service Programming: An annual assessment of the collective service needs of the inmate population is to be completed by the Director of Inmate Services. This evaluation will include a review of statistics retained concerning the previous years activity. Recommended changes for inmate programs will be submitted to the Inmate Welfare Committee. The following data sources will be used to determine the collective needs of the inmate population:

1. A review of randomly selected individual client plans and individual client evaluations/exit interviews.

2. Discussions with staff relating to social programming.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.10
	RELATED ORDERS: MJS 1065	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-2019 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Exercise and Recreation Programs	

I. POLICY

A. The Custody Services Bureau shall provide a recreational and entertainment program that allows access to exercise, recreational and entertainment opportunities including games, sporting equipment and television to maintain the physical, social, and emotional well being of inmates.

B. Minimum jail standards require a minimum of three (3) hours of such activity distributed over a period of seven (7) days.

C. Inmates will be encouraged to participate in a program of physical activity.

II. PROCEDURE

A. Inmate recreational activities at MDF

1. Due to MDF being classified as a maximum-security facility, recreational opportunities available to inmates are more limited than at other Detention facilities.

2. All inmates will have access to the following recreational activities (not inclusive):

a. Board games

b. Courtyard/exercise area

c. Television and movies

- Custody Staff will determine the availability of programming

d. Newspapers

e. Special holiday musical programs.

3. Custody staff will determine inmate "free" time when recreational equipment or games may be checked out and when they must be returned.

B. Inmate recreational activities at WCDF

1. The WCDF is a medium-security facility.

2. All inmates will have access to the following recreational activities (not inclusive):

   a. Board games

   b. Courtyard/exercise area

   c. Television and movies

      - Custody Staff will determine the availability of programming

   d. Newspapers

   e. Special holiday musical programs

3. Custody staff will determine inmate "free" time when recreational equipment or games may be checked out and when they must be returned.

C. Inmate recreational activities at MCDF

1. The MCDF is a minimum-security facility.

2. All inmates will have access to the following recreational activities (not inclusive):

   a. Board games

   b. Courtyard/exercise area

   c. Television and movies

      - Custody Staff will determine the availability of programming

   d. Newspapers

   e. Special holiday musical programs.

3. Custody staff will determine inmate "free" time when recreational equipment or games may be checked out and when they must be returned.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.11
	RELATED ORDERS: P.C. 4025	
ISSUE DATE: 07-01-04 **REVISION DATE:** **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Transportation Services for Released Inmates	

I. POLICY

A. BART and bus tickets purchased with Inmate Welfare Funds will be available for all indigent inmates at time of release.

B. It shall be the responsibility of the Director of Inmate Services to ensure that adequate resources are available in order to allow an inmate to return to their location of arrest within the county area.

II. PROCEDURE

A. Issuance and Record keeping

1. Upon request for BART or bus tickets during the release process, the Processing Sergeant will verify an inmate's indigent status.

2. Assuming the inmate's final destination is serviced by BART, County Connection, AC Transit, or Tri Delta Transit, eligible inmates will be provided a BART ticket, a bus ticket, or any combination thereof to allow transportation to the inmate's county of residence.

3. County Connection bus tickets are good for destinations within Central Contra Costa County. This includes:

   a. Martinez

   b. Pleasant Hill

   c. Walnut Creek

   d. Concord

   e. Clayton

   f. Danville

g. Alamo

h. San Ramon

i. Lafayette

j. Moraga

k. Orinda

l. Dublin

4. AC Transit bus tickets allow two adult rides and are good for destinations within West Contra Costa County. This includes:

a. Richmond

b. Pinole

c. El Cerrito

d. San Pablo

e. El Sobrante

f. Hercules

g. Oakland

h. Hayward

i. Union City

j. Fremont

k. Menlo Park

l. Palo Alto

5. Tri Delta bus tickets are good for destinations within East Contra Costa County. This includes:

a. Bay Point

b. Pittsburg

c. Antioch

d. Brentwood

6. All bus tickets allow bus transfers within their system (i.e., County Connection

allows a transfer within their servicing area but does not allow a transfer to AC Transit bus nor to a Tri Delta bus).

7. BART tickets will allow transportation throughout Contra Costa County.

8. A working inventory of BART and bus tickets will be maintained in a locked drawer, cabinet, etc. until required.

    a. The Shift Supervisor will record the date, the inmate's name and booking number, and the type and number of tickets issued in the Inmate Transportation Log.

    b. The inmate's initials will also be obtained in the log.

B. Replenishment

1. The primary inventory of BART and bus tickets is maintained in the Martinez Detention Facility Accounting Office's safe.

2. When a Detention facility needs to replenish its working inventory, the Facility Commander or designee should provide a written request to the MDF Accounting Office along with copies of the Inmate Transportation Log.

3. A designated MDF Accounting Office staff member will compare the request with the quantity of tickets issued as documented by the Inmate Transportation Log.

    a. If the request appears reasonable, the MDF Accounting Office will provide replenishment tickets from their safe and obtain a receipt signature from the requestor.

    b. If the request appears unreasonable (i.e., usage from Inmate Transportation Log does not support the request), the MDF Accounting Office will notify the applicable Facility Commander and the Director of Inmate Services so they may view the request.

4. On a weekly basis at MDF and WCDF, accounting staff will reconcile the existing ticket inventory to the Inmate Transportation Log and notify the Operations Sergeant of any discrepancies.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.12
	RELATED ORDERS: Policy 2.17.09	
ISSUE DATE: 07-01-04 **REVISION DATE:** 11-26-10 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Notary Public Services	

I. POLICY

A. It shall be the policy of the Custody Services Bureau to permit Notary Public Services to all inmates. Identifying and using available resources within the community will achieve this.

B. All fees and costs related to the Notary is the responsibility of the inmate.

C. Notary Publics are not authorized contact visits.

II. DEFINITIONS

A. NOTARY PUBLIC: A person legally empowered to witness and certify documents and to take affidavits and depositions.

III. PROCEDURE

A. All telephone calls/inquiries regarding Notary Public access will be referred to CAS.

1. Appointments are to be scheduled at least 24 hours in advance, Tuesday through Thursday, 1300-1500 hours.

2. Inmates wishing to get married are responsible for locating and making arrangements with a Notary to enter the facility with approval of the Facility Commander or designee through their fiancé, family members or friends. Refer to Inmate Visiting Policy 2.17.09, Section II C. “Special Visits”.

B. Prior to confirming the appointment, CAS will advise the Notary Public that the only identification available for the purpose of identifying any inmate signing a legal document, will be the armband worn by the inmate and bearing the inmate’s name and booking number.

C. Should confirmation of a Notary Public's status be necessary, an individual Notary Public can be verified with the State of California through the following agency:

a. Secretary of State
Notary Public Division
1500 11th Street, Fifth Floor
Sacramento, CA 95814
(916) 653-3595

D. Notary Public Division office hours are as follows:

a. Monday through Friday

- 8:00 a.m. - 4:00 p.m.

E. **Notaries will be permitted non-contact visit room privileges only.**

1. Upon arrival to the designated housing unit, the deputy will retrieve and inspect the paperwork requiring notary service.

2. The deputy will direct the notary into a non-contact visit room.

3. The deputy will present the paperwork to the inmate in view of the notary to review and sign.

4. The deputy will retrieve the paperwork from the inmate and return it to the notary for disposition.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.13
	RELATED ORDERS: MJS 1063, 1064, 1066 Coordinated Trial Courts Agreement	
ISSUE DATE: 01-20-04 **REVISION DATE:** 11-25-19 **REVIEW DATE:** 11-25-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services	**SUBJECT:** Pro Per Inmates	

I. POLICY

A. Inmate Pro Per privileges shall apply to active criminal cases only. Pro Per privileges will become effective upon Custody Administrative Services (CAS) receipt of the appropriate court order. Pro Per privileges will be terminated in accordance with the court order, ~~or~~ under conditions causing suspension, or once the case has been adjudicated.

B. Pro Per privileges shall be at the expense of the inmate unless the court has been satisfied as to the indigence of the inmate.

C. Pro Per privileges shall be honored at the reasonable convenience of the facility and shall be dependent on the security of the Pro Per inmates, other inmates, staff, and the needs and security of the facility.

II. DEFINITIONS

A. IN PROPRIA PERSONA (PRO PER): In one's own person. For the purpose of this section, an inmate is in Propria Persona or Pro Se Status only if acknowledged by a court to be appearing in a specific criminal action without counsel.

B. LEGAL MAIL: Confidential correspondence between inmates and local, state, and federal courts, any member of the State Bar, or holder of public office and/or the State Board of Corrections.

C. SHERIFF'S REPRESENTATIVE: For purposes of this section, The Sheriff's representative for all inquires regarding the facility or the ability to carry out various court orders will be considered to be the Custody Administrative Services Lieutenant or his/her representative. Management of the Pro Per Inmate program is the responsibility of CAS. All inquires from the Court regarding compliance with this agreement, management of the Pro Per Program, or the ability to carry out various court orders, will be made to CAS. Pro Per Inmates should direct their inquiries regarding compliance to CAS where the inmate is currently being housed.

III. PROCEDURE

A. Pro Per inmates will be housed according to their specific classification requirements.

B. Activation of Pro Per status

1. Pro Per Orders will be effective immediately upon receipt and review of the appropriate court order.

2. Operations clerks will be responsible for notifying CAS upon receipt of any court order.

   a. The Operations Clerk will contact CAS to advise them of the court order.

   b. The Operations Clerk will forward a copy of the court order to CAS.

3. CAS will maintain a current pro per list, which will be accessible by staff members at all workstations.

4. If an inmate believes they have been granted Pro Per status by the courts, the inmate may submit a request to CAS to investigate the inmate's eligibility.

   a. CAS will review the inmate's booking and contact the appropriate court if necessary to confirm any active Pro Per status order.

   b. The Inmate's Pro Per status will be activated immediately upon receipt and review of the court order.

   c. The inmate's Pro Per phone privileges will begin upon review of the court authorized phone list.

C. LEGAL RUNNER

1. A "Legal Runner" will be recognized for the function implied, specifically, to obtain and deliver legal materials. The purpose of the "Legal Runner" is to provide assistance to the Pro Per Inmate in furthering their legal argument. Typical duties of "Legal Runners" include:

   a. Conducting legal research.

   b. Filing court documents.

   c. Obtaining necessary forms and other legal supplies.

   d. Conducting other administrative support functions to include making telephone calls, contacting witnesses and taking statements, and performing routine photocopying of legal materials.

2 All materials delivered by the legal runner for the Pro Per Inmate will be subject to inspection for contraband. No materials will be transferred from the legal runner to the inmate without authorization of custody staff members.

3 Pro Per Inmates may be authorized one "legal runner" by order of the court only. The services and expenses incurred by the legal runner are the responsibility of the Pro Per Inmate, unless other provisions for payment to the individual is specified by the court.

4. The Pro Per Inmate has the responsibility to request authorization from the Court for whom their designated "Legal Runner" will be.

    a. Once authorized by court order, the "legal runner" shall be subject to security clearance by the Office of the Sheriff.

        - The Office of the Sheriff may refuse a clearance or deny admittance for the following reasons:

            - Any unacceptable or disruptive conduct.

            - The "legal runner" is determined to be a security risk or hazard.

            - The "legal runner" is an ex-felon per (PC 4571)

            - The "legal runner" was released from a Detention Facility within the previous twelve months.

    b. In the event a legal runner is denied access, the Office of the Sheriff will notify the court, and the Pro Per inmate immediately.

    c. A "Legal Runner" may not be a social visitor for any inmate housed at a Contra Costa County Detention Facility while designated as a "Legal Runner" without written approval by the CAS Lieutenant.

    d. A "Legal Runner" may not communicate with any inmate other than the Pro Per Inmate to which they are assigned without written approval by the CAS Lieutenant.

5. If it is necessary for the "Legal Runner" to speak to the Pro Per Inmate, a non-contact visit may be permitted during normal visiting hours. Visits are limited to a maximum of two thirty-minute visits per week, unless otherwise ordered by the court.

    a. These visits will not be recorded, but may be monitored for the purpose of ensuring safety and security.

    b. "Legal Runner" visits should take place following the procedures afforded for other professional visits within the facility.

6. A "Legal Runner" may only be authorized to assist one inmate at a time.

7. The failure of a Pro Per Inmate to designate a "Legal Runner" does not imply the duties commonly done by a "Legal Runner" will become the duties of the Office of the Sheriff or the Court.

D. COURT AUTHORIZED INVESTIGATORS

1. The Pro Per Inmate may be authorized, by Court Order, one investigator only, at his/her own expense (unless other provisions for payment are specified by the Court).

2. The services of a licensed investigator may be retained by the Pro Per Inmate.

   a. If the Court is satisfied as to the Pro Per Inmate's indigence, the services of a licensed investigator may be provided by the Court.

   b. The investigator must be a California Licensed Investigator.

   c. Investigator designees and representatives will not be permitted.

3. The Pro Per Inmate has the responsibility to request authorization from the court for a Private Investigator.

   a. Court approved Investigators shall be subject to security clearance by CAS and may be refused a clearance, or denied admittance, upon the discretion of the Facility Commander or the CAS Lieutenant.

   b. In the event an investigator is denied clearance, the Office of the Sheriff will notify the court, and the Pro Per Inmate immediately.

E. DETERMINATION OF INDIGENCE

1. The court will order an indigence study to determine the inmate's ability to pay for services at the time Pro Per privileges have been granted.

   a. Indigence will be presumed if the inmate was previously represented by the Public Defender or Alternate Defender's Office.

F. MAIL PRIVILEGES

1 Pro Per Inmate "Legal Mail" will be handled in accordance with the standards identified within Title 15, Chapter 3, (Minimum Jail Standards) of the California Code of Regulations.

2 The inmate shall be allowed unlimited US Postal Service Privileges in his/her case at the inmate's own expense.

   a. Outgoing "Legal Mail" may be sealed.

      - Incoming mail readily identified as "Legal Mail" will only be opened and searched for contraband in the presence of the Pro Per Inmate.

   b. Indigent Pro Per Inmates shall be provided a reasonable amount of postage to accommodate the defense of their case.

- Any postage granted by the Court will be controlled by the Sheriff's Fiscal Services Unit for purposes of accountability.

- Pro Per inmates who exhaust their funds through the purchase of commissary will not be entitled to free postage for three weeks following the most recent commissary purchase.

3 Mail will be picked up using the same process as is currently used for outgoing US Mail within the Sheriff's Detention Facilities.

4 Sheriff's Office inter-office mail will not be used to deliver Pro Per legal documents to the court.

a. Inmates will use their legal runners for this purpose

b. This prevents allegations of interference by the Office of the Sheriff with the Inmate's case.

G. LEGAL REFERENCE AND MATERIALS

1. Inmates shall have access to legal reference materials and research services in accordance with CSB Policy and Procedure 2.18.14, Legal Reference Services.

2. Legal material shall be made available to inmates who wish to gather legal information pertinent to their current charges. The following guidelines shall apply:

a. Inmates will have access to legal research materials through the established Legal Research Associates (LRA) process.

b. Inmates may be challenged or denied requests, subject to Court review, if it appears the law materials requested are not relevant to the inmate's charges, or are deemed excessive.

c. Pro Per Inmates shall have priority on the use of legal reference materials, and thereafter requests from other inmates will be considered.

d. Inmates may order law materials by submitting a request through the LRA Process. These requests will be delivered by CAS as soon as possible via normal delivery process.

3. The Pro Per Inmate may receive legal journals, law reviews, softbound law books and other legal documents.

a. Any additional reference or resource material will require a specific Order of the Court, and a means to obtain the reference sought.

b. This legal material may be delivered to the inmate's facility by the inmate's designated "Legal Runner", investigator, or using the other common procedures within the facility.

c. All materials will be inspected for contraband as described in CSB Policy 2.17.01.

- Legal materials directly relating to the inmate's case will not be read.

4. Pro Per Inmates may only be permitted to possess the number of books or journals regularly allowed in CSB Policy 2.16.02.

5. Excessive legal material will be stored in the inmate's personal property until final release.

6. Limitations on legal material stored in Pro Per Inmate rooms will follow the guidance of the California State Fire Marshall and is essential to limit potential fire hazards.

   a. Pro Per inmates may be provided with one box without a lid to store legal material.

      - One box of legal material will be allowed to be stored in the Pro Per inmate's cell.

      - Any material that cannot fit in the box will be removed and placed into the Pro Per inmate's property.

        - Property may be released to someone outside the facility as described in CSB policy 2.11.21

      - Pro Per inmates will be responsible for inventorying all items being placed into storage.

   b. Inmates may make reasonable requests for access to legal materials stored in their property, provided they know which box they require.

   c. Facility Staff will process the request in a timely manner and as determined by the needs of the facility.

7. All legal materials are to be purchased by the Pro Per Inmate. Legal materials purchased by Pro Per Inmates are subject to inspection by Custody Staff for the presence of contraband.

8. Legal material not available through the LRA request process may be obtained through the use of a "Legal Runner" or by submission of a request to the County Law Library. Completed requests from Pro Per inmates for materials from the County Law Library will be retrieved by the designated Legal Runner or Private Investigator and provided to the inmate. These materials are subject to inspection by custody staff for the presence of contraband.

H. DIGITAL MEDIA

1. Digital Discovery may only be provided to a Pro Per inmate for the case in which the inmate has been granted Pro Per status.

2. Digital media may only be provided by the District Attorney or the Court in which the defendant is being heard. CAS may facilitate the exchange with the inmate.

    a. The types of digital media which will be accepted are:

        - CD
        - DVD
        - Small Flash "Thumb" Drive
            - Only one drive per inmate will be allowed in the facility at a time without written approval from the facility commander.

    b. All digital media will be clearly labeled with the following information:

        - Inmate name
        - Brief description of contents
        - If there are multiple discs being submitted on the same day, they must be numbered. (ex. 7/8/15 – 1 of 3)
        - The information must be labeled directly onto any DVD/CD.
        - An envelope must be provided to hold any flash drive and must be labeled with the required information and docket number.

3. Storage of Digital Media

    a. The Digital Medial will be turned over to a Legal Runner or Private Investigator once one is approved and ordered by the court.

    b. In the absence of a Court Ordered Legal Runner or Licensed Private Investigator, digital media will be stored in the CAS office at the facility where the inmate is being housed.

        - Once Pro Per status is removed, the Digital Media will be placed in the inmates' shelf property.

4. Viewing Digital Discovery

    a. No Equipment will be provided by the Custody Services Bureau.

    b. Court Ordered Private Investigators will be permitted to bring in a laptop for viewing digital discovery with the inmate only after the Custody Services Bureau has received a court order specifying that he/she is authorized to facilitate the viewing of digital discovery.

- The approval of the facility commander or the CAS Lieutenant will also be required in complying with the court order for the viewing of digital discovery to ensure the safety and security of the facility.

- Before Digital Viewing visits are approved, the Investigator must have passed a security clearance performed by the CAS.

- Visits for the purpose of viewing media will be allowed during normal visiting hours and will not require a scheduled appointment. If there are no available visit rooms to view media, the Private investigator will be asked to return at another time.

- The inmate will be allowed to schedule a visit for the purpose of media viewing to ensure room availability.

- The laptop computers will be examined at the time of check in and at the request of any deputy sheriff at any time. The investigator will be informed that they are not permitted to use the Internet while in the detention facility. Internet usage shall not be allowed by any Investigator on any device within a Contra Costa County detention facility. Any violation of policy or misuse of a laptop computer will be grounds to terminate the visit and may result in the Investigator's clearance being revoked.

- Laptop computers must be taken from the facility by the Private investigator after the visit has concluded.

- Laptop computers shall not be used to take photos or record any video or audio files, without prior written approval from the Facility Commander or the CAS Lieutenant.

I. COURT ORDERED TELEPHONE PRIVILEGES

1. Pro Per Inmate telephone calls will be made at the expense of the Pro Per Inmate, unless the Pro Per Inmate is designated as being indigent by the court.

2. No inmate may provide their Personal Identification Number (PIN) to any other inmate under any circumstances.

   a. Such attempts will be documented and forwarded to the court for review of the inmate's pro per status.

   b. Pro Per Inmate telephone calls are not to be made on the behalf of other inmates.

3. Pro Per Inmate telephone privileges are restricted to outgoing telephone calls only.

   a. Pro Per Inmates shall not knowingly participate in a forwarded, transferred, or third-party calls per CSB policy 2.17.08.

4. Pro Per Inmates will be permitted a maximum of 280 minutes of telephone calls per week. (Sunday through Saturday)

   a. Pro Per Inmates may provide a list of up to three telephone numbers to be used as an "Allow List" on the pro per phone. The Allow List must be submitted to CAS within a reasonable amount of time after being approved by the court. The list of phone numbers will be limited to the following:

      - Court Ordered Legal Runner.
      - Court Ordered Licensed Private Investigator.
      - One additional number as approved by the court.
      - Any changes to the Allow List of phone numbers will require approval by the court.
      - Phone numbers will be added to the inmate's "P.I.N." once the number is verified by CAS as being a good working number for the person ordered by the court.

   b. Pro Per Inmates shall be allowed two phone calls daily.

      - It is the inmate's responsibility to manage their 280 minutes per week.

   c. Calls may be made between 0800 and 2200 hours, providing the operation of the facility of the facility and its security are not compromised.

   d. Inmates may request to use the Pro Per phone at a specific time.

      - The inmate must establish the need for use at the specific time.
      - The inmate must provide at least 24 hours notice of the need.
      - Housing unit deputies will honor the request provided it does not interfere with the needs or security of the facility.

5. Housing unit deputies shall log all Pro Per activity into JMS.

J. SUPPLIES AND EQUIPMENT

1. CAS will provide a one-time issue of the following materials to the inmate upon receipt of the inmate's Pro Per status Court order:

   a. One (1) expanding file folder

   b. Two (2) legal tablets

   c. Five (5) legal folders

d. Five (5) golf pencils

e. Twenty Five (25) legal size envelopes

2. Additional supplies shall be purchased from commissary at the inmate's expense.

3. Indigent inmates may be provided additional supplies within reason and are limited to the supplies listed above (III, K, 1).

a. The inmate's fund balance will be verified before further materials are provided by CAS. Inmates who exhaust their account by purchasing commissary and fail to purchase stamps, supplies, etc., will not receive free postage or supplies for three (3) weeks.

4. Courts will accept legal documents in pencil from inmates.

5. Inmates assigned Pro Per status will purchase supplies available through commissary. All other requests will be made through CAS. Supplies not obtained through commissary must be approved by CAS after a security clearance examination.

6. Ink or ballpoint pens, staplers, staples, paperclips, binding clips or items to bind or maintain documents and/or materials that are otherwise deemed to be a security risk shall not be permitted. The Court will not order "ink" or "ballpoint" pens to be provided or made available to inmates.

7. Requests by Pro Per Inmates for any other supplies not available through commissary, may be made directly to CAS. Each request shall be reviewed on an individual, as needed basis, with CAS staff making the final decision.

K. SUBPOENAS

1. The court shall issue blank subpoena forms to each Pro Per inmate per PC 1326.

a. Subpoenas may be reviewed by the court to ensure the subpoena process is not abused.

b. Inmates abusing the subpoena process are subject to restriction or termination of their Pro Per privileges.

2. Subpoena of witnesses shall be at the inmate's expense.

a. In the event the prisoner is without funds, he/she will complete an In Pauperis form supplied by LRA.

b. Inmates may send completed subpoena forms to the Office of the Sheriff Civil Unit for completion of service.

- Inmate's legitimately filing Fee Waiver "In Forma Pauperis" will have all filing fees waived.

L. PRE AND POST-TRIAL REQUESTS

1. Any pre-trial or post-trial requests for Pro Per privileges other than those specified regarding Pro Per privileges shall be heard only in the appropriate criminal calendar or pre-assigned criminal trial department.

    a. In-trial requests may be made and heard in the trial courts.

        - The Trial court judge will act in consultation with the appropriate criminal calendar department.

2. Pro Per inmates alleging violations of this policy shall be forwarded to the criminal calendar or criminal trial judge for hearing.

    a. The hearing will be limited to only the issue that was forwarded for review.

3. Pro Per inmates may report any alleged violations of Pro Per policy through the inmate appeals process.

    a. Refer to CSB Policy and Procedure 2.16.05, Inmate Appeals for additional information.

    b. No petition or motions concerning alleged policy violations will be considered by the court until the inmate first complies with administrative procedure via inmate appeal.

        - Exception: The court will consider unusual circumstances that indicate compelling reasons that this procedure would result in substantial prejudice to the inmate.

            - The court will additionally consider the appropriateness of any action taken by the facility administrator in response to this information.

M. SUSPENSION OF PRIVILEGES

1. The Office of the Sheriff may terminate the court-ordered privileges of any Pro Per inmate with appropriate cause.

2. Except in emergency circumstances, Pro Per privileges may not be restricted or terminated as a condition of either jail discipline or administrative segregation without complying with the following procedures:

    a. The Sheriff's Office must provide the inmate with 24 hours advance notice of the intent to restrict or terminate the inmate's privileges and that a hearing before the decision making body will take place.

    b. The inmate is provided with the opportunity to appeal the restriction/termination of privileges.

c. The inmate is provided with an opportunity to present witnesses and documentary evidence.

- Exception: If the presentation will not be unduly hazardous to the security of the facility.

d. The Sheriff's Office must provide the inmate with a written statement of the evidence relied upon.

- This may be in the form of an Incident Report
- Specific reasons for the action taken may be included in the statement unless institutional safety and/or the security of the facility is in jeopardy.

e. The Office of the Sheriff shall notify the court before whom the inmate's case is pending of the desire to restrict or terminate the Pro Per privileges of the inmate.

- The notification shall be made no later than two (2) days after the hearing.
- The notification shall include:
  - Copies of relevant incident reports.
  - Results of the disciplinary hearing committee's recommendations.
- Unless emergency circumstances exist, the inmate's Pro Per privileges should not be restricted or terminated until the court has the opportunity to modify the order granting Pro Per privileges.
- The court should hold a hearing to review the recommendations of the Sheriff's Office and provide the inmate with an opportunity to appear and object to the decision.
  - The court will hold the hearing no more than three (3) days following the hearing.

3. In emergency situations, The Office of the Sheriff may immediately restrict the Pro Per privileges of an inmate prior to the court issuing a modified order.

a. The Sheriff's Office shall provide the inmate with a written notification of such an action.

b. The Sheriff's Office must ensure that the court has been notified of the revocation.

- The notification shall include:
  - Copies of relevant incident reports.
  - Results of the disciplinary hearing committee's recommendations.
- The court will hold a hearing on the revocation no more than three (3) days following the revocation.

4. Pro Per inmates will be assigned housing according to Classification criteria.

5. An inmate's Pro Per status shall be terminated upon notification from the court.

6. An inmate's Pro Per status shall be terminated within seven (7) days of final sentencing.

7. The court may order a hearing at the inmate's request to determine if any suspended Pro Per privilege should be restored, modified or permanently revoked.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.14
	RELATED ORDERS: MJS 1064	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-09-14 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Legal Reference Services	

I. POLICY

A. The facility shall provide access to legal materials and research services that meets the requirements of law, judicial mandates, accreditation standards, and Legal Assistance Program needs.

B. Pro-Per inmates shall be allowed access to these services.

C. Legal Research Associates shall provide legal reference materials and research services. Legal Research Associates shall be responsible for ensuring that all legal reference materials are current and meet required service levels.

II. DEFINITIONS

A. PRO-PER INMATES: Inmates who are appearing in a defined court action without counsel.

B. ACCESS- Access shall be considered to mean the ability to obtain information through the service provider, or as directed by the Facility Commander.

III. PROCEDURE

A. INMATE ACCESS

1. All inmates are allowed one (1) legal request per calendar month with up to five (5) items.

   a. Federal Detainees access to copies of legal documents will not be restricted.

   b. Federal Detainees will not normally be denied access to the law library. If access to the law library needs to be restricted, an Incident Report detailing the reasons will be generated and forwarded to Immigrations and Customs Enforcement.

c. Federal Detainees housed in Administrative Segregation or Disciplinary Segregation units shall have the same law library access as the general population, unless compelling security concerns require limitations.

2. Requests for legal reference material and research services shall be made using the Legal Information Form. The form will be made available at each housing unit.

3. The inmate will complete the form and submit it to the Housing Unit Deputy.

B. PROCESSING

1. Deputies shall accept all Legal Information Request forms.

a. Upon receiving a Legal Information Request from an inmate, the deputy shall note the request in the inmates JMS History.

b. The deputy will forward the request to Custody Administrative Services by the end of his or her shift.

2. The CAS Specialist will retrieve all requests at the beginning of each normal Workday (Monday through Friday).

a. An Inmate Legal Request Log will be maintained.

b. Each request will be assigned a tracking number.

c. Requests will be e-mailed each normal workday to Legal Research associates at LAWSEARCHASSOC@AOL.COM, or faxed to (510) 581-3748.

C. RECEIPT AND DISTRIBUTION OF LEGAL MATERIALS

1. Packages from Legal Research Associates will be shipped via private courier.

a. A log of all packages received from Legal Research Associates will be maintained in Operations.

b. The Operations Clerk receiving the package will make an entry in the log.

c. The clerk will forward the package to the CAS Specialist.

2. The CAS Specialist, using the tracking numbers, will record the receipt of each completed request in the Inmate Legal Request Log.

a. The CAS Specialist will deliver all materials in accordance with CSB Policy and Procedure 2.17.01, Inmate Correspondence and Mail Regulations.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.15
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 03-26-14 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Inmate Marriages	

I. POLICY

A. Chaplain staff assigned to the Detention Division will provide limited assistance in making arrangements for inmate marriages.

II. PROCEDURE

A. Scheduling Marriages

1. Marriages will only be allowed between 8:00 – 11:00 a.m. on Thursday at WCDF or between 1:30 – 4:00 p.m. on Thursday at MDF or MCDF.

2. The marriage ceremony will be conducted in a non-contact visiting room at the discretion of the Facility Commander or designee.

3. Only people eighteen or older may be married in County Detention.

B. Marriage Ceremony

1. Flowers and/or cameras are not allowed at the ceremony.

2. Media coverage will not be permitted.

3. An inmate bride or groom will wear jail clothing.

4. Inappropriate behavior (such as revealing the naked body) during the ceremony, or the visiting period thereafter, will be cause for termination of the ceremony and/or visiting period.

C. Inmate Marriage Responsibility

1. Inmates desiring to be married will submit an Inmate Request Form to the Facility Chaplain requesting the information packet on Detention marriages, “How to Get Married While in County Detention.”

a. The inmate will complete the Court Order Form and Confidential Marriage Application, both included in the information packet, and forward them to the intended spouse.

2. It is the inmate's responsibility to convince a judge to sign the court order for marriage.

   a. The inmate may deal directly with the intended spouse, legal counsel, or a friend to obtain the signature of the judge.

   b. The Facility Chaplain is not responsible for obtaining the judge's signature and the County Clerk will not issue a license for an inmate marriage without a court order.

3. The intended spouse must take the Court Order Form and the Confidential Marriage Application to the County Clerk's Office and purchase the marriage license.

   a. If both parties to the proposed marriage are in custody, then both must obtain court orders authorizing their marriage.

      In this case, a relative, friend, or legal counsel is responsible for obtaining a judge's signature on both court orders and for purchasing the marriage license.

   b. Health certificates are not required

4. An inmate should not make application for marriage if already claiming to be married or if the intended spouse is listed as a family member in the inmate's booking records.

   a. An inmate or intended spouse must arrange/schedule clergy to perform the marriage ceremony.

5. Following the marriage ceremony, the spouse (or designee if both spouses are in custody) will file the license at the County Clerk's Office.

   a. Inmates desiring visits (non-contact only in Contra Costa County Detention Facilities) must ensure their spouse is included in their authorized visitor's list.

   b. In the event an inmate has been reassigned to a state or federal facility, they must take a certified copy of their marriage license with them to prove marital status. Otherwise, family visits at these facilities will not be permitted.

6. Failure of inmates to comply with any and all requirements of this policy and procedure will result in the cancellation, postponement, and/or denial of the ceremony.

7. Same sex inmates whom are married to each other will not be housed together.

D. Facility Chaplain's Responsibility

1. The Facility Chaplain will forward a copy of the information packet on Detention marriages when requested by an inmate.

2. All inmate marriages occurring in County Detention must be cleared through the Facility Commander or his/her designee and only by court order.

    a. Facility Chaplains do not perform Detention marriages; it is the responsibility of the inmate/intended spouse to schedule outside clergy to perform the wedding.

3. The Facility Chaplain will obtain the inmate's signature on the Marriage license and hear the oath.

    a. The County Clerk will forward the marriage license to the Chaplain's Office.

    b. Inmates at WCDF and MCDF need to allow two weeks processing time after purchasing the license.

4. The Facility Chaplain will provide the completed license to the applicable Detention receptionist.

    a. The Facility Chaplain will ensure the receptionist provides the spouse and their clergy with the completed license upon their arrival for the marriage ceremony.

5. In cases where the out of custody spouse is in need of money for the purchase of a license, the inmate may obtain approval from the Facility Commander (upon recommendation of the Facility Chaplain) for a cash release in the amount of the license to the spouse.

6. The Senior Chaplain will report the number of marriages performed at each Detention facility within their quarterly Program Activity Report.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.16
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **PUBLIC**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** Inmate Worker Responsibilities	

I. POLICY

A. The Housing Unit Workers will be responsible for the cleanliness of the common area within each Housing Unit, activity rooms, showers, staff toilets, sally ports, courtyards and any other area when directed by the Housing Unit Deputy.

B. Inmates will be responsible for the cleanliness of their respective rooms.

C. All necessary cleaning material (disinfectant, cleanser, brooms, mops, etc.) will be stored in a locked closet within each Housing Unit.

II. PROCEDURE

A. DAILY HOUSING UNIT WORKER RESPONSIBILITIES

1. Clean all table tops in common area
2. Clean pantry and mop floor
3. Clean microwave ovens
4. Wipe down juice and coffee machines
5. Vacuum carpets in all common areas
6. Sweep activity rooms, courtyards and corridors and sally ports
7. Mop activity rooms and corridors
8. Spot clean all windows where needed
9. Wipe down telephones
10. Dust all TV's, bookcases & furniture

11. Clean and disinfect inmate shower and bathrooms

12. Clean and disinfect staff restroom

13. Empty and wipe out waste containers

14. Clean sink and refill dispensers

15. Clean marks from doors and walls

16. Cleaning prior to and after meal service will be done daily in the following manner when applicable:

    a. The pantry area will be cleaned prior to serving meals

    b. Any juice or coffee spillage will be wiped up

    c. Microwave ovens will be checked to ensure they are clean

    d. All tables where eating will occur will be damp wiped off

    e. After meals have been served, the pantry and tables will be cleaned before recreation and social activities resume

    f. All excess food will be returned to the kitchen

    g. Food waste and scraps will be disposed of and removed from the housing unit

    h. Any spillage on the carpet or tile will be cleaned immediately.

B. WEEKLY HOUSING UNIT SERVICE

1. Common Area of the Housing Unit will be cleaned prior to the Weekly Inspection.

2. Spin clean carpet the night before inspection

3. Vacuum all carpets to include moving furniture and vacuum underneath

4. Spot clean soiled spots on carpet

5. Dust or wipe down all recreation equipment and furniture

6. Clean all table tops and wipe down pedestals

7. Clean all windows accessible from inside Housing Unit

8. Clean outside of windows from courtyard

9. Straighten books in bookshelves and dust

10. Dust window sills, over doors, stairs and railings

11. Mop and buff all tile floors

12. Pantry

    a. Clean pantry counter top, doors and shelves

    b. Straighten and dust inside of cabinets and drawers

13. Other Housing Unit Rooms (Visiting, storage, showers, etc.)

    a. Showers and staff toilets will be cleaned daily, however, once a week they will be dusted above doors and the walls wiped down.

    b. The Housing Unit storage room will be straightened, dusted and mopped.

C. HOUSING UNIT WORKER RESPONSIBILITIES - MCDF

1. Inmate Housing Areas

    a. Monday, Wednesday, Thursday, and Friday dorms are to be vacated from 0800 to 0845 of all inmates except dorm orderlies.

        Exceptions may be made for ill inmates or inclement weather.

    b. Dorm orderlies will be responsible for the cleanliness of the common area within each dorm, inmate rest room, courtyard area adjacent to their respective dorm daily and other areas as directed by the Dorm Deputy.

    c. Each inmate will be responsible for the cleanliness of his respective bed area daily.

    d. The Dorm Deputy will ensure that the dorm orderlies perform weekly/daily housekeeping duties so as to maintain the acceptable level of cleanliness required, including a thorough cleaning of the dorm, mopping and waxing of the floor and other duties as to meet the requirements of the weekly inspection.

    e. All Dorm refuse is to be placed in trash containers that are located at accessible locations throughout living quarters in the facility. All receptacles and containers are to be emptied and cleaned daily.

Contra Costa County Office of the Sheriff CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.17
	RELATED ORDERS: None	
ISSUE DATE: 07-01-04 **REVISION DATE:** 07-01-04 **REVIEW DATE:** 03-26-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** WCDF Landscape Projects	

I. POLICY

A. An inmate assigned to a landscaping project outside of the West County Detention Facility compound will be under the direct supervision of the Landscape Program Supervisor and/or Custody Staff.

B. The Landscape Program Supervisor and Custody Staff will be responsible for ensuring the safety and security of the facility, staff and public, maintaining a standard of control against the introduction of contraband and the prevention of inmate escape.

II. PROCEDURE

A. General operation of this program will be as follows:

1. Wednesday unless prior arrangements are made with MCDF staff

2. Hours: 0900-1500hrs

3. Any variation to the above schedule shall have prior approval by the Facility Commander or Designee.

B. All inmates must be cleared by the Classification Unit prior to being assigned to Landscape Crew.

C. The Landscape Program Supervisor and/or Custody Staff will notify Central Control when a Marsh Creek Detention Facility (MCDF) inmate landscaping crew has arrived at the West County Detention Facility and is working around the perimeter of West County Detention Facility compound.

1. Central Control will notify Shift Sergeant and the Perimeter Unit.

2. Central Control will provide a portable radio to the MCDF Custody Staff upon arrival.

D. The inmate landscape worker will be under direct supervision at all times by the Landscape Program Supervisor and/or Custody Staff.

1. If, for any reason, the Landscape Program Supervisor and/or Custody Staff must leave the area, they shall notify Central Control, and request a Sworn Staff Member respond and stay with the inmate landscape crew until the Program Supervisor and/or Custody Staff returns. Central Control will notify the Custody Sergeant who will assign a deputy to respond. The Program Supervisor and/or Sworn Staff will not leave the crew until the responding Deputy(s) arrive.

2. MCDF landscaping crew inmates will be dressed in the following attire:

    a. Blue Jeans

    b. Gray sweatshirt and/or white undershirt/T-shirt

    c. Work boots

    d. Optional rain gear/approved baseball caps

E. All tools and equipment needed for the landscaping project will be provided by the Landscape Program Supervisor unless prior arrangements are made.

F. MCDF landscaping crews will bring their own meals and beverages, so as to be self-sufficient.

G. In the event the assigned inmate worker(s) are not in the sight of the Landscape Program Supervisor and/or Custody Staff, Central Control and the Shift Supervisor will be notified immediately.

1. If the inmate(s) cannot be located and an escape has been verified, CBS Policy and Procedure 2.08.33, Escapes will be implemented by the West County Detention Facility Shift Supervisor.

Contra Costa County **Office of the Sheriff** CSB Policy and Procedure	**DETENTION**	**NUMBER:** 2.18.18
	RELATED ORDERS: None	
ISSUE DATE: 01-13-04 **REVISION DATE:** 01-07-19 **REVIEW DATE:** 03-07-19	**CLEARANCE:** **CUSTODY**	
CHAPTER: Inmate Services and Programs	**SUBJECT:** MCDF Woodshop	

I. POLICY

A. The MCDF Woodshop shall be funded through Inmate Welfare Funds (IWF) as well as Office of Education Adult School funds.

B. It shall be operated in a safe, efficient manner.

C. Toys and bicycles produced by inmates in the MCDF Woodshop Program shall be available for donation to qualifying organizations for distribution to underprivileged children residing in Contra Costa County.

II. PROCEDURE

A. The Director of Inmate Services shall:

1. Determine the acceptability of all organizations requesting donations from the MCDF Woodshop.

   a. Organizations must meet the following standards to be eligible for participation:

      - Provide IRS non-profit 501(c)(3) exempt status documentation.

      - Provide By-Laws or agency policy stating all donated toys or bicycles will be distributed to underprivileged children.

   b. A limited number of organizations may be approved to accept toy and/or bicycle donations to auction for the purpose of raising funds to benefit children. A maximum of 20% of all toys/bicycles produced annually will be designated for this purpose.

      - The same eligibility standards identified above must be met.

   c. In order to continue to receive MCDF Woodshop donations, organizations approved for participation must provide the following:

- A list of agencies or community groups that benefited from donated toys.

- A minimum of ten color photos of toy recipients.

B. The Woodshop Instructor shall:

1. Provide vocational training to eligible inmates.

2. Maintain all teaching and record keeping requirements and shall report to the Director of Inmate Services for all operational and administrative matters.

   a. During the period when employed by the Office of the Sheriff (up to 8 hours/week paid through IWF Funds)

   b. Information shall be provided directly to the MCDF Facility Commander in the Director of Inmates Services absence.

3. Continually stress and monitor safety standards regarding proper use of shop tools and equipment, safety equipment (i.e., goggles, gloves, etc.), and hazardous materials.

4. Ensure all hazardous materials are maintained and stored in OSHA approved storage cabinets.

5. Maintain all shop tools and equipment in good working order.

6. Maintain the cleanliness of the shop.

7. Order required supplies as per existing blanket purchase orders. Supplies, minor equipment, and equipment maintenance are properly charged to the IWF.

   a. Questions regarding authorized IWF budget amounts may be addressed to the Director of Inmate Services.

   b. Questions regarding authorized vendors can be addressed to MDF accounting staff.

8. Maintain an inventory of manufactured toys and refurbished bicycles.

   a. This information will be shared with the Office of Education Adult Schools Principal, the Director of Inmate Services, and the Volunteer Donation Coordinator and the MCDF Facility Commander.

   b. Wood toys shall be segregated by type and stored in designated areas.

9. Refer all organizations requesting donations to the Director of Inmate Services.

10. Coordinate the participation of all approved organizations.

11. Recommend the annual open house date and time to the Director of Inmate Services.

    a. The Director of Inmate Services shall coordinate this event with the Office of Education Adult Schools Principal, the CSB Assistant Sheriff, the Detention Captain, the MCDF Facility Commander, and the Sheriff.

    b. After this date has been approved, the Director of Inmate Services shall advise the Woodshop Instructor who in turn will inform all participating organizations.

12. During the open house, collect all requested donations and compare this list against available inventory.

    a. Agency needs will be accommodated as best as possible (all agencies shall receive a pro-rata share of available inventory if total demand exceeds total supply).

    b. All participating organizations shall be contacted and informed of their donation share.

13. He/she shall coordinate agency pick-up of toys and bicycles the first week of December.

    a. A list of participating agencies and their allotted toys and bicycles shall be provided the Director of Inmate Services after the pick-up phase has been completed.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 07/10/2018	**NUMBER:** FSD.01 - Policy Statement & Objectives
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 4.2	
CHAPTER: Quality Management System	**SUBJECT:** Policy Statement & Objectives	

I. Policy Statement

A. The Forensic Services Division (FSD) exists to provide the public with the highest quality of service in the recognition, collection, preservation, scientific analysis, and interpretation of physical evidence, and its presentation in court. Towards this purpose we are dedicated to serving the interests of justice to the best of our ability. The Division is committed to continually improve the effectiveness of the management system and ongoing compliance with ISO/IEC 17025 and ANAB requirements.

II. Quality Management System

A. A quality management system has been established to ensure the quality of service and to provide the criminal justice community with the continuing confidence that laboratory results are and remain accurate, impartial and relevant. The management system, with its checks and balances, allows management to have confidence in the staff's work and assures that the work product is consistent and of superior quality.

1. When changes are made to Division policies and procedure, the integrity of the management system is maintained by having the QA Coordinator, facility managers, and the Chief of Forensic Services review documents prior to being published. In addition, a manager reviews and approves all technical unit documents prior to being published. When changes are made to Division processes (typically as a result of a Quality Action), the integrity of the management system is maintained by having the QA Coordinator, facility manager, or the Chief of Forensic Services review and approve the proposed changes.

2. All personnel involved in analysis shall familiarize themselves with the management system documentation and implement the policies and procedures in their work. Laboratory activities shall be carried out in such a way as to meet the requirements of Division and Unit policies and procedures, the laboratory's customers, regulatory authorities, and organizations providing accreditation. The management system covers all work performed by technical units within the laboratory facilities and at locations away from the facilities. The published versions of all Division Unit documents are available to staff at all locations where staff perform work through PowerDMS.

    a. PowerDMS is an on-line document management system.

    b. All staff have access to PowerDMS on their computers or mobile devices.

B. **Management Goals**-The goals of the Forensic Services Division are:

1. To provide highest quality of service in as timely a manner as possible.

2. To satisfy the needs of its customers by performing accurate examinations of physical evidence using methods accepted within the forensic science community.

3. To communicate the results of analyses and the opinions of examiners by means of intelligible written reports and competent testimony.

4. To increase the staff that hold individual certifications.

C. **Management Objectives**-The objectives of the Forensic Services Division are:

1. To ensure initial and on-going competence of individuals authorized to perform forensic analysis through competency testing, proficiency testing and professional development.

2. To ensure the validity of examination results by utilizing validated procedures, appropriate equipment and the technical and administrative review process.

3. To preserve the integrity of evidence within the custody of the Division.

4. To provide appropriate training to law enforcement officers.

5. To receive, analyze and consider customer feedback as part of the management review and take appropriate action when deemed necessary.

D. **Accreditation**

1. The laboratory only claims conformity to ISO 17025 and accreditation from ANAB for range of laboratory activities listed on our most current scope document from ANAB.

2. The range of activities covered by our accrediting body is available on the ANAB website (certificate and scope documents).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/27/2019	**NUMBER:** FSD.02 - Division Organization
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 5.1, 5.5, 5.6, 6.2.4,**	
CHAPTER: Quality Management System	**SUBJECT:** Division Organization	

I. POLICY The Forensic Services Division (FSD) is part of the Contra Costa County Office of the Sheriff. The FSD is divided into sections, then subdivided into units.

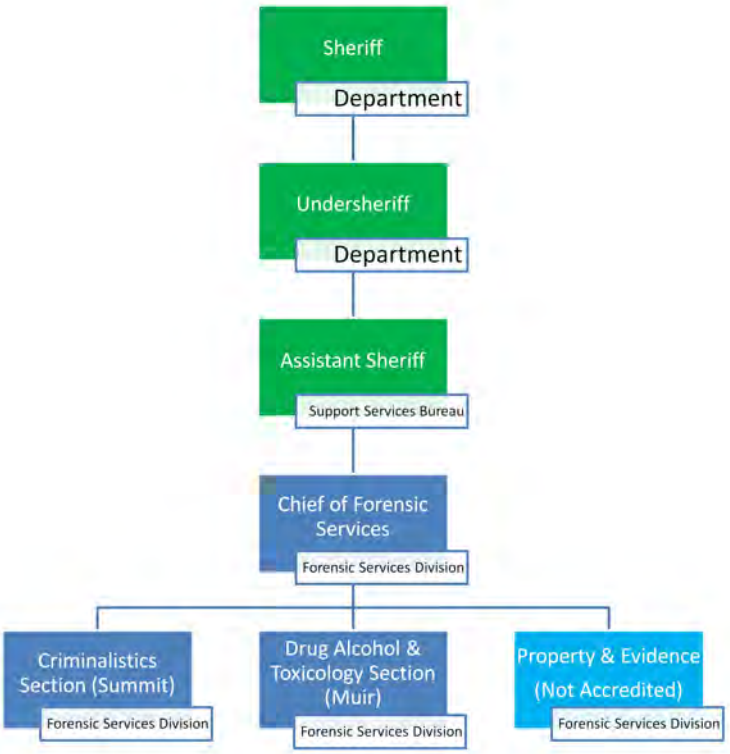
A. The Forensic Services Division is composed of the following sections with their associated units:

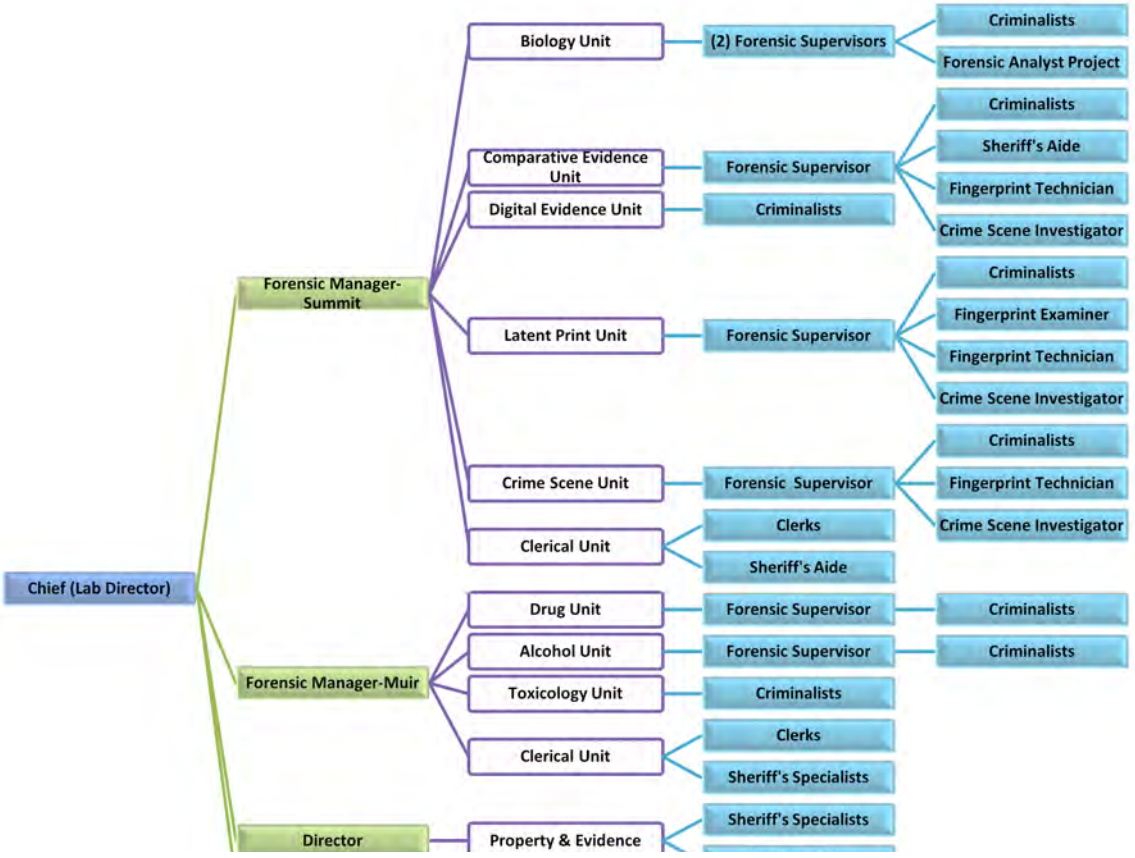
1. Criminalistics Section
    a. Biology Unit
    b. Comparative Evidence Unit
    c. Latent Print Unit
    d. Crime Scene Unit
    e. Digital Evidence
    f. Clerical Unit
2. Drugs, Alcohol and Toxicology Section
    a. Drug Unit
    b. Alcohol Unit
    c. Toxicology Unit
    d. Clerical Unit
3. Property and Evidence Services Section

B. Job Classifications

1. See FSD.03 for more information about job classifications and assignments.
2. Some job classifications within the FSD may be held by sworn or non-sworn staff (eg. Forensic Supervisors and Criminalists).

Sheriff's Department







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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 01/02/2019	**NUMBER:** FSD.03 - Personnel
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 5.5, 5.6, 6.2	
CHAPTER: Quality Management System	**SUBJECT:** Personnel	

I. POLICY The laboratory shall have available the personnel and support services necessary to manage and perform its laboratory activities.

A. **ALL FSD STAFF**-All personnel of the laboratory, either internal or external, that could influence the laboratory activities shall:

1. **Act impartially**-see FSD.13 for expectations and requirements for impartiality.

   a. There are personnel within the Sheriff's Department that have an involvement in testing. These individuals may request expedited and/or additional analysis but cannot request violations of accreditation criteria. Their respective responsibilities are specified in the links below as well as Department Policy 1.03.02.

      i. Sheriff

      ii. Undersheriff

      iii. Assistant Sheriff

2. **Work in accordance with the laboratory's management system**-see FSD.01 for expectations and requirements for personnel working in accordance with the laboratory's management system.

   a. When contracted personnel are used by the laboratory, the contracted personnel will be supervised, competent to perform the contracted work, and will perform work in accordance with the laboratory's management system.

3. **Be competent-**the laboratory documents the competence requirements for each function influencing laboratory activities with job descriptions and task lists (if applicable).

   a. **Job Descriptions**-the County Human Resources Department, under the auspices of the Merit System, has prepared job descriptions for each job title within the County. A description of the minimum qualifications, including education and experience, and typical duties for each job title within the Division has been created. Job descriptions are essential for the hiring and promotion of qualified employees and for assuring that employees understand what tasks they are expected to perform. Division employees are expected to read and be familiar with the job description for their respective positions. Division employees should expect that they could be required to perform any of the duties described within the employee's job description regardless of current assignment. Additional duties can also be required which are not specifically stated within the job description but may be included as "other related work as required". The job descriptions serve two functions:

      i. They state the minimum qualifications, which an applicant must have to be considered for the described position. The minimum qualifications may include certain requirements for education, work experience, health, licenses, skills, and knowledge.

      ii. They describe the nature of the job and list many of the typical tasks, which may be required. The job descriptions will state whether a position includes supervisory responsibilities, the degree of independence that the employee will be expected to exhibit, and how a position differs from similar job categories.

      iii. Current copies can be obtained from the Human Resources Department web site. The following is a list of job titles within the Division:

         1. Chief of Forensic Services (Laboratory Director)
         2. Deputy Sheriff-Forensic Manager
         3. Forensic Manager
         4. Sheriff's Director of Property & Evidence
         5. Deputy Sheriff-Forensic Supervisor

6. Forensic Supervisor
7. Deputy Sheriff-Criminalist I, II & III
8. Criminalist I, II & III
9. Crime Scene Investigator I & II
10. Fingerprint Examiner I & II
11. Fingerprint Technician I & II
12. Forensic Analyst Project
13. Senior Clerk
14. Sheriff's Specialist
15. Sheriff's Aide
16. Student Intern I, II, III, IV & V

b. **Task Lists**-Supervisors or Managers may create task lists to document additional competence requirements.

B. **ALL TECHNICAL STAFF**-The laboratory documents the competence requirements for each function influencing the **results** of laboratory activities, including requirements for education, qualification, training, technical knowledge, skills and experience with job descriptions and training programs.

1. **Job Descriptions**-see above
2. **Training Programs**-see FSD.21 for expectations and requirements for training programs.

C. **ALL FSD STAFF**-The management of the laboratory communicates to personnel their duties, responsibilities and authorities through organizational charts, job descriptions, authorizations/task lists, assignments, and policy (if applicable).

1. **Organizational Charts**-see FSD.02.
2. **Job Descriptions**-see above
3. **Authorizations**-see FSD.21 for expectations and requirements for authorizations.
4. **Assignments**-employees may be given job assignments within the Division. Examples include:

a. Technical Lead-In addition to meeting the requirements of the job description, staff designated as Technical Lead will have a baccalaureate degree and at least three years of experience as an analyst performing comprehensive examinations of complex casework and experience as an expert witness. All individuals with technical responsibility are responsible for:

i. implementation and improvement of the management system

ii. identification of non-conformities from the management system or technical procedures and assessment of the severity of that deviation

iii. initiation of actions to prevent or minimize such deviations (improvement opportunities and risk prevention actions)

iv. addressing corrections and corrective actions

v. reporting to laboratory management on the performance of the management system and any need for improvement

b. QA Coordinator- The QA Coordinator (along with Top Management) is responsible for the activities of the quality system including ensuring compliance with applicable accreditation requirements, implementation and maintenance of the management system, and ensuring the effectiveness of laboratory activities.

c. Safety Coordinator

d. LIMS Administrator

e. CODIS Administrator

5. **Division and Unit Policy**-see table below for personnel, their duties, and links to Division and Unit policy and procedure for responsibilities and authorities.

D. **ALL TECHNICAL STAFF**-The management of the laboratory specifies the responsibility, authorities and interrelationships of all personnel who manage, perform or verify work affecting the results of laboratory activities through organizational charts, job descriptions, authorizations/task lists, assignments, and policy (if applicable).

1. See details above.

Management	Key Personnel	Duties & Responsibilities	Deputies
Chief of Forensic Services Division-Laboratory Director	Chief of Forensic Services Division-Laboratory Director	Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.04.	The most senior Forensic Manager is in charge in the absence of the Chief. Significant issues should be brought to the attention of a the Assistant Sheriff.
Forensic Manager and Safety Coordinator, Drugs, Alcohol and Toxicology	Forensic Manager and Safety Coordinator, Drugs, Alcohol and Toxicology	**The Muir Forensic Manager has technical responsibility for the Toxicology Unit.** Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.05 and FSD.08.	The Supervisor for Drugs, Alcohol and Toxicology is in charge in the absence of the Forensic Manager and Chief.
Forensic Manager and Safety Coordinator, Criminalistics	Forensic Manager and Safety Coordinator, Criminalistics	Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.05 and FSD.08.	The most senior or designated Supervisor is in charge in the absence of the Forensic Manager and Chief.
	Unit Supervisor Drugs, Alcohol and Toxicology	**The Unit Supervisor has technical responsibility for the Drug and Alcohol Units.** Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.06.	The most senior Criminalist is in charge of technical issues in the absence of the Unit Supervisor. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Unit Supervisor*, Forensic Biology *2 positions	**The Unit Supervisors have technical responsibility for the Biology Unit.** *See DNA Technical Lead below Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.06.	The most senior Criminalist is in charge of technical issues in the absence of the Unit Supervisors. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Unit Supervisor, Comparative Evidence	**The Unit Supervisor has technical responsibility for the Comparative Evidence Unit.** Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.06 and CE.40.	The most senior Criminalist is in charge of technical issues in the absence of the Unit Supervisor. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Unit Supervisor,	**The Unit Supervisor has**	

	Latent Prints	**administrative responsibility for the Latent Print Unit.** Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.06.	Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Unit Supervisor, Crime Scenes *2 positions	**The Unit Supervisors have technical responsibility for the Crime Scene Unit.** Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.06.	The most senior Criminalist is in charge of technical issues in the absence of the Unit Supervisors. An analyst may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Technical Lead, DNA	**The Technical Lead has technical responsibility for the DNA program.** Refer to individual job descriptions in the Unit Manual for more information about responsibilities. See BIO.5.QAQC.05.	The Unit Supervisor is in charge of technical issues in the absence of the DNA Technical Lead. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	CODIS Administrator	**The CODIS Administrator has technical responsibility of overseeing the CODIS program.** Refer to individual job descriptions in the Unit Manual for more information about responsibilities. See BIO.3.CODIS.05.	The Assistant CODIS Administrator is in charge of technical issues in the absence of the CODIS Administrator. Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Technical Lead, Latent Unit	**The Technical Lead has technical responsibility for the Latent Unit.** Refer to individual job descriptions in the Unit Manual for more information about responsibilities. See LP.72.	The most senior Criminalist is in charge of technical issues in the absence of the Technical Lead. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Technical Lead, Digital Evidence Unit	**The Technical Lead has technical responsibility for the Digital Evidence Unit.** Refer to individual job descriptions in the Unit Manual for more information about responsibilities. See DE.02.	The most senior Criminalist is in charge of technical issues in the absence of the Unit Supervisor. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.
	Technical Lead, Shoe/Tire (part of Comparative Evidence Unit)	**The Technical Lead has technical responsibility for shoe/tire casework** Refer to individual job descriptions in the Unit Manual for more information about responsibilities. See CE.40.	The most senior Criminalist is in charge of technical issues in the absence of the Unit Supervisor. A Criminalist may be designated in writing (eg. email to staff). Any administrative issues will be brought to the attention of a Supervisor, Manager or the Chief.

	LIMS Administrator	Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.09.	Any LIMS issues will be brought to the attention of an Assistant LIMS Administrator.
	QA Coordinator	Refer to individual job descriptions in the Forensic Services Division Manual for more information about responsibilities. See FSD.07.	Any QA issues will be brought to the attention of a Supervisor, Manager or the Chief.

E. **Records-**the laboratory shall retain records for:

1. Determining the competence requirements-see FSD.21 for expectations and requirements for competence requirements.
2. Selection of personnel-Managers will maintain records for the selection of personnel. Records should include:
    a. Announcement
    b. Application
    c. Selection
3. Training of personnel-see FSD.21 for expectations and requirements for training requirements.
4. Supervision of personnel-A number of policies and procedures address supervision of personnel. Policies are located in the Department Manual. Examples include:
    a. Command Control and Responsibility
    b. Performance Evaluations
    c. Personal Appearance
    d. Vacation Accrual and Use, Sick Leave
    e. Office of the Sheriff Propriety and Decorum, Courtesy and Bearing, and Unbecoming Conduct
    f. Corrective Counseling System
    g. Personnel Management and Employee Relations
    h. Personnel Files (documentation of evaluations, counseling, etc. are maintained in employee personnel files, access is subject to SO policy)
5. Authorization of personnel-see FSD.21 for expectations and requirements for authorization requirements.
6. Monitoring competence of personnel-Monitoring of competence is accomplished in a variety of ways. Examples include:
    a. Proficiency testing-see FSD.23.
    b. Technical review of casework-see FSD.17.
    c. Court testimony review-see FSD.26.
    d. Verification of results-see Technical Unit Manuals.
    e. Review of case files during internal audits-see FSD.20.
    f. Direct observation of testing during internal audits-see FSD.20.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 6/13/13	**NUMBER:** FSD.04 - Chief of Forensic Services
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 5.6, 6.2**	
CHAPTER: Quality Management System	**SUBJECT:** Chief of Forensic Services	

I. POLICY The Chief of Forensic Services plans and manages all operations of the Forensic Services Division under general direction from the Office of the Sheriff.

A. The Chief reports directly to the Assistant Sheriff of the Support Services Bureau and is responsible for:

1. Carrying out the operations of the Forensic Services Division within policy guidelines set by the Sheriff.

B. The management responsibilities of the Chief include:

1. Planning and providing direction to both sworn and non-sworn staff in the collection, preservation, examination, analysis, and storage of physical evidence.

2. Developing and implementing operating policies of the Division and ensuring the laboratory's quality assurance polices are in accordance with the criteria of its accreditation body.

3. Monitoring implementation of policies and initiating corrective action as required.

4. Evaluating performance of subordinates.

5. Taking disciplinary actions as necessary.

6. Coordinating Forensic Division operations with other Divisions within the Office of the Sheriff, other County departments, and other law enforcement agencies.

7. Evaluating and making recommendations on personnel and equipment requirements.

8. Submitting an annual budget request for the operation of the Division.

9. Evaluating operating costs and assisting with the establishment of service fees.

10. Providing direction to staff to assure the quality of work conducted.

11. Coordinating the maintenance of assigned facilities and equipment.

12. Preparing detailed reports, correspondence, and statistical data related to activities of the Division.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 07/05/2016	**NUMBER:** FSD.05 - Section Managers
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 5.6, 6.2**	
CHAPTER: Quality Management System	**SUBJECT:** Section Managers	

I. POLICY A section manager oversees the operations of several technical units within the Forensic Services Division. A section manager may have one or more technical unit supervisors as direct subordinates.

A. A section manger is responsible for effectively managing a complex technical organization including budget, facility, personnel, safety, and other resources for their respective section. Managers must use common sense and adopt quick, effective and responsible courses of action, giving due regard to the circumstances of each situation while working harmoniously with other Division and Departmental personnel, and representatives of other law enforcement agencies and the public. Managers must convey and share necessary information both up and down the chain of command in a timely manner and notify the Chief of any significant correspondence or issues. Managers are expected to be familiar with and follow Division, Department, and County policies and procedures as well as adhere to the ANAB Guiding Principles (also known as a code of ethics).

B. Typical tasks include but are not limited to:

1. Establishing, implementing and monitoring quality assurance policies and procedures for laboratory methodologies consistent with the criteria of the laboratory's accreditation body.
2. Evaluating and acquiring equipment.
3. Utilizing laboratory information management systems (LIMS) and related software.
4. Maintaining a safe working environment for personnel.
5. Assisting and advising the Chief of Forensic Services in personnel, budgetary and policy matters within the laboratory.
6. Preparing budgets, operational and statistical reports, and long range plans for the Chief of Forensic Services and user agencies using computer word processing, spreadsheets and graphics applications.
7. Applying for and managing grants.
8. Supervising and consulting with Forensic Supervisors regarding daily operations, staff productivity and performance.
9. Evaluating the performance of direct reports.
10. Working closely with other Division managers to ensure consistent application of Division's policies and procedures.

11. Communicating clearly, concisely and effectively up and down the chain of command.

12. Ensuring the maintenance and security of section facilities.

13. Maintaining the coordination of evidence examination and security.

14. Delivering timely and cost effective services to clients.

C. The section manager is expected to have a working knowledge of and keep current in:

1. Basic principles involved in scientific methodology, current methods and techniques used in the forensic analysis of physical evidence.

2. Recent developments, literature and sources of information relative to forensic science.

3. California laws of evidence, criminal procedure and crimes.

4. Modern methods of classifying, indexing and filing and preserving laboratory records and evidence.

5. Quality assurance guidelines and the implementation of quality assurance procedures and monitoring.

6. Law enforcement principles and understanding of police terminology.

D. The section manager is also designated as the safety coordinator for their respective section.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 01/09/2019	**NUMBER:** FSD.06 - Technical Unit Supervisors
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 6.2**	
CHAPTER: Quality Management System	**SUBJECT:** Technical Unit Supervisors	

I. POLICY Unit supervisors directly supervise technical and support personnel for the assigned forensic discipline within the Forensic Services Division.

A. A unit supervisor is responsible for effectively supervising their respective unit(s). Supervisors must use common sense and adopt quick, effective and responsible courses of action, giving due regard to the circumstances of each situation while working harmoniously with other Division and Departmental personnel, and representatives of other law enforcement agencies and the public. Supervisors must convey and share necessary information both up and down the chain of command in a timely manner and notify the Chief of any significant correspondence or issues. Supervisors are expected to be familiar with and follow Division and Department policies and procedures as well as adhere to the ANAB Guiding Principles (also known as a code of ethics).

B. Roles, Responsibilities, and Authorities:

1. Supervision

   a. Assigning duties to staff (e.g. casework, crime scene response, method development, training, etc.)

   b. Conducting performance evaluations of staff

   c. Coordinating staff coverage in a Unit

   d. Engaging in corrective counseling of staff

2. Oversight

   a. Providing technical supervision for the analysis of physical evidence or crime scene investigation activities

   b. Monitoring Unit quality assurance activities for conformance with Division policy and accreditation criteria

   c. Reviewing and updating technical unit procedures as needed

   d. Conducting, or coordinating, the technical review of casework and court testimony

   e. Identifying non-conforming work and determining the severity of the non-conformance and appropriate action to take

   f. Approving deviations from policy

g. Coordinating staff professional development (e.g. suggesting and reviewing training opportunities)

h. Recommending suspension or resumption of casework for an individual or for the Unit

i. Maintaining a safe working environment for staff

3. Problem-Solving

a. Determining general types of analytical tests to be performed on evidence submitted for examination

b. Assisting in technical problem solving

c. Assisting laboratory customers in the evaluation and interpretation of analytical findings

d. Communicating with laboratory customers to clarify their requests and provide relevant information about laboratory capabilities

e. Assisting staff if they feel any threat to their impartiality, resolving the issue, and taking steps to prevent recurrence

4. Improvements

a. Identifying opportunities for unit improvement and taking appropriate actions (e.g. proposing the acquisition of needed equipment and supplies)

b. Engaging in, or directing, research and validation to develop and improve analytical procedures

c. Evaluating and documenting the approval of all validations and methods, and approving new or modified procedures

d. Evaluating potentials for risk and taking appropriate actions

5. Training & Competency and Proficiency Testing

a. Supervising, or coordinating, the training of less experienced laboratory personnel and law enforcement officers in the methods of analysis used in the laboratory and the methods of collection and preserving physical evidence

b. Reviewing the training records for new hires and approve their qualifications prior to casework

c. Reviewing and approving training programs

d. Administering competency tests

e. Determining and documenting staff authorizations

f. Creating proficiency testing plans

g. Assigning and administering proficiency tests

h. Reviewing the results from proficiency testing and competency tests and determining satisfactory performance

C. The supervisor is expected to have a working knowledge of and keep current in:

1. The basic principles involved in scientific methodology
2. Current methods and techniques used in the laboratory analysis of physical evidence including microscopic techniques, comparative microscopy, spectro-chemical analysis, gas chromatography mass spectrometry and other scientific tests used in forensic casework
3. Accepted principles of supervising the work of others, including accepted principles of providing on-the-job training
4. Laboratory safety procedures
5. Recent developments, literature, and sources of information relative to forensic science
6. California laws of evidence, criminal procedure and crimes
7. Methods of classifying, indexing, filing and preserving laboratory records and evidence
8. Quality assurance guidelines and the implementation of quality assurance procedures and monitoring
9. Law enforcement principles and understanding of police terminology

D. Supervisors may also be involved with technical casework depending on the Unit's needs.

E. Supervisors may be assigned other tasks and duties (e.g. Quality Assurance Coordinator).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 06/05/2014	**NUMBER:** FSD.07 - Quality Assurance Coordinator
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 5.6, 6.2**	
CHAPTER: Quality Management System	**SUBJECT:** Quality Assurance Coordinator	

I. POLICY The Quality Assurance Coordinator is responsible coordinating the activities of the quality system including ensuring compliance with applicable accreditation requirements. The Quality Assurance Coordinator reports directly to the Chief in this job function and assists Section Managers and Technical Unit Supervisors with their roles in implementing and maintaining the quality assurance program.

A. The QA Coordinator's responsibilities, under the direction of the Chief, include:

1. Acting as a liaison to the laboratory's accrediting body, including but not limited to:
   a. Notifying the accrediting body of significant events of non-confirming work within 30 days of its occurrence.
   b. Preparing and submitting the Performance Declaration to the accrediting body with required elements.
   c. Coordinating the laboratory response to the Proficiency Review Committee (PRC) within the time frame specified by the accrediting body.
2. Coordinating the order of external proficiency tests, typically annually.
3. Maintaining and updating the quality management system policies and procedures in the Forensic Services Division Manual.
4. Implementing the document control polices and procedures for the laboratory.
5. Evaluating instrument calibration and maintenance records as part of internal audits and/or corrective actions.
6. Periodically assessing the adequacy of report review activities as part of internal audits and/or corrective actions.
7. Selecting and training internal auditors.
8. Proposing corrections and improvements in the quality system.
9. Monitoring Division practices to verify continuing compliance with policies and procedures and applicable accreditation requirements, typically as part of internal audits and/or corrective actions.
10. Scheduling and coordinating quality system audits.
11. Ensuring documented compliance with Division policy for required elements of a validation, typically by review of FSDF.12.

12. Ensuring documented compliance with Division policy for required elements of a corrective action.

    a. This may include aiding in the investigation of technical problems and proposing remedial actions.

    b. The verification of implementation and evaluation of effectiveness of the corrective or remedial actions are typically assessed as part of an internal audit.

13. Recommending and coordinating training to improve the quality of Division staff.

B. The individual filling the QA Coordinator function may be selected from technical, supervisory, or management staff, depending on the staffing levels of the Division, the existing budget situation, and the needs of the Division.

    1. The Chief may appoint a new QA Coordinator at any time depending on the needs of the Division; although the importance for stability at this position will be taken into consideration.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 6/13/13	**NUMBER:** FSD.08 - Safety Coordinator
	RELATED ORDERS: SAF.02 - Roles And Responsibilities	
APPROVED BY: Pamela Hofsass	**ANAB: 5.6, 6.2**	
CHAPTER: Quality Management System	**SUBJECT:** Safety Coordinator	

I. POLICY Each Section Manager is the Safety Coordinator for their section.

A. The Safety Coordinator will be responsible for the regular monitoring their respective section's health and safety program. For more information regarding the responsibilities see SAF.02 (Roles and Responsibilities).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 6/13/13	**NUMBER:** FSD.09 - LIMS Administrator
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 5.6, 6.2**	
CHAPTER: Quality Management System	**SUBJECT:** LIMS Administrator	

I. POLICY A Forensic Services Division employee will be designated as the LIMS Administrator to oversee the Division's LIMS system and as an interface with the Department's Technical Services

A. The LIMS Administrator will be responsible for the regular monitoring of the Division's LIMS program.

B. The LIMS Administrator may train Division staff as Assistant LIMS Administrators to assist in LIMS activities at the section or unit level. If needed, due to absence of the LIMS Administrator or under direction of the Chief, these Assistants may oversee LIMS at the Division Level.

C. The employee(s) assigned as the LIMS Administrator and Assistant LIMS Administrator will have access to confidential information within the database as a result of the necessary administrative clearance. The employee will abide by all policies, either Division, Department, or by statute, related to this confidential information.

1. The LIMS Administrator and Assistant LIMS Administrator will have administrator security clearance within LIMS.

2. The LIMS Administrator and Assistant LIMS Administrator will provide guidance to the Chief and Section Managers regarding the effective use of the software.

3. The LIMS Administrator will be responsible for current and future upgrades to the system.

4. The LIMS Administrator and Assistant LIMS Administrator will respond to requests from technical unit supervisors, section managers, the Chief, and the QA Coordinator regarding LIMS issues.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 02/22/2017	**NUMBER:** FSD.10 - Laboratory Information Management System
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 7.11**	
CHAPTER: Quality Management System	**SUBJECT:** Laboratory Information Management System	

I. POLICY **The Forensic Services Division maintains a LIMS system to track: cases, evidence, training, QA Actions, courtroom testimony monitoring and proficiency and competency tests.**

A. For **GENERAL** LIMS information and instructions, see:

1. QAT.09-LIMS Training
2. QAT.09.01 - LIMS DOs and DON'Ts

B. For information and instructions related to **tracking cases**, including requests for service, reports and discoveries, see:

1. FSD.42 - Test Records
2. FSD.42.01 - Diagrams, Photographs & Digital Images
3. FSD.17 - Technical Review
4. FSD.18 - Administrative Review
5. FSD.43 - Test Reports
6. QA.04 - Amending Reports
7. QA.07 - Confidential Reports and Restricted Reports
8. FSD.45 - Discovery Requests for Records
9. FSD.35 - Evidence Handling

C. For information and instructions related to **tracking evidence**, see:

1. FSD.35 - Evidence Handling
2. FSD.38 - Evidence Itemization
3. QA.09 - Adding, Itemizing and Transferring Evidence in LIMS
4. QA.09.01 - LIMS Procedure for Correcting the Chain of Custody
5. FSD.59-Evidence Recon Policy
6. QA.17 - Evidence Recon

D. For information and instruction related to **tracking training,** including statement of qualifications, see:

1. FSD.21 - Training Programs, Competency Testing, and Authorizations
2. QA.12 - LIMS Training Module Procedure
3. QA.19 - Safety Training Records Entered in LIMS

E. For information and instruction related to **tracking QA Actions**, including corrective actions, validations, improvements and preventive actions, see:

1. FSD.15 - QA Actions
2. QA.18 - Quality Assurance Action Request Procedure
3. QA.14 - LIMS Imaging Upload Procedure

F. For information and instructions related to **tracking courtroom testimony monitoring**, see:

1. FSD.26 - Court Testimony Review
2. QA.13 - LIMS Court critique procedure

G. For information and instructions related to **tracking proficiency and competency tests**, see:

1. FSD.21 - Training Programs, Competency Testing, and Authorizations
2. FSD.23 - Proficiency Testing
3. QA.10 - LIMS Proficiency and Competency test procedures
4. QA.11 - Archiving Proficiency/Competency Tests before 2008

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 12/28/2017	**NUMBER:** FSD.12 - Document Control
	RELATED ORDERS: _QA.01 - Creating and Revising Controlled Documents & _FSD.34 - Control of Software and Data	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: ISO/IEC 17025:2005(E) 4.3**	
CHAPTER: Quality Management System	**SUBJECT:** Document Control	

I. POLICY: The Quality Assurance Coordinator will maintain all controlled Management System documents. The Management System is the organizational structure with responsibilities, procedures, processes, and resources for implementing the quality system; it includes all activities that directly or indirectly contribute to quality.

A. PowerDMS is the central repository for all active controlled documents.

1. The QA Coordinator is responsible for placing documents into PowerDMS or giving rights to staff to place documents in PowerDMS.

B. Control and Approval

1. Documents required for use are considered controlled documents. All documents required for use will be kept up to date and made readily available to staff. Controlled documents are tagged as "controlled" in PowerDMS.

   a. Documents that are not required for use are not controlled. Non-controlled documents may be placed in PowerDMS to make them readily available to staff; they are tagged as "non-controlled".

2. All controlled documents must be approved prior to their use. See Table below for approving authorities.

3. The approval date is defined as the date the final approving authority added their signature to the document in PowerDMS; this is the date the document is published. The effective date is denoted as the "Published Date" in PowerDMS.

4. The approval or control of external documents (eg. manufacturer or vendor instructions) can be performed by one of the following methods:

   a. By publishing the document in PowerDMS.

   b. By citing the external document within a controlled document; this may include referencing the title, date of publication, edition/volume and page numbers.

C. Documents

1. All controlled documents will be labeled with the a unique document identification, revision date, name of approving authority or authorities, name of document, the page number, and the total number of pages or a mark to signify the end of the document.

2. Each document will be numbered based on a numbering system. See table below.

   a. Sub-numbering can be done to insert closely related policies or procedures into the existing manuals. Example: FSD.42.01.

   b. Units may choose to have a group of documents further delineated by assigning additional numbers and/or letters as depicted in the Biology Technical Unit Manual.

D. Software

1. Software that is controlled will be identified according to FSD.34 .

E. Forms

1. Controlled forms will have a footer containing a unique document identification, revision date, name of approving authority or authorities, and the page number.

PowerDMS Document Type		Document Identification	Approving Authorities
Forensic Services Division Manual		FSD.XX	Chief of Forensics
Quality Management System Procedures		QA.XX	Chief of Forensics
Safety Manual		SAF.XX	Section Manager
Biology Technical Unit Manual			
Chapters:	Biology Procedures	BIO.1.BIO.XX	Criminalistics Section Manager, Technical Unit Supervisor & DNA Technical Lead
	DNA Analytical Procedures	BIO.2.DNA.XX	Criminalistics Section Manager, Technical Unit Supervisor & DNA Technical Lead
	CODIS Procedures	BIO.3.CODIS	Criminalistics Section Manager, Technical Unit Supervisor & DNA Technical Lead
	Training	BIO.4.TRAIN.XX	Criminalistics Section Manager, Technical Unit Supervisor & DNA Technical Lead
	Quality Assurance and Quality Control Procedures	BIO.5.QAQC.XX	Criminalistics Section Manager, Technical Unit Supervisor & DNA Technical Lead
Latent Print Technical Unit Manual		LP.XX	Criminalistics Section Manager & Technical Lead
Latent Print Training Manual		LPT.XX	Criminalistics Section Manager & Technical Lead
Comparative Evidence Technical Unit Manual		CE.XX	Criminalistics Section Manager & Technical Unit Supervisor
Comparative Evidence Training Manual		CET.XX	Criminalistics Section Manager & Technical Unit Supervisor
Criminalistics Clerical Manual		CLER.CRIM.XX	Criminalistics Section Manager

Crime Scene Technical Unit Manual	CS.XX	Criminalistics Section Manager & Technical Unit Supervisor
Digital Evidence Technical Unit Manual	DE.XX	Criminalistics Section Manager & Technical Lead
Digital Evidence Training Manual	DET.XX	Criminalistics Section Manager & Technical Lead
Drugs, Alcohol and Toxicology Clerical Manual	CLER.DAT.XX	DAT Section Manager
Controlled Substances Technical Unit Manual	DRG.XX	DAT Section Manager & Technical Unit Supervisor
Controlled Substances Monographs	MONO.DRGFAM.XX	DAT Section Manager & Technical Unit Supervisor
Toxicology Technical Unit Manual	TOX.XX	DAT Section Manager & Technical Unit Supervisor
Blood Alcohol Technical Unit Manual	BA.XX	DAT Section Manager & Technical Unit Supervisor
Breath Alcohol Technical Unit Manual	BRA.XX	DAT Section Manager & Technical Unit Supervisor
Property & Evidence Services	PROP.XX	Chief of Forensics & Director of Property and Evidence Services

F. Review

1. Documents may be reviewed and revised at any time to ensure continuing suitability and compliance with applicable requirements.
2. All controlled policy and procedure documents **will** be reviewed at least once every two years.
3. The periodic review will be documented. The Review Workflow in PowerDMS is one mechanism of documenting the review (see QA.01).
4. The reviewer will determine if any changes are needed and request a workflow to be opened if necessary.

G. Revisions

1. Revisions to published documents or requests for new documents will be initiated by submitting a request to the QA Coordinator or a PowerDMS Administrator. See QA.01.
2. Changes to documents are made directly in PowerDMS and the changes are tracked within each document.
3. Non-substantive changes (eg. format, spelling or grammar) will be submitted to the QA Coordinator or PowerDMS Administrator and will be made directly to the published version. They are not considered a new revision. Staff are not required to re-sign a document when a non-substantive change is made.

H. Archived Documents

1. Active documents may be archived by submitting a request to the QA Coordinator or a PowerDMS Administrator.
2. Documents are automatically archived once a new revision is approved and published.
3. Archived documents are denoted within PowerDMS with a Blue "A" for Archive. See FSD.34 for the archiving of controlled software.

I. Release of Documents

1. See FSD.45 for information about releasing documents as part of a discovery request, subpoena or court order.
2. The Chief may authorize the release of documents when requested by outside entities (eg. city, county or state laboratory).
    a. The Document Receipt Form (FSDF.18) should be used to track the release of FSD documents.
    b. The QA Coordinator will maintain the completed Document Receipt Forms when they are returned by the requesting entity.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 01/03/2019	**NUMBER:** FSD.13 - Impartiality and Ethical Conduct
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 4.1**	
CHAPTER: Quality Management System	**SUBJECT:** Impartiality and Ethical Conduct	

I. POLICY: The laboratory's quality management system has been established to ensure a high quality of service and to provide the criminal justice community with the continuing confidence that laboratory results are accurate, impartial, and relevant.

A. Impartiality means that conflicts of interest do not exist, or are resolved so as not to adversely influence laboratory activities.

B. Laboratory activities shall be undertaken impartially.

1. Staff will conduct laboratory activities independently, impartially, and objectively. All examinations will be approached with due diligence and an open mind.

2. Staff will base their conclusions on the evidence and material relevant to the evidence, not on extraneous information, political pressure, or other outside influences.

3. Staff will use sound scientific principles and not pressure another examiner or technician to arrive at conclusions not supported by data.

C. Laboratory management is committed to impartiality. This commitment is communicated to staff through:

1. Incorporating impartiality into the FSD Policy Statement. See FSD.01

2. Providing training on ethical codes that incorporate impartiality and emphasize the importance of objectivity in forensic science. See below.

3. Providing direction to staff to safeguard impartiality.

4. Incorporating training on bias, objectivity, and impartiality into training programs as appropriate. See LP.47 and CET.01.

5. Requiring staff to follow policies and procedures to ensure that information in reports is accurate, clear, unambiguous, and objective, and that results, interpretations and opinion are supported by examination documentation. See FSD.43.

D. Laboratory activities are managed to safeguard impartiality, this includes:

1. Requiring that all test methods that involve the comparison of an unknown to a known shall require the evaluation of the unknowns item(s) prior to comparison to one or more known item(s). See FSD.29.

2. Requiring a technical review of results to ensure results, opinions, and interpretations are accurate, properly qualified, and supported by the technical

record. See FSD.17.

3. Requiring staff to disclose any personal relationships with named individuals in a case to their supervisor. In such cases, the supervisor, manager, or Chief may decide to reassign the case.

4. Requiring staff to disclose any personal relationships with vendors of services or supplies that affect laboratory activities. The manager responsible for approving the purchase or services and supplies will be made aware of any personal relationships staff have with vendors.

5. Addressing additional requirements for impartiality in technical unit manuals by limiting information provided to staff that may cause bias. For example:

   a. The Latent Technical Unit Manual addresses staff not reading police reports related to the case they are assigned. See LP.14.

   b. The Comparative Evidence Technical Unit Manual addresses not informing the verifier of the original examiner's conclusion prior to the verifier's examination. See CE.11.

6. Requiring staff to report any undue influence or pressure from customers (law enforcement or attorney) to interpret, report, or testify to results in a way that allows the report to be misinterpreted or misused by the customer or reader.

7. Requiring staff to report any requests from customers that would result in a violation of policies and procedures.

8. Requiring staff to report any unusual requests from customers (eg. requesting blank copies of reports) that may compromise impartiality.

E. Training on Ethical Codes that Incorporate Impartiality & Being Unbiased

1. New employees will review The Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Personnel during orientation.

   a. The training will be documented on the orientation checklist (See FSDF.01).

2. Each calendar year, management will ensure that all FSD staff review the Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Personnel.

   a. The review will be documented.

   b. The section manager will be responsible for maintaining the documentation of annual review.

3. All Division staff are expected to abide by the Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Personnel and professional standards outlined in SO policy.

   a. Suspected ethical violations must be brought to the attention of the Chief.

   b. The Chief has the discretion to investigate suspected ethical violations through a QA Action and/or an Internal Affairs investigation.

F. Risks to Impartiality

1. The Forensic Services Division is part of the Office of the Sheriff, a law enforcement entity. The Office of the Sheriff executive team recognizes that

laboratory management and staff are under competing demands from multiple agencies to perform work in a timely manner.

2. Staff from the Office of the Sheriff may request expedited or additional services, but cannot request violations of accreditation criteria. At no time will the quality of work be sacrificed in order for more cases to be completed.

3. Any perceived risk of being part of a law enforcement entity is mitigated on an on-going basis by having case prioritization protocols and requiring staff to report feelings of excessive pressure or influence to a supervisor or manager.

G. Case Prioritization

1. Cases will generally be prioritized on the basis of date of receipt. When necessary to meet critical judicial deadlines, investigative demands, or evidence preservation needs, cases will be given first priority whenever resources permit and when warranted by the seriousness of the case.

2. As the FSD is part of the Office of the Sheriff, it is recognized and acknowledged that there may be internal or external entities that request work on their cases to take priority. When warranted, the laboratory will adjust case priorities to address these demands.

3. Staff may ask their supervisor for assistance if they are pressured by clients to change work priority status of particular evidence. The supervisor, may, in turn, ask for assistance from his/her manager, another manager within the command structure, or the Chief until resolution is obtained

4. Assignments of cases will be prioritized based on:

   a. Severity of the crime

   b. Court date

   c. Need for investigative leads

   d. Available manpower

   e. Client requests

5. Staff will prioritize work on evidence assigned to him/her based on one or more of the following:

   a. Compliance with prioritization guidelines listed in their Technical Unit Manual, if applicable

   b. Discussion with his/her supervisor or instructions received from his/her supervisor

   c. Conditions exist such that further any delay would lead to loss or deleterious change of the evidence

   d. Discussion with clients

6. Specific case priority criteria may be addressed in the Technical Unit manuals.

7. Staff may rely upon their supervisors and managers to assist with addressing client demands for additional work.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 01/08/2019	**NUMBER:** FSD.14 - Customer Service and Complaints
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 4.2, 4.4, 4.7 & 4.8	
CHAPTER: Quality Management System	**SUBJECT:** Customer Service and Complaints	

I. Top Management of the Forensic Services Division (FSD) is committed to good professional practice, to the quality of our testing, and serving our customers.

A. **Commitment to Our Customers-**As part of our commitment to customer service, FSD staff will:

1. Be fair, unbiased, objective, impartial and courteous, performing our work with professionalism;
2. Strive to identify and pursue ways to improve our programs and services;
3. Listen to comments, suggestions, and concerns in an effort to improve our services and to meet customer needs;
4. Cooperate with customers and their representatives to clarify their request, to provide them the information they need, and to deliver a quality work product;
5. Respond to inquiries or complaints in accordance with established procedures;
6. Maintain a high level of competence by committing to professional development and keeping abreast of new technologies and methods;
7. Provide timely, accurate, and reliable forensic services in compliance with relevant statutory, regulatory and other legal requirements;
8. Meet accreditation criteria and our quality standards.

B. **Confidential Information**

1. The laboratory is responsible for the management of all information obtained or created during the performance of laboratory activities.
   a. The FSD protects the electronic storage of results by storing test data in a Laboratory Information Management System (LIMS) that is password protected on a limited access network.
   b. The LIMS administrator oversees user access and permissions.
2. The laboratory shall inform the customer in advance, of the information it intends to place in the public domain. Except for information that the customer makes publicly available, or when agreed between the laboratory and the customer (e.g. for the purpose of responding to complaints), all other information is considered proprietary information and shall be regarded as confidential. When the laboratory is required by law or authorized by contractual arrangements to release confidential information, the customer or individual concerned shall, unless prohibited by law, be notified of the information provided.
   a. Disseminating reports and discovery information through ARIES is not considered placing information in a public domain.
   b. The FSD protects the electronic transmission of results by releasing reports via an Automated Regional Information Exchange System (ARIES) that is password protected on a limited access network.
   c. The ARIES administrator oversees user access and permissions.
3. Laboratory personnel, including contractors, personnel of external bodies, or individuals acting on the laboratory's behalf, shall keep confidential all information obtained or created during the performance of laboratory activities, except as required by law.
   a. The FSD ensures the protection of its customers' confidential information by adhering to *SO Policy 1.06.71 Dissemination of Law Enforcement Information* and *1.06.74 Control of Office of the Sheriff Information*.

C. **Service Agreements or Contracts**

1. The Forensic Services Division maintains relationships with routine in-county customers via interagency agreements.
2. These agreements are administered through Sheriff's Administration and undergo County Counsel approval prior to implementation. Agreements will be reviewed initially and prior to renewal and records of the reviews, including any significant changes, shall be maintained by Sheriff's Administration.
   a. Significant amendments to an interagency agreement (eg. cost of service) will undergo the same process as above.
   b. Minor amendments to an interagency agreement (eg. frequency of billing) will be communicated to the customer prior to implementation.
3. The interagency agreements set forth the Forensic Services Division's obligation to the customer as well as the customer's obligations to the Division. "Agency" is defined as the customer or contract agency in the following language.

D. **Forensic Services Division (FSD) Obligations-FSD has the following obligations:**

1. The FSD will provide forensic services when requested by the Agency.
   a. The FSD reserves the right to determine if the service will or can be provided, and the type of service needed based on a review of the evidence and case circumstances.
   b. The FSD reserves the right to modify, add, or stop the scope of forensic services that can be provided dependent upon resources and justice system need

c. If the FSD will not or can not provide the service, Agency will be advised of the reason and be provided an alternate resource if the request is determined to be forensically legitimate. See FSD.43.

d. If the FSD subcontracts that service, Agency will be advised in the report. See FSD.31.

e. The FSD may decline to retest evidence for analysts on scheduled leave (eg. vacation or training) when the District Attorney's Office has been made aware of the absence (eg. subpoena returned). The District Attorney's Office or Agency may choose to have an item reanalyzed by another lab and any cost associated will be incu

2. The FSD will prioritize the requests received first based on severity of the crime and urgent public safety concerns, followed by trial deadlines.

a. The FSD will endeavor to provide as timely a service possible based on resources available.

b. Routine requests that do not have exigent public safety concerns or trial deadlines will be prioritized based on the date of request.

c. If the FSD cannot meet Agency's timeline needs for a particular case, Agency may retrieve the evidence at any time to send to an outside forensic resource. Agency will not be charged for any administrative overhead under these circumstances. If examinations had occurred by the FSD prior to Agency withdrawing the evidence, Agency will be charged for the cost of the examinations conducted to date.

3. The FSD will provide witness and expert testimony for services rendered at no additional cost to Agency.

a. The FSD will provide forensic consultation services to Agency at no charge to assist Agency in their investigation or to advise Agency as to what evidence should be submitted and what forensic services should be requested.

b. Laboratory staff may not provide testimony for work not performed or reported by FSD.

c. Laboratory staff will not provide toxicology interpretation testimony for drugs without a toxicology chemical test.

4. The FSD will maintain an on-call crime scene expert who will be available twenty-four (24) hours seven (7) days a week, to provide technical advice to Agency for homicide or other major felony scene processing involving complex evidence issues.

a. Agency must have trained staff respond to scenes to handle the routine aspects of crime scene documentation or processing on cases involving call out of County staff.

b. The FSD will, per Officer Involved Protocol, assume lead crime scene responsibility for Officer Involved Protocol cases.

5. The FSD through staff of the Sheriff's Fiscal Unit, will monthly invoice Agency for services rendered.

a. The invoice will itemize the charges to include each request completed during the invoiced time period and the services provided for each request.

E. **Agency Obligations-Agency has the following obligations when requesting service from the Forensic Services Division:**

1. Agency will abide by the FSD's requirements for evidence packaging and request for service procedures.

a. The FSD may change packaging or request procedures and will notify Agency of such changes.

2. Agency will notify the FSD of exigencies pertaining to the prioritization needs of the request such as public safety concerns, urgent investigative needs, and suspect flight risks.

3. Agency will ensure a request for service is rescinded if the work is no longer needed.

a. The FSD will not be responsible for work done on a request in cases where Agency failed to notify the FSD that the work was no longer needed.

4. Agency will promptly notify the FSD of any requests that are considered confidential such as internal affairs inquiries.

5. The cost for the service provided by the FSD will be based on the Board of Supervisor's approved Forensic Services Fee Schedule.

F. **Submitting a Request for Service**

1. Requests for analysis are only accepted from law enforcement entities or the District Attorney's Office in connection with official investigations. Additional requests may also be accepted on a case-by-case basis upon approval by the Chief of Forensics.

2. The regular request and evidence submission hours are: Monday through Friday (8:00 AM to 12:00 PM and 1:00 PM to 5:00 PM). The laboratory typically does not accept requests or evidence on weekends or holidays except under the following circumstances:

a. Crime scene response

b. If requested and approved by the Chief of Forensics or a Forensic Manager.

3. There are two mechanisms to request service from the FSD:

a. Evidence can be submitted and accompanied with the **Criminalistics Request Form**. The request form informs the customer: the Forensic Services Division reserve the right to select the appropriate service based on a review of the evidence and case circumstances including transferring evidence to another competent laboratory when necessary. The primary agency is financially responsible for the service(s) provided.

b. Evidence can be submitted in a **pre-printed package or "kit"** that also serves as the request form. The submission of evidence using a "kit" serves as a request for service.

G. **Customer Communication**

1. The FSD communicates with customers in a variety of ways. One mechanism of communication is providing information via an Automated Regional Information Exchange System (ARIES), information includes:

a. Completed test reports. See FSD.43.

b. Discovery information. See FSD.45.

c. The DAT Handbook which informs the customer of: services offered, methodology and equipment used, scope of analysis, and information pertaining to reporting and interpreting results of analysis

d. The Criminalistics Request Form with examples and instructions

e. Upcoming training

f. Instructions for best practices (evidence placards)

g. Drug Presumptive Testing (DPT) manual and forms

h. Customer Feedback Form

H. **Customer Feedback**

1. Management will actively solicit feedback (both positive and negative) from the customers using a variety of methods including customer satisfaction forms, online surveys, email correspondence, or telephonic communication. See FSDF.13 and QA.22.

2. All feedback from the customers will be used to continually improve the management system and service to our customer.

3. **Receipt**: Managers and QA will receive and review the feedback from the customers.

4. **Review and Evaluation**: Managers and QA will review and categorize the type of feedback received. Feedback may be categorized into three broad areas:

   a. Satisfactory or positive feedback (no observations or suggestions for improvement)

   b. Suggestions for improvement (feedback with observations, suggestions, or minor grievances)

   c. Complaints (significant unsatisfactory feedback or dissatisfaction)

5. **Action**

   a. For satisfactory feedback, no action is required.

   b. For feedback with suggestions for improvement, Managers will evaluate the feedback, determine if action is required, and ensure appropriate action is taken.

      i. Any action taken will be documented and maintained with the feedback and reviewed during the Management Review. See FSD.19.

   c. For complaints, the complaint process will be initiated.

6. **Storage and Retention**: Managers and QA will store the feedback in a central repository or as directed by the Chief.

   a. The feedback will minimally be retained through the current accreditation cycle.

I. **Complaints**

1. The FSD will respond to all complaints received from customers, laboratory staff, or other parties.

   a. A complaint is an expression of dissatisfaction made to the laboratory, related to laboratory activities that it is responsible for (testing, reporting, or testimony), or the complaints handling process itself, where a response or resolution is explicitly or implicitly expected.

   b. A description of the handling process for complaints shall be available to any interested party on request.

2. **Receipt**: a complaint shall be submitted in writing to the QA Coordinator, a Manager, or the Chief.

   a. Upon receipt of a complaint, the laboratory shall confirm whether the complaint relates to laboratory activities that it is responsible for. The laboratory shall be responsible for all decisions at all levels of the handling process for quality complaints related to laboratory activities.

      i. The QA Coordinator and Chief will be immediately notified for any quality-related issues.

      ii. The Chief will be immediately notified for any complaint of misconduct.

   b. Whenever possible, the laboratory shall acknowledge receipt of the complaint and provide the complainant with progress reports.

3. **Review and Evaluation:** QA, a Manager, or the Chief is responsible for validating a complaint.

   a. It is recognized that many "complaints" and issues of a minor nature can be addressed quickly and informally through supervisory action and verbal communication. These informal interactions are not considered complaints and do not require written documentation but should be monitored by laboratory management to ensure that the issue has been resolved.

   b. Interviews with the complaining party to gather additional facts may be necessary to validate the complaint before the investigation begins.

4. **Investigation**: the QA Coordinator, a Manager, or the Chief is responsible for investigating a complaint.

   a. The investigation may involve interviews with the parties involved, review of case files, review of LIMS reports, review of evidence, review of court transcripts, re-analysis of evidence, etc.

   b. The investigation will be as extensive as necessary to gather the information and data necessary to achieve a resolution.

   c. In general, the following resolutions will be used:

      i. “founded” means that the expression of dissatisfaction are true and action will be taken by the lab to resolve the issue.

      ii. “unfounded” means that expression of dissatisfaction are not true or found not to be legitimate.

      iii. “not resolved” means that the expression of dissatisfaction cannot be proven true or untrue at the conclusion of the investigation.

   d. The outcomes will be reviewed and approved by individual(s) not involved in the original laboratory activities in question.

e. If the complaint is handled by Internal Affairs, staff from SO Professional Standards will conduct the investigation.

5. **Action**: the QA Coordinator, a Manager, or the Chief will determine the appropriate action to be taken at the conclusion of the investigation.

   a. Actions to resolve a complaint may include changing laboratory processes or policies, providing additional training to staff, providing additional training to customers, changing report language, changing methods and mechanisms of communication.

   b. Whenever possible, the laboratory shall give formal notice of the end of the complaint handling to the complainant and communicate the outcome.

6. **Tracking and Recording**: In general, complaints will be recorded and tracked as a Corrective Action.

   a. Records of personnel issues and any actions taken will be maintained per the Sheriff's Department policy.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 03/28/2019	**NUMBER:** FSD.15 - QA Actions
	RELATED ORDERS: QA.18 - Quality Assurance Action Request Procedure	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.10, 8.5, 8.6, 8.7	
CHAPTER: Quality Assurance	**SUBJECT:** QA Actions	

I. POLICY QA Actions are the central component for maintenance and improvement of the Quality Management System and are used to track quality related issues.

A. **General Information**

1. The FSD is committed to quality of our work and to the continuous improvement of laboratory operations. The FSD considers the risks and opportunities associated with the laboratory activities in order to:
   a. Give assurance that the management system achieves its intended results
   b. Enhance opportunities to achieve the purpose and objectives of the laboratory
   c. Prevent, or reduce, undesired impacts and potential failures in the laboratory activities
   d. Achieve improvement
2. QA Actions are a mechanism to document quality incidents, improvement opportunities, and risk prevention.
3. QA Actions do not address personnel issues and are not considered personnel actions.
4. The default due date for an Improvement Opportunity, Risk Prevention, or Corrective Actions is 90 days from the date of the assignment. An extension may be granted by the QA Coordinator or Chief, if necessary.

B. **Types of QA Actions**

Type of QA Action	Description	Documentation in LIMS
Improvement Opportunity	An action taken based on a quality related observation or suggestion for improvement. *Opportunities for improvement can be identified through the review of the operational procedures, the use of the policies, overall objectives, audit results, corrective actions, management review, suggestions from personnel, risk assessment, analysis of data, and proficiency testing results*	FSDF.22
Risk Prevention	An action taken to address	FSDF.22

	a potential risk or threat. *Options to address risks can include identifying and avoiding threats, taking risk in order to pursue an opportunity, eliminating the risk source, changing the likelihood or consequences, sharing the risk, or retaining risk by informed decision.*	
Level 1-Corrective Action	An action taken to correct significant non-conforming work that has already occurred.	FSDF.06
Level 2-Correction	An action taken to correct a somewhat significant non-conforming event that has already occurred.	FSDF.23
Validation and Performance Verification	An action taken to document the validation or performance verification of a new or modified method (procedure, equipment and/or software) to ensure it is fit for purpose. See FSD.27 for more information.	FSDF.20 (plan) FSDF.12 (summary)

C. **Expectations**

1. All staff have an obligation to disclose quality incidents, non-conforming work, and quality concerns/suggestions to the appropriate personnel. The routine and recommended process for reporting a quality incident or raising a quality concern/suggestion is through discussions with an employee's immediate supervisor.

2. Staff are expected to have attempted to resolve quality concerns with their immediate supervisor. Unresolved quality concerns must be brought to the attention of the QA Coordinator. The complaint and investigation will be documented. See FSD.14 for more information.

3. The Chief and QA Coordinator must be notified of significant non-conforming work or quality concerns as soon as is practicable. Significant non-conforming events must be disclosed to ANAB.

D. **Nonconforming Work**

1. Non-conforming work refers to any aspect of the forensic unit's work that do not conform to the forensic unit's policies, procedures or the agreed requirements of the customer. Non-conforming work includes: unplanned and/or unintended occurrences, adverse events, errors, omissions, mistakes, as well as departures from policies or procedures.

2. All FSD staff are responsible for being able to identify non-conforming work.

3. FSD staff, along with their supervisors are responsible for evaluating the significance of the nonconforming work and associated risks, including an impact analysis on previous results. The QA Coordinator, Forensic Manager, and Chief may also be consulted to make a determination of significance. The following guidance is provided:

   a. Level 1 (**High-Risk Nonconformance**): This type of nonconformity raises immediate concern regarding the reliability of test results. There is potential

that incorrect results were reported. Corrective action will be required, but it is imperative to first address suspension of work and recall of test reports (if applicable). Examples include:

i. A technical problem or error results in erroneous results or conclusions being reported in casework

ii. A technical problem or error results in an unsuccessful proficiency test

iii. Erroneous court testimony is identified

iv. Evidence is significantly compromised

v. A non-conformity is identified in an audit

b. Level 2 (**Medium-Risk Nonconformance**): This type of nonconformity does not cause immediate concern regarding the reliability of test results or the overall quality of the laboratory's work product. The nonconformity may be of some significance but there is confidence that the non-conformity did not affect the validity and accuracy of the test result. This type of non-conformity is typically caught during the technical review process and corrected prior to the results being reported.

c. Level 3 (**Low-Risk Nonconformance**-simple correction): This type of nonconformity is readily apparent and can be corrected quickly. The nonconformance is considered the least severe, to have only a minimal effect or significance, is the least likely to reoccur, is not systemic and does not significantly affect the fundamental reliability of the laboratory's work. These types of nonconformities may be remediated via simple correction or documentation in the case record. Possible examples include, but are not limited to: typographical or grammatical errors in records or logs caught during the review process.

4. The laboratory shall retain records of the nature of the nonconformities, cause(s), and any subsequent actions taken, and the results of any corrective action. See below for more information on documentation.

5. Where the evaluation indicates that the nonconforming work could recur, or that there is doubt about the conformity of the laboratory's operations with its own management system, the laboratory shall implement corrective action.

E. **Documenting Level 1 Corrective Actions**

1. Level 1 Corrective Actions will be documented in LIMS on FSDF.06. The documentation will include:

a. Event Description-a clear and concise description of the event.

b. Immediate Correction-the action taken to control and correct the nonconformity. The immediate correction will include a brief description of any actions taken to immediately address or correct the problem (short-term solution).

i. It may be necessary to temporarily suspend casework to allow for an evaluation of the significance and/or to prevent non-conforming work from being produced.

ii. The Chief of Forensics, Manager, Supervisor, DNA Technical Lead or QA Coordinator have the ability to temporarily suspend and resume

casework.

c. **Risk Assessment**-the determination to halt and resume work will be made based on a risk assessment. The individuals responsible for halting and resuming casework will evaluate the circumstances (event description coupled with immediate correction) and determine if:

   i. Casework can continue to be completed while the corrective action process is progressing with confidence that casework is accurate and reliable

   ii. An individual(s) need to be temporarily suspended from performing casework while the corrective action process is progressing

   iii. The unit needs to be halted from performing casework while the corrective action process is progressing

d. Investigation-the systematic research, review, and analysis of the event (a timeline is suggested). The investigation includes:

   i. An evaluation of the significance of the non-conformity on casework

   ii. An evaluation of the frequency of the non-conforming work (determining if similar nonconformities exist)

   iii. A determination if the customer needs to be notified and work needs to be recalled/retested

e. Root Cause Analysis-the reason(s) the non-conformity occurred.

f. Corrective Action-the action(s) taken to prevent recurrence.

   i. The laboratory shall select the action(s) that will most likely eliminate the non-conformity or prevent recurrence.

   ii. Corrective actions shall be appropriate to the effects of the nonconformities encountered.

   iii. The scope of the action will be assessed based on the risk and/or magnitude associated with the non-conformity.

   iv. Based on the severity of the non-conformity, the laboratory may need to update risks and opportunities and make changes to the management system.

   v. The DNA Technical Lead must approve the action(s) taken prior to the actions being implemented when the corrective action involves DNA casework.

g. Monitor the Effectiveness of Action(s)-the manner, time frame and responsibilities for monitoring the action(s), which may include but are not limited to:

   i. Monitoring casework for a specified time period

   ii. Using Crystal Reports in LIMS to monitor effectiveness

   iii. Limited scope audits on the non-conformity

   iv. Review during the annual internal audit

v. Review during the Management Review

vi. Proficiency testing

h. Close of the Corrective Action-the evaluation of monitoring techniques and the effectiveness of the action(s) taken to address the root cause of the non-conformity.

F. **Documenting Level 2 Corrections**

1. Level 2 corrections will be documented in LIMS on FSDF.23. The documentation will include:

a. A brief summary of the event, dates of analysis, lab/batch #, equipment identifier, etc.

b. Any trouble-shooting or investigation

c. The actions taken to correct the non-conformity

d. Any other pertinent information or follow-up required

G. **Documenting Improvement Opportunities and Risk Prevention**

1. Improvement Opportunities and Risk Prevention actions will be documented in LIMS on FSDF.22. The documentation will include:

a. The evaluation of the opportunity or risk assessment

b. The actions to address risks and opportunities

c. How to integrate and implement the actions into its management system

d. How to evaluate the effectiveness of these actions.

2. Actions taken to address risks and opportunities shall be proportional to the potential impact on the validity of laboratory results.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 01/09/2018	**NUMBER:** FSD.17 - Technical Review
	RELATED ORDERS: FSD.43 - Test Reports, FSD.15 - Non-Conforming Work and QA Actions	
APPROVED BY: Pamela Hofsass	**ANAB:** 5.9	
CHAPTER: Quality Assurance	**SUBJECT:** Technical Review	

I. POLICY Technical review is an in-depth examination of analysis records and test reports to ensure that the reported conclusions are reasonable and supported by sufficient scientific data.

A. **Responsibilities**

1. The analyst completing the report is responsible for submitting a case file in compliance with unit and Division policy.
    a. An analyst may not technically review their own work.
2. The analyst and technical reviewer are both responsible for ensuring results, opinions, and interpretations are accurate, properly qualified and supported by the technical record.
    a. The technical review process does not shift responsibility for ensuring the accuracy of results and conclusions from the analyst to the reviewer. Both individuals share a responsibility to ensure the quality of the reported results.
3. The Supervisor or Manager is responsible for ensuring that staff performing technical review have been competency tested in the task(s) that the review is encompassing.
4. The Supervisor or Manager is responsible for authorizing individuals to perform technical review.
    a. See FSD.21 for more information on competency testing and authorizations.
5. The technical reviewer is responsible for completing and documenting a review of the case file following the method and process below.

B. **Method of Review**

1. As appropriate and applicable, the following elements will be reviewed:
    a. Technical language in the laboratory report is clear, accurate, unambiguous, complete, and in compliance with FSD.43
    b. All results, opinions, and interpretations are accurate
    c. All results, opinions, and interpretations are reasonable, supported by the documented data, and within the constraints of validated scientific knowledge

d. All results, opinions, interpretations, and associations are properly qualified in the test report

e. Tests and procedures used are appropriate

f. Analysis was performed in accordance to written policies and procedures

g. Blanks and controls are properly used and documented

h. Instrumental data meets the standards of quality outlined in the technical unit manual

i. Manual calculations are accurate

j. Required verifications are documented

k. Additional guidelines or requirements, as specified in the technical unit manual, are met

2. Depending on the technical unit procedures, technical review may be documented by:

a. Marking the request as technically reviewed as a milestone in LIMS

b. Documenting the request as technically reviewed with initials and date in the case file

c. Specifying (in unit policy) that the LIMS administrative review milestone encompasses the technical review

C. **General Process**

1. All reports are technically reviewed prior to release unless a percentage of cases is specified in the unit manual.

2. The analyst gives the case file to a competent and authorized technical reviewer or places it in a designated location to await review.

3. The technical reviewer reviews the case file.

4. If the technical reviewer notes any technical issues or discrepancies then the file is returned to the analyst for action.

a. A technical nonconformity must be brought to the attention of the Supervisor and documented per FSD.15.

b. If the reviewer rejects a technical element (observation, data, or a test result), they must document the reason, the identity of the individual taking the actions and date in the technical record.

c. The analyst makes any necessary changes.

d. All changes made to technical records as a result of verification or technical review must be tracked.

5. The case file is submitted for administrative review.

D. **Technical Disagreements**

1. If the analyst and reviewer do not agree as to the need or extent of the recommended revisions, then the reviewer or analyst will bring the matter to the attention of the

next person in the chain of command. This third person will attempt to facilitate a resolution.

2. The resolution may involve changing report wording, performing additional analysis, or having the evidence analyzed by another laboratory.

    a. The third person may consult a technically competent individual, if necessary. Both internal and external experts may be used.

    b. In the DNA Unit, the DNA Technical Lead will be involved in the resolution of a disagreement.

    c. The QA Coordinator and Chief will be notified of significant technical disagreements.

3. An inconclusive result may be issued if the technical disagreement cannot be resolved.

    a. The reason for reporting an inconclusive result must be technically justified and included in the report.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/12/2016	**NUMBER:** FSD.18 - Administrative Review
	RELATED ORDERS: FSD.42 - Test Records	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Administrative Review	

I. POLICY Administrative review is a procedure that checks the case file documentation and report for consistency with laboratory policy and for editorial correctness. Administrative review is intended to prevent data entry or grammatical errors from being reported; it also ensures compliance with ALL applicable Unit and Division policies for reporting and note-taking. All case files will undergo an administrative review before written technical results are released to an outside agency.

A. **Responsibilities**

1. The analyst(s) completing the report are responsible for submitting a report and notes package in compliance with unit and Division policy.
2. The Supervisor or Manager is responsible for authorizing individuals to perform administrative review.
3. The review will be conducted by an authorized administrative reviewer and by an individual other than the author(s) of the test report.
4. The administrative reviewer is responsible for ensuring:
   a. adherence to laboratory policy and procedure
   b. all key information is included
   c. the language in the report is clear, accurate, and complete
   d. accurate transfer of data and results from the notes to the report
   e. the technical review has been conducted and documented (eg. the initials and date of the technical reviewer)
   f. spelling & grammatical accuracy
   g. the correctness of the laboratory case number, agency, agency case number, requestor, request date and victim and/or suspect names
   h. the signature of the analyst and the date
   i. proper note correction technique (no obliterations). See FSD.42
   j. proper case number identifier, page numbering and analyst initials on all pages
   k. the check that the evidence items listed on the request form correspond to reported items

l. the correctness of the Chain of Custody

B. **General Process**

1. The administrative reviewer may also be the technical reviewer.
2. If corrections are needed, the reviewer's notes and any necessary corrections are returned to the analyst.
3. The corrected file is returned to the reviewer with the reviewer's original notes for verification of the corrections made. Any changes to the notes must be tracked see FSD.42 Case Record.
4. The report is signed, manually or electronically, by the administrative reviewer.
5. The report is released and the case is designated as Administratively Reviewed as a milestone in LIMS.
6. The case file is routed to the clerical staff for filing.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/02/2018	**NUMBER:** FSD.19 - Management Review
	RELATED ORDERS: FSD.01 - Policy Statement & Objectives, FSD.15 - Non-Conforming Work and QA Actions	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Management Review	

I. POLICY The Chief of Forensics, Managers, and QA Coordinator shall conduct a review of the laboratory's management system and testing activities once per calendar year.

A. Purpose

1. The Management Review is a planned and documented formal assessment of the quality management system (QMS) and Division's overall operations. The review is conducted by the Chief, Section Managers, and the QA Coordinator. The purpose of the review is to evaluate the suitability, effectiveness and efficiency of FSD operations as well as determine future direction. The review of the past year's activities should shape and guide future objectives, actions items, and recommendations for improvement. After the Management Review, "Action Items" for the following year are created.

B. Schedule

1. A management system review will be conducted annually and occur in the second half of the calendar year.

2. The Chief will be responsible for coordinating the management review.

C. Documentation

1. The Managers are responsible for providing the Chief with section-specific management review reports. These reports should be reviewed during the scheduled management review.

2. The QA Coordinator is responsible for providing the Chief and Managers with the Division management review report. This report will be reviewed during the scheduled management review.

3. The management review reports will be maintained by the QA Coordinator.

D. Division Management Review Inputs

1. The **inputs** to the Division management review report shall include the following:

a. Changes in internal and external issues relevant to the laboratory

b. Fulfillment of objectives. See management objectives FSD.01.

c. The suitability of policies and procedures

d. Status of actions from previous management review

e. The outcome of recent internal audits

f. Corrective actions

g. Assessments by external bodies

h. Changes in the volume and type of the work

i. Customer and personnel feedback

j. Complaints

k. Effectiveness of any implemented improvements

l. Adequacy of resources

m. Results of risk identification

n. Outcomes of the assurance of the validity of results (may include proficiency test results, testimony reviews, etc.)

o. Other relevant factors, such as monitoring activities and staff training

E. Division Management Review Outputs

1. The **outputs** from the Division management review will be recorded as "Actions Items".

2. The system review findings or "Action Items" that are identified at the conclusion of the management review will be recorded and incorporated into the Division management review report.

3. The Chief, Managers and QA Coordinator are responsible for identifying and creating "Action Items" based on the management review and ensuing those items are addressed. All decisions and actions related to the following will be recorded:

   a. Actions needed to address the effectiveness of the management system and its processes

   b. Actions related to recommendations for improvement of the laboratory activities

   c. Actions involving provision of required resources

   d. Actions related to any identified need for change

4. "Action Items" will be addressed on an appropriate time scale.

5. An "Action Item" may be documented as a QA Action, see FSD.15.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 03/19/2018	**NUMBER:** FSD.20 - Quality Audit
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 8.8**	
CHAPTER: Quality Assurance	**SUBJECT:** Quality Audit	

I. POLICY Audits are conducted to assess the competence of individuals performing tests, compliance with the requirements of the management system, and the effectiveness of the operation.

A. **General Information**

1. An internal audit, inclusive of accredited technical units and the quality management system, will be conducted annually.
   a. Additional audits may be conducted if necessary.
2. The QA Coordinator may include specific areas of focus in addition to the scopes listed below. These areas of focus may be identified as a result of new procedural requirements, new accreditation requirements, on-going evaluation of effectiveness of corrective actions, or concerns brought to the attention of the QA coordinator.
3. See QA.16 for additional information on the audit process.

B. **Scope of the Technical Unit Audit**

Areas Assessed	Applicable FSD Policy	Documents Reviewed & Activities Undertaken
Compliance with Division Manual and Technical Unit Manual policies and procedures	various	Review of case files within each discipline Perform an audit trail within each discipline Direct observation of a sampling of testing within each discipline
Completeness of validation/verification records (specifically for new procedures)	FSD.27	Validation/Verification records
Completeness of reagents, controls, and standards records	FSD.29	Reagent and Quality Control logs
Completeness of instrument/equipment calibration and maintenance records	FSD.33	Equipment and maintenance logs
Compliance with evidence handling procedures	FSD.35	Spot-check of evidence storage areas (integrity of seals, firearms stickers, chain of custody, etc.)

		LIMS evidence inventory reports for people and locations
Completeness of proficiency testing records	FSD.23	LIMS reports for proficiency testing Proficiency testing plans
Completeness of competency testing records (specifically for new employees)	FSD.21	New employee training, authorization and competency records
Completeness of staff training records	FSD.21	LIMS Statement of Qualifications
Effectiveness of training programs	FSD.21	Feedback provided during new employee training
Completeness of court testimony monitoring records	FSD.26	LIMS reports for court testimony monitoring
Suitability of measurement assurance and uncertainty of measurement programs	FSD.28	Uncertainty budgets and measurement assurance programs

C. **Scope of the Quality Audit**

Areas Assessed	Applicable FSD Policy	Documents Reviewed & Activities Undertaken
Completeness of security key records	FSD.32	Security Key Logs
Suitability of management review	FSD.19	Management Review
Effectiveness of identifying and addressing non-conforming work (specifically past audit findings)	FSD.15	Unit and Division Corrective Actions
Effectiveness of identifying addressing areas of improvement	FSD.15	Improvement Actions
Effectiveness of identifying and mitigating areas of risk	FSD.15	Preventative Actions
Completeness of ethics training	FSD.21	Ethics training
Adherence to evidence recon policy	FSD.59	Evidence recon reports
Customer satisfaction	FSD.14	Feedback and Compliants

D. **Audit Findings**

1. Findings of non-conformance may be made due to violations of external accreditation standards, internal policies and procedures, or other regulations.

    a. When audit findings of non-conformance cast doubt on the effectiveness of the operations, or the correctness/validity of the laboratory's test results, the laboratory shall take timely corrective action.

    b. The customer will be notified in writing if the investigation demonstrates the laboratory results were affected.

c. See FSD.15.

2. The audit findings will be recorded in an Audit Report.

E. **Preventative Actions and Improvements**

1. Observations will be provided to the appropriate unit in the form of improvement suggestions or preventative actions.

2. These are not considered findings of non-conformance and do not require a corrective action. However, failure to appropriately address preventative actions may result in future corrective actions.

F. **Retention of Audit Documents**

1. The Audit Report and all corrective actions will be kept according to FSD.44.

G. **Training of Auditors**

1. Audit team members shall be trained; the training may include:

a. In-house training provided by the QA Coordinator.

b. External training: Assessor Training, Internal Audit Training, or a similar course.

2. This training will be documented in LIMS. See FSD.21.

3. Auditors performing the DNA QAS Audit must meet the qualifications in the DNA Quality Assurance Manual BIO.5.QAQC.15.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 07/22/2019	**NUMBER:** FSD.21 - Training Programs, Competency Testing, and Authorizations
	RELATED ORDERS: QA.12 - LIMS Training Module Procedure	
APPROVED BY: Pamela Hofsass	ANAB: 6.2	
CHAPTER: Quality Assurance	**SUBJECT:** Training Programs, Competency Testing, and Authorizations	

I. POLICY The Forensic Services Division ensures the competence of technical personnel through a variety of measures including: hiring skilled and/or educated personnel (FSD.03), providing ethics training (FSD.13), utilizing appropriate training programs, administering suitable competency tests (FSD.21), offering access to literature resources (FSD.52), using an employee development program to provide ongoing training (FSD.21), and participating in proficiency testing (FSD.23).

A. **Training Program Purpose**

1. Each technical unit shall utilize training programs that develop individuals with sound scientific backgrounds into competent forensic examiners in designated categories of testing.

2. The training program will provide the necessary resources to ensure the analyst:

   a. Develops specific analytical skills to correctly perform laboratory activities for which they are responsible.

   b. Acquires the necessary knowledge to perform laboratory activities, accurately document the testing, and appropriately convey the results.

   c. Demonstrates their abilities with comprehensive understanding of the theory and applications of the method(s) used.

   d. Complies with associated Division and Unit policies and procedures.

   e. Achieves competence to perform laboratory activities for which they are responsible.

   f. Evaluates the significance of deviations.

B. **Training Program Elements**

1. Training programs shall include the following essential elements:

   a. The educational requirements

      i. Personnel who authorize results, opinions, and/or interpretations shall meet the minimum educational requirements set forth by ANAB.

   b. The goals or intent of the training program, including as appropriate:

      i. Technical knowledge, skills, and experience required for staff

      ii. A list of topics to be addressed

c. A description of the training process, including as appropriate:
   i. Literature review
   ii. Lectures/demonstrations
   iii. Practical exercises
   iv. Analysis of case-like materials
   v. Assessments
   vi. Mock court

d. A timeline for completion of the training program, including as appropriate:
   i. Approximate length of overall training
   ii. Approximate time spent on each module of training

e. A mechanism to document training, including as appropriate:
   i. Description of how required elements of the training program will be documented (eg. training binder, forms, checklists)
   ii. Documentation of dates of training and the individual(s) responsible for training (eg. form or checklist)
   iii. Staff shall maintain records of training in the LIMS training module. See QA.12.

f. The criteria for acceptable performance, including as appropriate:
   i. Expectations of the trainee
   ii. Description of how competency will be demonstrated
   iii. The criteria for successful completion

g. General knowledge of forensic science

h. The application of ethics in forensic science

i. Criminal law, civil law and testimony, including as appropriate:
   i. Legal procedure
   ii. Presentation of evidence in court

j. A mechanism to evaluate the effectiveness of initial training and actions to take if training is not effective, including as appropriate:
   i. Review of competency testing results
   ii. Oral or written feedback provided to a Supervisor regarding a training program
   iii. Annual performance evaluations to assess if training was effective to meet specified goals
   iv. See remedial training below

k. A mechanism to evaluate the effectiveness of on-going training and actions to take if training is not effective, including as appropriate:

i. Review of proficiency testing results

ii. Technical review of casework

iii. Oral or written feedback provided to a Supervisor regarding a training class

iv. Review of court critique feedback

v. See remedial training below

2. Abbreviated Training Programs

a. An abbreviated training program may be appropriate for newly-hired individuals with training and experience that was received prior to employment with the Forensic Services Division. The following must be documented:

i. Assessment of the examiner's prior knowledge and skills

ii. Demonstration of competence as specified in the technical unit manual for required elements of a competency test

C. **Competency Testing Purpose**

1. Competency tests are challenging individual performance examinations designed to test an analyst's specialized knowledge, skills and abilities. A competency test shall encompass the scope and difficulty of expected casework assignments. The test is a demonstration of the analyst's ability to apply knowledge of the laboratory's policies and procedures while utilizing the technical skills and abilities gained during training. As competency tests are individual assessments of performance and capability, the results are not technically reviewed prior to being finalized.

2. The competency test shall include practical examination(s) that cover the spectrum of anticipated activities related to the test or calibration.

3. All personnel who influence the results of testing or calibration activities shall successfully complete a competency test prior to performing casework. The competency test intended results shall be achieved prior to performing the activity on evidence regardless of academic qualifications or past work experience.

4. A competency test may also be required for existing Forensic Services Division staff for **new** methodologies and/or equipment.

D. **Competency Testing Elements**

1. Analysts whose job responsibility includes performing testing or performing tasks that create items that could be used for testing must be given a competency test that minimally includes:

a. A written or oral test of knowledge to demonstrate the individual's understanding and comprehension of the subject matter. It is recommended that the test of knowledge be provided and completed successfully prior to the analyst being assigned the unknowns.

b. Examination of sufficient unknown samples to cover the anticipated spectrum of assigned duties

c. A written report to demonstrate the individual's ability to properly convey results and/or conclusions and the significance of those results or conclusions, if applicable

d. A verbal practical examination of the individual's ability to provide testimony, if applicable

E. **Competency Testing Responsibilities**

1. It is the responsibility of the Supervisor or designee to:

a. Evaluate staff readiness for competency testing

b. Ensure the test is sufficiently rigorous to test the scope and difficulty of anticipated casework activities

c. Create internal competency tests or obtain tests from external providers

d. Ensure the quality of the test items prior to the analyst beginning the test

e. Ensure that the analyst is not aware of the expected answers when a competency test is shared or reused

f. Provide a due date for completion

g. Determine and convey to the analyst the criteria for successful performance prior to beginning the test

h. Provide any necessary instructions prior to the analyst beginning the test. Instructions from a Supervisor or any staff member cannot take the form of help, guidance, assistance or review of results prior to turning in the test. Instruct the analyst to complete the test on their own without any help, guidance, assistance or verification/review of results/data/conclusions/etc. prior to turning in the test.

i. Determine satisfactory or unsatisfactory test performance based on the expected results in a timely manner

j. Provide feedback to the analyst after the test has been finalized

k. Solicit feedback from the analyst about the training program

l. Notify the QA Coordinator of any unsatisfactory competency tests. Remedial training and/or an additional competency test may be necessary. If a technical error leads to an erroneous conclusion or incorrect result it may be documented per FSD.15.

2. **The following must be documented in LIMS:**

a. The additional data field filled out completely and correctly for the sub-request. See QA.10 for instructions on completing the additional data field.

b. The mechanism for evaluating the quality of the test prior to test being administered

c. Criteria for successful performance communicated to the analyst prior to beginning the test

d. Due date

e. Test of knowledge. Note: the documentation must include the date and identity of the individual evaluating the results.

f. Test of unknowns. Note: the documentation must include the date and identity of the individual evaluating the results

g. Practical exam for testimony. Note: the documentation must include the date and identity of the individual evaluating the results

h. Report and notes

i. Feedback to/from the analyst regarding the training program

j. Completed/signed competency test summary report

k. Authorization form(s)

l. Training form(s)

F. **Authorizations**

1. Staff will not be authorized to perform tests, etc. until successful completion of a competency test is documented.

2. The laboratory shall authorize personnel to perform specific laboratory activities, including but not limited to, the following:

a. Development, modification, verification and validation of methods.

b. Perform tasks that create items that could be used for testing.

c. Analysis of results, including statements of conformity or opinions and interpretations.

d. Report of results.

e. Verify, review and authorization of results. Personnel who review and authorize results, an opinion or an interpretation or perform technical review of results or testimony, shall be competency tested in the task they are reviewing.

3. Authorizations may be made by staff with supervising authority, including Supervisors, Managers and the Chief or the Unit's Technical Lead.

a. Authorization will be documented and include: the identity of the individual being authorized, the individual responsible for the authorization and the date.

b. The Supervisor or Section Manager is responsible for maintaining the documentation.

c. Additional authorization requirements or instructions may be specified in the technical unit manual.

G. **Professional Development & Statement of Qualifications**

1. Professional development is the process of improving and increasing capabilities of staff through access to education and training opportunities. The Forensic Services Division will provide training to develop the competency and maintain the

proficiency of analysts in their current assignment(s). The Division may provide opportunities for cross training when feasible.

2. The Chief of Forensics will approve training based on legal or regulatory requirements, available funding, and the professional development needs of the staff member.

3. Staff are encouraged to join and be involved in professional organizations within the forensic community that provide networking and training opportunities.

4. Staff are encouraged to seek and obtain individual certification(s) as appropriate to their assignment(s).

5. All technical training and professional development will be documented on the staff member's statement of qualifications in the LIMS Training Module. Examples include:

    a. Formal Education (eg. college courses)

    b. Seminars or Courses (eg. Ron Smith course)

    c. Professional Meetings (eg. CAT or OSAC meeting)

    d. Study Groups (eg. CAC study group)

    e. On-Site Training

        i. FSD in-house training program (eg. controlled substance training program)

        ii. Webinars (eg. RTI or Agilent sponsored webinar)

        iii. On-site vendor supplied training (eg. Sorenson on-site training)

        iv. Courses taught by lab staff members (eg. CSI refresher)

6. The LIMS statement of qualifications will minimally contain:

    a. The name/title of the training

    b. The host entity or presenter/instructor

    c. The location of the training (physical location or indicate the training was a webinar/on-line)

    d. The date of the training, reflected as a month and year on the report

    e. The duration of training, reflected in hours on the report (must be at least one hour)

7. Staff members will keep their statement of qualifications current. Supervisors will conduct a review of staff's statement of qualification at least annually. The statement of qualification may also be reviewed during an audit.

8. See QA.12 for examples of training entries and instructions for populating additional information (eg. job history, testimony, professional affiliations).

H. **Remedial Training & Refresher/Retraining**

1. Remedial Training

a. Remedial training is implemented when a technical issue is detected; remedial training is reactive.

b. The need for remedial training may be identified during competency testing, proficiency testing, technical and administrative review of casework, auditing or brought to the attention of a Supervisor or Manager. Remedial training will be implemented when it is determined that there is a need.

c. The trainer will document the skill abilities that are reviewed during the remedial training. This may be done through a Quality Action (Corrective Action, Risk Prevention, Opportunity for Improvement), see FSD.15.

d. At the conclusion of the remedial training a competency test may be given if deemed necessary by the Supervisor or Manager. The scope of the test may be limited to the area of remedial training but all elements of a competency tests must be completed.

2. Refresher/Retraining

a. Refresher training may be implemented at any time; refresher training is proactive.

b. Staff may be provided refresher training to maintain proficiency or refresh their skills prior to undertaking a task they have not performed for a period of time.

c. Refresher training may be documented as part of a proficiency test prior to the analyst resuming casework.

d. At the conclusion of the refresher training a proficiency test may be given if deemed necessary or dictated by policy, see FSD.23.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 05/03/2019	**NUMBER:** FSD.23 - Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Tests
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.7	
CHAPTER: Quality Assurance	**SUBJECT:** Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Testing	

I. POLICY The laboratory shall monitor its performance by comparison with results of other laboratories, where available and appropriate. This monitoring shall be planned and reviewed and shall include, but not be limited to participation in proficiency testing and participation in interlaboratory comparisons other than proficiency testing.

A. **Definitions**

1. Interlaboratory comparison-organization, performance and evaluation of measurements or tests on the same or similar items by two or more laboratories in accordance with predetermined conditions.

   a. Proficiency testing-evaluation of participant performance against pre-established criteria by means of interlaboratory comparisons. This type of test is commonly referred to as an "external test".

2. Intralaboratory comparison-organization, performance and evaluation of measurements or tests on the same or similar items within the same laboratory in accordance with predetermined conditions. This type of test is commonly referred to as an "internal test".

B. **Unit and Discipline Requirements**

1. All personnel who perform testing shall successfully complete at least one intralaboratory comparison, interlaboratory comparison or proficiency test per calendar year in each discipline on the scope of accreditation in which the individual conducts work.

   a. In the event that the preceding options are not available or appropriate, observation-based performance monitoring is acceptable.

   b. Solely performing verifications or solely reviewing and authorizing results are considered to be testing and are subject to these requirements.

2. Each discipline in which accredited services are provided (see scope of accreditation) shall successfully complete at least one proficiency test per calendar year, with authorized release of the test results to ANAB from the test provider.

3. For proficiency tests taken at the end of one calendar year, evaluation of successful completion can occur in the subsequent calendar year.

C. **Responsibilities for Obtaining Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Tests**

1. The QA Coordinator is responsible for ordering, or coordinating the order, of proficiency tests based on the requests of the Section Manager or Technical Unit Supervisor.

    a. Where available and appropriate for the work conducted, the laboratory will use a proficiency test provider that is accredited to ISO/IEC 17043 by an accreditation body that is a signatory to the APLAC MRA or IAAC MLA5 and has the applicable proficiency test(s) on its scope of accreditation.

    b. Where not available or not appropriate for the work conducted, the laboratory will gain approval from ANAB for alternative means by which the laboratory's performance can be assessed.

2. The Section Manager or Technical Unit Supervisor is responsible for initiating or creating intralaboratory (internal) comparisons.

D. **Responsibilities for Scheduling Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Tests**

1. The Section Manager or Technical Unit Supervisor will maintain a documented schedule for intralaboratory comparisons, interlaboratory comparisons, and proficiency tests.

    a. The plan must take into account past, current, and future casework assignments.

    b. The plan must take into account the **Unit and Discipline Requirements** above.

    c. The plan must ensure inclusion of a representative sample of the components/parameters and equipment/technologies within each discipline listed on the scope of accreditation.

2. Annual proficiency testing for a new discipline will begin the calendar year following the completion of the competency test.

3. Proficiency testing is required prior to returning to casework after an absence of greater than 12 months for Biology, Comparative Evidence and Latent Prints.

    a. Previously competent analysts in the following high volume casework assignments: Drugs, Alcohol and Toxicology may commence casework prior to a proficiency test even after an absence of more than 12 months if no significant changes to the procedure have occurred during the analyst's absence from performing this type of casework. Analysts must be proficiency tested within the calendar year.

    b. A **competency test** is required prior to conducting casework if **NEW** methodologies or equipment have been introduced since the analyst last performed casework. See FSD.21.

4. The Supervisor or Section Manager may initiate a intralaboratory comparison, interlaboratory comparison or proficiency test for any analyst in their section at any time.

5. The Chief may initiate a intralaboratory comparison, interlaboratory comparison or proficiency test for any analyst in the Division at any time.

E. **Responsibilities for Assigning Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Tests**

1. The Section Manager or Technical Unit Supervisor is responsible for:

   a. Ensuring intralaboratory comparisons, interlaboratory comparisons, or proficiency tests are received/created, assigned, and distributed for the various disciplines per the documented plan.

   b. Taking steps, when needed, to ensure that results are not known or readily available to the participant being monitored.

   c. Having a mechanism to ensure the quality of intralaboratory comparisons, interlaboratory comparisons and observation-based monitoring prior to the monitoring activity

   d. Establishing criteria for determining successful completion prior to the monitoring activity

   e. Ensuring submission of results to the proficiency test provider, if applicable, on or before the agreed upon due date

2. See QA.10 for information about using case samples, re-using tests and restricting tests.

F. **Responsibilities for Analysts Taking Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Tests**

1. The analyst is responsible for ensuring use of approved methods including:

   a. Completing the intralaboratory comparison, interlaboratory comparison or proficiency test like casework, including verification, technical review, and administrative review.

   b. Completing the intralaboratory comparison, interlaboratory comparison or proficiency test in accordance with the laboratory's analytical capabilities. Tests should **not** be subject to policies adopted by the laboratory for expediency or efficiency of casework.

G. **Responsibilities for Determining Satisfactory or Unsatisfactory Test Performance**

1. The Section Manager or Technical Unit Supervisor is responsible for:

   a. Determining satisfactory or unsatisfactory test performance based on the expected results

   b. Providing and documenting feedback on individual performance to the participant

   c. Notifying the QA Coordinator of discrepancies or unexpected results

2. See FSD.15 for information about documenting a technical error leading to an erroneous conclusion or incorrect result

H. **Responsibilities for Documenting and Retaining Intralaboratory Comparisons, Interlaboratory Comparisons, and Proficiency Tests Records**

1. The Section Manager or Technical Unit Supervisor is responsible for ensuring all intralaboratory comparison, interlaboratory comparison or proficiency test records

are entered in LIMS. See QA.10 and QA.14. At minimum the following records will be documented in LIMS:

a. The mechanism for evaluating the quality of the test prior to test being administered

   i. Proficiency tests from an approved provider are assumed to have been sufficiently evaluated. An evaluation of quality must be documented for all other comparisons/tests. Evaluation may consist of documentation of how the comparisons/tests was created or inclusion of results from previous analysis.

b. Criteria for successful performance communicated to the analyst prior to beginning the test

   i. Communicating the criteria for successful performance does not constitute giving the analyst the test answers. Communicating the criteria for successful performance means the analyst understands the expectations for completing the test (eg. all controlled substances successfully identified).

   ii. Unless further clarified by the Unit, proficiency tests will be considered successfully completed if they are graded “successful” by the test provider.

   iii. All inconclusive results will be evaluated by the technically responsible individual to determine if they are consistent with FSD policies and procedures.

c. The test set identifier for all interlaboratory comparisons, or proficiency tests (eg. CTS 18-123)

d. Due date

e. Report and notes

f. Communication to the vendor (including the transmission of results)

g. Communication from the vendor (eg. manufacturer report, summary report, test results)

h. Evaluation of results

   a. Date and identity of the individual evaluating the results

   ii. Identification of any discrepancies

   iii. If discrepancies are identified, a reference to the QA Action

i. Completed/signed "Proficiency Test Summary Report" in LIMS

2. The QA Coordinator will review all completed intralaboratory comparisons, interlaboratory comparisons or proficiency tests and document the review in LIMS.

3. See QA.10 for instructions on completing the additional data field, use of casework, re-using tests and restricting tests.

4. Retention of records will be done according to FSD Policy on Control of Records (see FSD.44).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 12/27/2018	**NUMBER:** FSD.26 - Court Testimony Review
	RELATED ORDERS: QA.13 - LIMS Court critique procedure, FSDF.02 - Internal Court Critique Form, FSDF.03 - External Court Critique form, FSD.15 - Non-Conforming Work and QA Actions, FSD.44 - Control of Records	
APPROVED BY: Pamela Hofsass	**ANAB: 7.7**	
CHAPTER: Quality Assurance	**SUBJECT:** Court Testimony Review	

I. POLICY Analyst's court testimony will be technically reviewed by a competent individual in each discipline in which they have testified annually, when possible.

A. Purpose

1. The purpose of the testimony review is to ensure that results, opinions, and interpretations are accurate, properly qualified and supported by the technical record.

2. In addition, the review ensures the analyst demonstrates appropriate courtroom demeanor and attitude.

B. Requirements

1. Each analyst providing testimony will be technically reviewed in each discipline in which that analyst has testified during the calendar year.

   a. The Manager or Supervisor may determine that additional reviews are needed.

2. The individual performing the review must be technically competent in the task(s) the review is encompassing.

3. If an analyst testified during the year but **did not** have their testimony reviewed, the Manager or Supervisor will request and review court transcripts of the analyst's testimony.

4. If an analyst's only testimony was a juvenile hearing or Grand Jury then a technical review cannot be performed. This is not considered a non-conformance with policy. Transcripts are typically not available for a juvenile hearing or Grand Jury. In addition, witnesses are typically not allowed during testimony.

C. Responsibilities

1. The Manager or Supervisor is responsible for ensuring that each analyst providing testimony is technically reviewed.

   a. The Manager or Supervisor may designate the task of performing the technical review.

2. The testimony review consists of:

   a. An evaluation of technical correctness or "content review"

b. An evaluation of courtroom demeanor or "style review"

3. The Manager or Supervisor is responsible for assessing the feedback provided by the individual performing the review and determining if follow-up or additional action is required.

   a. Deficiencies in the technical content of an analyst's testimony will be addressed per FSD.15.

   b. Suggestions for improvement to the analyst's style will be addressed at the discretion of the Manager or Supervisor.

4. The Manager or Supervisor is responsible for providing feedback to the analyst who testified.

5. The Manager or Supervisor is responsible for documenting the court testimony review in LIMS.

6. If an analyst does not testify in a given year, the Manager or Supervisor is responsible for documenting that in LIMS.

D. Documentation

1. Technical review is typically documented on the Internal Court Critique Form FSDF.02 according to the procedure outlined in QA.13.

2. The Manager or Supervisor may solicit or request additional testimony review from attorneys, judges, court staff, or others. These reviews are not a substitute for a technical review of testimony. An external review is typically documented on the External Court Critique Form FSDF.03.

E. Retention of Records

1. Records of court testimony reviews will be maintained electronically within Forensic Services Division according to FSD.44.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 02/26/2019	**NUMBER:** FSD.27 - Method Selection & Validation
	RELATED ORDERS: FFSD.15 - QA Actions, QA.18 - QA Action Procedure, FSD.12 - Document Control, FSDF.12 - Validation and Performance Verification Form	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.2	
CHAPTER: Quality Assurance	**SUBJECT:** Method Selection & Validation	

I. POLICY Only approved methodology that is documented in the technical unit manuals should be used for casework analysis.

A. **Method Selection**

1. The laboratory shall use appropriate methods and procedures for all laboratory activities and, where appropriate, for evaluation of the measurement uncertainty as well as statistical techniques for analysis of data.

2. All methods, procedures and supporting documentation, such as instructions, standards, manuals and reference data relevant to the laboratory activities, shall be kept up to date and shall be made readily available to personnel. See FSD.12.

    a. The laboratory shall ensure that it uses the latest valid version of a method unless it is not appropriate or possible to do so. When necessary, the application of the method shall be supplemented with additional details to ensure consistent application.

3. When the customer does not specify the method to be used, the laboratory shall select an appropriate method and inform the customer of the method chosen through the report.

    a. Methods published either in international, regional or national standards, or by reputable technical organizations, or in relevant scientific texts or journals, or as specified by the manufacturer of the equipment, are recommended.

    b. Laboratory-developed or modified methods can also be used.

B. **Responsibilities for Method Development, Validation, and Verification**

1. The Manager or Technical Unit Supervisor is responsible for:

    a. Submitting the validation plan to the QA Coordinator. See FSDF.20.

    b. Assigning a qualified and authorized individual.

        a. Support staff may be utilized as necessary to assist with the study under the direction of the qualified analyst.

    c. Providing sufficient resources to adequately complete the assigned task

    d. Ensuring effective communication to all personnel including updates during method development

e. Ensuring periodic review is carried out to confirm that the needs of the customer are still being fulfilled.

a. Ensuring any modifications to the development plan are approved and authorized.

f. Ensuring the method validation or performance verification is fit for its intended use

g. Ensuring staff are appropriately trained, competency tested and authorized, if applicable. See FSD.21.

h. Ensuring that the method is written, approved, and published in PowerDMS, if applicable. See FSD.12.

i. Completing appropriate validation documentation including:

i. Creating a summary of the validation/performance verification using FSDF.12

ii. Ensuring all documentation (electronic or hard-copy) is stored with the QA Action or in the technical unit. The documentation must be accessible for review by all staff.

2. The DNA Technical Lead is responsible for approving methods involving DNA analysis.

3. The QA Coordinator is responsible for:

a. Reviewing validation plans prior to beginning a validation

b. Reviewing validation documentation prior to implementation of new methods

C. **Method Development**

1. A method is the course of action or technique followed in conducting a specific analysis or comparison leading to an analytical result.

2. When method development is required, this shall be a planned activity and shall be assigned to competent personnel equipped with adequate resources.

3. The plan will be documented using FSDF.20 and include:

a. Description of the method/equipment/software/etc.

b. Scope

c. Type of samples to be tested and intended use in casework

d. Time frame for validation and periodic review (when necessary)

e. Personnel involved in and responsible for the validation

f. Performance characteristics to be evaluated, for example:

i. Demonstration of the expected result

ii. Specificity

iii. Accuracy

iv. Precision (repeatability or reproducibility)

v. Robustness

vi. Limit of detection or sensitivity

vii. Limit of quantification

viii. Range, linearity, carryover, or contamination

g. The criteria for acceptance

h. Limitations of the method and the impact on reported results, opinions, and interpretations

i. Under what conditions additional validation is required

j. Safety considerations

k. Data required to report a test result, opinion, or interpretation

l. The process for data interpretation

i. All test methods that involve the comparison of an unknown to a known shall require the evaluation of the unknown item(s) to identify characteristics suitable for comparison and, if applicable, characteristics suitable for statistical rarity calculations, prior to comparison to one or more known item(s).

ii. Characteristics include, but are not limited to, alleles in a DNA profile, friction ridge detail in a latent print, striation detail on a bullet, or criteria for evaluation of mass spectrometry fragments and ratios in a seized drug sample or a toxicology sample extract.

m. Assessment of training, competency, authorization, and policy updates

D. **Method Validation**

1. A validation is a documented process of performing a set of experiments which establish the efficacy and reliability of a technique or procedure or modification thereof. A validation must have a set of particular requirements specific for the intended use of the method and demonstrate through objective evidence that those requirements are fulfilled.

2. The laboratory shall validate non-standard methods, laboratory-developed methods, and standard methods used outside their intended scope or otherwise modified.

3. The validation shall be as extensive as is necessary to meet the needs of the given application or field of application and demonstrate fitness for purpose.

a. Scientific Working Group (SWG) documents, Organization of Scientific Area Committees (OSAC) documents and ASTM standards are resources a Technical Unit unit may choose to rely on to determine the scope and extent of a validation.

4. The performance characteristics of validated methods, as assessed for the intended use, shall be relevant to the customers' needs and consistent with specified requirements.

5. The techniques used for method validation can be one of, or a combination of, the following:

    a. Comparison of results achieved with other validated methods

    b. Calibration or evaluation of accuracy and precision using reference standards or reference materials

    c. Evaluation using case-like materials

    d. Assessment of the factors influencing the result

    e. Evaluation of measurement uncertainty of the results

6. When changes are made to a validated method, the influence of such changes shall be determined and where they are found to affect the original validation, a new method validation shall be performed.

    a. The associated data interpretation is considered part of a validated method. When changes are made, the influence of such changes shall be determined and where they are found to affect the original validation, a new method validation shall be performed.

    b. A performance verification may be performed when minor modifications to an existing method, procedure, or software are made when those changes do not affect the original validation. The Manager or Technical Unit Supervisor is responsible in determining when the change is significant enough to require a full validation.

E. **Performance Verification**

1. A performance verification is a check of the reliability of a previously validated method, procedure, software, or equipment by demonstrating through objective evidence that the performance characteristics of the item have been met. Performance verifications, are typically less extensive than validations.

2. The laboratory shall verify that it can properly perform methods before introducing them by ensuring that it can achieve the required performance. Records of the verification shall be retained. If the method is revised by the issuing body, verification shall be repeated to the extent necessary.

3. A Performance Verification may be as extensive as necessary to document fitness for purpose and may include, but are not limited to:

    a. Comparison to other methods currently in use

    b. Demonstration that the method or equipment yields the expected result

    c. Assessment of factors influencing the result

F. **Record Retention**

1. The laboratory shall retain the following records:

    a. Validation procedure used;

    b. Specification of the requirements;

    c. Determination of the performance characteristics of the method;

d. Results obtained;

e. A statement on the validity of the method, detailing its fitness for the intended use.

G. **Writing Method Procedures or Work Instructions**

1. A new method will be incorporated into the technical unit manual. The following will be included as applicable:

a. Appropriate identification including name of methodology and/or equipment

b. Scope of analysis including parameters, quantities, or ranges to be tested

c. Limitations of the test method

d. Description of the item(s) to be tested including requirements for marking, handling, transporting, storing and preparation of evidence

e. Checks to be made before work is started

f. Equipment used, including technical performance requirements and checks that the equipment is working properly and where required, calibration of the equipment before use

g. Reference standards, reference materials, controls, or reagents required

h. The method of recording observations and results including criteria and/or requirements for approval/rejection of results

i. The method of data interpretation

j. Any safety measures to be observed

k. Environmental conditions required

l. The uncertainty or procedure for estimating the uncertainty

m. Training procedures

H. **Deviations From an Approved Method**

1. A deviation is an occasion when the documented test method cannot be followed exactly. This normally happens when evidence items are atypical and technical adaptations have to be made.

2. Any deviation from an approved test method shall occur only if the deviation has been:

a. documented in the case file. If relevant to the interpretation of the results, the deviation must appear on the report.

b. technically justified. The technical justification must be documented in the case file.

c. authorized by an individual with technical responsibility. See FSD.03 for individuals with technical responsibility.

d. accepted by the customer. Per FSD.14, the FSD will determine if a service will or can be provided, and the type of service needed based on a review of the evidence and case circumstances and the need for any deviations from an

approved test method. Notification to the customer regarding deviation will typically be accomplished through the report process. Any communications with the customer will be included in the case record per FSD.42.

3. Authorization for a deviation from an approved test method must be obtained PRIOR to undertaking the deviation. Deviations from an approved test method undertaken without authorization will be documented as a non-conformity. See FSD.15 for more information on classification of non-conformities.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 12/27/2018	**NUMBER:** FSD.28 - Measurement Uncertainty
	RELATED ORDERS: FSD.33 - Equipment Service and Calibration, FSD.43 - Test Reports	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.6	
CHAPTER: Quality Assurance	**SUBJECT:** Measurement Uncertainty	

I. POLICY Laboratories shall identify the contributions to measurement uncertainty. When evaluating measurement uncertainty, all contributions that are of significance, including those arising from sampling, shall be taken into account using appropriate methods of analysis.

A. Uncertainty of Measurement: Technical use of the word "uncertainty" indicates a level of confidence in the result or the test being performed or the measurement. Estimated uncertainty of a measured value is an interval around that value such that any repetition of the measurement will produce a new result that lies within this interval with a stated level of confidence.

1. Measurement uncertainty shall be evaluated, or estimated when applicable, for all reported quantitative results.

   a. Where the test method precludes rigorous evaluation of measurement uncertainty, an estimation shall be made based on an understanding of the theoretical principles or practical experience of the performance of the method.

   b. An item descriptor that includes a number is not considered a result. This difference should be clear to the reader of the report.

2. Technical Units performing calibrations, including of their own equipment, shall evaluate the measurement uncertainty for all calibrations.

3. The Technical Units shall have a method of analysis for evaluation of measurement uncertainty and the method shall:

   a. Require the specific measuring device or instrument used for a reported result to have been included in or evaluated against the estimation of measurement uncertainty for that method;

   b. Include the process of rounding the expanded uncertainty;

   c. Require the coverage probability of the expanded uncertainty to be a minimum of 95.45% (often referred to as approximately 95%); and

   d. Specify the schedule to review and/or recalculate the measurement uncertainty.

4. The Technical Units shall maintain the following records for each evaluation and estimation of measurement uncertainty:

   a. Statement defining the measurand;

b. Statement of how traceability is established for the measurement;

c. The equipment (e.g., measuring device(s) or instrument(s)) used;

d. All uncertainty components considered;

e. All uncertainty components of significance and how they were evaluated;

f. Data used to estimate repeatability, intermediate precision, and/or reproducibility;

g. All calculations performed; and

h. The combined standard uncertainty, the coverage factor, the coverage probability, and the resulting expanded uncertainty

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION**	**REVISION DATE:** 12/27/2018	**NUMBER:** FSD.29 - Assuring the Quality of Tests
	RELATED ORDERS: FSD.17 - Technical Review, FSD.18 - Administrative Review, FSD.23 - Proficiency Testing, FSD.28 - Measurement Traceability of Equipment, Reference Materials and Reference Standards, FSD.32 - Security, FSD.50 - Facility Maintenance	
APPROVED BY: Pamela Hofsass	**ANAB:** 6.3, 7.2, 7.7	
CHAPTER: Quality Assurance	**SUBJECT:** Assuring the Quality of Tests	

I. POLICY The FSD is committed to assuring the accuracy and reliability of the tests performed. Where necessary, technical units will have procedures to assure the quality of test results.

A. **General**

1. Each **Technical Unit Manual** shall have a procedure for monitoring the validity of results.
2. The resulting data shall be recorded in such a way that trends are detectable and, where practicable, statistical techniques shall be applied to review the results.
3. This monitoring shall be planned and reviewed and shall include, where appropriate, but not be limited to:
   a. Use of reference materials or quality control materials;
   b. Use of alternative instrumentation that has been calibrated to provide traceable results;
   c. Functional check(s) of measuring and testing equipment
   d. Use of check or working standards with control charts, where applicable;
   e. Intermediate checks on measuring equipment;
   f. Replicate tests or calibrations using the same or different methods;
   g. Retesting of retained items;
   h. Correlation of results for different characteristics of an item;
   i. Review of reported results;
   j. Intralaboratory comparisons;
   k. Verification of results
   l. Technical and administrative review
   m. Testing of blind sample(s).

B. **Procedures and Test Methods**

1. Technical units will have and use appropriate methods and procedures for all tests.

2. Technical units will have procedures for test data interpretation.

3. All methods, procedures, software or equipment must be validated or performance checked prior to use in casework. See FSD.27.

4. Technical units will have instructions on the use and operation of equipment (see FSD.33) and handling of evidence (see FSD.35).

5. Technical Units where sampling occurs will have procedures for sampling. See FSD.40.

6. All test methods that involve the comparison of an unknown to a known shall require the evaluation of the unknowns item(s) to identify characteristics suitable for comparison and, if applicable, characteristics suitable for statistical rarity calculations, prior to comparison to one or more known item(s).

    a. Characteristics include: alleles in a DNA profile, friction ridge detail in a latent print, criteria for evaluation of mass spectrometry fragments and ratios in a drug or toxicology sample extract

C. **Environmental Conditions**

1. The facilities and environmental conditions shall be suitable for the laboratory activities and shall not adversely affect the validity of results. Influences that can adversely affect the validity of results can include, but are not limited to, microbial contamination, dust, electromagnetic disturbances, radiation, humidity, electrical supply, temperature, sound, and vibration.

2. Measures to control facilities shall be implemented, monitored, and periodically reviewed and shall include, but not be limited to:

    a. Access to and use of areas affecting laboratory activities. See FSD.32;

    b. Prevention of contamination, interference, or adverse influences on laboratory activities;

    c. Effective separation between areas with incompatible laboratory activities.

    d. Incorporating good housekeeping measures within the laboratory. See FSD.50.

3. Any technical requirements for facilities and environmental conditions necessary for the performance of the laboratory activities will be documented in the technical unit manual.

    a. The unit shall monitor, control, and record environmental conditions in accordance with relevant specifications, methods, or procedures or where they influence the validity of the results.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 01/11/2019	**NUMBER:** FSD.30 - Purchasing and Ordering Supplies and Services
	RELATED ORDERS: FSD.23 - Proficiency Testing	
APPROVED BY: Pamela Hofsass	**ANAB: 6.6**	
CHAPTER: Quality Assurance	**SUBJECT:** Purchasing and Ordering Supplies and Services	

I. POLICY The Technical Units will have a system to select, assess, monitor, and reassess external providers. The FSD shall ensure that all purchased products and services fulfill our requirements.

A. **Introduction-**Supplies and services are designated into two broad categories:

1. General supplies and services that do not affect the quality of tests, including office supplies.
2. Supplies and services that affect testing and have an impact on the quality of tests.

B. **General Information for Supplies and Services that Affect Testing**-The Technical Units shall ensure that only suitable externally provided products and services are used, when such products and services are:

1. Intended for incorporation into the laboratory's own activities (eg. equipment, chemicals, reagents, reference materials),
2. Are used to support the operation of the laboratory (eg. calibration services, equipment maintenance services, or proficiency testing services),
3. Are provided, in part or in full, directly to the customer by the laboratory, as received from the external provider (eg. subcontracting laboratory).

C. **Procedure for Supplies and Services that Affect Testing**-The Technical Units must have procedures and retain records for:

1. Defining, reviewing, and approving the requirements for externally provided products and services. The requirements may include capability, suitability, or criteria to provide a service or supply. For example:
   a. Traceable reference materials obtained from an ISO 17034 provider
   b. Calibration services provided from an ISO 17025 vendor
   c. Proficiency tests purchased from an ISO 17043 supplier
   d. Sub-contracting services supplied by an ISO 17025 laboratory
   e. Consumables provided by the manufacturer of the equipment being used
2. Defining the criteria for evaluation, selection, monitoring of performance, and re-evaluation of the external providers. The criteria may include ability to meet the the

Technical Unit's requirements for quality, ability to deliver the product/service within an acceptable time frame, access to technical support, accreditation status or review of scope documents. For example:

a. Checking a scope document to ensure the calibration being requested is within the scope of the vendor

b. Checking an accreditation certificate to ensure that accreditation has not lapsed

c. Checking that quality controls or standards meet the performance criteria of the equipment or method

d. Ensuring that methodology requiring consumables (e.g. kits) from a specific vendor are obtained

e. Ensuring that a certificate is checked after the expiration date before ordering additional supplies or services

3. Ensuring that externally provided products and services conform to the laboratory's established requirements, or ISO 17025:2017 before they are used or directly provided to the customer. The requirements may include competence of personnel or accreditation status. For example:

a. Checking a packing list to verify an order before using the supplies in casework

b. Checking the correct testing was provided from a sub-contracting laboratory before providing the report to the customer

c. On-going evaluation of quality control data

4. Taking any actions arising from evaluations, monitoring of performance, and re-evaluations of the external providers. Actions may include ensuring the correct services or supplies are received, issues are resolved, or monitoring that services and supplies meet the needs of the unit

D. **Communication for Supplies and Services that Affect Testing**-The Technical Units shall communicate its requirements to external providers for:

1. The products and services to be provided. The requirements may consist of specific products (equipment, software, consumables) or services (calibration or sub-contracting) needed. For example:

a. In a purchase order or purchasing document

b. The description of the item(s) or services ordered may include information such as: type, class, grade, precise identification, specifications, inspection instructions or other technical data. This description may also include a reference(s) to relevant analytical methods or procedures.

2. The acceptance criteria. The criteria may consist of equipment or method specifications, accreditation status, or catalog part #. For example:

a. A letter sent with a piece of equipment outlining the accreditation requirements

b. A email or phone call communicating the vendor part #

c. A purchase order or purchasing document outlining specific acceptance criteria

3. Competence, including any required qualification of personnel. The competence requirements may be individual certifications or accreditation status. For example:

   a. A letter sent with a piece of equipment outlining the calibration requirements

4. Activities that the laboratory intends to perform at the external provider's premises. The activities may include on-site audits or assessments at the provider's facility. For example:

   a. Scheduling an on-site QAS audit

E. **Procedure for Ordering General Supplies and Services**

1. Personnel in each of the technical units will forward a request that lists the supplies to be ordered to an aide, clerk, or individual ordering the supply. The following should be documented by either the requester or the person ordering the supplies:

   a. Vendor

   b. The quantity or amount required

   c. Catalog number

   d. A description of the supply or service

2. The aide, clerk, or individual placing the order of the supply will create an order sheet for supplies that includes:

   a. Cost

   b. Purchase order

   c. Org #, if needed

3. An individual with budget authority will review, approve and authorize the purchase of supplies and services. ONLY managers and individuals above a manager level are designated as having budget authority. The signature, or equivalent, of an individual at a manager level or above must be documented with an order.

4. After approval, the order is placed by the approver or the approved order sheet is forwarded to the aide, clerk, or individual who then orders the supply. The orders may be placed by using one of the following methods:

   a. Existing purchase order number for a vendor

   b. Requisition form

   c. County credit card held by the account clerk from Sheriff's Fiscal Section.

5. A record(s) will be maintained of the approved order to ensure the accuracy of the supply or service received.

   a. General laboratory supplies and services are generally ordered and received by an aide or clerk.

   b. Packing slips will be reviewed for accuracy, signed and dated. The original will be forwarded to Account Clerk at Sheriff's Fiscal.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/01/2013	**NUMBER:** FSD.31 - Subcontracting & Externally Directed Analysis
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 6.6**	
CHAPTER: Quality Assurance	**SUBJECT:** Subcontracting & Externally Directed Analysis	

I. POLICY Any subcontracted laboratory must be competent to perform work.

A. **Definitions**

1. A subcontractor or contract laboratory refers to an outside entity that the Forensic Services Division (FSD) contracts with to perform forensic analysis.
    a. Subcontracting occurs if the FSD first agrees ("contracts") to accept evidence to test, then subcontracts to perform the test.
    b. Reasons for subcontracting may include but are not limited to: limited resources, inability to provide the service, backlog reduction or unforeseen circumstances.
2. Externally Directed Analysis (e.g. referee analysis or court directed) is analysis that has been requested by an external agency. The request may be under the direction of the Court, Prosecution, Defense or Police Agency.
    a. No subcontracting agreement exists between the laboratory and the testing laboratory.
    b. The Laboratory is not responsible for the analysis and does not receive a report from the external laboratory.

B. **Sub-Contracting**

1. The customer should be notified in writing of the subcontracting arrangement. This may be accomplished by, but not limited to, inter-agency agreements, communication with the customer or the issuance of a laboratory report.
2. The laboratory will be responsible for the subcontractor's work. The subcontracting agency chosen for the testing must be competent in the work being contracted.
    a. This competence may be demonstrated by the subcontracting laboratory being accredited under ISO/IEC 17025:2005, equivalent accrediting standards or competence criteria specified in the technical unit manual. Documentation must be acquired and maintained that demonstrates competence. A list of competent contractors will be maintained.
3. The sub-contractor must provide their report in writing or electronically.

C. **Externally Directed Analysis**

1. The FSD will perform externally directed analysis when there is a need. Examples include, but are not limited to:
    a. Improper handling may jeopardize evidence integrity.
    b. There is a safety hazard for a non-trained individual.
    c. The evidence is of a high-value or high-theft nature.
2. The FSD will obtain authorization from a law enforcement agency, the District Attorney's Office or court order, before sending samples for externally directed analysis.
    a. FSD may obtain "blanket" authorization for sending out evidence for externally directed analysis. See the technical unit manuals for specific information about "blanket authorization".
3. FSD will use a postal carrier with the ability to adequately track the evidence package.

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION**	**REVISION DATE:** 08/29/2018	**NUMBER:** FSD.32 - Security
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 5.3	
CHAPTER: Quality Assurance	**SUBJECT:** Security	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 12/27/2018	**NUMBER:** FSD.33 - Equipment, Calibration, Measurement Traceability
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 6.4, 6.5	
CHAPTER: Quality Assurance	**SUBJECT:** Equipment, Calibration, Measurement Traceability	

I. POLICY The laboratory shall have access to equipment that is required for the correct performance of laboratory activities and that can influence the results.

A. **Equipment (Applies to Measuring Instruments, Software, Measurement Standards, Reference Materials, Reference Data, Reagents, Consumables or Auxiliary Apparatus that can Influence the Results)**

1. **Procedures**-The Technical Unit Manuals shall document its procedures to the extent necessary to ensure the consistent application of its laboratory activities and the validity of the results and include:

a. Use

i. The Technical Units shall have procedures to ensure proper functioning.

ii. The Technical Units shall verify that equipment conforms to specified requirements before being placed or returned into service.

iii. Only equipment that has been furnished by the lab and/or approved for use (through procedures, validations, etc.) should be used for testing.

iv. Staff shall use equipment within the laboratory's permanent control. The Technical Unit shall check the function of equipment if it goes outside the permanent control of the laboratory and is used for testing to ensure satisfactory function before being returned to service..

b. Planned Maintenance

i. The Technical Units shall have a procedure for carrying out intermediate checks when necessary to maintain confidence in the performance of the equipment. When evaluating the need for intermediate checks, topics to consider include, but are not limited to: the calibration interval, the use of the equipment, the stability of the equipment, the method specifications, and risk associated with a failed check.

b. The Technical Units shall require labeling, coding, or other identification of equipment requiring calibration or which has a defined period of validity (eg. expiration date) to allow the user of the equipment to readily identify the status of calibration or period of validity.

c. The Technical Units shall ensure the reference values and correction factors are updated and implemented when calibration and reference material data include reference values or correction factors.

c. Handling

i. The Technical Units shall have procedures to prevent contamination or deterioration

ii. The Technical Units shall take practicable measures to prevent unintended adjustments of equipment from invalidating results.

iii. The Technical Units shall ensure that equipment that has been subjected to overloading or mishandling, gives questionable results, or has been shown to be defective or outside specified requirements, is taken out of service. It shall be isolated to prevent its use or clearly labelled or marked as being out of service until it has been verified to perform correctly.

1. The Technical Unit shall examine the effect of the defect or deviation from specified requirements and shall initiate the management of nonconforming work procedure. See FSD.15.

d. Storage

i. The Technical Units shall have a procedure for specific storage requirements, if applicable.

e. Transport

i. The Technical Units shall have a procedure for specific transport requirements, if applicable

2. **Records**-The Technical Unit will retain records for equipment **(measuring instruments, software, measurement standards, reference materials, reference data, reagents, consumables or auxiliary apparatus)** which can influence laboratory activities. The records shall include the following, where applicable:

a. The identity of equipment, including software and firmware version;

b. The manufacturer's name, type identification, and serial number or other unique identification;

c. Evidence of verification that equipment conforms with specified requirements;

d. The current location;

e. Calibration dates, results of calibrations, adjustments, acceptance criteria, and the due date of the next calibration or the calibration interval;

f. Documentation of reference materials, results, acceptance criteria, relevant dates and the period of validity;

g. The maintenance plan and maintenance carried out to date, where relevant to the performance of the equipment;

h. Details of any damage, malfunction, modification to, or repair of, the equipment

3. **Supplemental Reagent Requirements**

   a. The Technical Units will retain records identifying who made the reagent and the components used in preparation.

   b. Reagents prepared shall be labeled with, at a minimum the identity of the reagent and the date of preparation or lot number.

4. **Supplemental Reference Collection Requirements**

   a. The Technical Units will ensure reference collections of data or materials which are maintained for identification, comparison, or interpretation purposes (e.g., mass spectra, drug samples, bullets, cartridges, DNA profiles, laboratory developed population databases) shall

      i. Have each entry in the collection documented;

      ii. Uniquely identified and;

      iii. Handled properly to protect the characteristic(s) of interest.

B. **Calibration (Applies to Measuring Equipment)**

1. The equipment used for measurement shall be capable of achieving the measurement accuracy and/or measurement uncertainty required to provide a valid result.

2. **Measuring equipment** shall be calibrated when:

   a. The measurement accuracy or measurement uncertainty affects the validity of the reported results, and/or

   b. Calibration of the equipment is required to establish the metrological traceability of the reported results.

3. The Technical Units shall establish a calibration program (where appropriate), which shall be reviewed and adjusted as necessary in order to maintain confidence in the status of calibration. The program for the calibration of equipment shall include:

   a. A list of the equipment requiring calibration;

   b. Specifications for the calibration laboratory;

   c. Specified requirements for the calibration, and;

   d. The interval of calibration.

C. **Measurement Traceability (Applies to Measuring Equipment, Reference Standards, Certified Reference Materials)**

1. The laboratory shall establish and maintain metrological traceability of its **measurement results** by means of a documented unbroken chain of calibrations, each contributing to the measurement uncertainty, linking them to an appropriate reference.

   1. Metrological traceability is defined as the "property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty".

2. A measurement result is defined as a set of quantity values being attributed to a measured quantity value together with a measurement uncertainty

2. The laboratory shall ensure that measurement results are traceable to the International System of Units (SI) through:

   a. Calibration provided by a competent laboratory (*laboratories fulfilling the requirements of this document are considered to be competent*); or

   b. Certified values of certified reference materials provided by a competent producer with stated metrological traceability to the SI (*reference material producers fulfilling the requirements of ISO 17034 are considered to be competent*); or

   c. Direct realization of the SI units ensured by comparison, directly or indirectly, with national or international standards.

3. If available, suppliers of external calibration services for **measuring equipment and/or reference standards, and certified reference materials** used to establish or maintain metrological traceability shall be either:

   a. A National Metrology Institute that is a signatory to the BIPM 1 - CIPM Mutual Recognition Arrangement with the calibration of measuring equipment and/or reference standard to be performed or the certified reference material listed to be purchased in Appendix C of the BIPM key comparison database (KCDB) 2; or

   b. A service supplier accredited to ISO/IEC 17025 by an accrediting body that is a signatory to the ILAC Mutual Recognition Arrangement, with the calibration of measuring equipment and/or reference standard to be performed listed in a scope of accreditation; or

   c. An accredited reference material producer that is accredited to ISO 17034 3,4 by an accrediting body that is a signatory to a mutual or multilateral recognition arrangement in an ILAC recognized regional accreditation cooperation or the ILAC Mutual Recognition Arrangement, with a scope of accreditation covering the certified reference material.

4. In situations where a supplier that meets the requirements above is not available, the competence, capability, and metrological traceability for the supplier and the external product or service being purchased shall be confirmed.

   a. Objective evidence of the confirmation shall be available for review.

5. When metrological traceability to the SI units is not technically possible, the laboratory shall demonstrate metrological traceability to an appropriate reference, e.g.:

   a. Certified values of certified reference materials provided by a competent producer;

   b. Results of reference measurement procedures, specified methods or consensus standards that are clearly described and accepted as providing measurement results fit for their intended use and ensured by suitable comparison.

6. If a **certified reference material** is changed in a way that alters the traceable measurement value, then the equipment used to alter the certified reference material

shall be evaluated for applicability of measurement traceability accreditation requirements.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 03/28/2019	**NUMBER:** FSD.34 - Control of Data and Information Management
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.11	
CHAPTER: Quality Assurance	**SUBJECT:** Control of Data and Information Management	

I. POLICY: The laboratory shall have access to the data and information needed to perform laboratory activities.

A. General Information

1. "Laboratory information management system(s)" includes the management of data and information. Examples include:

   a. JusticeTrax LIMS (including crystal reports)

   b. VeriPic

   c. Instrument software (including data-handling and reporting software)

   d. Lab-created software (including macros)

   e. Databases

   f. Excel spreadsheets

B. Verification and Validation

1. Technical Units shall ensure the laboratory information management system(s) used for the collection, processing, recording, reporting, storage, or retrieval of data are validated for functionality, including the proper functioning of interfaces within the laboratory information management system(s) by the laboratory before introduction.

   a. Whenever there are any changes, including laboratory software configuration or modifications to commercial off-the-shelf software, they shall be authorized, documented and validated before implementation.

   b. There shall be a plan for validation of computer software developed by the user and records of the validation shall be maintained. See FSD.27 and FSDF.20.

2. **Commercial off-the-shelf software in general use within its designed application range can be considered to be sufficiently validated**.

   a. Microsoft Word, Excel, Access, Adobe Reader, Adobe Acrobat, Adobe Photoshop, VeriPic, JusticeTrax (LIMS), JusticeTrax Indexer and PowerDMS are approved for use and considered sufficiently validated when used within its designed application range.

b. Some software may be approved for use, however the application of software may need to be validated and uniquely identified. For example, Excel is approved for use but the use of formulas that affect test results may require validation and approval. Depending upon the application, validation and approval may be required.

C. Operation

1. Technical Units or appropriate system administrator shall ensure laboratory information management system(s) will:

a. Be protected from unauthorized access. This may be accomplished by having a user name and password, firewall protections, personal identification numbers (PINS), etc.

i. Computer systems containing digital evidence will only be accessed by authorized staff that has a user name and password for that system.

ii. JusticeTrax LIMS requires the use of a password, pin, and security levels be given to different users.

b. Be safeguarded against tampering and loss. This may be accomplished by conducting periodic back-ups of data.

i. Electronic data in JusticeTrax and VeriPic are regularly backed up by Technical Services Division.

c. Be operated in an environment that complies with provider or laboratory specifications. This may be accomplished by using computerized equipment within manufacturer specifications in climate controlled facilities.

i. The laboratory's environmental conditions are sufficient to ensure proper functioning of computers and automated equipment to maintain the integrity of test data.

d. Be maintained in a manner that ensures the integrity of the data and information. This may be accomplished by having instructions on the use of the system and checking calculations and data transfers.

e. Include recording system failures and the appropriate immediate and corrective actions. This information may be recorded within the system, created on a log, or obtained from an outside source (eg. Information Technologies staff).

2. When a laboratory information management system is managed and maintained off-site (eg. off-site servers) or through an external provider (eg. cloud-based provider), the Technical Unit shall ensure that the provider or operator of the system complies with all applicable requirements selecting a suitable external provider. See FSD.30 for more information on external services.

D. Instructions for Use

1. Technical Units shall ensure that instructions, manuals, and reference data relevant to the laboratory information management system(s) are made readily available to personnel. See FSD.12 for more information on document control.

E. Calculations and Data Transfers

1. Calculations and data transfers shall be checked in an appropriate and systematic manner. Note: this requirement does not apply if the calculation or data transfer is secure and not subject to human error.

2. The technical record shall indicate the check was performed and who performed the check.

3. When possible, this check shall not be conducted by the person who performed the calculation(s) or the data transfers.

4. This check may be part of a technical review. See FSD.17 for more information on technical reviews.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 03/11/2019	**NUMBER:** FSD.35 - Evidence Handling
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.4	
CHAPTER: Evidence	**SUBJECT:** Evidence Handling	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/02/2019	**NUMBER:** FSD.38 - Evidence Itemization
	RELATED ORDERS: QA.09 - Adding, Itemizing and Transferring Evidence in LIMS, QA.09.01 - LIMS Procedure for Correcting the Chain of Custody	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Evidence	**SUBJECT:** Evidence Itemization	

I. POLICY Submissions and items are assigned a unique identifier; LIMS is the mechanism used to track all evidence within the Forensic Services Division.

A. **Format of LIMS-generated evidence numbers:**

001-01-A-01-a-01

- Level 1: **001** (Submission Level in LIMS)
- Level 2: **001-01**
- Level 3: **001-01-A**
- Level 4: **001-01-A-01**
- Level 5: **001-01-A-01-a**
- Level 6: **001-01-A-01-a-01**

1. All preceding zeros are understood.
2. Dashes after Level 2 are optional. For example 001-01-A-01 can be written as 1-1A1.
3. Crime Scene Tracking Numbers, JusticeTrax evidence and outside agency identifiers will be entered into the **Other ID field** in LIMS.

B. **Definitions and Terms**

1. Submission: A **package** containing evidence. **Submissions will not be deleted in LIMS**. If a submission is created in error, the submission will be unrelated to any requests and transferred in LIMS to agency representative "Generated in error" under the Forensic Services Division agency.
2. Submission Number: A LIMS-generated designation for evidence at Level 1. It may be abbreviated as S# or Sub#. Each submission will be given its own Submission Number.
3. Add Evidence: The LIMS process for creating a Submission (Level 1). See QA.09 (Generating Submissions in LIMS) for more information on the procedure for creating submissions. See QA.09.01 for more information about editing the chain of custody for a submission.
4. Item: A **unit** of evidence. **Items will not be deleted in LIMS**. If an item is created in error, the item will be unrelated to any requests and transferred in LIMS to agency representative

"Generated in error" under the Forensic Services Division agency.

5. Item Number: A LIMS-generated designation for evidence. Item numbers are obtained through itemization except when there is only one level.

6. Itemize Evidence: The LIMS process for creating an Item at Level 2 or below. See QA.09 (Itemizing Evidence) for more information on the procedure for itemizing evidence. See QA.09.01 for more information about editing the chain of custody for an item.

7. Primary Item: The first level of evidence. Note: the container and inherit fields are blank at this level.

8. Parent Item: An item that has one or more child items.

9. Child Item: An item that is linked genealogically to a parent item. Upon original itemization, the child item will show the parent item in the "container" field. If the child item is containerized the "container" field will change. The original parent will always be shown in the "inherit" field (which cannot be changed).

10. Tracking Number: A designation given to evidence at the time of collection during field activities.

11. Origin: The source of the evidence. For example, origins may include a crime scene location or individuals.

12. Containerize: Containerization is grouping split LIMS items into a new or different package. When beginning an electronic chain of custody in LIMS an analyst will use the agency representative "Lab-Containerized" under the Forensic Services Division agency. See QA.09 (Containerize Evidence) for more information on the procedure for containerizing and examples.

13. Lab-Generated Evidence: Evidence that has been created from laboratory analysis. When beginning an electronic chain of custody in LIMS an analyst will use the agency representative "Lab-Generated Evidence" under the Forensic Services Division agency. See QA.09 (Lab-Generated Evidence) for more information and the procedure for creating lab-generated evidence.

14. Split Chain of Custody: Procedure by which a child item is removed from its parent item. The Container field will be set to blank. The split item no longer shares the chain of custody with the parent and will no longer be transferred automatically when the parent is transferred. Once split, the child has its own independent chain. See QA.09 (Split Chain of Custody) for more information and the procedure for removing a child from a parent item.

C. **General Information:** Three general categories of evidence are encountered during normal laboratory operations: (1) submitted, (2) obtained from a crime scene and (3) lab-generated evidence.

1. Submissions received over the counter are generally entered into LIMS by clerical staff. It is the responsibility of the analyst to account for all evidence within a Submission, itemizing at level 2 and below in LIMS, to capture evidence information concisely.

   a. The analyst will use the number format defined in Section A to itemize all evidence in LIMS. See QA.09 for information regarding unit specific requirements for shared evidence.

   b. Note: For swabs collected from guns ONLY, the analyst may use an itemization scheme that results in a deviation from the hierarchical relationship in LIMS (described in Section A). The description of the item MUST clearly describe the source of the swab.

2. Crime scene evidence is entered into LIMS by an analyst.

   a. It is the responsibility of the analyst to account for all evidence within a Submission, itemizing at level 2 and below in LIMS, to capture evidence information concisely for all evidence for which there is a known expectation for analysis by the FSD. The

analyst will use the number format defined in Section A to itemize all evidence in LIMS. See QA.09 for information regarding unit specific requirements for shared evidence.

b. It is the responsibility of the analyst to appropriately group the evidence and ensure the accuracy of Submission information for evidence the lab cannot or will not examine.

3. Lab-generated evidence is entered into LIMS by technical staff.

4. The table below reflects relationships and the results of actions conducted during the process of Itemization in LIMS.

	Itemize	**Split**	**Containerize**
Purpose	create a child item at level 2 or below.	remove a child item from its parent	remove a child item from its parent and containerize in another submission
Container Field	no change (shows parent)	changed to blank	changed to new parent
Inherit Field	original parent	original parent	original parent
Chain of Custody	shared with parent	inherits parent, becomes independent	shared with new parent item
Transferred	with parent	by itself	with new parent

D. All Section Managers must be consulted prior to any alterations to this policy.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 05/03/2019	**NUMBER:** FSD.40 - Sampling
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.3	
CHAPTER: Evidence	**SUBJECT:** Sampling	

I. Policy: Each Technical Unit where sampling occurs will document in their technical unit manual a sampling plan and method.

A. Definition:

1. **Sampling:** Selection of a sample for testing, according to a procedure. The approach to sampling can be either non-statistical or statistical. The intent of ISO/IEC 17025 is that the activity of sampling occurs prior to the item being submitted to the laboratory. A laboratory can choose to perform further sampling after receipt of the item, in which case the requirements for sampling are applicable.

B. Where sampling occurs, the Technical Unit shall have a sampling **plan** and **method** when it carries out sampling of substances, materials or products for subsequent testing.

1. The **sampling plan and method** shall be available at the site where sampling is undertaken.

2. Sampling plans shall, whenever reasonable, be based on appropriate statistical methods.

C. The sampling method shall:

1. Describe the selection of samples

2. Describe the sampling plan

3. Describe the preparation and treatment of sample(s) from a substance, material, or product to yield the required item for subsequent testing

4. Require statistical sampling at a stated level of confidence if an inference will be made to report on the whole population

D. The Technical Unit shall retain records of sampling data that forms part of the testing, and include:

1. Reference to the sampling method used

2. Date and time of sampling

3. Data to identify and describe the sample (e.g. number, amount, name)

4. Identification of the personnel performing sampling

5. Identification of the equipment used

6. Environmental or transport conditions

7. Diagrams or other equivalent means to identify the sampling location, when appropriate

8. Deviations, additions to or exclusions from the sampling method and sampling plan.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 07/09/2019	**NUMBER:** FSD.42.01 - Diagrams, Photographs & Digital Images
	RELATED ORDERS: QA.21 Veripic Procedure	
APPROVED BY: Pamela Hofsass	**ANAB 7.5**	
CHAPTER: Case Records	**SUBJECT:** Diagrams, Photographs & Digital Images	

I. POLICY Diagrams and photographs may be used to document observations made by the analyst at a crime scene or during an evidence examination. Diagrams and photographs should accurately reflect their subject and be properly labeled when they appear in examination documentation. Photographs relied upon to form substantive conclusions in casework shall be treated as evidence and handled accordingly.

A. **Definitions**

1. A diagram is a plan, sketch, drawing, digital scan (by laser scanner), or outline designed to explain or demonstrate how something works or to clarify the relationship of the parts of a whole.

   a. A scale diagram is a drawing with dimensions at a specific ratio relative to the actual size of the object drawn. For crime scene plan-type diagrams, the notation "Not to Scale" should be included if the diagram is not drawn to scale. All other hand-drawn diagrams in examination notes should be considered not drawn to scale unless otherwise indicated.

2. A photograph is an image captured by a camera, either using emulsion-based film or digital media, that is intended to document the visual characteristics of a scene or object.

B. **Inclusion of Diagrams and Photographs in Examination Notes**

1. When placing a diagram in laboratory notes, the analyst should keep in mind the following guidelines:

   a. At a minimum, the diagram should be labeled with a title, orientation information (for example, a notation as to which direction is North or up), and scale, if necessary.

   b. The diagram should be made large enough to allow labels, measurements, and comments to be written alongside the appropriate parts of the diagram. Alternatively, a symbol system may be used with a legend or key identifying the items or parts of interest.

2. When placing a photograph in laboratory notes, the analyst should keep in mind the following guidelines:

   a. The subject of the photograph should be in focus, with sufficient exposure, depth of field, and proper lighting to show the features intended to be documented.

b. If a feature or observation of interest is not discernible in a particular photograph, then another image should be created under conditions that adequately depict the observation.

3. Retention and Representation

a. The case file shall indicate where the archived photographs are stored.

b. All retained photographs shall be represented in the **case file** so it is clear what photographs have been archived; this may be accomplished by:

i. Including an inventory of all retained photographs, such as:

1. A printout of the thumbnail images of the photographs with their respective file names.

2. A photograph log, including a unique identifier and brief description for each photograph.

ii. Embedding all of the retained photographs in the examination notes (for example, on a worksheet or other electronic note page).

iii. Making a text-only reference to each retained photograph using a unique designation (for example, "Digital Image 1-1, IMG_0001, 14-123-1, dollar bill, ninhydrin").

C. **Labeling**

1. Digital images used to document the basis for a conclusion shall be labeled with the filename or item number of the evidence item depicted.

2. Digital images used for general documentation should be labeled with the filename, image reference number, or item number on the printed image in the examination notes.

3. If not otherwise indicated in the case file, a brief description of what is being depicted in a particular printed photograph should accompany the image in the examination notes. An exception to this is when a series of thumbnail-sized images (for example, photo contact sheets) is printed for the purposes of providing a quick reference to the various digital images that may be associated with a particular case file. Handwritten or typed annotations should be added to an image in the examination notes to clarify what is being depicted or draw attention to a particular observation of interest, if appropriate.

D. **Treating an Image as Evidence**

1. When printed photographs are used for comparison and relied upon as the basis for a reported conclusion regarding the identity or origin of an impression or object depicted in the photographs, the prints shall be treated as evidence from that point forward, to include proper labeling, packaging, and tracking via LIMS.

a. When evidence suitable for comparison examinations (for example latent prints, impressions) cannot be collected or preserved using physical techniques (tape lifts, silicone casts), examination-quality digital images shall be taken and subsequently treated as evidence. Examination-quality photographs for comparison purposes are those that accurately record the maximum amount of detail present in an impression, with minimal optical distortion. These photographs shall include a scale for reference. Any digital

photographs (including the original electronic file and any processed or printed copies) used for comparison and relied upon as the basis for a reported conclusion regarding the identity or origin of an impression or object depicted in the photographs shall be handled as evidence.

2. Examination quality digital images should be captured using a lossless file format (for example, RAW or TIFF). If compressed image files (JPEG) are received into the laboratory for comparison examination purposes, copies should be made in a lossless file format prior to processing or examination to prevent progressive degradation of the original image.

3. If multiple images depicting the same item of evidence have been captured, the analyst may select the image or images that best represent the item for preservation as evidence.

E. **Image Enhancements**

1. The analyst shall use a working copy of the original file for image processing, including enhancement, restoration, or compression. After processing, the image shall be saved as a separate file. The original image file shall not be altered. Renaming an original image file from the filename designated by the camera at the time of image capture is acceptable.

2. A brief description of the processing applied to the final image file shall be recorded in the examination notes by the analyst. For example, "image cropped; brightness and contrast adjusted".

   a. If image enhancement techniques beyond basic cropping, brightness, or contrast adjustments have been applied to an image, the image processing program used, including the version, should be recorded.

3. The documentation of the image processing steps should be sufficient to permit a comparably trained individual to understand the techniques used and to achieve a comparable final image. Every change to every pixel value of an image does not need to be documented.

4. Exploratory processing operations not incorporated into the final saved or printed image do not need to be documented. Test prints and/or intermediate images resulting from a variety of techniques not incorporated into the final image may be discarded.

F. **Storage and Retention**

1. Non-evidentiary digital images:

   a. Files captured using cameras shall be archived by storing in VeriPic (see QA.21) or LIMS. Original and enhanced digital files shall be archived.

   b. Files captured using tablet computers for general documentation purposes are not required to be archived as they shall be retained by embedding in the case file.

2. Crime scene digital images:

   a. All crime scene digital images shall be archived.

   b. Memory cards from digital cameras containing photographs from a crime scene do not need to be retained as evidence. A memory card may be

reformatted for use after downloading the image files to a suitable medium (for example, hard drive or CD/DVD).

c. Poorly exposed, out of focus, or otherwise unusable images taken at a crime scene may be deleted from the final collection of archived images at the discretion of the analyst. If a photograph is rejected (deleted), the reason, the identity of the individual(s) taking the action, and date shall be recorded in the technical record. The sequence of file numbers associated with the entire collection of digital photographs from a particular case do not need to be consecutive.

3. Evidentiary digital images must be stored on archival-quality optical discs or other suitable media, properly packaged and labeled, and tracked in LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 07/25/2019	**NUMBER:** FSD.42 - Test Records
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.5	
CHAPTER: Test Records	**SUBJECT:** Test Records	

I. POLICY Technical Unit Manuals will have procedures that will specify what technical and administrative records will be contained within the test record and the location of any records not in the case file.

A. **Definitions**

1. **Test Records** are administrative records and technical records generated or received by a laboratory pertaining to testing performed, which may be stored in one or more locations.

   a. The **Case File** is a part of the test record that contains the report, and all or a portion of the technical records and the administrative records for a particular case. The case file at minimum will contain the report and technical documentation necessary to support the results.

2. **Technical Records** are accumulations of data and information which result from carrying out tests, they include:

   a. Original observations

   b. Tests conducted

   c. Reagents, standards, or controls used

   d. Results of examinations

   e. Photographs or diagrams

   f. Forms

   g. Instrumental data

   h. Worksheets

3. **Administrative Records** are records that do not constitute data or information resulting from testing, they include:

   a. Communication logs

   b. Evidence (test-item) receipts

   c. Chain of custody records

   d. Police or incident reports

e. Request forms

B. **Technical Record Requirements**

1. Technical records must be labeled with a unique test record identifier (laboratory number).

2. The technical records for each laboratory activity must contain the results, report, and sufficient information to facilitate, if possible, identification of factors affecting the measurement result and its associated measurement uncertainty and enable the repetition of the laboratory activity under conditions as close as possible to the original.

   a. *"The overall requirement from a quality point of view is that data must be recorded at the time of observation and in such a way that there is a complete audit trail so that errors can be traced and work can be repeated in a manner as near to the original as possible. It must be possible to trace a result to the person who made the measurement and the equipment used and to identify precisely the method used. This means that the audit loop can be closed, making it possible to check that the work was done by a trained member of staff, using appropriate methods, on correctly functioning and calibrated equipment."* (excerpt from: *A practical guidebook for meeting the requirements of laboratory accreditation schemes based on ISO 17025:2005 or equivalent national standards*, UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION, 2009)

3. The technical records shall include the **date** and the **identity** of personnel responsible for each laboratory testing task and for checking data and results.

4. Records shall be created or maintained in a permanent manner.

   a. For example, technical records originally captured in pencil (e.g., a rough sketch) can be maintained in a permanent manner by photocopying, scanning, or taking a photo.

5. The **Technical Unit Manual** must define the technical record(s) to be retained if all related technical records are not maintained.

6. Original observations, data, and calculations shall be recorded at the time they are made and shall be identifiable with the specific task.

   a. Options for recording observations include, but are not limited to: written notes, photography, drawing, photocopying, or scanning.

7. If an observation, data, or calculation is rejected (**during testing, verification, or review**), the reason, the identity of the individual(s) taking the action and the date shall be recorded in the technical record.

8. Where abbreviations or symbols specific to the forensic service provider are used, the meaning of the abbreviations or symbols shall be defined in the **Technical Unit Manuals**.

9. Technical records to support a report (including results, opinions, and interpretations) shall be such that, another reviewer possessing the relevant knowledge, skills, and abilities could evaluate what was done and interpret the data.

10. Amendments to technical records must be tracked to previous versions or to original observations. Both the original and amended data and files shall be retained,

including the date of alteration, an indication of the altered aspects, and the personnel responsible for the alterations.

a. Corrections or alterations to **handwritten records** must be made in such a way that the original version can be read. The approved method is to cross out the original with a single line and write in the corrected version as near to it as possible. All such alterations shall be initialed and dated by the person making the correction. The original version cannot be marked out; erased, made illegible or deleted.

b. Corrections or alterations to **electronic records created in LIMS** will be tracked electronically in LIMS.

c. Corrections or alterations to **electronic records created outside of LIMS** (worksheets, forms, etc.) will be tracked, with the exception of contemporaneous revisions. Contemporaneous revisions are not considered amendments. For the purposes of applying the requirement to track amendments to technical records, contemporaneous is defined as occurring in the **same period of time**. Corrections or alternations made to the technical record during the same period of time as each testing activity or task do not need to be tracked.

i. Example of tracking alterations: An analyst is working on a comparison case over a couple days. On day one the analyst records a result for item #1 that is an exclusion. On day three, that result is revised to an identification. The change to entries made on day three to work performed on day one is **not** contemporaneous; the changes occurred over different periods in time and the amendment would need to be tracked.

ii. Example of contemporaneous revision: An analyst is working on a ballistic imaging case over a period of a couple hours, and the analyst has the electronic worksheet open until the case is completed. While working on the case, the analyst makes a change in the worksheet. When the work is complete, the analyst saves the changes to the worksheet and draft completes the case. This is an example of an acceptable contemporaneous revision. The technical record was created when the analyst started working and all work occurred during one period of time.

11. Technical records must be paginated. Each page of the technical records will be numbered when there are multiple pages.

a. The first and last page of technical records must include the total number of pages.

b. If pages must be inserted into a set of previously numbered technical records, each inserted page shall be serially numbered using the number from the previous page, plus a letter suffix, for example, 21a, 21b, and 21c. The first and last page shall be updated with the new total number of pages and a notation including the pages inserted.

c. When a page of the technical record is to be disregarded, a single line is drawn diagonally across the page, including the analysts initials, date and a brief explanation about the change.

d. Double sided technical records are not allowed.

12. Verification will be conducted by an individual who is currently authorized to perform the testing.

    a. A record of the verification will be made and the record will identify who performed the verification, when it was performed, and the results of the verification.

    b. **Technical Unit Manuals** will have a procedure to address situations where the verification does not agree with the original test result.

    c. The resolution shall be recorded.

13. Discrepancies between the submitting agency description of items and the physical inventory of evidence will be noted in the test record. Minor terminology discrepancies may not require changing the LIMS evidence description. However, the evidence description in LIMS MUST reflect what is physically present even if different from the description provided by the submitting agency.

    a. It is the responsibility of the analyst opening and inventorying the evidence to ensure the LIMS evidence description is correct.

    b. Discrepancies observed for items that have high theft potential, such as controlled substances, money, jewelry or firearms, must be verified by another employee of the laboratory, as soon as practicable. The discrepancy will be documented in the test record.

C. **Administrative Records**

1. Administrative records shall be identifiable to a unique test record identifier (laboratory number).

    a. Administrative records received or generated by the laboratory for a specific case shall be identified with the laboratory number, initials, and date.

    b. Administrative Records that contain data from multiple cases must include all associated lab numbers.

    c. Multi-paged administrative records that are bound together only require the laboratory number, initials, and date on the first page.

2. Corrections or alterations to handwritten records must be made in such a way that the original version can be read. When corrections, alterations or insertions are made by Division staff, the approved method is to cross out the original with a single line and write in the corrected version as near to it as possible. All such alterations shall be initialed and dated by the person making the correction. The original version cannot be marked out; erased, made illegible or deleted.

D. **Release of Test Records**

1. For routine report distribution, see FSD.43.

2. For distribution of test records via discovery, subpoena, or court order, see FSD.45.

3. Test records may be released as indicated below:

    a. When requested by the investigating agency, crime scene photographs or photographs taken to document evidence before any testing or alteration may be released.

b. When requested by the investigating agency, the evidence inventory, crime scene sketches/diagrams, and processed or unprocessed scanner data may be released.

c. When requested by another forensic entity to complete testing that was initiated by the customer or lab, test records may be released.

d. When authorized by the Chief of Forensics, test records may be released to an outside entity.

4. The release will be documented in the test record and will include:

a. The records released

b. The individual or entity receiving the records

c. The date the records were released

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/29/2019	**NUMBER:** FSD.43 - Test Reports
	RELATED ORDERS: QA.04 - Amending Reports, QA.07 - Confidential Reports, FSD.17 - Technical Review, FSD.18 - Administrative Review, FSD.31 - Subcontracting & Externally Directed Analysis, FSD.45 - Discovery Requests for Records	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.4 (disposition), 7.8	
CHAPTER: Case Records	**SUBJECT:** Test Reports	

I. POLICY: The results of testing shall be provided accurately, clearly, unambiguously and objectively, in a report, and shall include all the information agreed with the customer and necessary for the interpretation of the results and all information required by the method used. All issued reports shall be retained as technical records. The results shall be provided in a written report or through electronic access.

A. The laboratory shall be responsible for all the information provided in the report, except when information is provided by the customer. Data provided by a customer shall be clearly identified. In addition, a disclaimer shall be put on the report when the information is supplied by the customer and can affect the validity of results.

B. The results shall be reviewed and authorized prior to release. The authorizer of results shall review the technical record and document the review. The individual DRAFT COMPLETING the report will review the technical record and document the review by placing their initials on each page of the notes in the case file.

C. The report header will contain:

1. The LIMS (Laboratory Information Management System) generated laboratory number including request number
2. A title such as "Report of Laboratory Examination"
3. The case type
4. The name and address of the laboratory
5. The requesting agency name and case file number
6. The requesting agent's name
7. The request date
    a. The request date in LIMS will be the date the first submission of evidence associated with a request is received into the laboratory accompanied by a complete request for analysis, such that work can begin. The request date will not change for evidence that is shared between units.
    b. If the request cannot be logged-in or worked due to missing information, incomplete submissions, or any other reason, the request date may be changed to the date when all required information and/or submissions are present in

the laboratory. A note will be put into LIMS to reflect the reason the request date does not match the date the first submission was received.

8. The individuals or entities related to the case (Victims, Suspects, Subjects, or Police Officers).

D. The report body will contain:

1. The location of performance of the laboratory activities if it is different from the address of the laboratory

2. The page number and total number of pages which provide unique identification that all its components are recognized as a portion of a complete report and a clear identification of the end

3. The name and contact information of the customer

4. Identification of the method used. It must be clear to the reader of the report which method(s) were used for each item tested.

5. A description of, the condition of, and unambiguous identification of all items received (including those items tested and those items not tested), and items collected or created (that were tested or are preserved for future testing)

6. The disposition of all items received (including those items tested and those items not tested), and items collected or created (that were tested or are preserved for future testing)

7. The date of receipt of the test item(s), and the date of sampling, where this is critical to the validity and application of the results

8. The date(s) of performance of the testing. Date(s) may be reflected as a range of dates.

9. The date of issue of the report

10. Reference to the sampling plan and sampling method used by the laboratory or other bodies where these are relevant to the validity or application of the results

11. The test result for all items tested with units of measurement

    a. When relevant, a statement to indicate that the results relate only to the items tested

    b. When relevant, a statement to indicate an item was not tested or is being preserved for testing

12. When relevant, a statement on deviations or exclusions from or additions to the test method or the specific test. See FSD.27 for more information about deviations

13. Identification of the person(s) authorizing the report

14. Clear identification when results are from external providers

15. Where applicable, information on specific test conditions, such as environmental conditions

16. Where relevant, a statement of conformity with requirements or specifications (eg. Title 17)

17. Where applicable, the measurement uncertainty presented in the same unit as that of the measurand or in a term relative to the measurand (e.g. percent) when:

    a. It is relevant to the validity or application of the test results;

    b. A customer's instruction so requires, or

    c. The measurement uncertainty affects conformity to a specification limit;

18. Additional information that may be required by specific methods, authorities, customers or groups of customers.

E. When opinions and interpretations are reported, they will be clearly marked as such on the report. **The technical unit will have a procedure to**:

1. Ensure opinions and interpretations expressed in reports are based on the results obtained from the tested item(s)

2. Address how to document the basis upon which the opinions and interpretations have been made

3. Ensure opinions and interpretations are accurate and properly qualified and supported by the technical record

4. When opinions and interpretations are directly communicated by dialogue with the customer, a record of the dialogue shall be retained.

F. When associations are reported, they will be clearly communicated on the report. **The technical unit will have a procedure to**:

1. Address the terms used to convey the strength of an association (e.g. "likely", "consistent with", "match", "common source")

2. Address how to properly qualify the significance of associations, whether by a statistic or qualitative statement

3. Ensure reported language for strength and significance is consistent with established laboratory interpretation standards

G. When no definitive conclusion can be reached (inconclusive result), the report shall clearly communicate the result. **The technical unit will have a procedure to**:

1. Describe how to clearly communicate the reason(s) no definitive conclusions can be reached

H. When a database is searched (CODIS, AFIS, NIBIN), the extent of the search will be clearly communicated and updated as needed. **The technical unit will have a procedure to**:

1. Require reporting of the initial database entry

2. Require reporting of an association resulting from a database search

3. Address how to communicate the scope of the search (local, regional, state, or national), the frequency of the search (continuous, once, periodically), and how long the sample will be searched (always in the database, circumstances under which the sample would be removed from the database).

I. When measurement uncertainty is reported, it will be clearly marked on the report. **The technical unit will have a procedure to:**

1. Require inclusion in the report or an annex to the report when it impacts the evaluation of a specification limit stated by a regulatory body, a statute, case law, or other legal requirement
2. Include the measured quantity value, y, along with the associated expanded uncertainty, U, and the coverage probability
3. Be in the format of $y \pm U$
4. Be limited to at most two significant digits, unless there is a documented rationale for reporting additional significant digits
5. Be reported to the same level of significance (i.e., same number of decimal places or digits) as the measurement result

J. When a statement of conformity to a specification or standard is provided, it will be clearly marked on the report. **The technical unit will have a procedure to:**

1. Document the decision rule employed, taking into account the level of risk (such as false accept and false reject and statistical assumptions) associated with the decision rule employed, and apply the decision rule. Where the decision rule is prescribed by the customer, regulations or normative documents, a further consideration of the level of risk is not necessary.
2. Ensure the statement clearly identifies:
    a. To which results the statement of conformity applies
    b. Which specifications, standards or parts thereof are met or not met
    c. The decision rule applied (unless it is inherent in the requested specification or standard

K. When the results of sampling are reported it will be clearly marked on the report. **The technical unit will have a procedure to include the following, where necessary for the interpretation of results:**

1. The date of sampling;
2. Unique identification of the item or material sampled (including the name of the manufacturer, the model or type of designation and serial numbers, as appropriate)
3. The location of sampling, including any diagrams, sketches or photographs
4. A reference to the sampling plan and sampling method
5. If statistical sampling is used, the report shall contain the confidence level and corresponding inference regarding the population
6. Details of any environmental conditions during sampling that affect the interpretation of the results
7. Information required to evaluate measurement uncertainty for subsequent testing or calibration

L. When there is an operational need, an analyst in one unit may be asked to perform analysis under another unit's request. An example is a Biology Unit staff member presumptively testing a substance on a gun being analyzed in the Comparative Evidence Unit to determine if it may be blood or a Latent Unit staff member being asked to evaluate a possible fingerprint on a knife being analyzed in the Biology Unit.

1. The results of the testing will be included in the final report, along with the identity of the individual conducting the analysis

2. The individual conducting the analysis will document the testing in the notes and indicate the language to be included in the final report. The notes will include the analyst's initials, or secure electronic equivalent, and the date.

3. The results will be technically reviewed of the analysis and report language by an authorized individual. The technical reviewer will document the review in the notes and will include the reviewer's initials, or secure electronic equivalent, and the date.

II. Releasing Results Prior to the Completion of a Test Report

A. A result can be provided to a customer entitled to the test report prior to the completion of the written test report.

1. If there is any doubt to the identity of the individual seeking the result, the result will not be released and the request will be referred to a supervisor for resolution

2. Sufficient work will be performed to obtain a result that is accurate and supported by the technical record.

3. If applicable, the result will be properly qualified when provided to the individual.

B. The result must be technically reviewed by an authorized individual prior to releasing the information.

C. The release of the result will be documented in the test record. The documentation will include:

1. What result was released

2. Who technically reviewed the result

3. Who released the result

4. When the result was released

5. Who the result was provided to

D. A written test report will be issued when all analysis is complete.

III. Distribution of Test Reports

A. Test reports will be routinely provided to:

1. The requesting or investigating (Primary) agency

2. Related investigating agencies

3. The District Attorney's Office

4. Other entities entitled to the report by statute, law, discovery, or court order

5. Other entities when authorized by the requesting agency or Chief of Forensics

B. Test reports are distributed via the Automated Regional Information Exchange System (ARIES). ARIES is a restricted access intranet site for secure transmission of test reports.

C. If a report has been finalized and is needed urgently (for court or investigative purposes), but is not yet able to be viewed in ARIES, the report may be provided to the customer. The

date and name of the agency receiving the report must be recorded in the test record.

D. For non-ARIES distribution (agencies or entities that do not have access to ARIES), the date and name of the agency receiving the report must be recorded in the test record.

IV. "No Work Done" Report, Partial Work Performed Report, and Canceled Requests

A. "No Work Done" Reports

1. When the laboratory determines that the requested work cannot or will not be performed, a report will be issued to the customer. The reason the requested work was not performed will be articulated in the report.

    a. The Forensic Services Division has the discretion to what extent the services requested will be performed. See FSD.14 for additional information.

2. When the agency cancels a request for service and no work has been performed, a report will be issued. The identity of the individual canceling the request will be included in the final report.

B. Partial Work Performed Reports

1. If work is halted for any reason, the results of any work performed (including partial testing) will be communicated to the customer through a written test report. The reason the work was halted will be included in the final report.

C. Canceled Requests

1. A request may be canceled by a Supervisor, Manager, or Chief of Forensics when the request has been created due to a data entry error (eg. duplication of the request). The reason for the cancelation will be recorded in the test record.

V. Amended Reports

A. Amended reports are not required when the submitting agency has provided the incorrect information. In these cases, it is at the discretion of a Supervisor, Manager, or Chief of Forensics to initiate an amended report.

B. An amended report will be issued when Division staff make an error in a report that has been released to a customer.

1. When an issued report needs to be changed, amended, or re-issued, any change of information shall be clearly identified and, where appropriate, the reason for the change included in the report.

2. Amendments to a report after issue shall be made only in the form of a further document which includes the statement "Amendment to Report" or an equivalent form of wording.

3. When it is necessary to issue a complete new report, this shall be uniquely identified and shall contain a reference to the original that it replaces.

4. The amendment may only be made if the laboratory has the original report.

C. See QA.04 for more information.

VI. Confidential and Restricted Reports

A. Confidential Reports

1. Confidential requests are designated by the submitting agency or when there is a legal need. Confidentiality may be necessary to:
    a. Protect the privacy of the individual under investigation
    b. Protect the integrity of an investigation
    c. Limit knowledge of information related to high profile cases
2. Laboratory employees may not discuss the results of confidential requests with others, except a Supervisor, Manager or Chief of Forensics, the requesting person, or as necessary to perform the requested examination(s).
3. See QA.07 for:
    a. Acceptance procedures
    b. Notification procedures
    c. Distribution procedures
    d. Storage procedures

B. Restricted Reports

1. Reports not intended for normal distribution via ARIES, but not truly confidential (eg. officer involved crime scene request), may be designated as restricted by the laboratory. See QA.07 for more information.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 04/17/2019	**NUMBER:** FSD.44 - Control of Records
	RELATED ORDERS: FSD.20 - Quality Audit QA.16 - Internal Audit Procedure FSD.19 - Management Review FSD.21 - Competency, Training, Authorizations & Ethics QA.12 - LIMS Training Module Procedure FSD.15 - Non-Conforming Work and QA Actions FSD.27 - Method Selection & Validation QA.18 - Quality Assurance Action Request Procedure	
APPROVED BY: Pamela Hofsass	**ANAB:** 4.13	
CHAPTER: Case Records	**SUBJECT:** Control of Records	

I. POLICY: The laboratory will have controls for identification, storage, protections, back-up, archival, retrieval, retention time, and disposal of records used to demonstrate fulfillment with accreditation standards.

A. Technical Records

1. **Identification:** Case Files contain administrative and technical records generated or received by a laboratory pertaining to a particular case and include test report, records of observations and test/examination results, instrumental data, photographs, conversation logs, evidence receipts, police reports. They are uniquely identified with a laboratory number and request number.

   a. As of 3/1/2013, the official test report is created, stored and retrieved in an electronic format (in JusticeTrax LIMS).

   b. Prior to 3/1/2013, the official report varied by unit (either hard copy or electronic).

   c. The official supporting technical records may be created, stored and retrieved in electronic, written, or hybrid format.

2. **Storage:**

   a. Physical Storage of case files/reports will be in a secured location under the management of the Administrative Staff. .

   b. Electronic laboratory reports and technical records will be maintained in LIMS or other data management systems.

3. **Protections**

   a. Case files are stored in limited access facilities protected by a security system.

   b. The information contained within technical records will be restricted to those that have a need or a right to know.

   c. No original reports and/or notes should be removed from the laboratory except as a result of a court order.

i. In the event the Court orders the laboratory to produce the original report and/or notes, the staff member releasing the report shall place a photocopy of the court order, report and notes in the file with a note attached explaining the circumstances of the removal of the report, date and initials of the staff person.

d. Copies can be made for the purposes of technical and administrative review. No original copies will leave the Forensic Services Division.

4. **Back-up**

a. Records are backed up by the Sheriff's Technical Services Division or as specified in the Technical Unit Manual.

5. **Archival**

i. Several years (amount dependent on storage capacity) of paper reports and case notes are found in file cabinets in the office areas of the Muir and Summit facilities.

ii. Older paper reports and case notes are stored at a secured off site facility pending electronic conversion.

6. **Retrieval**

i. The clerical staff are responsible for the filing and maintenance of hard copy case files

ii. Case files are typically filed in numerical order according to the Division's laboratory number

iii. Electronic case files are indexed in LIMS by the Division's laboratory number

iv. Records are readily retrievable in facilities that provide suitable environment to prevent damage or loss.

v. Routine access to hard copy case files is limited to Clerical Staff, or those assigned in an acting equivalent role. If needed, the following individuals, or their designee, may access case files:

i. Chief

ii. Forensic Managers

iii. Forensic Supervisors

vi. FSD staff have access to case files stored electronically (unless restricted in LIMS-see QA.07).

7. **Retention time**

a. Retention practices take into account legal requirements (statute of limitations).

b. Homicide and sexual assault case files are retained indefinitely.

c. Other than the exceptions above, case files will be retained in accordance with the Contra Costa County Records Department policy or minimally 7 years.

8. **Disposal**

a. The Section Manager is responsible for disposal of the hard copy technical records.

b. Once retention time frames are met, original laboratory reports, case notes, and photographs for offenses other than the exceptions can be discarded or returned to the primary agency.

c. Prior to discarding a case file, the documentation will be captured electronically.

B. Quality Records

1. **Identification:** Quality Records contain documentation related to the Quality Management System. The name of the record identifies the type, for example:

a. Audits and assessments

b. Management reviews

c. QA Actions

d. Competency and proficiency tests

e. Statements of qualification

f. Court testimony monitoring

2. **Storage:** Quality records may be created, stored and retrieved in electronic, written or hybrid format.

a. Typically reports from internal audits and management reviews are stored electronically. FSD.20 , QA,16 & FSD.19 .

b. QA Actions, proficiency and competency records, staff SOQs, and court testimony monitoring are stored in LIMS. See FSD.15 , FSD.27 & QA.18.

3. **Protections**

a. The information contained within Quality Records will be restricted to those that have a need or a right to know.

4. **Back-up:** Records stored electronically are backed up by the Sheriff's Technical Services Division.

5. **Archival:** Older paper or electronic records may be stored in limited access facilities protected by a security system.

6. **Retrieval:**

a. The Quality Assurance Coordinator is responsible for ensuring the proper filing and maintenance of quality records. Quality Records are typically maintained in

i. FSD Quality Assurance Folder (secure drive)

ii. LIMS

b. The following individuals have access to the files containing quality records:

i. Chief

ii. Quality Assurance Coordinator

iii. Forensic Managers

iv. Forensic Supervisors

v. Individuals granted access by the Chief or Quality Assurance Coordinator

7. **Retention Time**

a. Electronic copies of audits and assessments, management reviews, QA Actions, competency and proficiency tests, statements of qualification, and court testimony monitoring will be kept for at least one accreditation cycle (4 years).

8. **Disposal**

a. The Quality Assurance Coordinator is responsible for disposal of the quality records

C. Purchasing Records

1. **Identification:** Records of purchases of external supplies or services that affect the quality of tests are identified as purchasing documents

2. **Storage:** Records may be created, stored and retrieved in electronic, written or hybrid format.

a. Purchasing records are typically stored in a database (Muir) or binders (Summit)

3. **Protections:**

a. The information contained within Purchasing Records will be restricted to those that have a need or a right to know.

b. Hard-copy records are stored in limited access facilities protected by a security system

4. **Back-up:** Records stored electronically are backed up by the Sheriff's Technical Services Division.

5. **Archival:** Records may be archived at the Sheriff's Office Fiscal Dept.

6. **Retrieval:** Typically, the clerical, other support staff, or Section Manager is responsible for ensuring the proper filing and maintenance of purchasing records.

7. **Retention Time:** Purchasing records will be maintained for at least one year.

8. **Disposal**: The Section Manager is responsible for disposal

D. Selection of Personnel Records

1. See FSD.03 for more information on records maintained by the FSD

2. Sheriff's Office Human Resources also maintains records for selection of personnel.

E. Personnel Records

1. See SO Policy 1.05.82 for more information of employee personnel files.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 02/02/2017	**NUMBER:** FSD.45 - Discovery Requests for Records
	RELATED ORDERS: CLER.CRIM.11, CLER.DAT.12, CLER.DAT.07, TOX.10, FSDF.10 - Subpoena Duces Tecum Notification/Compliance Form and BA.43	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Case Records	**SUBJECT:** Discovery Requests for Records	

I. POLICY Forensic Services Division staff will comply with all reasonable and legitimate discovery requests and will adhere to CCCSO Policy 1.06.71.

A. **Discovery**: refers to the pre-trial tools that can be used by one party to obtain facts and information about the case from the other party in order to assist the preparation for trial.

1. Discovery requests to produce case files and other case-related materials resulting from the analysis of evidence in criminal cases are handled in accordance with the discovery procedures below. The District Attorney's Office has access to completed laboratory reports via ARIES, see FSD.43. A request for any materials other than the report are considered a discovery request.

B. **Criminal Discoveries**

1. **Receiving a Request**

a. **All Criminal discovery requests must be in writing and received via the District Attorney's office; the District Attorney is considered the requesting party.**

b. The District Attorney's office should review discoveries for relevance before sending the request to the laboratory. If the discovery information sought appears to be unreasonable or irrelevant, a Supervisor or designee may contact the District Attorney's office for assistance in obtaining a modification to the discovery.

c. If a discovery request is received without a reasonable time period to meet the due date, the requesting party should be advised.

d. A Rush discovery request will be reviewed by a Supervisor so they may assess exigent circumstances.

e. A request by defense counsel for viewing the records in lieu of receiving the records may be honored following approval by the District Attorney's office.

2. **Generating & Tracking Discovery Requests**

a. **Discovery requests for each unit will be tracked via LIMS.**

b. Discovery requests will be dated upon receipt and brought to clerical or support staff for processing and entry into LIMS.

c. The discovery request is logged into LIMS and a scanned image of the request is attached.

d. Discovery requests that ask for materials from multiple technical units may be coordinated by a **section manager** that has the preponderance of the materials under their domain.

e. Discoveries associated with a laboratory number will be logged in as a subsequent request under the existing laboratory number.

f. Discoveries not associated with a laboratory number, e.g. breath cases, are given a **new lab number**. See CLER.DAT.12.

g. At any time, a Supervisor/Manager may view the status of open or pending discovery requests using LIMS reports (eg. **All Open Requests** or **Requests Awaiting Admin Review**).

3. **Assigning & Preparing Discovery Materials**

a. Discovery requests will be assigned to an appropriate technical unit staff member based on the nature and scope of the request.

b. **It is the responsibility of the assigned staff member to review the records being sought and determine what will (or will not) be released. If there are any questions about release of records, it is the responsibility of the Unit Supervisor or Section Manager to make a determination of what will (or will not) be released.**

i. **The laboratory will ONLY release Corrective Action documents, inclusive of Level 2 or Division Level Corrective Actions when supplied with a subpoena or Subpoena Duces Tecum (SDT) for the records.**

c. **It is the responsibility of the assigned staff member to request records they cannot access themselves (see table below) and review the prepared records to ensure completeness and suitability prior to release.**

d. See below for a list of commonly requested records and who is typically responsible for **preparing** those materials:

Record or Material Requested	Typically Prepared by:
Report, Notes and Chain of Custody	Clerical or Unit Staff
ASCLD/LAB Certificate (available on-line)	Unit Staff or Supervisor or QA Coordinator or QA Clerk
Proficiency or Competency Records	Unit Staff or Unit Supervisor
Training Records/Individual Certifications	Unit Staff or Unit Supervisor
Authorizations	Unit Staff or Unit Supervisor
Equipment/Reagent/Maintenance Logs	Unit Staff or Unit Supervisor
Raw Instrumental Data	Unit Staff or Unit Supervisor

Digital Images	Unit Staff or Unit Supervisor
Validations or Performance Verifications	Unit Staff or Unit Supervisor
Level 2 Corrective Actions	Unit Staff or Unit Supervisor
Division Corrective Actions	Unit Supervisor or Section Manager
Current Policy and Procedure	Unit Staff or Unit Supervisor or QA Coordinator or QA Clerk
Audit Reports*	QA Coordinator or QA Clerk *DNA Audit Reports obtained from Unit Supervisor
Archived Policy and Procedure	QA Coordinator or QA Clerk

e. When requesting policy and procedure from the QA Coordinator or QA Clerk, staff **MUST** include:

i. the active date(s)

ii. the name(s) of the document(s) being requested (eg. DRG.34 and DRG.60)

iii. the name(s) of the technical unit manual(s) being requested (eg. Biology QA/QC Manual and CODIS Manual)

4. **Completing a Discovery**

a. **Records may NOT be released until the Discovery Request is marked Administratively Reviewed in LIMS.**

b. **It is the responsibility of the assigned staff member to ensure the discovery is completed.** A completed discovery is one that:

i. Provides all the requested information or

ii. Indicates what information the lab can and cannot provide or

iii. Indicates what information the lab will and will not provide

c. Discovery requests should be completed in a timely fashion to avoid unnecessary continuances or dismissals of the judicial proceedings.

d. The discovery request, when completed, will be marked **Draft Complete** in LIMS by the assigned staff member.

e. A Supervisor or designee will review the records to ensure the completeness and suitability of the discovery, as requested, and mark the request **Administratively Reviewed**.

f. **If needed, it is the responsibility of the technical units to provide clarification or unit specific instructions or guidance in a technical unit manual policy or procedure.**

g. Any associated charges for copying or preparation of records may be charged to the defense counsel per the CCCSO Policy 1.05.68.

5. **Release of Discovery Records**

a. **For materials released outside of ARIES, a record of WHEN the materials were released and WHO the materials were released to must be retained.**

b. **The discovery records will ONLY be released to the District Attorney's office by one, or more, of the following methods (see below for exceptions):**

i. **Posted to ARIES**

1. In the LIMS imaging module, under the discovery request, select the image(s) to be released and check "Send to iResults". **The images will be available on ARIES 24 hours after the administratively reviewed milestone is checked in LIMS**.

2. If desired, multiple pdf documents may be concatenated prior to release, see "Electronic Batch Documents" under TOX.10 for more information.

ii. **Email**

1. The staff member emailing the records must document the release in LIMS or in the case file with a notation that includes the date of release and who the records were sent to.

iii. **Paper copy or Hard Copy**

1. The staff member releasing the records must document the release in LIMS or the case file with a notation that includes the date of release and who the records were released to.

iv. **Compiled on CD, DVD or other electronic media**

1. Release via electronic media is appropriate when the requested records are not amenable to be uploaded as images (e.g. digital images, raw data, very large documents, etc.).

2. Multiple copies of the electronic media may be provided.

3. The staff member releasing the records must document the release in LIMS or the case file with a notation that includes the date of release and who the records were released to.

c. A former laboratory employee may be provided their **CASE FILE** for the purpose of testimony at a criminal trial at the discretion of a supervisor. The supervisor may request to be provided with the subpoena for testimony prior to providing the case file or request the individual utilize the discovery process indicated above. Any records, other than the case file, must be obtained through the discovery process indicated above for the purpose of tracking what records the laboratory is releasing.

d. The District Attorney's office may authorize the release of records to a member of the Sheriff's Department (eg. Coroner's personnel for an inquest)

6. **Documentation and Retention of What Was Released**

a. **Regardless of the mechanism of release, the discovery materials or records of WHAT was released will be retained in one or more of the following ways:**

i. filed electronically as images with the request in LIMS

ii. as a paper copy with the case file

iii. as a CD/DVD (or other electronic media) with the case file

iv. as a LIMS generated report

C. **Civil Discoveries**

1. For Civil discovery requests, if there is a pending lawsuit, County Counsel or the defense counsel needs to serve a Civil Subpoena/Discovery Request to the laboratory for production of the records.

   a. If the records have any confidential information or if unsure of what needs to be released, staff need to notify their Supervisor.

   b. If needed, the Supervisor will facilitate consultation with County Counsel before releasing the records.

2. A former laboratory employee requesting records in a civil case should be instructed to contact the Sheriff's Office Records Unit.

3. The laboratory will follow the Criminal Discovery procedures (above) for:

   a. **generating/tracking**

   b. **assigning/preparing**

   c. **completing**

   d. **documenting when the documents were released and to who (as it will be outside of ARIES)**

   e. **documenting/retaining what was released**

D. **Subpoena Duces Tecum (SDT)**

1. Forensic Services Division staff will adhere to CCCSO Policy 1.05.68.

2. The Criminal SDT should be received via the Identification and Records Unit.

3. The original SDT will be date and time stamped and initialed by the person receiving it.

   a. Both FSD and Identification and Records Unit staff will review the SDT for validity based upon requirements within CCCSO 1.05.68.

   b. Identification and Records Unit staff will provide guidance and direction to FSD in the event of an invalid SDT.

4. Criminal SDT response time requires documents to be provided within 15 calendar days.

   a. If the laboratory cannot produce the records within the 15 calendar days the laboratory should seek an extension.

5. If the SDT is for court appearance, a minimum of 5 calendar days response time is required

6. Complete the Notification and Compliance Form and return to the Technical Services Records Unit Manager for recordation and audit/tracking

7. Any fee associated for copying and preparation of records is handled by the Identification and Records Unit with the defense counsel.

8. **Admin *Per Se* SDTs** (typically received from DMV on Alcohol cases) require documents to be provided for DMV hearings.

    a. The records need to be produced in 15 calendar days.

    b. If the SDT is for court appearance a minimum of 5 calendar days is required.

    c. The laboratory staff review the records for validity of records sought.

    d. The Identification and Records Unit Clerical Supervisor or Manager shall be notified of the receipt of the SDT by fax or email.

    e. Documents requested by the SDT will be copied. Original material shall not be provided to the requester.

    f. The copies will be certified by stamping in red ink (or electronic equivalent) indicating they are a true copy of the originals. The stamp format is as follows:

    I hereby certify that the annexed instrument is
    a true and correct copy of the original on file
    in my office.
    Dated_____
    By: _____
    Forensic Services Division

    g. Complete a Notification and Compliance Form. See FSDF.10 .

    h. PDF files can be created by JusticeTrax Imaging or other PDF generating programs such as PDFcreator and Adobe Acrobat Pro or equivalent. See TOX.10 for detailed procedures.

    i. Pages for the discovery record may be created separately and then combined into a single PDF file with an electronic signature page.

    j. If the official records are electronic, it is sufficient to create a secure electronic signature and display the signature and the date once for the entire electronic package. See BA.43 for creating a secure identity and electronic signature procedure.

    k. Scan the SDT, Notification and Compliance Form, and certified copies of provided documents and file electronically. See CLER.CRIM.11 and CLER.DAT.07 for more information.

    l. Forward the original SDT, Notification and Compliance Form, and Fee Document to the Records Unit for tracking and processing.

    m. The Records unit will handle collection of any fee associated with the compilation of the records.

    n. The laboratory will follow the Criminal Discovery procedures (above) for:

        a. **generating/tracking**

b. **assigning/preparing**

c. **completing**

d. **documenting when the documents were released and to who (as it will be outside of ARIES)**

e. **documenting what was released**

9. Retention of Completed SDTs:

a. Forensic Division personnel shall retain the electronic copies of the subpoena, the released material, correspondence, or other ancillary documents for a minimum period of three years from the scheduled production date. The file copy can be utilized for a court appearance should a request to testify to the documents arise.

E. **Other Discovery Requests**

1. Requests from official government/governing agencies, such as State Licensing Boards will be tracked through the discovery procedure. The laboratory will follow the Criminal Discovery procedures (above) for:

a. **generating/tracking**

b. **assigning/preparing**

c. **completing**

d. **documenting when the documents were released and to who (as it will be outside of ARIES)**

e. **documenting/retaining what was released**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 09/22/2015	**NUMBER:** FSD.46 - Business Hours
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Business Hours	

I. POLICY Normal Forensic Services Division business hours are 8:00 a.m. to 12:00 noon and 1:00 p.m. to 5:00 p.m., Monday through Friday.

A. The Forensic Services Division is open for routine business 8:00 a.m. to 12:00 noon and 1:00 p.m. to 5:00 p.m., Monday through Friday. During these hours, clients may conduct routine business with Division staff members.

1. Routine evidence submissions will be accepted during normal business hours except during the 12:00 p.m. to 1:00 p.m. hour.

   a. Urgent evidence submissions may still be accepted during the lunch break.

2. Phone calls will be answered during normal business hours, including the lunch break.

   a. Phone calls may be forwarded from one facility to another during normal business hours.

   b. The Chief may authorize the cessation of reception services. See FSD.53 for more information.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/26/2019	**NUMBER:** FSD.47 - Employee Orientation
	RELATED ORDERS: FSDF.01 - New Employee Orientation Checklist, QA.12 - LIMS Training Module Procedure	
APPROVED BY: Pamela Hofsass	**ANAB: 4.1**	
CHAPTER: Administration	**SUBJECT:** Employee Orientation	

I. POLICY New, assigned, contract, or volunteer employees will receive an orientation when they begin employment.

A. **Overview**

1. This process takes place in the first few days to weeks of employment.
    a. Although the process may take several days to weeks to complete, orientation should begin on the employee's first day of employment.
2. The purpose of orientation is to introduce a new employee to the County, the Sheriff's Department (SO), and the Forensic Services Division (FSD).
3. Orientation should make a new employee feel welcomed and valued by the FSD, and help a new employee feel comfortable in their role.

B. **Responsibilities**

1. It is the responsibility of the employee's supervisor to provide or arrange for the orientation and explain what's expected of new employees and provide a warm welcome to the FSD.
    a. The supervisor may assign other employees to assist in any portion of the orientation.

C. **Employee Benefits**

1. See New Hires for Contra Costa County and Instruction for New Hires

D. **The orientation should include, as applicable, an overview of the following:**

1. The organizational structure of the SO and FSD and the concept of Chain of Command
2. An introduction to key personnel within the FSD
3. Document control, including how SO and FSD policies and procedures are disseminated and accessed
4. Key SO and FSD policies
5. SO and FSD culture
6. FSD facilities, including a tour highlighting building awareness and safety equipment at each facility

7. Job description and expectations, including work assignment and work space
8. Safety Program, including safety training
9. Key administrative policies
10. Computers and networks

E. **Documentation**

1. A checklist, FSDF.01 , is available for the supervisors to ensure that the most important topics are covered during the orientation
2. Not all subjects in the checklist may be applicable to every new employee. A notation of N/A next to that subject may be used.
    a. The checklist may be imaged into the employees LIMS training module. See QA.12.
3. The completed checklist is retained by the Section Manager or designee.

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION**	**REVISION DATE:** 08/26/2019	**NUMBER:** FSD.48 - Separation from Employment
	RELATED ORDERS: SO Policy 1.05.76, FSDF.04 - Exit Interview Questionnaire, FSDF.05 - Exit Checklist	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Separation from Employment	

I. POLICY Managers will ensure that SO and FSD policy is followed for an employee's separation from employment with the Sheriff's Department.

A. It is the responsibility of the employee's **Manager** or their designee to ensure SO policy is followed upon separation. **See 1.05.76 for details**. Some responsibilities include:

1. Arranging an exit interview
2. Providing the employee the Notice of Voluntary Termination of Employment Form
    a. Note: The Termination of Employment Form (AK219) is found on SPARKS under Personnel and Fiscal forms.
3. Collecting items listed in SO policy, as applicable

B. In addition to following SO policy for separation, it is the responsibility of the employee's **Manager** or their designee to ensure the following:

1. FSDF.04 (Exit Interview Questionnaire) is completed
2. FSDF.05 (Exit Checklist) is completed
    a. The purpose of the checklist is to aid management in ensuring that all items are completed prior to the employee leaving employment.
    b. The exit checklist should be started prior to the last day since it may take time to close cases, transfer evidence etc.
    c. Not all subjects in the checklist may be applicable to every employee. A notation of N/A next to that subject may be used.
    d. The completed checklist will be maintained.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 09/17/2015	**NUMBER:** FSD.49 - Employee Recognition Program
	RELATED ORDERS: SO Policy 1.04.33, 1.04.23, 1.04.31	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Employee Recognition Program	

I. POLICY Employees will be recognized and appreciated for meritorious performance.

A. A Forensic Services Division Employee of the Month may be selected if the employee's performance is deemed exceptional and department-wide recognition is appropriate. An Employee of the Month may not be selected each month.

1. The Employee of the Month recommendation will be brought to the Chief's attention.
2. The Chief will approve the selection of the employee as the FSD Employee of the Month.
3. The section manager will generate a memo to the employee indicating the selection as the FSD Employee of the Month.
4. The memo will be forwarded up the chain of command to the Support Services Bureau Assistant Sheriff for their review and comments.
5. The memo will then be given to the employee and copied to the Sheriff's PIO and the employee's personnel file.
6. The employee's Manager will arrange for a name plate from the Sheriff's sign shop to be added to the FSD Employee of the Month plaque.

B. Performance above and beyond normal expectations should be recognized with a letter of commendation (**SO Policy 1.04.31**).

1. The letter of commendation may be issued by a technical unit supervisor, a section manager, or the Chief.
2. The letter will be produced on the Sheriff's Office memo format and addressed to the employee.
3. The letter will be forwarded up the chain of command to the Support Services Bureau Commander for his review and comments.
4. The letter will then be given to the employee and copied to the Sheriff's PIO and the employee's personnel file.

C. Employees may be recognized for with a plaque, trophy or award for service (**SO Policy 1.04.33**).

D. Employees may be recognized in the annual Office of the Sheriff Employee of the Year ceremony (**SO Policy 1.04.23**).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/01/2015	**NUMBER:** FSD.50 - Facility Maintenance
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Facility Maintenance	

I. POLICY All Division employees are responsible for keeping Division facilities in good order and for reporting problems in the facilities that require maintenance.

A. Each employee is responsible for keeping his/her work and/or desk area neat and clean by putting away supplies, tools, and evidence.

1. Division staff are responsible for cleaning his/her work surfaces that are not cleaned by the custodial staff.

B. The custodial staff are responsible for the routine cleaning of Division facilities.

1. Special requests for custodial services can be made through a Supervisor/Manager.

C. Any employee who notices a maintenance problem within a Division facility is responsible for promptly bringing it to the attention of his/her Supervisor/Manager.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/03/2013	**NUMBER:** FSD.52 - Library and Literature
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Library and Literature	

I. POLICY Libraries and their publications at the Summit and Muir facilities are available for use by all Division members.

A. Anytime a Division employee removes a publication from the library area of either laboratory, they should complete an out card and leave it in the place of the publication. All publications must be returned to the appropriate location as soon as the employee has finished with them.

II. POLICY New literature should be distributed to appropriate staff for review.

A. The distribution of literature may accomplished in a variety of ways, including electronic or hard-copy notifications.

1. An example of electronic distribution of literature is placing literature on a shared drive for staff to view or distributing to staff using PowerDMS.

2. An example of hard-copy distribution of literature is distributing the literature to the staff via a route slip or during a staff meeting.

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION**	**REVISION DATE:** 08/28/2015	**NUMBER:** FSD.53 - Minimum Staffing
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Minimum Staffing	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/06/2015	**NUMBER:** FSD.54 - Activity Tracking
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Activity Tracking	

I. Analysts will account for their time utilizing activity tracking in LIMS.

A. Scope

1. All analysts must track time spent at work in LIMS.
2. The Chief, Managers, Supervisors, and Clerical staff are not required to track their time but may choose to do so.
3. **All testimony related activities (eg. testimony, 115s, business records, official records, depositions, etc.) must be tracked (regardless of title).**

B. Responsibilities

1. Analysts will be responsible for populating activities into LIMS.
2. Supervisors will be responsible for reviewing analyst activities. The Chief and Managers may also review activities.

C. Examples of Activities

1. Casework analysis
   a. time spent performing analysis and preparation of report and notes
2. Casework related activities
   a. instrument maintenance and repair
   b. reagent, standard, calibrator, control, etc. preparation
   c. technical review
   d. administrative review
   e. verification
3. Court related activities
   a. consultation
   b. preparation
   c. 115s, or other phone testimony

d. testimony

4. Discovery related activities
5. Training
    a. internal & external training
    b. participation in training program
6. Teaching or lecture
    a. preparation
    b. teaching
7. Reading or research
8. Accreditation related activities
    a. participation in audits
    b. writing/reviewing standard operating procedures
    c. validation/performance verification
9. Meetings

D. Documentation

1. Case specific activities
    a. From the request tab, select Activities and add by selecting the green "+" button and add activities.
2. Non-case specific activities
    a. Click the clock icon and add activities.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 11/16/12	**NUMBER:** FSD.55 - Staff Meetings
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Staff Meetings	

I. POLICY The Forensic Services Division strives to create an environment that encourages communication between laboratory employees and management.

A. The Chief, Manager or Supervisor can schedule meetings with their staff and the meetings should be held on a regular and routine basis.

1. Manager Meetings: The Chief and Forensic Managers meet periodically to discuss administrative, budget, policies and procedures dealing with the operation of the Division. These meetings will typically be held on a quarterly basis.

   a. The Chief and Forensic Managers also have the ability to communicate with each other and various other individuals from the Sheriff's Administration Division via Avistar (video conference).

2. QA Meetings: The Chief, Forensic Managers, Quality Assurance Coordinator and other staff members can be called together to discuss various policies and procedures along with areas needed for improvement within the Forensic Services Division. Agenda and/or meeting minutes are stored in Power DMS. QA Meetings are typically held quarterly or when necessary.

   a. Communication is conducted via email or through the PowerDMS Workflows when drafting policies and procedures.

3. Manager & Supervisor Meetings: Each Manager may set up meetings with Supervisors to disseminate information in regards to the administration of the each Unit, Section, Division and Department when necessary.

4. Technical Unit & Section Meetings: Meetings may include discussion about the following: administrative announcements, policies and procedures, case management concerns, relevant technical issues, and training. These meetings provide an opportunity for the exchange of information up and down the chain of command. Unit Meetings will be held and documented at least every quarter. Section Meetings will be held at the discretion of the Forensic Manager.

   a. Information is also disseminated to and received from staff through email and PowerDMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 09/17/2015	**NUMBER:** FSD.56 - Vehicle Use
	RELATED ORDERS: SO Policy 1.07.42, 1.06.54	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Vehicle Use	

I. POLICY Division vehicles will be used in accordance with Office of the Sheriff policy. Vehicles may only be used for work-related activities.

A. Checking Out a Vehicle

1. To check out a vehicle, the staff member must fill out a Vehicle Usage Log.
2. The vehicle keys are returned when the vehicle is returned.

B. Fuel

1. The vehicle should be fueled at the County Fuel station when needed.
2. A non-County fuel station should only be used in emergencies or when outside the County for an extended period.

C. FasTrak Transponder Usage

1. The FasTrak Transponder may only be used in a County car.
2. The FasTrak Transponder may not be used in a personal vehicle, even when conducting official business.

D. Vehicle Maintenance

1. Emergency and routine maintenance is performed by Fleet Services.
    a. Fleet Services will notify the laboratory when vehicles are due for routine service.
2. Notify a Supervisor or Manager of any mechanical or safety issues with a vehicle.

E. Accident Reporting

1. Refer to Office of the Sheriff Policy 1.06.54 for vehicle accident reporting procedures.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/05/2013	**NUMBER:** FSD.57 - Hazardous Materials Reporting
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Hazardous Materials Reporting	

I. POLICY Section managers will be responsible for the maintenance of the hazardous materials reporting requirements for their respective facilities.

A. The Section Managers will be responsible for reviewing and filing their respective annual Hazardous Materials Business Plan upon receipt of the Certified Unified Program Agency (CUPA) packet from the Contra Costa County Health Services Hazardous Materials Program.

1. An electronic copy of the business plan is forwarded to the Chief.

2. A Hazardous Materials Business Plan is only needed for the Muir and Summit facilities at the current time.

B. The Section Managers will be responsible for reviewing and returning the annual Hazardous Waste Verification Questionnaire and keeping the EPA ID number current.

C. The Section managers will maintain a file of the Uniform Hazardous Waste Manifests that are produced when the waste hauler picks up the hazardous waste from each facility.

1. Immediately after receipt, a copy of the Uniform Hazardous Waste Manifest must be mailed to:

   DTSC Generator Manifests
   Department of Toxic Substances Control
   PO Box 400
   Sacramento, CA 95812-0400

2. The Section Manager or designee will be responsible for comparing the final Designated Facility report with the original manifest for discrepancies.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/03/2017	**NUMBER:** FSD.58 - Dress Code
	RELATED ORDERS: SO Policy 1.07.21	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Administration	**SUBJECT:** Dress Code	

I. POLICY Employees will adhere to Department policy regarding personal appearance and dress.

A. Daily handling of caustic and corrosive chemicals, toxics, biohazards, along with the intimate interactions with evidence containing various forms of contaminants are recognized as ill suited activities for formal dress. As a result, the following exceptions are approved:

1. Division staff performing casework or casework-supporting duties are permitted to wear the Class E uniform.

2. Division staff involved in crime scene response, including response to the morgue, may wear the approved Crime Scene Uniform whether in the lab or out in the field.

3. Clerical staff and support staff involved with evidence sign in, evidence log in, evidence transport within or between facilities, and placing and retrieving evidence from storage may wear Class E.

4. Staff may "dress-down" for scheduled facility clean-up or other physically demanding activities when approved by a Supervisor, Manager or the Chief.

B. All staff will wear proper business attire when appearing in court.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 04/01/2015	**NUMBER:** FSD.59-Evidence Recon Policy
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Evidence	**SUBJECT:** Evidence Recon Policy	

I. The purpose of Evidence Reconciliation or Recon is to ensure evidence within the Forensic Services Division is handled properly and tracked accurately in accordance with Division storage, handling and chain of custody policies. Each facility will perform an Evidence Recon utilizing Justice Trax biannually.

A. **General Information**

1. During an Evidence Recon, all evidence storage locations used to house legitimate case evidence, as well as personnel will be evaluated.
2. Follow procedures outlined in QA.17
3. The recon activities and recon report should take no more than 30 days to complete.
4. A recon report will be generated at the conclusion of the Recon.
   a. The report will include discrepancies, errors or inaccuracies encountered during the Recon.
   b. The report will include what, if any, steps were taken to remediate discrepancies, errors or inaccuracies.
   c. If staff or locations are not evaluated, they will be included in the report with an accompanying explanation of why they were not assessed (eg. *Mary Smith on maternity leave, unable to evaluate evidence in her possession*).
   d. The recon report will be evaluated by the section manager.
   e. The recon report will be maintained by the Quality Assurance Coordinator and may be reviewed during audits.

B. **Responsibilities**

1. Each section manager is responsible for:
   a. Scheduling Evidence Recons
   b. Assigning an individual the task of performing a Recon
   c. Facilitating any necessary training to perform a Recon
   d. Facilitating any necessary steps to resolve pending evidence discrepancies, errors in inaccuracies
   e. Reviewing the Evidence Recon report

f. Providing a finalized Evidence Recon report to the QA Coordinator at the conclusion of each Recon

2. The individual assigned the recon is responsible for:

   a. Utilizing the LIMS recon scanner and LIMS correctly, including familiarity with QA.17

   b. Scanning all evidence storage locations

   c. Evaluating evidence within the personnel possession of analysts

   d. Completing a recon report with all discrepancies and/or errors and indicating the status (*eg. 15-1010-5 scanned in wrong location, Verified with analyst Joe Jones the correct location and physically moved the evidence to the location reflected in LIMS*)

   e. Completing the Evidence Recon, including a recon report, within 30 days of commencing the Recon.

3. The QA Coordinator is responsible for:

   a. Evaluating the recon report to determine if any further action is needed

   b. Maintaining the recon reports for each facility

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Quality Management System Procedures**	**REVISION DATE:** 10/14/2013	**NUMBER:** QA.01 - Creating and Revising Controlled Documents
	RELATED ORDERS: FSD.12 - Document Control	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** ISO/IEC 17025:2005: 4.3	
CHAPTER: Document Control	**SUBJECT:** Creating and Revising Controlled Documents	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 08/11/2017	**NUMBER:** QA.02 - Laboratory Number
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: 5.8.2, 5.8.4.3**	
CHAPTER: Quality Assurance and Case Records	**SUBJECT:** Laboratory Number	

I. Policy: Laboratory numbers shall be assigned for each case submitted. The laboratory number with request number is the unique laboratory identifier.

A. Laboratory Number Format

XX-	XXXXXX	-XXXX
Last two digits of the year	**Sequential numbers reset to 000001 at the beginning of each year**	**Request number**

When printed or written, all preceding zeros are understood.

B. Generating Laboratory Numbers

1. Laboratory numbers are auto-generated and assigned by LIMS after a search on the agency case number yields no matches.
    a. If the agency case number exists in LIMS, each new request will receive a separate request number.
2. Clerical staff may manually assign laboratory numbers if LIMS is not functioning.
3. Clerical staff will manually assign laboratory numbers in LIMS with the pre-existing laboratory number for "**pre-LIMS**" cases.
    a. If the case occurred prior to approximately September, 1979, the old laboratory number designations relied on a sequential numbering scheme that did not utilize the last two digits of the year as a prefix (some of these old lab numbers will have "L" as a prefix). Clerical staff will add these cases into LIMS using the year the crime occurred as the prefix followed by the previously assigned sequential laboratory number. For example:
        i. 9101 that occurred in 1966 will become **66-9101** and
        ii. L9-7909 that occurred in 1979 will become **79-7909**.
    b. Use **only** a dash "-". **Do not use commas** "," **or other special characters** in the lab number.
4. Multiple agency case file numbers may be added to a single laboratory number when a laboratory request is being investigated by different agencies or when multiple complainants are related to the same suspect(s).

a. A primary agency will be designated in LIMS.

5. **In unusual circumstances**, two laboratory numbers may be given to a single agency case file number.

   a. Notes regarding the circumstance **will** be documented in the case file and in LIMS Case Synopsis.

   b. Lab numbers should be cross-referenced on the pending laboratory reports when multiple laboratory numbers exist for a single agency case file number.

   c. The cross-referenced laboratory number will be entered in either of the following ways:

      i. under the *Related Agencies* field and preceded by the prefix LIMS on the report.

      ii. under the *Related Laboratory Cases* field under the Case Info tab.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 06/07/2018	**NUMBER:** QA.04 - Amending Reports
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB**: 5.10	
CHAPTER: Casework	**SUBJECT:** Amending Reports	

I. In most circumstances, it will only be necessary to indicate the nature of the error and the correction in the amended report. However, there may be unique circumstances that require reconstruction of the original report into an amended report when the error and correction cannot be clearly and succinctly summarized. An individual with supervisory authority must be consulted and grant approval prior to reconstructing the original report.

A. **Generating an Amendment Request in JusticeTrax LIMS:**

1. The clerical staff or an individual with supervisory authority will generate a new request or a sub-request depending on either of the following:

   a. If a request exists in JusticeTrax, a **sub-request** will be generated for the amended report by adding a related request; regardless of whether or not the report was created in JusticeTrax.

   b. If the report was created PRIOR to implementing JusticeTrax, a new laboratory request will be generated in JusticeTrax pursuant to QA.02.

2. Enter the following LIMS information:

   a. Select the appropriate "Unit" amendment service.

   b. Enter in the correct case control information. The requesting rep should be the same as the original request unless otherwise specified.

3. Evidence **may** be related to the amendment request at the discretion of the individual opening the request or completing the report.

B. **Assigning the Amendment Request:**

1. The clerical staff or an individual with supervisory authority will assign the request to the original analyst/author of the report.

2. If the original analyst is unavailable or no longer employed by the Forensic Services Division, then the amendment request will be assigned to the Technical Unit Supervisor from the unit that originally issued the report.

C. **Creating the Amended Report in JusticeTrax LIMS**:

1. The assigned staff will open "Edit Findings" for the amended request and select "Add Result". Under the result type select "Amended Report" for the report header. Set the font to Times New Roman and font size 12.

2. The analyst should minimally address:
    a. Why the amended report is being issued and what original report it pertains to.
        i. For example, "*This report is being amended to reflect the correct agency case number for Laboratory Number 00-123-1.*"
    b. What was changed.
        i. For example, "*The agency case number was inadvertently reported as 00-456. The correct agency case number is 00-654 per Officer Smith.*"
    c. If applicable, that the amendment does not affect the results of the examination.
        i. For example, "*The amendment does not affect the examination results.*"
3. Additional information may be added in the notes of the report. Open "Edit Findings" for the amended request and select "Add Result". Under the result type select "Notes". Set the font to Times New Roman and font size 12.
4. The assigned staff will draft complete the report.

D. **Reviewing the Amended Report**

1. **Complete the technical review** of the amended report (if applicable). If the amendment encompasses a technical component, an authorized individual will perform a technical review.
2. The Supervisor, Manager, Chief of Forensics or designee will perform the **administrative review** and be responsible for ensuring the Amendment Notification Form is complete and the notification is sent to ARIES correctly.
3. **Complete** the Amendment Notification Form (FSDF.17) by filling-in the laboratory numbers of the original report and the new amended report.
4. **Image** the completed Amendment Notification Form to LIMS as a **PDF** (Portable Document Format). The PDF must be in color.
5. **Associate** the PDF form to the original (parent request) laboratory request being amended (**NOT the amendment or sub-request**). For instructions on how to use LIMS imaging, see QA.14.
6. **Name** the image "**Amendment Notification**".
7. **Send the image to ARIES** by right clicking on the image in the imaging module and selecting "**Send to iResults**". The notification will appear as a hyperlink in ARIES on the original request.
8. **Retain** the hard-copy of the completed Amendment Notification Form. The hard copy must be in color.
9. **Attach** the hard-copy of the Amendment Notification Form to the original report (the report being amended).
10. **Retain** the hard-copy of the Amended Report. The amended report must be in color.

E. **Notifying the Customer**

1. The customer/client agency will be notified through ARIES that a new report has been issued through the release of an amended report.

2. The customer/client agency will also be notified through ARIES that the original report has been amended when the Amendment Notification Form is posted to ARIES.

3. Note: The posting of the Amendment Notification Form is only applicable when there is an original request that exists in JusticeTrax LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 02/12/2018	**NUMBER:** QA.07 - Confidential Reports and Restricted Reports
	RELATED ORDERS: FSD.43 - Test Reports	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Quality Assurance and Case Records	**SUBJECT:** Confidential Reports and Restricted Reports	

[redacted]

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Quality Management System Procedures**	**REVISION DATE:** 08/26/2019	**NUMBER:** QA.09.01 - LIMS Procedure for Correcting the Chain of Custody
	RELATED ORDERS: FSD.38 - Evidence Itemization, QA.09 - Adding, Itemizing and Transferring Evidence in LIMS	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER:	**SUBJECT:** LIMS Procedure for Correcting the Chain of Custody	

[redacted]

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Quality Management System Procedures**	**REVISION DATE:** 06/10/2019	**NUMBER:** QA.09 - Adding, Itemizing and Transferring Evidence in LIMS
	RELATED ORDERS: FSD.35 - Evidence Handling, FSD.38 - Evidence Itemization, QA.09.01 - LIMS Procedure for Correcting the Chain of Custody	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Casework	**SUBJECT:** Adding, Itemizing and Transferring Evidence in LIMS	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 08/01/2019	**NUMBER:** QA.10 - LIMS Proficiency and Competency test procedures
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:** 6.2, 7.7	
CHAPTER: Proficiency & Competency Testing	**SUBJECT:** LIMS Proficiency and Competency test procedures	

I. The following is the procedure for receiving, entering, tracking and documenting proficiency and competency test performance.

A. **Procedure for Receiving Tests**

1. A chain of custody sticker should be placed on the test by the individual who receives or issues the test. The chain of custody should indicate:
   a. Who received or created the test.
   b. When the test was received or created.
   c. The storage location of the test (eg. individual, log-in storage or other location).
2. The chain should follow the movement of the proficiency or competency test through the laboratory system.
3. When a test is received via mail, the individual who receives the test should notify the Supervisor over the section/unit that a proficiency/competency test has arrived.

B. **Procedure for Logging Tests into LIMS**

1. In LIMS, create a new case by clicking the **New Case** icon to open a request for the proficiency test/competency test.
   a. Under **Agency Name** enter "Proficiency Test" or "Competency Test". "Proficiency Test" or "Competency Test"should always be the Primary Agency.
   b. The **Agency Case Number** may be the lab number or other designation.
   c. The **Service** should be the service in which casework would normally be performed.
2. OFFENSE TAB
   a. Skip the Offense tab
3. INDIVIDUAL TAB
   a. If Proficiency/Competency Test is for Alcohol or Toxicology an individual **must** be associated with the request, otherwise this tab can be skipped.
4. EVIDENCE TAB
   a. The **Agency** will default to what was entered previously, "Proficiency Test" or "Competency Test".
   b. The **Badge/Agency Representative** will be "Internal" or "External" based on the origin of the proficiency/competency test.
   c. The **Kit** should be:
      i. Blood Alcohol: BA Kit
      ii. Urine Alcohol: UA
      iii. Blood Toxicology: BDRUG KIT
      iv. Urine Toxicology: UD
      v. Controlled Substance: PROFICIENCY DRUGS
5. REQUEST TAB
   a. Leave the **Agency** as "Proficiency Test" or "Competency Test".
   b. The **Badge/Agency Representative** will be "Internal" or "External" based on the origin of the proficiency or competency test.
   c. The **Section/Unit** and **Service** is based on the sample type received.
   d. The **Analyst** is the person to whom the test is assigned.
   e. The **Request Date** defaults to the date the request is entered.
   f. The **Due Date** is the date the test is due, if applicable.
   g. **Requester Notes** may be used for notes or information about the test.
   h. **Assignor Notes** may be used for notes or information about the test.
6. Chain of Custody
   a. The individual logging in the test will generate a barcode from LIMS and attach it to the test sample package or to the assignment notification sheet. If the test is a re-analysis of previously analyzed evidence then the previous barcode may be used; with the

exception of Alcohol cases where a new lab number and barcode need to be generated.

b. For re-analysis of evidence the original chain of custody for the case sample must be filled out and an explanation stating that the evidence was used as a proficiency or competency test should be recorded in the case record. If the case is still open, the analyst of the open case will indicate in their notes that a sample was retained for laboratory use.

7. Adding a Sub-request

a. A sub-request is added to the proficiency or competency test by selecting the "parent" request and clicking **Add Related Request**.

b. The **Agency** of the sub-request should be the same agency as the parent request.

c. The **Badge Rep** will be "Internal" or "External" based on the origin of the proficiency/competency test.

d. The **Lab** is Forensic Services Division.

e. The **Div Section/Unit** is the Unit the proficiency or competency work is performed in.

f. The **Service** of the sub-request is always Comp/Prof and the unit of the parent request (eg. Comp/Prof Test Latent).

g. The sub-request is assigned to the Supervisor of the Unit by selecting them as the **Analyst**. The Supervisor may choose to reassign the sub-request.

h. It is not necessary to relate any evidence in the sub-request.

i. Select **OK** to add the related request.

j. LIMS will automatically prompt a barcode to be printed, click **OK**.

C. **Procedure for Populating Test Information in the Sub-Request**

1. The Supervisor, or individual assigned the sub-request will populate the requisite information by clicking on the **Additional Data** field (under the Request Tab) to fill in the requisite information, including:

a. **Date Received** (drop-down list, or type into the field). Enter the date the test was received or select "N/A"

b. **Date Assigned** (type in field). A date must be filled into this field

c. **Due Date** (drop-down list, or type into the field). Enter the due date for the test or select "N/A"

d. **Date Submitted** (drop-down list, or type into the field). Enter the date the test was submitted to the provider or select "Not Applicable"

e. **Supplier** (drop-down list, or type into the field), Select the supplier from the list

i. Type in a supplier if not on the list, or select "Not Applicable"

f. **Type of Test** (drop-down list). Select the type of test from the list based on the origin as well as if the results are being provided to our accrediting body

i. A test is considered "External-ANAB" if it has come from an approved proficiency test provider and the results are submitted to the vendor prior to the manufacturer's due date and the results are released to our accrediting body.

ii. A test is considered "External" meaning it has come from an outside test provider. This may not be an approved test provider.

iii. A test is considered "Internal" if it is made in house or it is an external test that is being "re-used".

g. **Test Set Identifier** (type in field). This field is used to capture the test provider's assigned test number (eg. CTS 17-530).

h. **Other Information** (type in field). This field may be used to identify additional information about the test (types of samples, new equipment, or new methodology).

i. **Internal Prep Person**-For Internal Test Preparation ONLY (type in field). Type the name of person responsible for preparing the test

j. **Description**-For Internal Test Preparation ONLY (drop-down list, or type into the field). Select the description of how test was prepared from the drop-down list or type into the field.

i. If more space is needed, reference the location of the information. For example, see Assignor Notes or attached image in LIMS.

k. **Components/Parameters of Testing** (drop-down list, or type into the field). There are (3) drop-down lists to utilize.

i. The type of test is based on whether the test is a competency or proficiency as well as the scope of the test (see table below).

ii. The lists allow the user to capture up to (3) types of testing within a single competency or proficiency test.

iii. If the user needed to capture more than (3) types of testing, an additional sub-request should be opened to populate the information.

Unit	Competency Types of Tests	Proficiency Types of Tests
Latent Prints	COMP-Physical Comparison COMP-Collection/Enhancement (Processing) COMP-ABIS	PROF-Physical Comparison PROF-Collection/Enhancement (Processing) PROF-ABIS (ICD)
Solid Dosage Drugs	COMP-Qualitative Drug Analysis COMP-Marijuana Analysis	PROF-Qualitative Determination PROF Weight Measure
Alcohol	COMP-Quantitative Alcohol Analysis	PROF-Quantitative Analysis
Toxicology	COMP-Screening COMP-Liquid/Liquid, SIM	PROF-Qualitative Analysis PROF-Quantitative Analysis

	COMP-Liquid/Liquid, FULL COMP-Solid Phase Extraction, SIM COMP-Solid Phase Extraction, FULL COMP-2D GC/MS, Solid Phase Extraction, SIM	
Comparative Evidence	COMP- Physical Comparison Firearms COMP- Physical Comparison Toolmarks COMP- Determination of Functionality COMP-Length Measure COMP-Trigger Pull COMP-Serial Number Restoration COMP- Qualitative Chemical Determination COMP-Distance Determination COMP-Product (Make/Model) COMP-Ballistic Imaging COMP-Sound Suppressor Testing COMP-Footwear/Tire Enhancement COMP-Footwear/Tire Comparison COMP-Footwear/Tire Product (Make/Model)	PROF-Physical Comparison Firearms PROF-Physical Comparison Toolmarks PROF- Determination of Functionality PROF-Length Measure PROF-Trigger Pull PROF-Serial Number Restoration PROF-Qualitative Chemical Determination PROF-Distance Determination PROF-Product (Make/Model) PROF-Ballistic Imaging (ICD) PROF-Footwear/Tire Enhancement PROF-Footwear/Tire Comparison PROF-Footwear/Tire Product (Make/Model)
Forensic Biology	COMP-Collection COMP-DNA COMP-Body Fluid Identification COMP-Relationship Testing COMP-CODIS	PROF-Collection PROF-DNA-STR PROF-Body Fluid Identification PROF-Relationship Testing PROF-CODIS (ICD)
Digital Evidence	COMP-Forensic Imaging COMP-Audio Preservation, Authentication & Enhancement COMP-Video Preservation, Authentication & Enhancement COMP-Image Preservation, Authentication & Enhancement	PROF-DE Preservation PROF-DE Authentication PROF-DE Enhancement PROF-Video/Image Preservation PROF-Video/Image Authentication PROF-Video/Image Enhancement
Crime Scene	COMP-Photography COMP-Scene Processing & Documentation COMP-Scene Reconstruction COMP-Shooting Incident Reconstruction COMP-Bloodstain Pattern Analysis	PROF-Scene Documentation & Collection PROF-Event Reconstruction PROF-Trajectory Determination PROF-Bloodstain Pattern Analysis

l. **Equipment/Technologies** (type in field). This field is used to identify the equipment or methodology used in the test. The language used should match the equipment/technology language from our current accreditation scope document on ANAB.org.

m. **For Competency Tests ONLY** (checkboxes). There are (4) checkboxes to document the test of sufficient unknowns, test of knowledge, generation of a written report, and a practical examination of testimony.

n. **Satisfactory (Yes)** (checkbox). Check the box to document satisfactory performance.

   i. If the box is not checked, the performance will be documented as unsatisfactory on the Proficiency/Competency Test Data Summary Report form

o. **Date of Completion** (type in field). Type a date into the field

   i. For a competency test, this is the date the analyst was granted competency and is authorized to perform casework. The date must match the date on the authorization paperwork.

   ii. For a proficiency test, this is the date the test was reviewed and the results were determined to be satisfactory or unsatisfactory. This is the completion of the proficiency test; however further action may be taken through the Corrective Action process.

p. **Calendar Year** (type in the field). Type the calendar year the test will "count" in.

   i. For a proficiency test, this is the calendar year that will be used to determine that the requirements of FSD.23 of are met.

q. **QA Action #** (drop-down list, or type into the field)

   i. If the analyst's performance was unsatisfactory or there is a technical error, reference the QA Action associated with the test.

r. For DNA ONLY-

   i. DNA extraction method (type in field)

   ii. DNA amplification kit (type in field)

   iii. Correct inclusions (type in field)

   iv. Correct exclusions (type in field)

   v. Correct genotypes (type in field)

   vi. CODIS Notified Initials and Date (type in fields)-If the analyst's performance was unsatisfactory, document the notification to the CODIS administrator

D. **Procedure for Performing Tests**

1. Documentation is on the PARENT or ORIGINAL REQUEST**.**
2. The analyst retrieves or is provided the test and examines the test as they would normally perform casework.
3. This includes verification if applicable, technical review and administrative review.

4. Policies or procedures used for efficiency should not be followed when performing a proficiency test.

E. **Procedure for Reviewing/Completing Tests**

1. Documentation is on the SUB- REQUEST.
2. The Supervisor or designee must determine if the analyst's performance was satisfactory or unsatisfactory.
    a. The criteria for successful performance must be communicated to the analyst prior to undertaking the test.
    b. If the analyst's performance was unsatisfactory or there is a technical error, the Supervisor will notify the QA Coordinator.
3. The Supervisor documents their review of the test results by electronically signing the sub-request.
    a. Note: a "Finding" must be added to the request under **Edit Findings** **prior** to Draft Complete. This is the FIRST signature applied as DRAFT COMPLETE.
4. If the results were reviewed for technical correctness by an individual other than the Supervisor that individual electronically signs the sub-request. If needed, this is the SECOND signature applied as VERIFYING ANALYST.
    a. This must be after Draft Complete and prior to Administrative Review.
5. For **DNA** competency and proficiency tests, the DNA Technical Lead must also electronically sign the sub-request. If needed, this signature is applied as TECHNICAL REVIEW.
    a. This must be after Draft Complete and prior to Administrative Review.
6. The QA Coordinator documents their review of the completeness of information by electronically signing the sub-request. This is applied as VERIFYING ANALYST.
    a. This must be after Draft Complete and prior to Administrative Review
7. The analyst documents their review of the test results with the Supervisor or designee by electronically signing the sub-request. This is the LAST signature applied as ADMINISTRATIVE REVIEW.

F. **Information Captured in LIMS**

1. See FSD.23 for the information that must be captured in LIMS for Proficiency Tests.
2. See FSD.21 for for the information that must be captured in LIMS for Competency Tests.

G. **Procedure for Creating Internal Tests**

1. Internal tests may be: created by lab staff (eg. spiked or prepared sampled), created by re-using external tests, or created from case samples.
2. Expected test results must not be known or readily available to the individual taking the test.
    a. When applicable, the mechanism for preventing staff from determining the correct answer will be documented as part of "how the samples were obtained or created". This may be accomplished by restricting a case in LIMS or taking adequate steps to prevent staff from determining the correct answer.
3. The quality of internal tests must be evaluated prior to providing the test to the analyst.
    a. The mechanism for evaluating quality and suitability will be documented as part of "how the samples were obtained or created".
4. When a sample from a case evidence is used for testing purposes, the analyst must:
    a. Document the use in the case file of the request related to the official analysis
    b. Mark the evidence container with their initials, date, and purpose of its use i.e. "Proficiency test"
    c. Complete the electronic Chain of Custody for that evidence. See FSD.42 & FSD.35 for more information.

H. **Discarding Tests and Completing the Chain of Custody**

1. Once the sub-request is administratively reviewed, the test samples will be transferred to "Proficiency-End Chain".
2. Controlled Substance proficiency samples must be transferred to the Unit Supervisor or Section Manager physically and in LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 7/29/2010	**NUMBER:** QA.11 - Archiving Proficiency/Competency Tests before 2008
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: ISO/IEC 17025:2005: 5.2 (E)**	
CHAPTER: Personnel Training & Professional Development	**SUBJECT:** Archiving Proficiency/Competency Tests before 2008	

Proficiency/Competency Test Cases

Creating proficiency test lab numbers

This is a suggested procedure for archiving Competency and Proficiency test records prior to 2008. All competencies for employees from January 1, 2008 to current will be added to LIMS. Proficiency Tests assigned from January 1, 2008 to current will be entered into LIMS and anything prior to 2008 may not be entered into LIMS. Do a search to make sure the test has not been previously entered into LIMS. You can search by agency Proficiency, Competency or Proficiency/Competency. Most competencies were previously entered into LIMS.

If not previously in LIMS then create a new case.

The agency is "Proficiency Test" or "Competency Test". The Agency Case Number is the identifying number of the test.



LIMS will search for the test and should not find any previous entries. Press "New Case".

NOTE: *"Proficiency Test" or "Competency Test" should always be the primary agency.*

Create a new request.

The agency is "Proficiency Test"

(a) The agency representative is the agency that created the test ("CTS" or "DOHS") or "internal" if made in the lab.

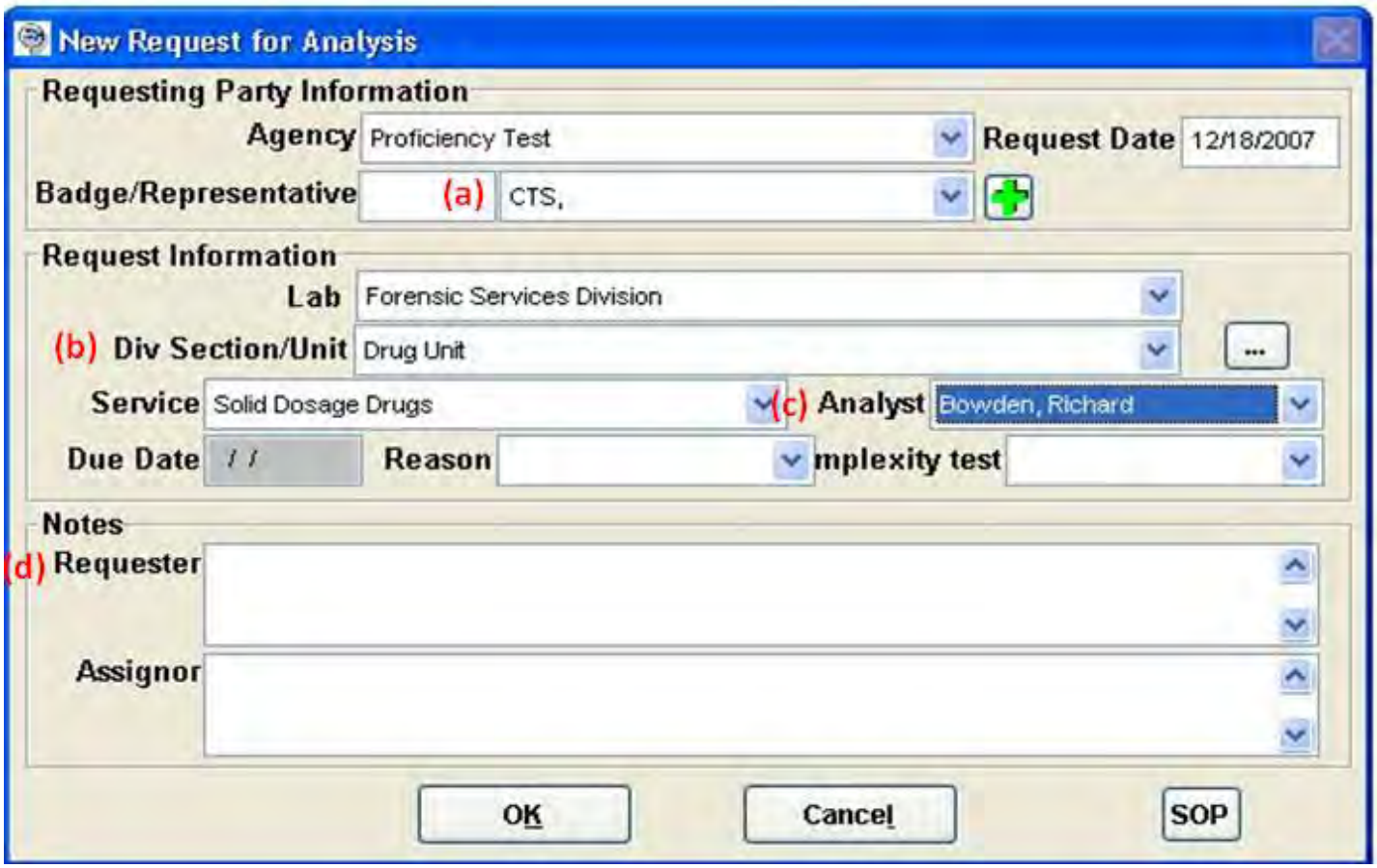
(b) The Div Section/Unit and Service should be the regular LIMS entries for the received sample type.

(c) The analyst is the person to whom the test is assigned.

(d) Requester or Assignor notes should include test information such as: Date received, Due Date, and any other information needed by the QA coordinator.

Create evidence items as normal. The evidence name should clearly state test set identifiers as given by the preparing agency.

Before admin reviewing: Enter "Reviewers Notes" to indicate whether the test was completed correctly and whether any corrective action was taken. Also add any DNA specific information about inclusions, exclusions, geno/phenotype and comments.



Uploading images and documentation into LIMS.

The following are general instructions of entering items for Proficiency and Competency Tests. Some discretion is given to the Managers and/or Supervisors of the unit on the organization and labeling of files. It also is good when starting a unit to meet with Manager/Supervisor so they can verify that the documents are being organized in the proper fashion.

Scan Data Summary Sheet as a TIFF file image and the image name should be Analysts initials lab number into your email. Note: It is easier if you create folders within your email to keep all of the scanned images in them. Example AJ_09-234567-1

Then scan the entire packet along with the Data Summary Sheet as a PDF document and with a file name as Analyst initials_month/year (doc. was created) _type of test_lab #. Example: AJ_0310_GSR Proficiency_09-25634.

Once all the documents have been scanned then save them onto the computer.

Open LIMS and open a case by entering the lab number.

Open the imaging module by clicking on the camera icon on the bottom left corner of the screen.

Click requests and then click on the appropriate request folder to upload the images too.

Click on add new image icon (looks like a picture frame) Retrieve the specified document from your computer and click open. LIMS will ask you if you would like to rename the document. Note: If you choose not to rename the document it will save the document as the original name you gave it.

Once you have entered a name click ok and in a few minutes LIMS will upload the image.

Repeat process until all images are in the LIMS.

If you accidentally place the image in the wrong folder, click the truck icon and move the image to the correct folder.

After a unit has been completed run the Crystal combined report by Unit. Review the entries to make sure all the tests are showing up correctly. Do a random spot check of the documents to make sure all images have been entered correctly. Have the analyst; Supervisor and Manager also review the report to make sure everything has been correctly entered.

The "Proficiency Test Data Summary Sheet" can be printed by going to Administration|Crystal Reports|Generate Reports under the category "Supervisor".

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 04/24/2019	**NUMBER:** QA.12 - LIMS Training Module Procedure
	RELATED ORDERS: FSD.21 - Competency, Training, Authorizations & Ethics	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Personnel Training & Professional Development	**SUBJECT:** LIMS Training Module Procedure	

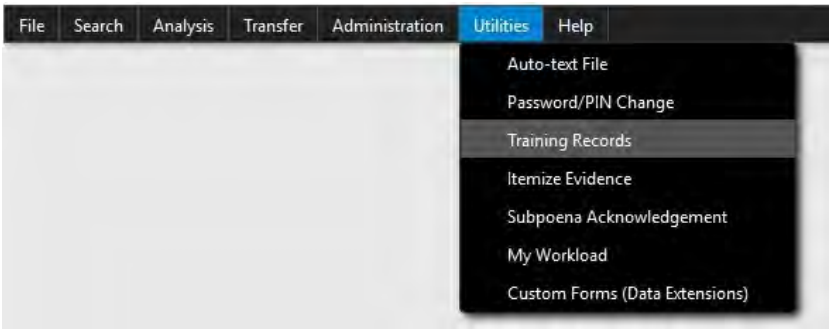
I. The following procedures are for using and populating the LIMS Training Records Module.

A. **General Information**

1. The analyst must be logged-into LIMS in order to edit their own training record.
2. Supervisors can view and edit the training records of those employees assigned to them in LIMS.
3. See FSD.21 more information on:
   a. The types of training and professional development records that must be documented in the LIMS training module.
   b. The required elements that must be captured in the LIMS training module.
   c. The expectation for staff keeping the LIMS training module up-to-date.

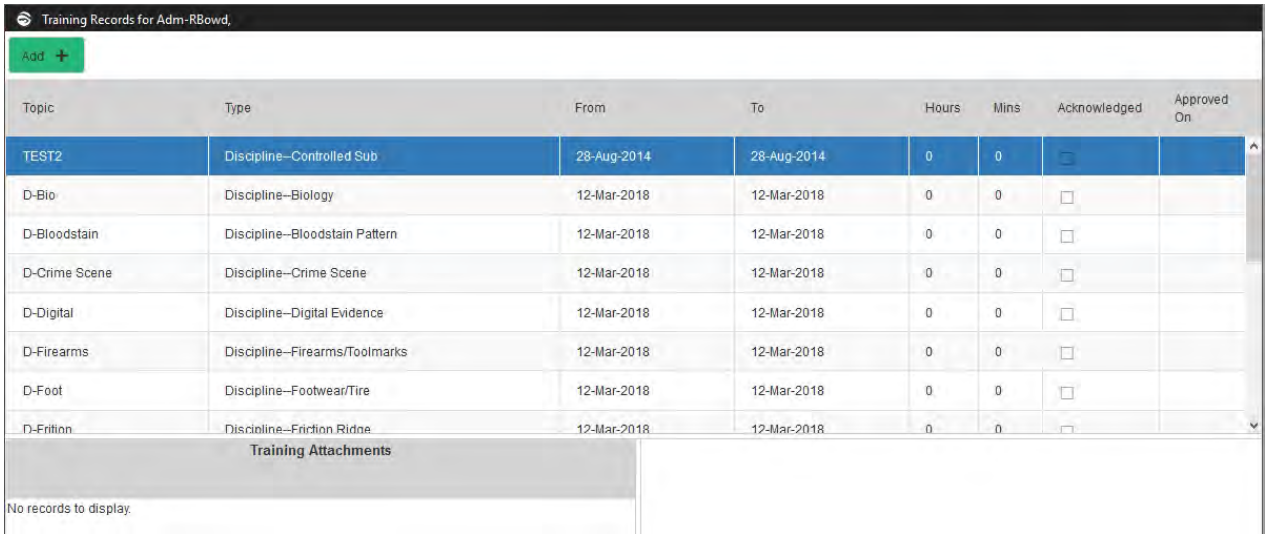
B. **Starting the Module**.

(a) Select the Utilities | Training Records menu item.



C. **Populating the Module**

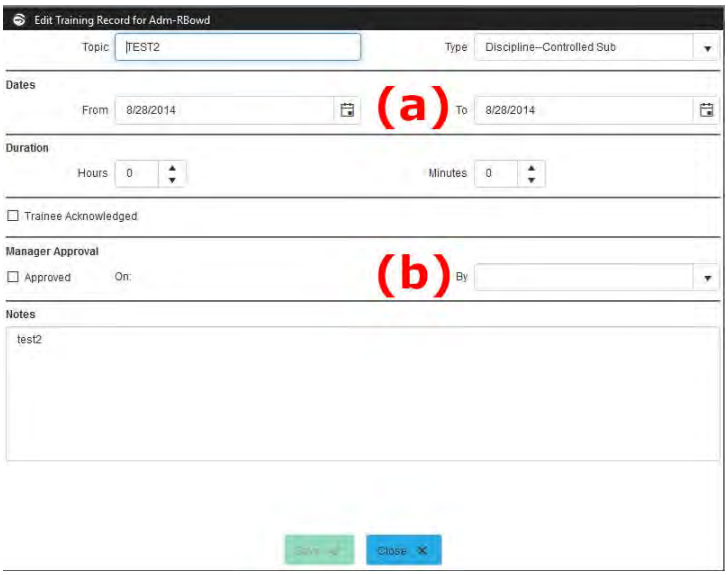
1. To add a new training record press the green "+" button.
2. To edit an existing record, right-click and choose "Edit".



D. **Data Entry**

(a) Each record requires the Dates (from and to) fields to be filled in.

(b) Each record requires the "Manager Approval" **"By**" field to be filled in.



E. **Training Section**

These records will appear under the Other Training section of the report. Add a training record of type "Training-[*applicable section*]".

Topic: Enter the **name/title** of the course, and the **host entity or presenter/instructor**, and **location** of the training in the **Topic** field. See examples below

-Emerging Trends in Synthetic Drugs Workshop hosted by NIST and DEA (On-line), C. C. Crime Lab
-Basics of Forensic Toxicology I, California Criminalistics Institute (CCI), Rancho Cordova, CA
-Palm Print Comparison Techniques, Ron Smith and Associates by James Bush, Glendale, AZ
-ASCLD Webinar Series: Firearms, Forensic Technology Center of Excellence presenter Timothy Scanlan (On-line RTI) , C.C. Crime Lab

Type: Choose the type of training from the drop-down menu. "Training-[*applicable section*]"

NOTE: The following types of training may be entered into LIMS but should not appear on the printed SOQ
-Safety training (eg. respirator, bloodborne pathogen, chemical hygiene plan). Use the training type "**Training-Safety**".
-Human resource-type training (eg. sexual harassment, diversity, mandated child abuse reporter). Use the training type "**Training-Human Resources**".
-Annual ethics training. Use the training type "**Training-Ethics**".

Dates: Enter the dates of training in the **Date From** and **To** fields. The end date will display as a month and year on the report. LIMS also requires a begin date. The fields can be the same date if the training was a one-day course.

Duration: Will appear on the report. Enter the hours of training in the **Duration** field.

NOTE: The duration must be at least one hour.

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

Staff may image training certificates or course syllabus.

F. **Disciplines Section**

To check the boxes at the top of the report that indicate the disciplines in which you are competent to do casework, add a training record of type "Discipline-…"

Topic: Will not appear on the report, but should be the same as the type for easy reference.

Type: Choose one of the disciplines labeled "Discipline-[*your section*]"

Dates: Will not appear on report, but are necessary for LIMS. Staff may enter both begin and end dates as the date that you started casework or were deemed competent to do casework in that section.

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

Staff may image(s) the completed authorization checklist(s) for the specific Discipline.

G. **Education Section**

These records will appear under the Education section of the report. Add a training record of type "Education".

Topic: Type the name of the degree followed by the name and location of the college.

Type: "Education"

Dates: End date will appear on the report and should list when the degree was obtained. LIMS also requires a begin date.

Duration: not needed

By [manager]: will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

Staff may image degrees or transcripts.

H. **Courtroom Experience Section**

These records will appear under the Courtroom Experience section of the report.

Add a training record of type "Courtroom Experience" **Add a new record for each type of discipline that you have testified in.**

If you want to be more specific than just the discipline, then you will have to make an entry for each type of testimony you performed.

For example in drugs if you want to show that you testified 5 times on Heroin analysis and 6 times on Cocaine analysis. Each one would need to be entered as a new record.

Topic: Discipline in which you testified as an expert witness.

Type: "Courtroom Experience"

Dates: Will not appear on report, but are necessary for LIMS.

Duration: Not needed

Notes: Type "approximately" and then the "number" of times testified in the particular discipline. This will appear on the report

Example: Approximately 28

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

I. **Professional Affiliations Section**

These records will appear under the Professional Affiliations section of the report. Add a training record of type "Professional Affiliation"

Topic: Type the name of the group to which you belong.

Type: "Professional Affiliation"

Dates: Start date or the earliest date will appear on the report and should list when membership was started. LIMS also requires a begin date.

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

J. **Employment History**

These records will appear under the Employment History section of the report. Add a training record of type "Employment History"

Topic: Type the job title and the employer.

Type: "Employment History"

Dates: Both begin and end dates will appear on the report. If a future date is put into the end date (12/31/2030), the report will print the end date as "Present"

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

In the notes section record your job duties which will appear on the report under Principal duties.

Click the **Apply** button.

K. **Other Qualifications Section**

These records will appear under the Professional Affiliations section of the report. Add a training record of type "Other Professional"

Certifications or awards they have received or example. Anything can be listed that does not fall in the other categories but adds to their forensic qualifications.

Topic: Type the name of the publication or presentation.

Type: "Other Professional"

Dates: End date will appear on the report and should list. LIMS also requires a begin date.

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

L. **Courses Taught**

These records will appear under the Instructor Experience section of the report. Add a training record of type "Courses Taught"

Topic: Name of course

Type: "Courses Taught"

Dates: The end date will be listed on the report. LIMS also requires a begin date.

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

M. **Publications**

These records will appear under the Publications section of the report. Add a training record of type "Publications"

Publications are papers written by the analyst and published in a peer review journal, newsletter or book.

Topic: Type the Title of the paper, article, etc.

Type: "Publications"

Dates: End Date will appear on the report and should list the date of publication. LIMS still requires a begin date to be entered.

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

N. **Presentations**

These records will appear under the Presentations section of the report. Add a training record of type "Presentations"

Topic: Name of Presentation

Type: "Presentations"

Dates: End date will appear on the report. LIMS also requires a begin date.

Duration: Not needed

By [manager]: Will not appear on report, but is necessary for LIMS. Fill in the default manager from the pull-down list.

Click the **Apply** button.

O. **Records not shown on Statement of Qualifications**

These types will not print out on the Statement of Qualifications. They are included so that additional information may be stored

in LIMS, if desired.

Remember to fill in the date and the manager fields so that LIMS will accept it as a valid training record.

Type: "Reading List" Attach images or documents to this training record that show your current reading list.

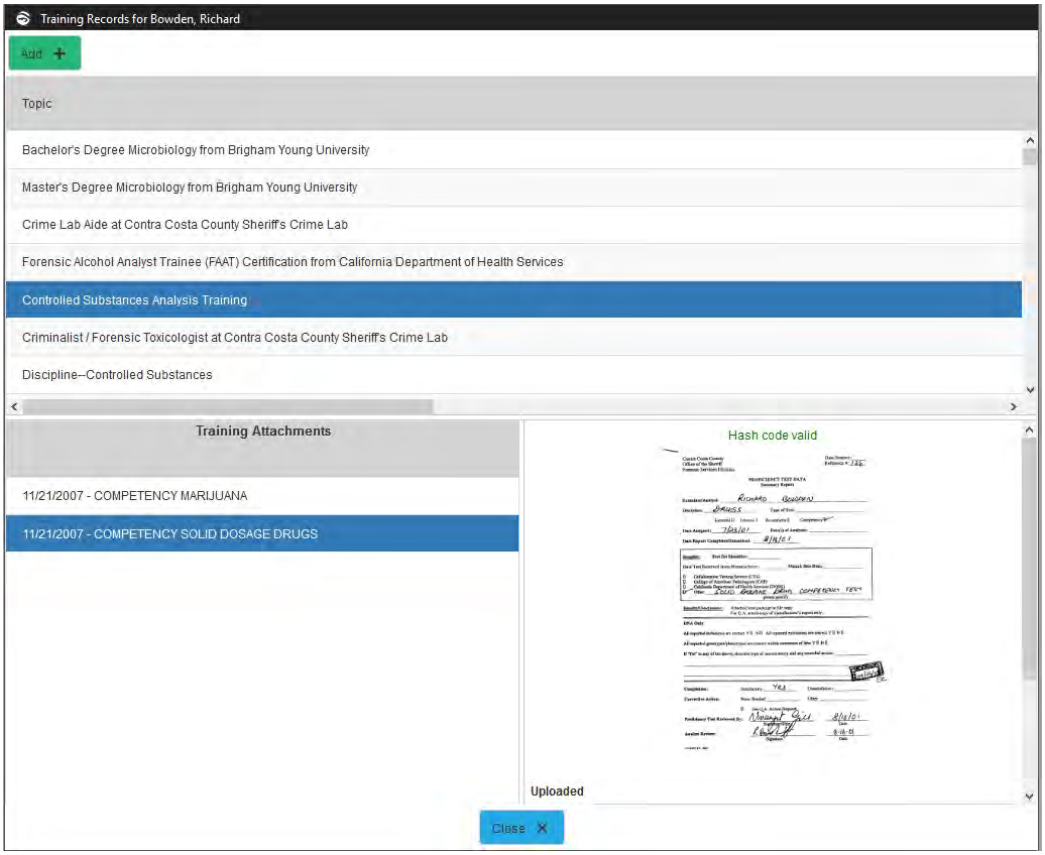
Type: "Transcripts" Attach images or documents to this training record that show your educational transcripts.

Type: "Safety Training", "Ethics Training", "Human Resource Training" The entry can display on LIMS reports but not on the printed Statement of Qualifications.

Type: "Separation from Employment" Attach exit checklist and any other relevant documents. This will not be displayed on the Statement of Qualifications.

P. **Attaching Images**

After training records have been entered, images such as certificates or forms may be added to each record. Images are shown in the section below the training record list labeled "Training Attachments".



NOTE: When scanning new images, it is important to limit the size of image files. Use 200 dpi or less. Limit the colors to black and white, 8 bit color, or 8 bit gray scale (depending on the type of image to be scanned).

Select Record: Click the record that you want to add the image to.

Add an Attachment: Right-click the record. Choose "Add Attachment". Browse to where the image is stored. *From the scanner*: Cancel the file browsing dialog. Position the certificate on the scanner. Click the scanner button.

Q. **Re-naming Images**

1. Right-click the image name. Select "Rename". LIMS will prompt you for the name of the image. This name will appear beneath the training record.

R. **Reports**

1. **Statement of Qualifications**
   a. Open LIMS and click on the "Administration"menu.
   b. Choose "Crystal" and then "Generate Reports".
   c. Select the "ANAB Statement of Qualification" from the list of report options.

d. Right-click and choose "Print Report".

e. LIMS will prompt you to scan a barcode for the individual you want a Statement of Qualifications printed or enter the employee number.

Make sure that you place your cursor in the box prior to scanning your barcode. If the cursor is not in the box a blank report will be printed.

f. Click the Printer button. Click the "Export" button.

2. **Training Module Records**

a. The reports includes the training entries as well as thumbnails of the images placed in LIMS by the staff member.

i. This Report is restricted to Chief, Managers, Supervisors, the QA Coordinator, and staff members assisting with the Quality Assurance Program.

b. Open LIMS and click on the "Administration" menu.

c. Choose "Crystal" and then "Generate Reports".

d. Select Audit from the Report Category list

e. Select *"Training Module Records"* Report

f. Right-click and choose "Print report".

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 12/27/2018	**NUMBER:** QA.13 - LIMS Court critique procedure
	RELATED ORDERS: FSD.26 - Court Testimony Review	
APPROVED BY: Pamela Hofsass	**ANAB: 7.7**	
CHAPTER: Quality Assurance	**SUBJECT:** LIMS Court critique procedure	

I. Policy: Court testimony review will be documented in LIMS. See FSD.26 for more information related to court testimony review.

A. **General Procedure for Obtaining a Completed Testimony Review**

1. Typically, the Supervisor assigns a competent and authorized individual who will observe the analyst's testimony.
2. The observer reviews the test record prior to going to court, if possible.
3. The observer records his/her observations and completes the Internal Court Critique form FSDF.02.
4. The form is given to the Supervisor for review.
    a. The Chief and QA Coordinator will be notified of any court testimony deficiencies per FSD.15.
    b. If an external court critique is initiated by a Supervisor, the External Court Critique Form FSDF.03 is used.
5. The Supervisor evaluates the documentation and seeks clarification from the observer if necessary.
6. The Supervisor reviews the form with the analyst.
7. The Supervisor and analyst sign and date the form where indicated.

B. **Procedure for Documenting the Review in LIMS**

1. The Supervisor is responsible for documenting the court review in LIMS or documenting that an analyst did not testify in a calendar year.
2. Open LIMS Case # Court 20XX (for the year the observation of testimony occurred).
    a. Remove the case mask when opening the case.
3. Create a New Request by right clicking and choosing Add Request.
4. Enter the required information in the request.
    a. The **Agency** is "Forensic Services Division".

b. The **Agency Representative** is the analyst whose testimony was observed.

c. The **Div Section/Unit** is "FSD Administration".

d. The **Service** is "Court Testimony Critique-General".

e. The request is **Assigned** to the Supervisor of the analyst.

5. Enter the required information in the additional data field by right clicking on the request and choosing Additional Data Field.

a. The **Date of Testimony** is the date of observation.

b. The **Reviewer** is the individual who performed for the testimony review.

c. The **Discipline** (drop-down menu) is the forensic discipline.

d. The **SubDiscipline** and **SubDiscipline2** (drop-down menus) are the specific types of testimony reviewed.

e. If more types of testimony are needed, open a new request.

6. Image the documentation of the testimony review into LIMS.

C. **Procedure for Documenting Staff Did Not Testify During the Calendar Year**

1. Supervisors will account for all staff that currently performed casework in the calendar year or are on a rotation (eg. crime scenes).

2. Follow the procedures above to open a request.

3. Enter the required information in the additional data field by right clicking on the request and choosing Additional Data Field.

a. The **Discipline** (drop-down menu) is the forensic discipline.

b. The **SubDiscipline** is Did Not Testify.

4. Documentation should be obtained affirming the analyst did not testify during the calendar year. Image the documentation into LIMS.

D. **Procedure for Documenting Review Could Not Be Obtained (When Staff's ONLY Testimony was Grand Jury/Juvenile Hearing)**

1. If staff's only testimony was a juvenile hearing or Grand Jury, then testimony review is typically not possible.

2. Follow the procedures above to open a request.

3. Enter the required information in the additional data field by right clicking on the request and choosing Additional Data Field.

a. Type in **Grand Jury** or **Juvenile Hearing** for the **Reviewer.**

b. The **Discipline** (drop-down menu) is the forensic discipline.

c. The **SubDiscipline** and **SubDiscipline2** (drop-down menus) are the specific types of testimony provided.

4. Image any associated documentation into LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 04/21/2015	**NUMBER:** QA.14 - LIMS Imaging Upload Procedure
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: LIMS Tools	**SUBJECT:** LIMS Imaging Upload Procedure	

JusticeTrax Imaging Procedure

I. File types

A. Although any type of file can be attached to the JusticeTrax LIMS imaging module, only some picture file types will have thumbnails and can be viewed natively in the imaging module. Image files like .tif and .jpg can be attached and viewed within the module.

B. Non-image file types such as Adobe .pdf, Word .doc, or Excel .xls can be attached, but cannot be viewed in the imaging module. The client computer will have to have proper software installed that can view the file.

C. Crystal report templates can only use .tif or .jpg files to display images. If the image is to be included in a crystal report template (such as a final report or notes package), then only .tif or .jpg should be used. In order to display properly in a crystal template there may be further limitations of file size, scan size, bit depth, and compression type. Files in .tif format need to be a single page per file. Multi-page .tif files will not work in crystal templates.

D. The Indexer and Batch Indexer utilities require .tif images. If these utilities are to be used to upload image files, then only the .tif format should be used.

E. Keep the file size of attachments as low as possible. Use lower resolution (200 DPI), black and white (1 bit) color bit depth, and small scan sizes whenever possible. The .tif file format is not compressed and creates larger files than the compressed .jpg format.

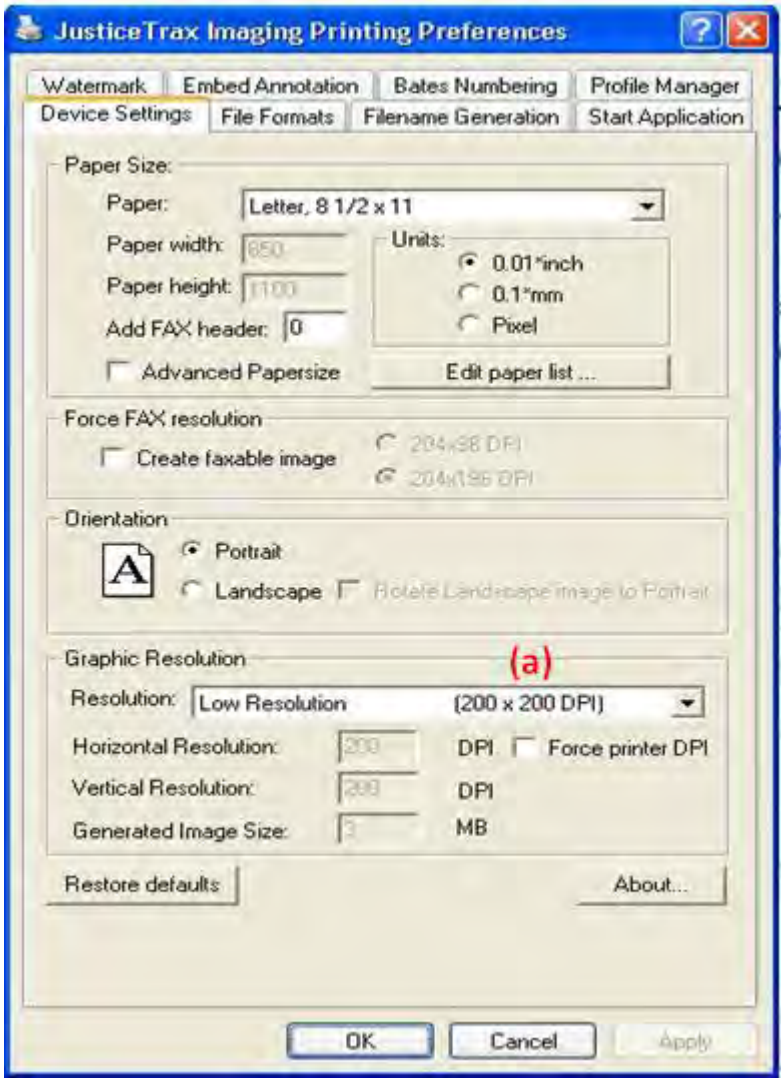
II. JusticeTrax Imaging Printer Default Setup

NOTE: The "JusticeTrax Imaging" printer is not currently installed on the Remote Desktop Server.

A. *This only needs to be done once per log-in on a computer*:

Click Start. Click Printers and Faxes.
R-Click the "JusticeTrax Imaging" printer.
Select "Printer properties".
Click the "Printing Preferences" Button.

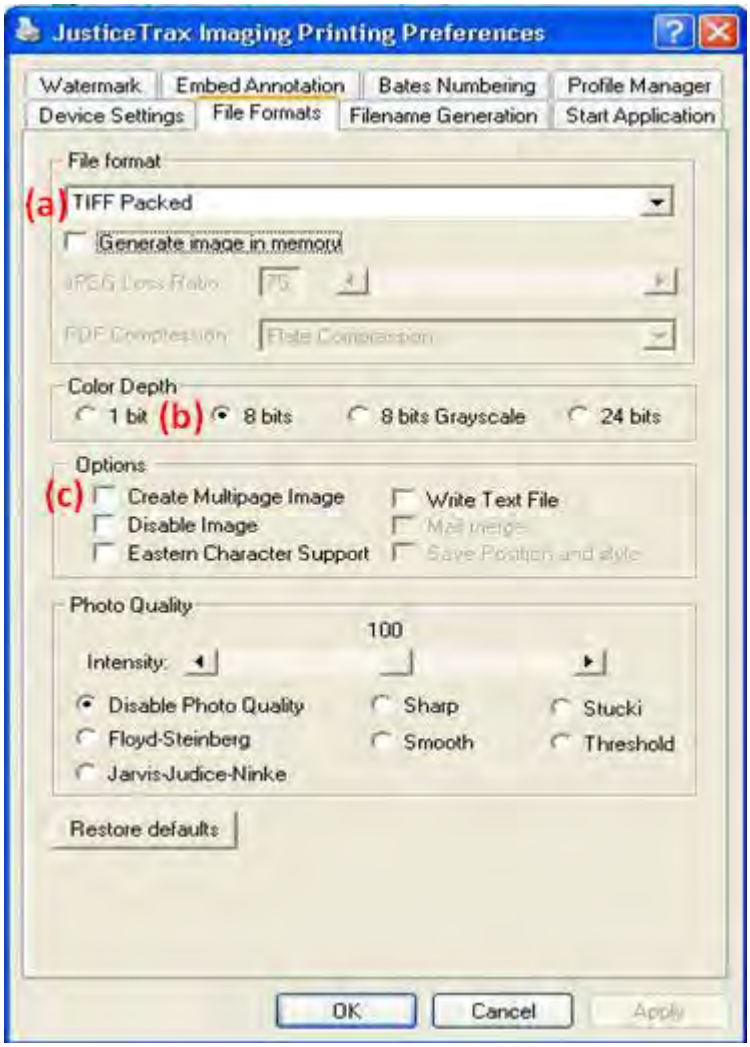
(a) Under the "**Device Settings**" tab, change the Resolution to "Low Resolution (200 x 200 DPI)



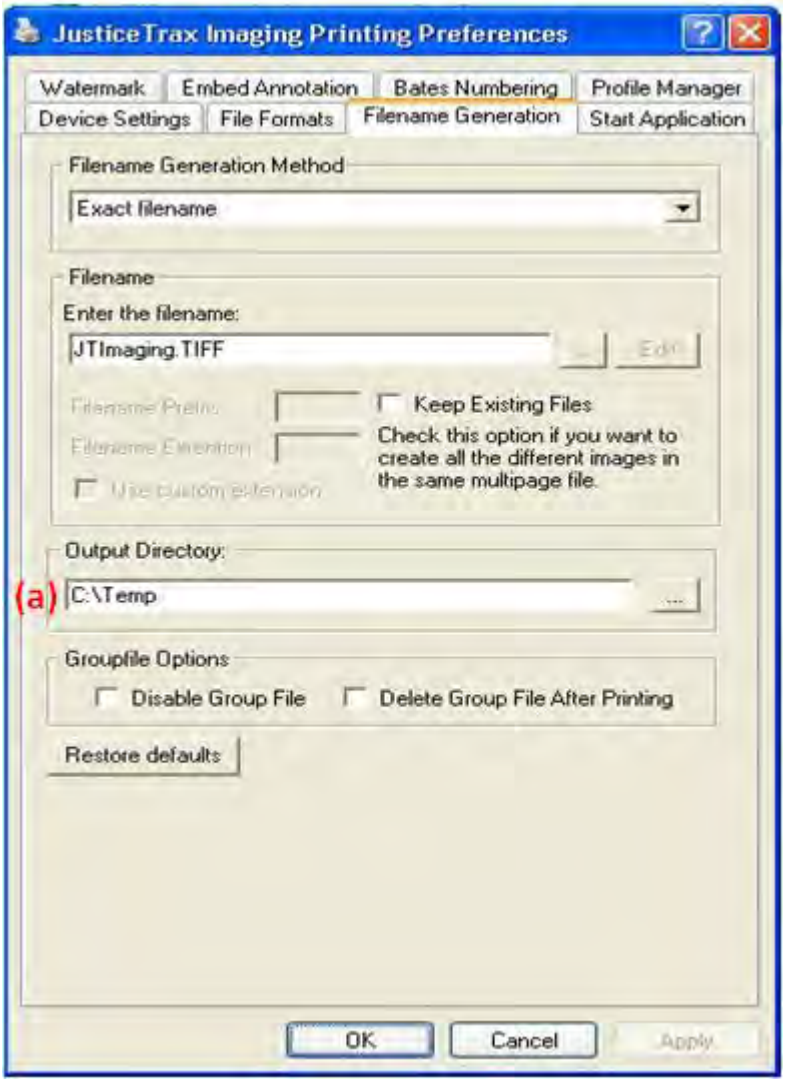
Images in LIMS to be used on reports and notes should be in .tif or .jpg format. Indexer and Batch Indexer utilities require .tif format. The following settings are for .tif files to be used with Indexer or Batch Indexer with the smaller file sizes. Be careful when using larger DPI, color settings, or file formats.

Under the "**File Formats**" tab, change File Format to **(a)** "TIFF Packed".
If black and white prints are acceptable choose **(b)** "1 bit" as the Color Depth. This will create a smaller file size. If color is needed set Color Depth to **(b)** "8 bits". Do not use "24 bits".
Under the Options section, check **(c)** "Save each page as a separate file".

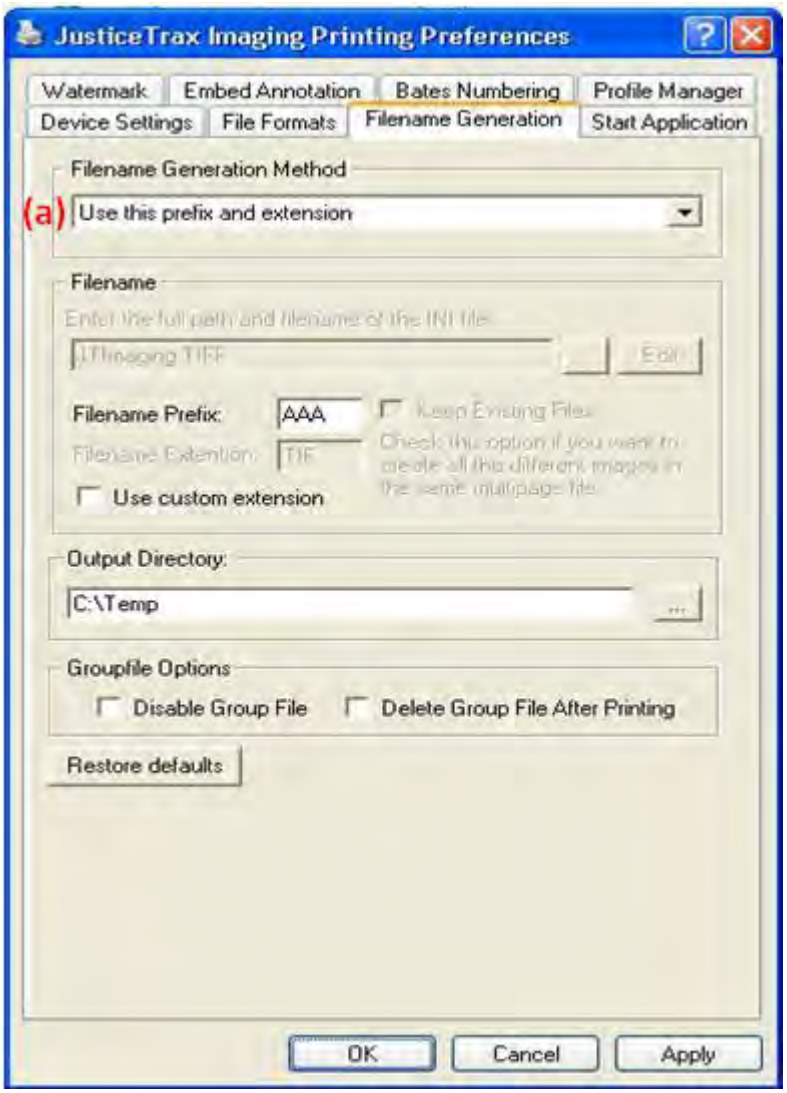
For a .pdf file that will not be used in a crystal report:
select (a) "PDF (*.pdf)" as the File Format
and un-check (c) "Save each page as a separate file" under the Options section.



(a) Under the "**Filename Generation**" tab, change the output directory to "C:\temp" or some other easily accessible location on the local hard drive.



(a) If you plan to do only single images, change the "Filename Generation Method" to "Exact Filename" and "Enter the filename" to "JT Imaging.TIFF" (or some other recognizable name). If you plan on doing large groups of images at once, change the "Filename Generation Method" to "Use this prefix and extension" or "Use document name".



III. How to print and add an image:

A. Printing

NOTE: The "JusticeTrax Imaging" printer is not currently installed on the Remote Desktop Server.

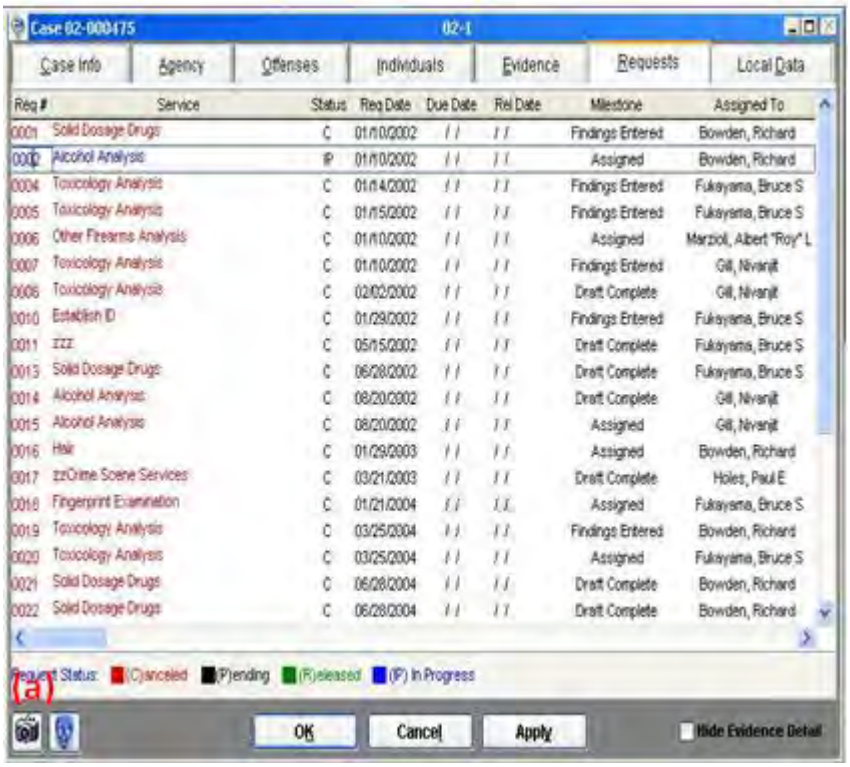
1. Open up the software that you want to print from.
2. Print the document/email/web page to the JusticeTrax Imaging printer instead of the default printer. Printer settings can be changed from the above defaults at the time the print is made.
3. Explore to the location of the created image. Check the size of the file. Large images should not be uploaded to LIMS. Consider changing Resolution or Color Depth to create as small an image as possible.

B. Adding the image to a request

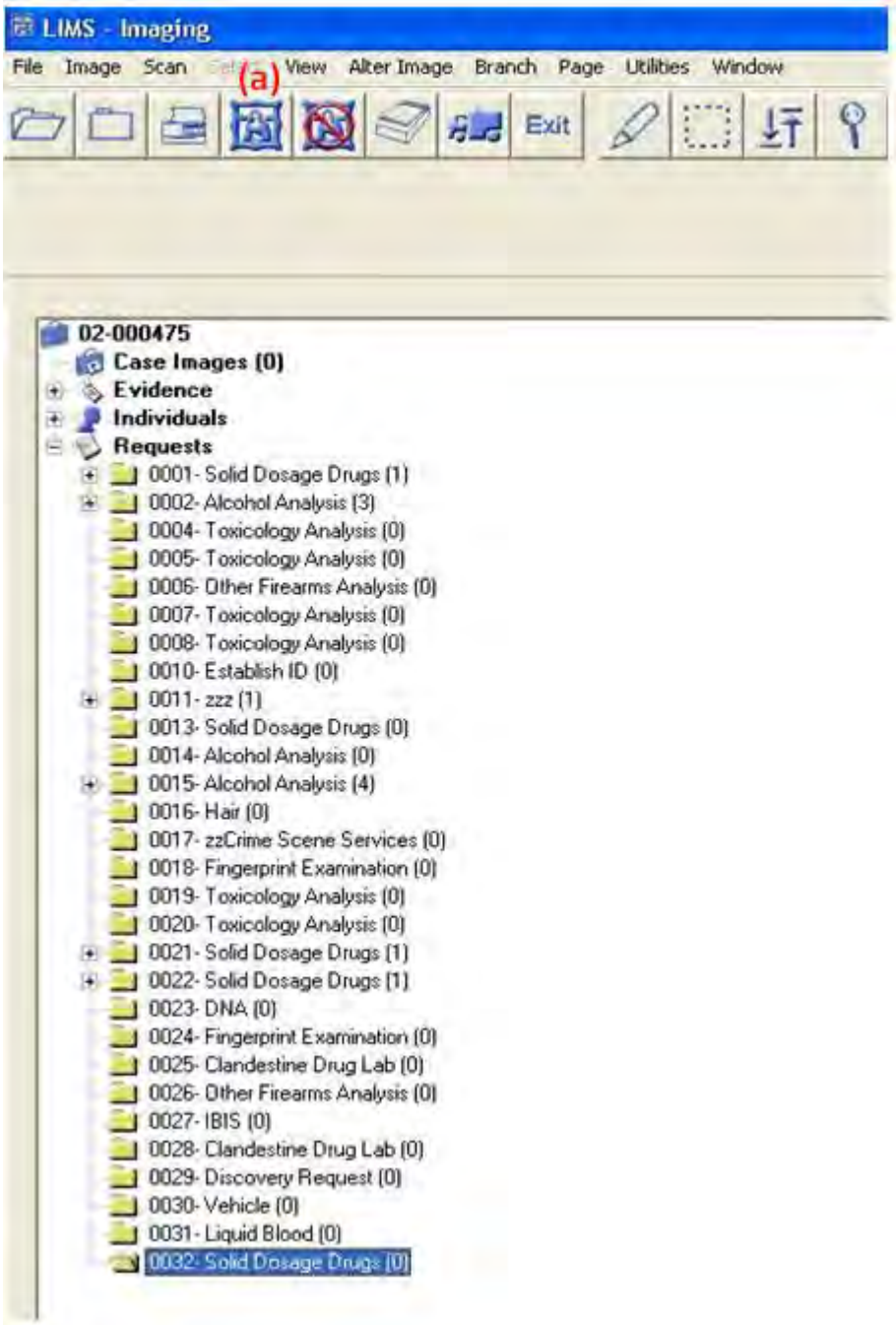
NOTE: This step can be done using the Remote Desktop. The location of the image file must be accessible to the Remote Desktop Server.

1. Open the case in LIMS

2. **(a)** Click the Camera button



3. Click on the request that you want to add the image to.
   a. To add an already printed or scanned image from a file:
      i. **(a)** Select "Image | Insert New Image" or click the "Add New Image" (picture frame) button.



ii. Browse to "C:\Temp\" (or wherever you decided to put the image.

iii. Select the image file.

b. To add a new image from a scanner:

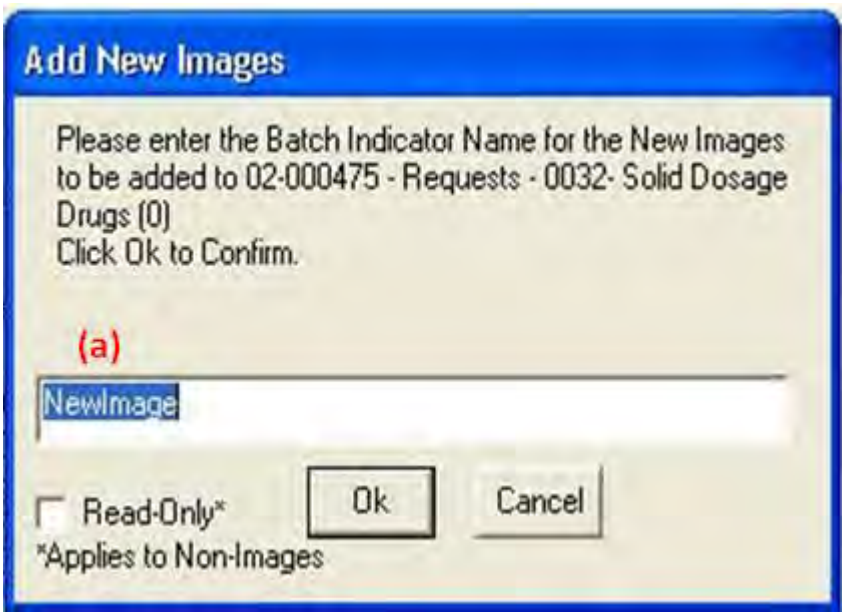
i. Make sure that "Scan | AutoFeed" is UN-checked.

ii. Select "Scan | Scan New Image" or click the "Scan New Image" (flat-bed scanner) button.

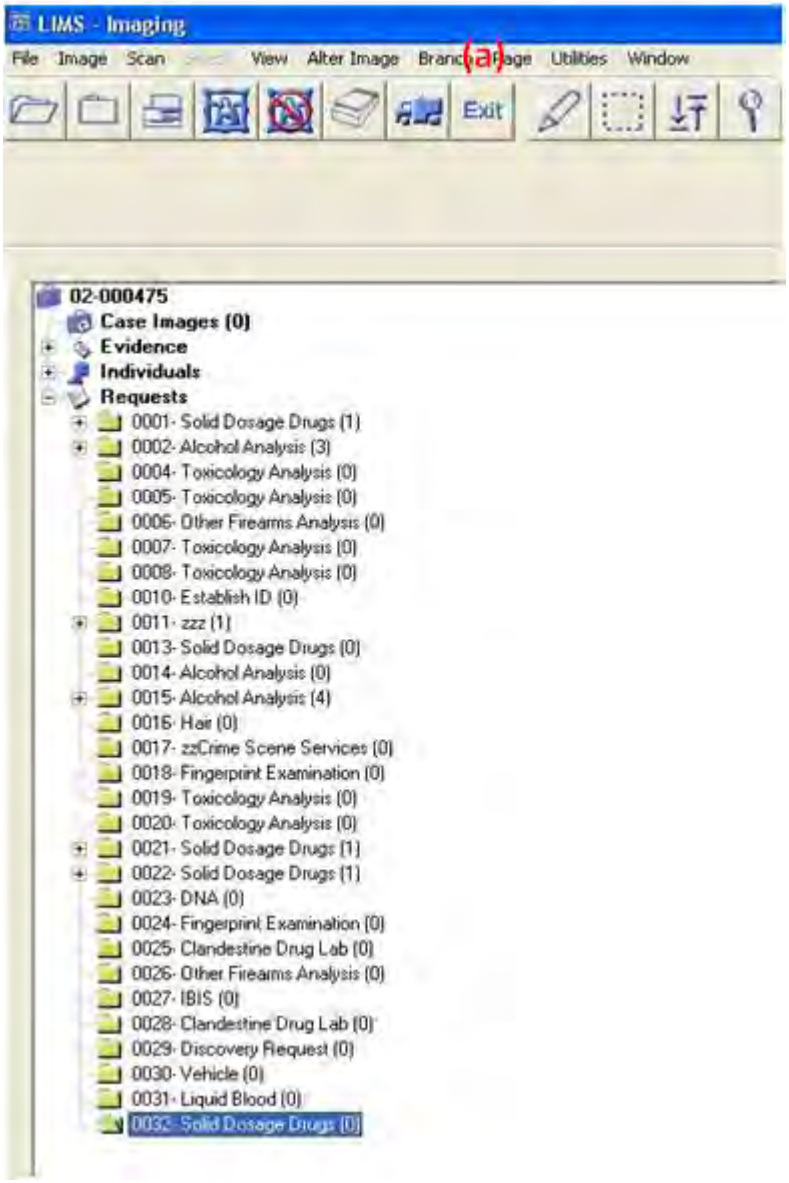
iii. Select the scanner TWAIN drivers.

iv. Scan the image.

4. **(a)** Name the image in LIMS. This name will appear beneath the image in your notes.



5. The images will sort by the name. If you want the images to appear in a certain order in your notes, prefix them with a sort number (ie "001-GC", "002-MS").
    a. Some units use specific letter codes to group and sort images. See unit manuals for details.
6. LIMS will always append your title with "_0". You can leave this as is, or remove the extra by renaming the image.
7. **(a)** Exit out of the imaging module.



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 7/29/2010	**NUMBER:** QA.15 - LIMS Indexer Procedure
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: LIMS Tools	**SUBJECT:** LIMS Indexer Procedure	

I. JusticeTrax Indexer Procedure

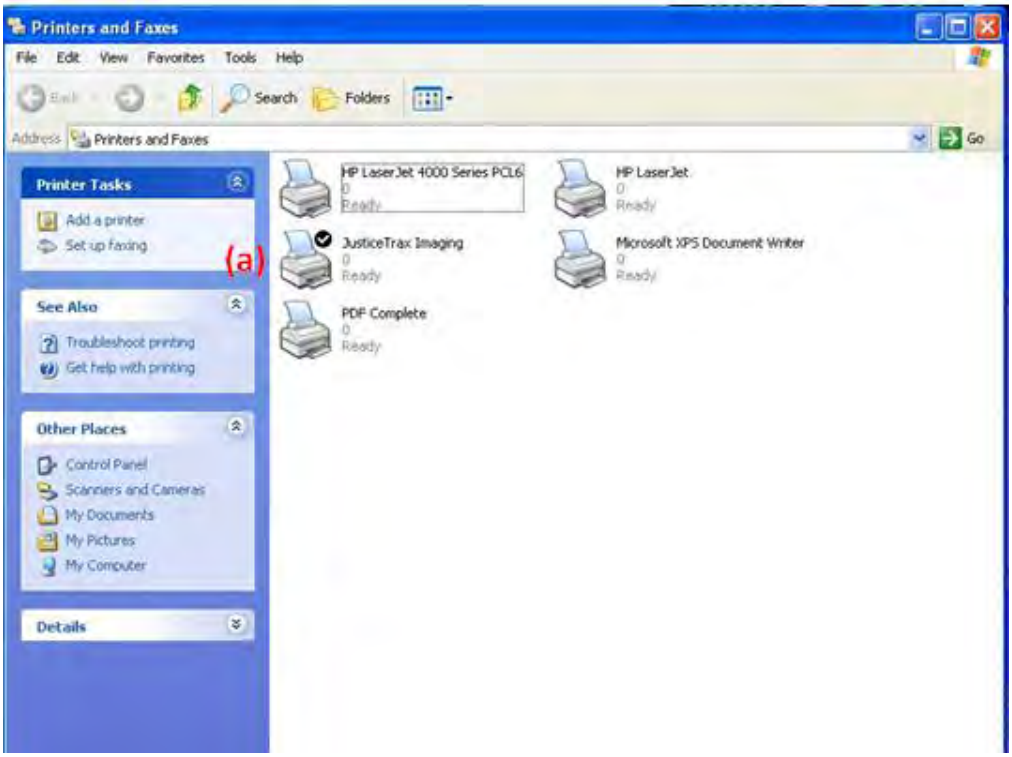
A. Printer Setup

Default printers:

Click Start. Click Printers and Faxes.

(a) Make sure that the JusticeTrax Imaging printer is set as the default printer (it will have a check mark next to it).

If it is not the default printer, R-Click the "JusticeTrax Imaging" printer. "Select Set as Default Printer".



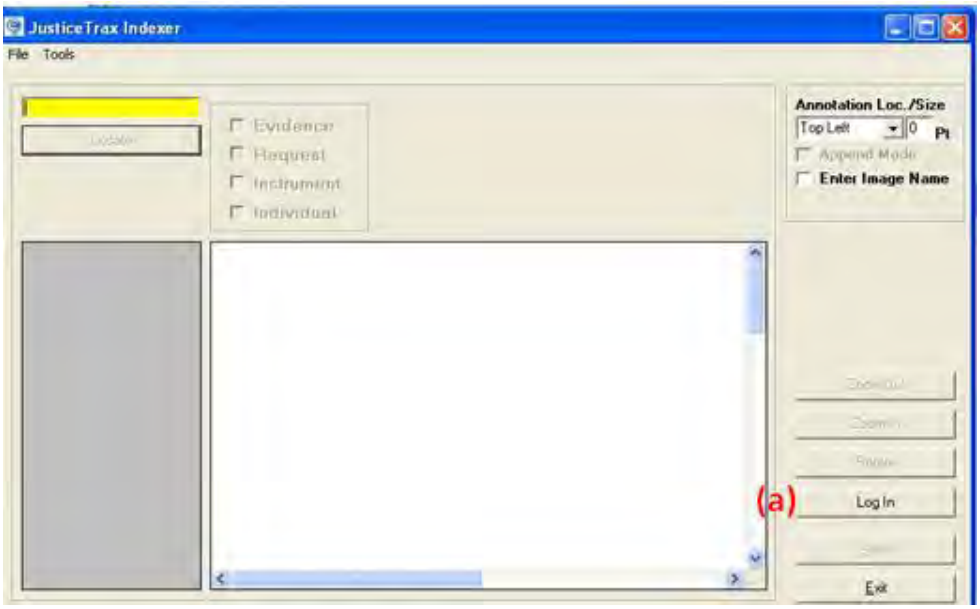
B. General Procedure

Adding Images to LIMS:

Make sure JusticeTrax Indexer is running. It can be minimized, but must be open in the background in order to work properly.

(a) If you have just started Indexer, you will have to log in.

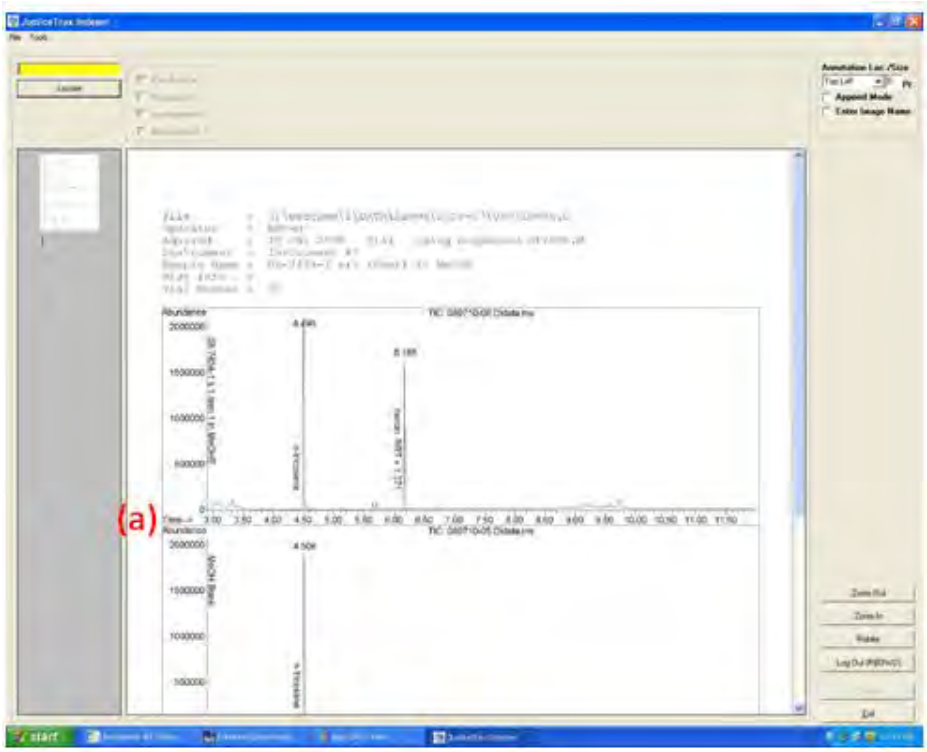
If another analyst has used Indexer, log out. Then log back in using your own name and password. This ensures that the images in LIMS belong to you. You can rename and move your own images, but not those that "belong" to other analysts.





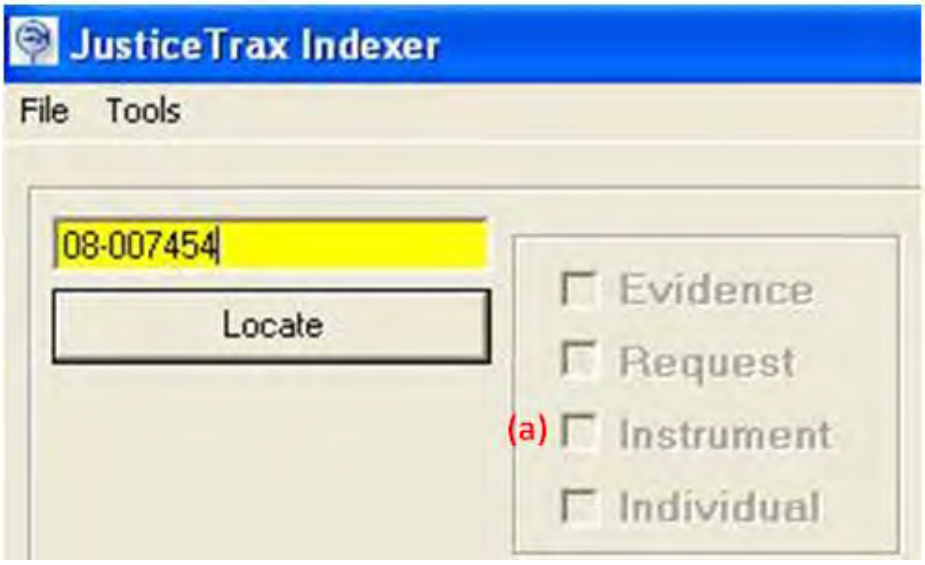
Print your results page as normal. Instead of printing through the physical printer, it will be caught by Indexer. The indexer program will blink of the taskbar, showing that it has an image ready to transfer.

(a) Maximize the indexer window. You should see a preview of your results page.



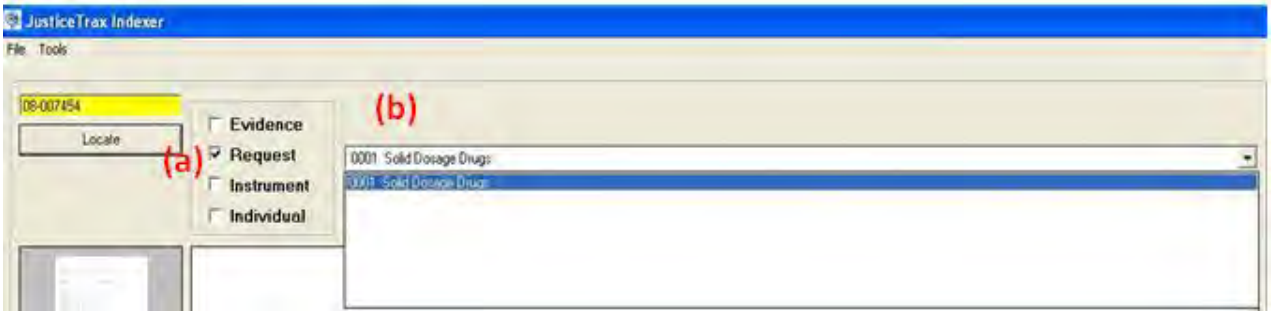
Enter that lab number in the yellow box. Indexer requires a 2 digit year followed by a dash followed by a six digit number to find the proper lab number. Add leading zeroes to pad the proper number of digits Lab #08-7454 should be entered as "**08-007454**"

(a) Press the "Locate" button underneath the lab number box. If it can find the Lab#, indexer will enable the next control. If this next section is grayed out, the lab # was probably entered wrong.



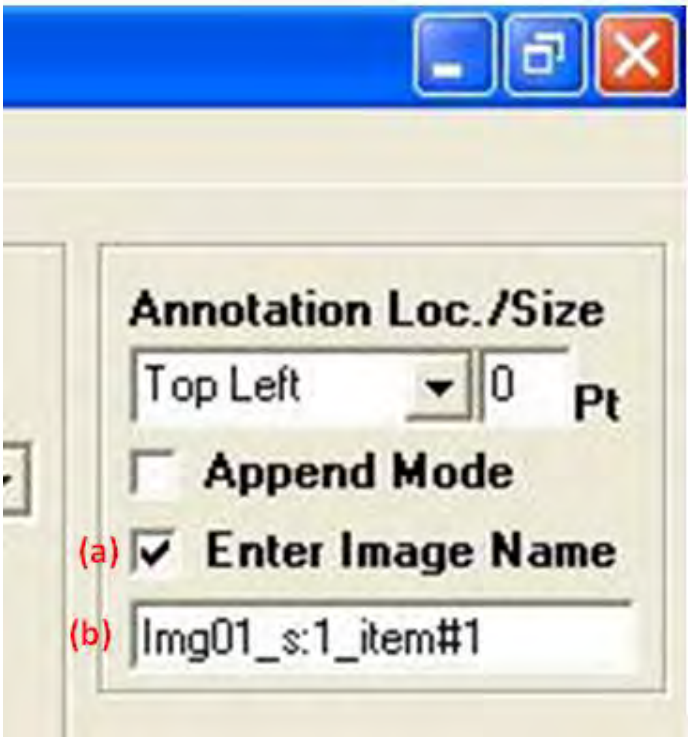
(a) Check the request box.

(b) Select the request from the dropdown list.

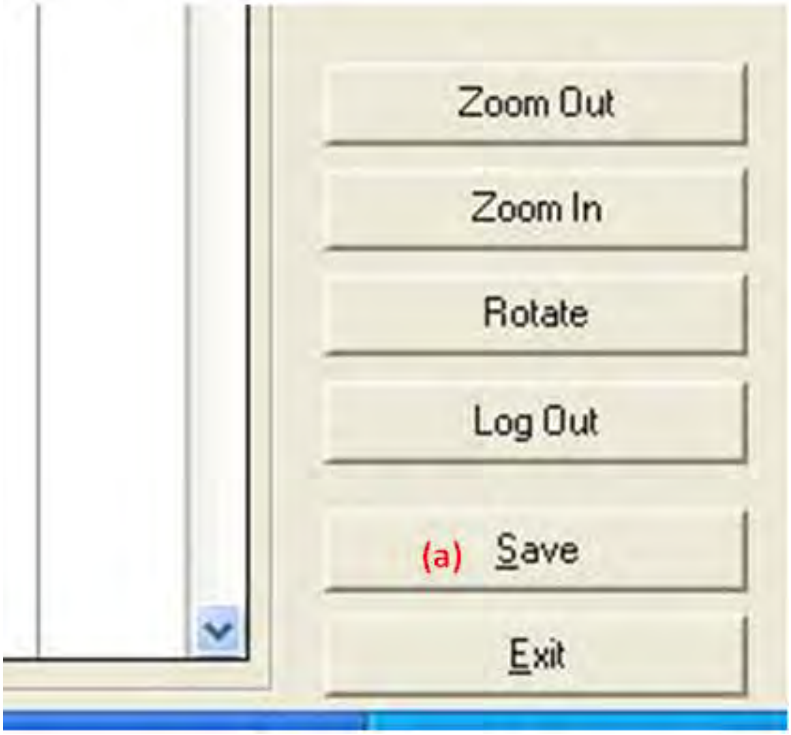


(a) Check the "Enter Image Name" box.

(b) Enter the image name. This will appear on your notes. The images will be sorted in alpha-numeric order when printed. This name should include the image #, submission #, and item # so that they can be recognized and sorted in the JusticeTrax Imaging module.



Double check that all the information is entered correctly. Push the **(a)** "Save" button



The image will be stamped with the date and time, as well as the user's login name. If successfully sent to LIMS, the dialog box will show up.



REMEMBER: click "OK" before printing other images. Indexer will crash if another image is sent before the dialog box is cleared.

The images can now be renamed, viewed, or deleted within the JusticeTrax Imaging module.

C. **Indexer Troubleshooting**

What do I do now?

Problem: I sent the image to the wrong Lab # or Request #.

Fix: If you know where you sent it, open that Lab # in LIMS. Open the Imaging module. Find the misplaced image. Move the image using the move button (it looks like a moving truck). Change its location to the correct Lab # and Request #.

If you don't know where you sent it, contact your LIMS administrator immediately. You need to move that image before someone else prints it out in their notes.

Problem: I can't delete or rename my images in the Imaging module.

Fix: Someone else was logged in on Indexer when you sent your images. If possible, have that person delete them. Re-send the images with your log in.

Problem: I print my notes and the images are out of order.

Fix: The images are sorted by the image name.

Make sure the names are consistent: " Image" (note extra space) is different that "Image" (no space) is different that "Img".

When images are added directly to the imaging module, rather than using the indexer, LIMS tacks the date to the front of the name. You may have to remove the date from the name if you are using a mixture of direct and indexer images.

I recommend using **2** digit image numbers such as "**Img01**" not "~~Img1~~". If you don't, and you have more than 10 images, then strange things may happen (Img11 will appear before Img2).

Problem: I print my page, but nothing appears in Indexer.

Fix: Make sure Indexer is running before you print.

If indexer is running, and still does not "catch" the image, contact your LIMS administrator. There is a setting in the printer preferences that has to be changed.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 03/20/2018	**NUMBER:** QA.16 - Internal Audit Procedure
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB: 4.14**	
CHAPTER: Audits	**SUBJECT:** Internal Audit Procedure	

I. Audits are conducted to assess the competence of individuals performing tests, compliance with the requirements of the management system, and the effectiveness of the operation. The general process for performing an internal audit is below.

Stage	Description	Time Frames (if applicable)
1	The QA Coordinator notifies the Chief, Managers & Supervisors of: (1) The proposed dates of the upcoming audit (2) The requested audit team members (3) The anticipated time span of the audit activities **The DNA Technical Lead is responsible for the DNA audit schedule, team assignment, and audit process.**	Typically, at least 30 days prior to the planned audit.
2	The Chief (or Managers) approves the dates and auditing team.	Typically, at least 30 days prior to the planned audit.
3	The QA Coordinator provides the team members an audit plan that includes: (1) The criteria being assessed (2) The planned daily schedule (3) The records that will be reviewed (4) The activities that will be undertaken during the audit **See FSD.20 for more information about scope of the technical unit audit and the quality audit, activities undertaken, and documents reviewed.**	Typically, the internal audit assesses the last calendar year.
4	The QA Coordinator informs the Managers and Supervisors what records they are responsible for providing. Examples include: (1) Case files (the audit team may request additional reports during the audit process) (2) Ethics training records (3) Security key logs (4) Training and authorization records (5) Safety training records (6) Purchasing records	Typically, at least 15 days prior to the planned audit.
5	The QA Coordinator provides records to the audit team members during the audit. Examples include: (1) Statement of qualifications (SOQ) (2) Competency records (3) Proficiency records (4) Court testimony monitoring records (5) QA Actions (6) Validation/Verification records (7) Previous audit findings (8) Most recent management review The audit is performed and evidence is gathered. During this time, clarifications may be sought from the Manager, Supervisor, and staff within the unit. The Manager or	Typically, the internal audit is complete within 5-7 days.

	Supervisor can, up until the conclusion of the auditing activities, provide any additional information which may clear up any potential finding. During the audit, the Section Manager or Unit Supervisor should be informed verbally of potential findings and observations.	
6	The internal audit will include direct observation of a sampling of testing within each discipline.	Direct observation (witnessing) may take place during the internal audit or prior to the scheduled audit.
7	Before the conclusion of the audit, all team members should meet to discuss, categorize and finalize potential findings and observations. The QA Coordinator provides the Chief and Managers with the draft report. If the Managers have any comments or objections, they must be put in writing and provided to the Chief and the QA Coordinator for review. If necessary, the Chief will make the final decision regarding the audit report findings and language. Further documentation may be requested from the QA Coordinator to clarify any finding(s).	The Draft report should be complete within two weeks of the conclusion of the audit. The Chief's final decision should be made within two weeks of any objections.
8	The report is approved by the Chief.	N/A
9	QA Actions are created for all findings and are marked as corrective actions. Observations and suggestions are designated as improvement actions or preventative actions. The QA Coordinator then prepares a **final** audit report and references the QA Action Request Number and its assignment.	N/A
10	The personnel assigned to the corrective actions are made aware of the assignment.	Typically, within 3-5 days of the assignment.
11	Completion of all corrective actions must be performed in accordance with FSD.15. Any "notes" created by audit team members may be discarded at that point.	N/A

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Quality Management System Procedures**	**REVISION DATE:** 04/27/2017	**NUMBER:** QA.17 - Evidence Recon
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Audits	**SUBJECT:** Evidence Recon	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 05/14/2019	**NUMBER:** QA.18 - QA Action Procedure
	RELATED ORDERS: FSD.15 - QA Actions	
APPROVED BY: Pamela Hofsass	**ANAB:** 7.10, 8.5, 8.6, 8.7	
CHAPTER: Quality Assurance	**SUBJECT:** QA Action Procedure	

I. The following is the procedure for initiating, creating, assigning and closing a Quality Assurance Action Request.

A. Types of QA Actions-See FSD.15 and FSD.27 for more information to determine the correct Case Number and Service to select.

Case Number where XXXX is the year	Service Type	Due Date
QARO XXXX	QA Risk Prevention QA Improvement Opportunity	90 days
QAV XXXX	QA Validation QA Performance Verification	N/A
QAC XXXX	QA Corrective Action	90 days
LEVEL2 XXXX	Level 2 Quality Incident	N/A

B. **Procedure for a Level 2 Correction**

1. Any FSD staff member can add a Level 2 request in LIMS.
2. Open LIMS Case# Level2 XXXX.
   a. Remove the case mask when opening the case.
3. Create a New Request by right clicking and choosing Add Request.
4. Enter the required information in the request.
   a. The **Agency** is "Forensic Services Division".
   b. The **Agency Representative** is the individual completing the request.
   c. The **Div Section/Unit** is "FSD Administration".
   d. The **Service** is " Level 2 Quality Incident".
   e. The request is **Assigned** to the individual documenting the correction.
5. Enter the required information in the additional data field by right clicking on the request and choosing Additional Data Field.
   a. **Date of Incident** is the date the quality incident occurred or was identified.
   b. **Unit**

c. **Type** (drop-down menu) is a list of general types of quality issues.

d. **Notes Field** may be used to add related units or add a type of quality issue not listed in the drop-down menu.

6. Image FSDF.23 and any other documentation into LIMS.

C. **Procedure for Corrective Actions, Risk Preventions, Improvement Opportunities, Validations, and Verifications**

1. A request may be made by any staff member, although the routine and recommended process for initiating a request is through an employee's immediate supervisor

2. It is the responsibility of the supervisor, or the staff member, to notify the QA Coordinator so that a request may be entered and tracked in LIMS.

   a. A brief description of the nature of the QA Action is required.

3. Upon notification, the QA Coordinator will add the appropriate request in LIMS. See table above.

4. The QA Coordinator will assign the QA Action to a staff member.

   a. Although multiple staff may be involved in completing the QA Action, the QA Action will be assigned to a Supervisor, Manager or the Chief.

   b. Typically the notification to the assigned individual will be made via email.

   c. The assigned individual can view their assignment(s) in LIMS by running the Open QA Action Report from LIMS Crystal Reports:

   d. The assigned individual will document the requisite information in LIMS.

   e. The laboratory shall retain records of the nature of nonconformities, cause(s), and any subsequent actions taken.

   f. For example, all the elements of a Corrective Action including the results of any Corrective Action must be documented in LIMS on FSDF.06. See FSD.15.

   g. Any required documentation is typically added by the person assigned the action but may be added by the QA Coordinator.

5. Once the assigned individual has completed the QA Action, the assigned individual will mark the request Draft Complete.

6. The assigned individual will inform the QA Coordinator that the QA Action has been completed.

7. The QA Coordinator or Chief will mark the request, if approved, technically reviewed in LIMS.

   a. The QA Coordinator or Chief may request further work or additional documentation prior to technically reviewing the QA Action.

   b. If the QA Action is assigned to the QA Coordinator, the QA Action is considered technically reviewed if marked Draft Complete.

c. Quality Actions involving DNA Analysis will be verified by the DNA Technical Lead.

8. Once the QA Coordinator or Chief has technically reviewed the QA Action, it will be administratively reviewed in LIMS. The Chief, Managers or QA Coordinator may administratively review QA Actions.

   a. The Chief typically administratively reviews section and Division level actions.

   b. The Managers typically administratively review unit level actions.

9. Documentation may be added after administrative review to demonstrate monitoring of actions and evaluation of the effectiveness of the action(s) taken.

10. When the monitoring period is over and the evaluation of the effectiveness of the actions taken is complete, the individual assigned the QA Action or the individual responsible for the monitoring will update the QA Action and add an activity in LIMS.

    a. In LIMS, choose the appropriate request

    b. Right click to add an activity and select **Activity** from the list

    c. **Lab** is Forensic Services Division

    d. **Dept** is FSD Administration

    e. **Service Name** Leave Blank

    f. **Activity** is QA Monitoring Complete

END OF DOCUMENT

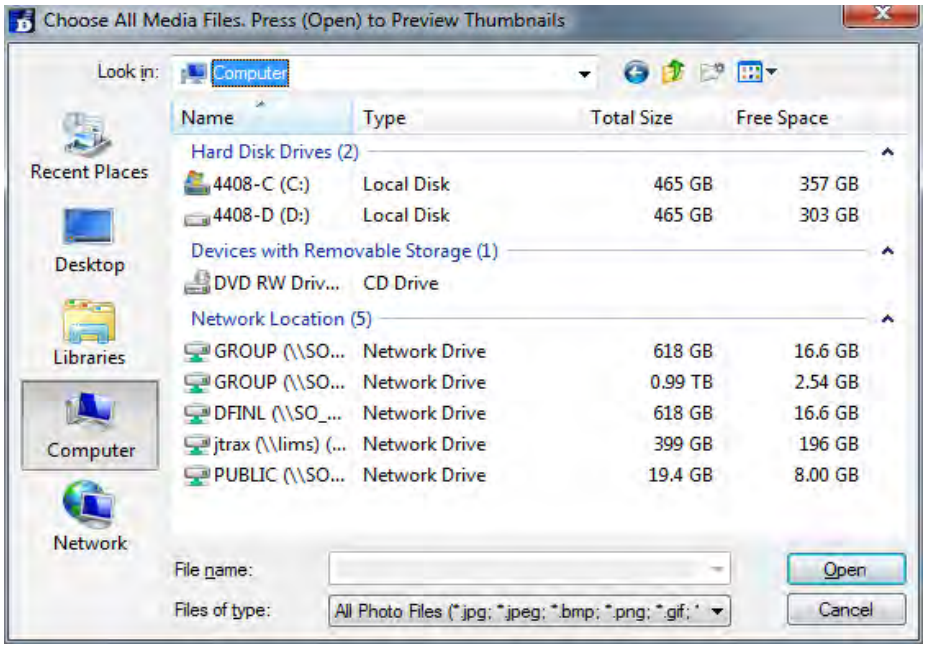
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management Systems Procedures	**REVISION DATE:** 08/13/2019	**NUMBER:** QA.21 - Veripic Procedure
	RELATED ORDERS: FSD.42 - Case Record, FSD.42.01 - Diagrams, Photographs & Digital Images	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Case Record	**SUBJECT:** Veripic Procedure	

I. Procedure for uploading images into VeriPic:

A. Open the VeriPic Digital Evidence Manager and log in using your Username and Password.

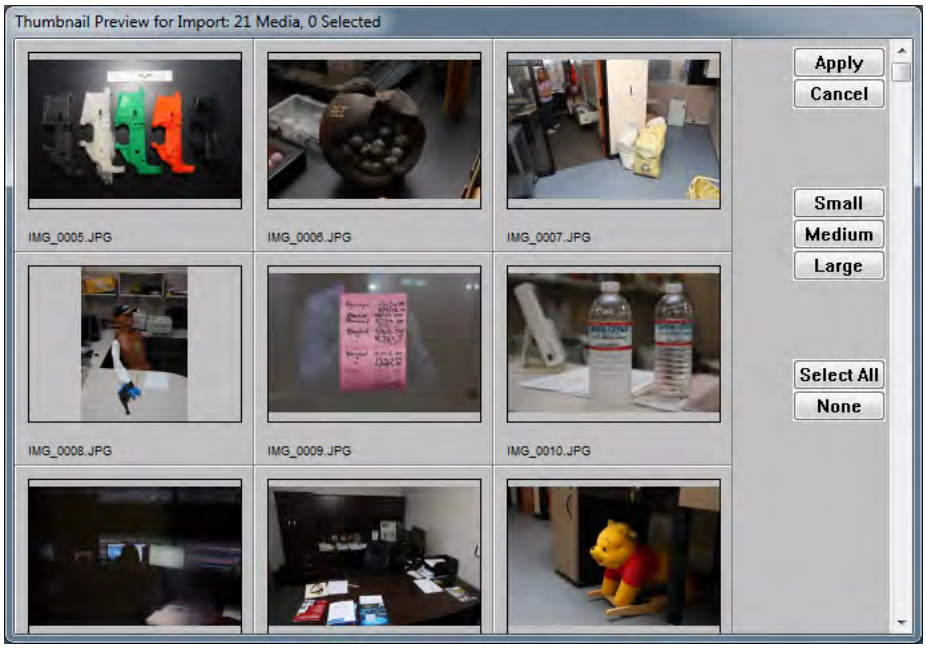
B. Click the "Import" button on the left

C. Use the Windows Explorer-style prompt to navigate to the location of the images you want to upload

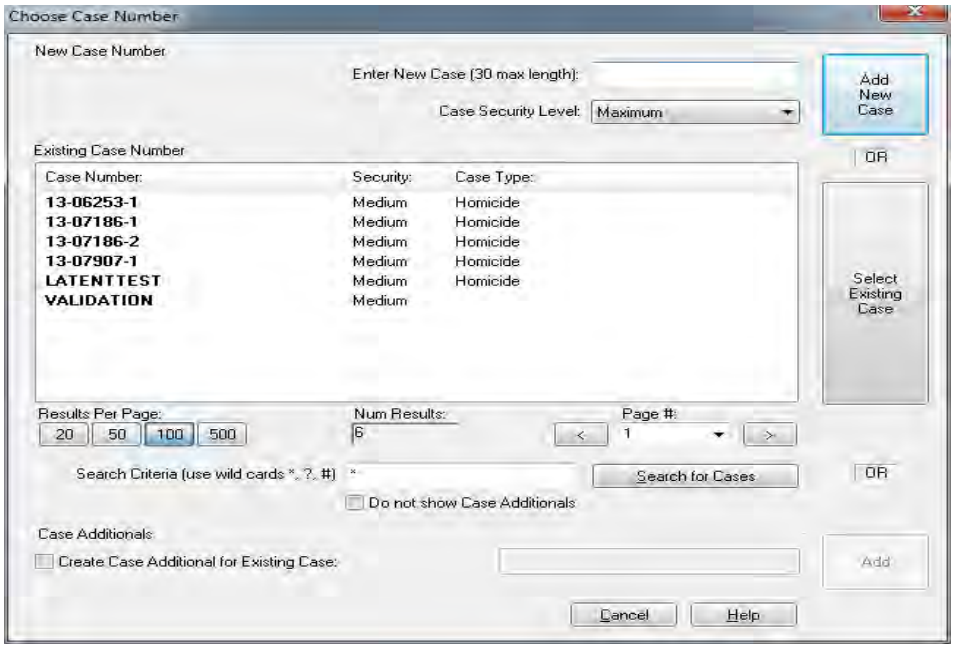


D. After locating the folder containing the images, use either Control-A to select all of the images or click on the first image, scroll to the last image, and then hold shift while clicking on the last image

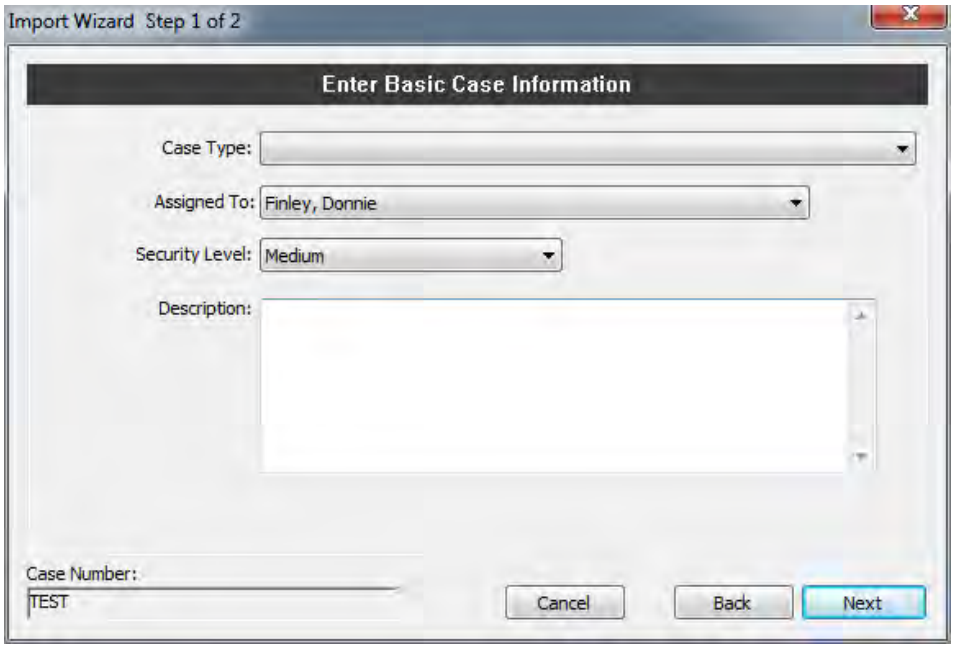
E. The next window allows the user to preview the selected files. If importing all of the images, click "Select All" then "Apply"



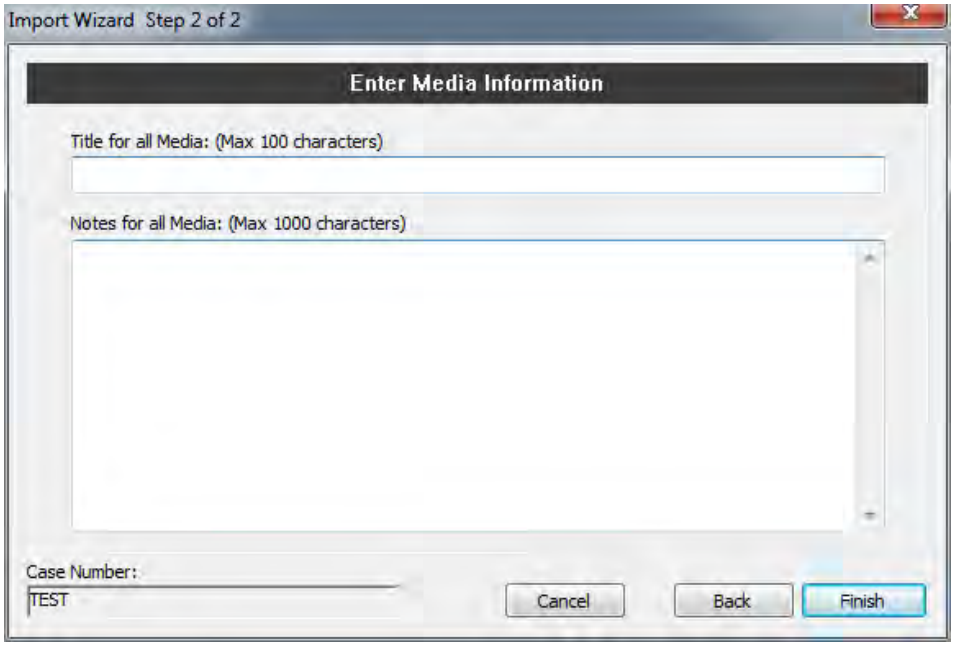
F. The next window asks if the user wants to add the images to an existing case or to add a new case. If adding a new case, enter the laboratory number using the YY-12345-1 format (i.e. 05-12813-1) and click "Add New Case". Use place holder zeros if the number is under five digits (e.g. 13-04269-1). The wizard will prompt re-enter the case number for accuracy.



G. If adding a new case, the next step is setting the case type, setting the case assignment, and setting the the security level. Set the security level to "Medium" unless otherwise instructed by a manager or supervisor. Enter a description if desired.



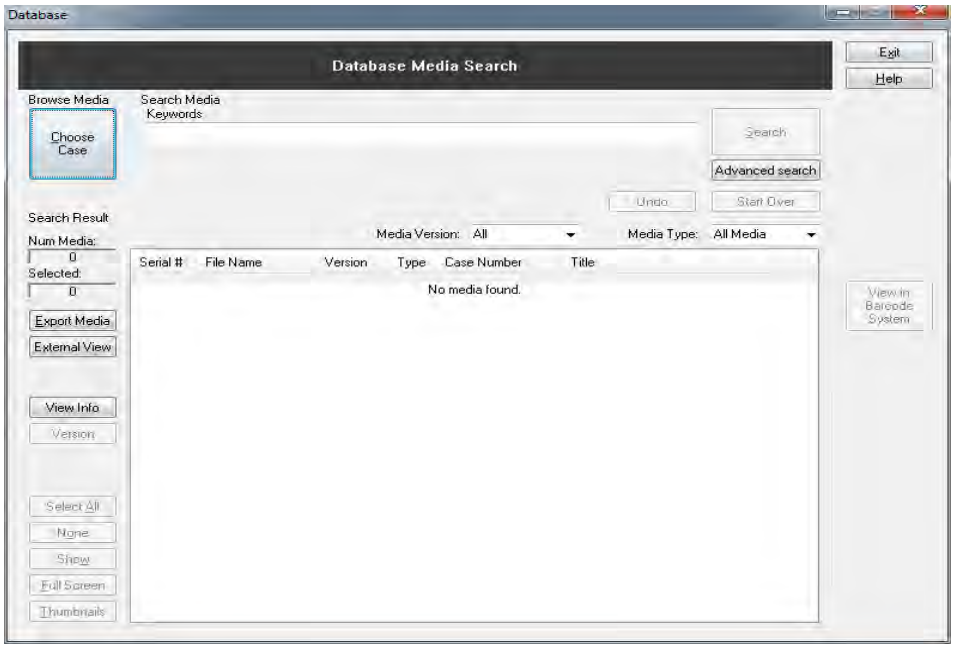
H. The next step will prompt for a title and notes for all media. Enter the lab number and a description of the activity (e.g. Autopsy, Death, Vehicle, etc). These fields can be edited later if needed.



I. Click "Finish" and the images selected will be uploaded.

II. Common menus encountered in VeriPic;

A. To find a case, log into the system and click the "View" button. This dialog box gives the user the option to either search for a case (type in the search box and click "Search") or to browse for a case by clicking the "Choose Case" button.

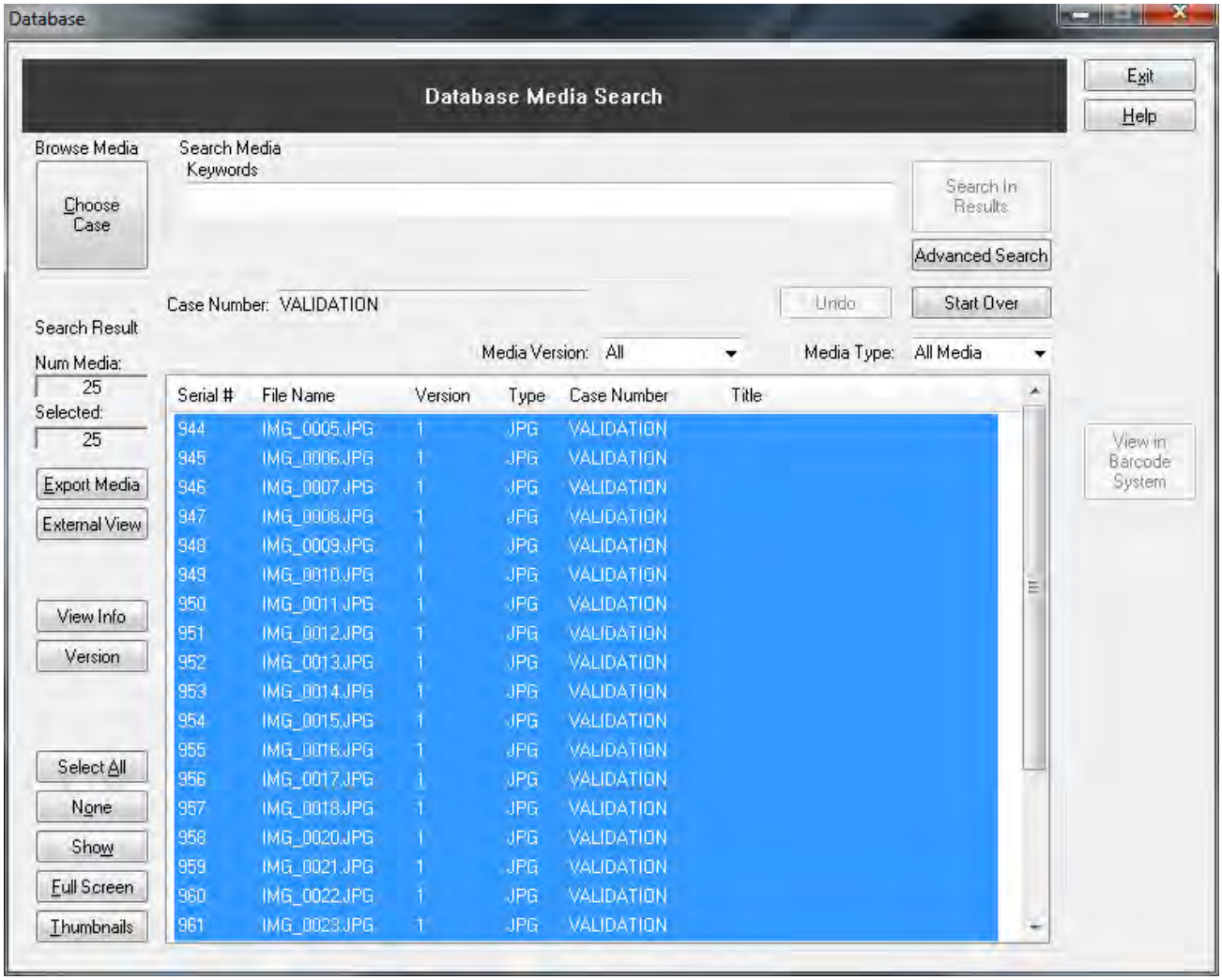


B. The remainder of the controls are based on the windows explorer interface and should be straightforward to follow.

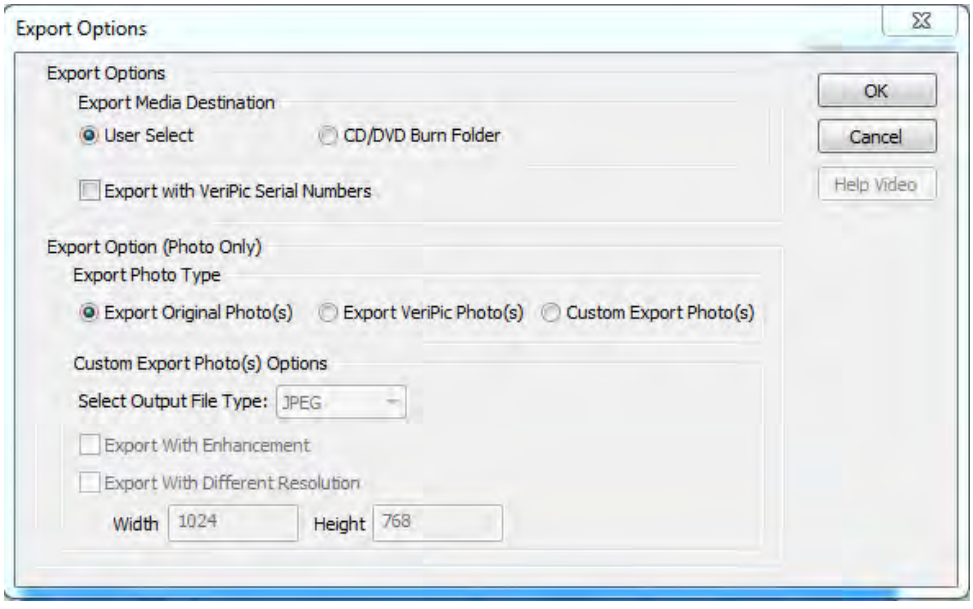
III. Exporting images from VeriPic.

A. Login to VeriPic and locate the case with the images to be exported (View, Choose case, then select the appropriate case).

B. Select the images to be exported (Select All or by Ctrl-clicking) and then click Export Media



C. Choose the User Select option, do not check the box for Export with VeriPic serial number, and Export Original Photo(s) and click ok.



D. Use the dialog box to find or create an appropriate folder to export the images to.

E. Add any appropriate notes for export in the next dialog box (e.g. see discovery request with the lab number).

F. The images will export to the chosen folder and the user can burn the images to CD/DVD.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Quality Management System Procedures	**REVISION DATE:** 10/17/2018	**NUMBER:** QA.22 - Customer Feedback Email Instructions
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Customer Service	**SUBJECT:** Customer Feedback Email Instructions	

[redacted]

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Quality Management System Procedures**	**REVISION DATE:** 04/08/2019	**NUMBER:** QA.23 - EvidenceOnQ
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Evidence	**SUBJECT:** EvidenceOnQ	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:**	**NUMBER:** QA.24 - QuarterMaster Instructions
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ANAB:**	
CHAPTER: Inventory	**SUBJECT:** QuarterMaster Instructions	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 06/30/2017	**NUMBER:** BA.01 - Introduction
	RELATED ORDERS: BA.30 - Analysis of Samples by GC-FID, BA.32 - Coroners Method, BA.34 - Alcoholic Beverage Quantitation, BA.08 - General Evidence Handling, BA.09 - Uniform Standards for Withdrawal, BA.39 - Uncertainty of Measurement, BA.40 - Uncertainty Budget for Blood Alcohol, BA.41 - Blood and Urine Training, BA.21 - Care and Maintenance of Equipment and Environmental Conditions, BA.26 - Diluters, Dispensers and Pipettes, BA.28 - Balances, BA.27 - Glassware and Thermometers, FSD.12 - Document Control, BA.10 - Technical Records	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: 5.4.1 ASCLD-LAB International Supplemental 2011: 5.4.1.1**	
CHAPTER: General Information	**SUBJECT:** Introduction	

I. Policy: Forensic alcohol analysis is performed on blood, urine and vitreous specimens utilizing an internally standardized gas chromatographic method coupled with flame ionization detection.

A. The method involves the analysis of blood and urine specimens that have been diluted with an internal standard, sampled by an automated heated headspace sampler, and analyzed by dual column gas chromatography.

1. The quantitation of ethanol is accomplished through calculation of the relative responses (peak areas) of the ethanol and internal standard by the gas chromatographic separation of ethanol from other volatile substances.

B. Forensic alcohol analysis is performed only by qualified Criminalists who have been authorized by the laboratory.

C. The title of the method for Alcohol Analysis by the Forensic Services Division, Office of the Sheriff Contra Costa County Blood Alcohol Operating Procedures is:

1. Forensic Alcohol Analysis by the Semi-automated Headspace Dual Column Gas Chromatography (viz., GC-Headspace) Method

a. DCPE1 will be used to refer to Perkin Elmer Clarus 580 Dual Column Gas Chromatograph (DCGC1) with Perkin Elmer Turbo Matrix 110 Headspace Sampler (HS1), TotalChrom Software and Windows 7.

b. DCPE2 will be used to refer to Perkin Elmer Clarus 580 Dual Column Gas Chromatograph (DCGC2) with Perkin Elmer Turbo Matrix 110 Headspace Sampler (HS2), TotalChrom Software and Windows 7.

c. BAC1.MTH for DCPE1 and BAC2.MTH for DCPE2 are the instrumental parameters and BACa.MTH and BACb.MTH are the calibration parameters used for quantitative analysis of ethanol in casework for columns a & b, respectively.

2. Both DCPE1 and DCPE2 systems have the same hardware, software and method configurations.

D. The California State Department of Public Health (CDPH) regulates forensic blood alcohol analysis and forensic breath alcohol analysis according to the pertinent Code of Regulations listed below:

1. Title 17. Forensic Alcohol Analysis

   a. Group 8. Forensic Alcohol Analysis and Breath Alcohol Analysis

   b. Articles 1-8

2. The Laboratory must adhere to Title 17. Some of the requirements the laboratory must meet include:

   a. qualifications of the analysts

   b. quality control program

   c. proficiency testing

   d. collection and handling of samples

   e. standards of performance

   f. standards of procedure

3. A copy of Title 17 is located on PowerDMS.

4. The Blood Alcohol Technical Unit Manual is designed to supplement the Title 17 requirements.

5. Prior to April 1, 2017, the California State Department of Public Health (Title 17) qualified analysts working in a Forensic Alcohol Laboratory as one of the following: a Forensic Alcohol Supervisor (FAS), a Forensic Alcohol Analyst (FAA), or a Forensic Alcohol Analyst Trainee (FAAT). As of April 1, 2017, it is the responsibility of each Forensic Alcohol Laboratory to authorize their personnel to perform duties in accordance with qualifications outlined in Title 17.

E. Terminology

1. The verbs "shall", "must", and "will" indicate mandatory requirements, while "should" is used to denote compelling or recommended practices and "may" is used in the permissive sense.

F. Test Methods

1. The Alcohol Unit will use appropriate methods and procedures for all tests within its scope. (ISO/IEC 17025:2005 5.4.1) These include:

   a. Methods and procedures, see:

      i. Analysis of Samples by GC-FID (BA.30)

   b. Sampling of items to be tested, see:

      i. Analysis of Samples by GC-FID (BA.30)

   c. Handling of items to be tested, see:

i. General Evidence Handling (BA.08)

ii. Analysis of Samples by GC-FID (BA.30)

iii. Uniform Standards for Withdrawal (BA.09)

d. Storage of items to be tested, see:

i. General Evidence Handling (BA.08)

ii. Uniform Standards for Withdrawal (BA.09)

e. Preparation of items to be tested, see:

i. General Evidence Handling (BA.08)

ii. Analysis of Samples by GC-FID (BA.30)

f. Estimation of uncertainty and statistical techniques for analysis of test data, see:

i. Uncertainty (BA.39)

ii. Uncertainty Budget for Blood Alcohol (BA.40)

2. The Alcohol Unit shall have instructions on (ISO/IEC 17025:2005 5.4.1):

a. Use and operation of all relevant equipment, see:

i. Blood and Urine Training (BA.41)

ii. Analysis of Samples by GC-FID (BA.30)

iii. Care and Maintenance of Equipment and Environmental Conditions (BA.21)

iv. Diluters, Dispensers and Pipettes (BA.26)

v. Balances (BA.28)

vi. Glassware and Thermometers (BA.27)

b. Handling and preparation of items for testing, see:

i. General Evidence Handling (BA.08)

ii. Analysis of Samples by GC-FID (BA.30)

3. All instructions, standards, manuals and reference data relevant to the work of the Alcohol Unit shall be kept up to date and made readily available to personnel through the use of this Technical Unit Manual. (ISO/IEC 17025:2005 5.4.1)

4. All methods shall be documented and the documents readily available for review by laboratory personnel through PowerDMS. See FSD.12. (Supplemental 5.4.1.1)

5. Deviation from test methods shall occur only if the deviation has been documented, technically justified and authorized. See BA.10. (ISO/IEC 17025:2005 5.4.1)

6. A Drug Alcohol and Toxicology (DAT) Handbook has been placed on ARIES, for review by the clients. The handbook includes the services provided by the Alcohol Unit and the equipment and methodology utilized in sample analysis.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** BA.02 - Purchasing Supplies
	RELATED ORDERS: FSD.30 - Purchasing and Ordering Supplies, BA.03 - Chemicals, BA.05 - Literature References	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 6.6**	
CHAPTER: General Information	**SUBJECT:** Purchasing Supplies	

I. Policy: Laboratory personnel will follow procedures for the selection, monitoring, ordering, verification and storage of supplies and reassess external providers. See FSD.30.

A. Introduction-Supplies and services are designated into two broad categories:

1. General supplies and services that do not affect the quality of tests, including office supplies.
2. Supplies and services that affect testing and have an impact on the quality of tests.

B. Evaluation: The Unit will evaluate vendors of externally provided products to ensure their suitability for use in testing. Reagents and supplies are selected based on one or more of the following criteria:

1. The vendor's product is specified by the technical procedure.
2. The vendor supplies a certificate of analysis specifying the grade.
3. The vendor providing consumables is the manufacturer of the instrumentation for which they are used.
4. The laboratory has a prior history of satisfactory service with the vendor product

C. Requirements: The Unit will define, annually review, and approve the requirements for externally provided products and services. The requirements may include capability, suitability, or criteria to provide a service or supply. For example:

1. Traceable reference materials obtained from an ISO 17034 provider - Certificate of Analysis needed from any ISO 17034 provider
2. Calibration services provided from an ISO 17025 vendor - Certificate of Calibration is needed for evaluation and documentation when calibration occurs
3. Proficiency tests purchased from an ISO 17043 supplier - Manufacturer's or vendor's summary and/or individual report is needed to evaluate the performance of an analyst in a proficiency test.
4. Sub-contracting services supplied by an ISO 17025 laboratory - Sub-contractor's accreditation scope document is needed for evaluation to ensure work provided is within the sub-contractor's scope.

5. Consumables provided by the manufacturer of the equipment being used - Manufacturer's consumables quality documentation is needed to ensure the quality of product is adequate for the testing being performed.

6. Once a product is evaluated and approved for use, for example through validation or as supplied for use with an instrument, it will be ready for use in casework and may be ordered as needed

7. Evaluations of reagents and supplies are done by testing their performance during validation.

8. Reagents and supplies will be re-evaluated on an on-going basis through the use of controls and intermediate checks. Further information can be found in BA.13 and BA.15 .

9. As needed to monitor a particular product, an initial control may be run when a new order is received. For example, a new lot of blood vials will be tested for its NaF content to ensure the correct % is present within that lot of vials/kits.

D. The Unit is responsible for the evaluation, selection and monitoring of performance, and annual re-evaluation of external providers.

1. Criteria for evaluation, selection, monitoring of performance, and re-evaluation of the external providers. For example:

a. Checking a scope document to ensure the calibration being requested is within the scope of the vendor

b. Checking an accreditation certificate to ensure that accreditation has not lapsed

c. Checking that quality controls or standards meet the performance criteria of the equipment or method

d. Ensuring that methodology requiring consumables (e.g. kits) from a specific vendor are obtained

e. Ensuring that a certificate is checked after the expiration date before ordering additional supplies or service

E. Ordering:

1. General laboratory consumables and supplies may be placed on the order list by any member of the laboratory staff. These consumables and supplies do not affect the quality of the final result. The following are some examples of consumables that do not affect the quality of the test results:

a. Gloves

b. Glass or plastic transfer pipettes

c. Vials and caps

2. Supplies which may affect the test result should be placed on the order list by personnel within the unit in which the supplies are to be used. The following is a list of supplies that may affect the quality of tests in Alcohol Unit:

a. Chemicals used for Forensic Alcohol Analysis

b. The "type" or "grade" of chemicals used in forensic alcohol analysis is specified in the technical unit manual (BA.03). Only the grade of chemical specified should be ordered.

c. Parts for the GC-FID or other equipment. These may be ordered based on part information in the instrument manual(s) (BA.05).

3. The following is a list of supplies and services that can affect test results in Alcohol Unit. The suppliers of these supplies and services must be annually evaluated and the evaluation will be documented:

a. NTRM (NIST Traceable Reference Material) purchased water/ethanol solutions of a known concentration

b. Calibration services for diluters, dispensers, pipettes, balances, critical volumetric glassware, thermometers

c. Calibration services for reference standards (check weights)

4. Supplies may be placed on the order list by any lab staff member or support staff so long as the person who actually requested the item to be placed on the list is indicated on the supply order list.

F. Defining the criteria for evaluation, selection, monitoring of performance, and re-evaluation of the external providers. The criteria may include ability to meet the the Technical Unit's requirements for quality, ability to deliver the product/service within an acceptable time frame, access to technical support, accreditation status or review of scope documents. For example:

1. Checking a scope document to ensure the calibration being requested is within the scope of the vendor

2. Checking an accreditation certificate to ensure that accreditation has not lapsed

3. Checking that quality controls or standards meet the performance criteria of the equipment or method

4. Ensuring that methodology requiring consumables (e.g. kits) from a specific vendor are obtained

5. Ensuring that a certificate is checked after the expiration date before ordering additional supplies or services

G. Ensuring that externally provided products and services conform to the laboratory's established requirements, or ISO 17025:2017 before they are used or directly provided to the customer. The requirements may include competence of personnel or accreditation status. For example:

1. Checking a packing list to verify an order before using the supplies in casework

2. Checking the correct testing was provided from a sub-contracting laboratory before providing the report to the customer

3. On-going evaluation of quality control data

4. Taking any actions arising from evaluations, monitoring of performance, and re-evaluations of the external providers. Actions may include ensuring the correct services or supplies are received, issues are resolved, or monitoring that services and supplies meet the needs of the unit

H. Approval of Orders

1. Any lab staff member or support staff may order supplies from the vendor. The supplies on the "Supply Order List" are inputted into a computer database. The list(s) of supplies to be ordered is printed out.

2. The list(s) of supplies to be ordered are then given to a Manager for approval.

I. Ordering Supplies from the Vendor

1. After the list(s) of supplies to be ordered have been approved, any lab staff member or support staff may order supplies from the vendor by phone/e-mail. The orders maybe placed:

   a. using an existing open Purchase Order for vendors or

   b. using a requisition form by the Account Clerk or

   c. using the County credit card held by the Account Clerk.

J. Receiving Supplies

1. Supplies that affect the quality of tests are not used until they have been inspected or verified as being the supply that was ordered.

2. When the consumables or supplies are received by the laboratory, the supplies are unpacked and verified by:

   a. Using the database generated list of supplies to be ordered, or equivalent and checking against the supplies received by checking the labels on supplies.

   b. The supplies received are also checked against the shipping receipt or packing slip.

3. The person checking the supplies against the shipping receipt will initial the shipping receipt. This paperwork goes to Account Clerk of the Sheriff's Department.

4. The information from the database generated list of supplies to be ordered, or equivalent, is entered into the supply ordering database to ensure what was ordered matches what was received.

5. The individual enters the date items were received/verified. The individual also enters his/her initials indicate when entering the information.

6. The supplies are then put away in a storage location.

7. General laboratory consumables and supplies are stored in the supply room or within the units of the laboratory. Any special storage requirements (refrigeration, storage in flammable or corrosive cabinets, etc.) will be adhered to.

8. Supplies required for specific instrumentation, chemicals required for certain procedures or supplies that are specifically listed in the method or procedure being used should be given to the lab staff member who ordered that supply item.

9. Reference materials are checked to ensure that the proper traceability paperwork accompanies the item or the traceability paperwork is retrieved from the vendor electronically. Reference materials (standards) are stored according to the storage recommendations on the package.

10. The traceability paperwork (Certificates of Analysis or other verification paperwork are maintained in the Alcohol Unit).

11. The received supplies are also entered electronically into the ordering database to verify that the supply that was ordered is the same as the supply that was received.

K. Discrepancies

1. If there is any discrepancy between the supply ordered and the supply received, the person ordering supplies will notify the vendor of the discrepancy and the supply will not be used by the laboratory. The supply will be returned and exchanged for the proper supply.

2. If there are any problems exchanging the supply for the correct item, the Forensic Manager or Supervisor will be made aware of the problem.

3. If the supply ordered is found to be defective or does not perform as expected it will not be used for casework.

4. Actions: Taking any actions arising from evaluations, monitoring of performance, and re-evaluations of the external providers. Actions may include ensuring the correct services or supplies are received, issues are resolved, or monitoring that services and supplies meet the needs of the unit.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/16	**NUMBER:** BA.03 - Chemicals
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB:ASCLD-LAB ISO/IEC 17025:2005: 4.6.2** **ASCLD-LAB International Supplemental 2011: 4.6.2 (note)**	
CHAPTER: General Information	**SUBJECT:** Chemicals	

I. Policy: The following chemicals/reagents are used for the method (ISO/IEC 17025:2005 4.6.2).

A. Chemicals/Reagents

1. Distilled or de-ionized water, commercially prepared or filtered in-house.
2. Ethyl alcohol (ethanol), 200 Proof.
3. N-Propanol, reagent grade.
4. Acetone, reagent grade.
5. Methanol, reagent grade.
6. Isopropanol, reagent grade.
7. Formaldehyde, reagent grade.
8. Acetaldehyde, reagent grade.
9. Acetonitrile, reagent grade.
10. Acetic Acid, reagent grade.
11. Isobutyric Acid, reagent grade.
12. sec-Butanol, reagent grade.
13. n-Butyric Acid, reagent grade.
14. Isobutanol, reagent grade.
15. Ethyl Acetate, reagent grade.
16. Propionic Acid, reagent grade.
17. Isopentanol, reagent grade.
18. Toluene, reagent grade.
19. Sodium fluoride, powder, reagent grade.
20. Air, compressed, breathing quality.

21. Hydrogen compressed gas, chromatography grade.
22. Helium compressed gas, chromatography grade.
23. TISAB (Total Ionic Strength Adjustment Buffer).
24. Saturated Potassium Chloride Solution.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/16	**NUMBER:** BA.04 - Retention of Forensic Alcohol Analysis Records
	RELATED ORDERS: BA.09 - Uniform Standards for Withdrawal, BA.20 - Validation Data	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB:ASCLD-LAB ISO/IEC 17025:2005: 4.13.1.1 ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: General Information	**SUBJECT:** Retention of Forensic Alcohol Analysis Records	

I. Policy: The laboratory shall maintain the Forensic Alcohol Analysis records arranged and indexed as described below. (ref. Title 17, 1222.1, ISO/IEC 17025:2005 4.13.1.1)

A. All official Forensic Alcohol records shall be maintained and located in such a manner that they will be immediately available for audits.

B. The records shall be maintained for at least five years, as that is the span of time between accreditation cycles.

C. No Forensic Alcohol Analysis records, or copies thereof, shall be released to any unauthorized agency or person without a properly executed court order, or authorization of the prosecuting attorney, or on specific authorization from the Chief or Forensic Manager of the Laboratory.

D. The following records will be maintained for **Forensic Alcohol Analysis**

1. PERSONS QUALIFIED - All California Department of Public Health issued certifications of persons currently qualified to perform forensic alcohol analysis.

2. CODE OF REGULATIONS, TITLE 17 - A current copy of the California Code of Regulations, TITLE 17.

3. OPERATING PROCEDURES - A current and complete copy of the Forensic Alcohol Analysis Operating Procedures will be available for review to all analysts.

4. UNIFORM STANDARDS - SAMPLES - A copy of the Uniform Standards for Withdrawal, Handling and Preservation of Blood Samples for Alcohol Determination, a copy of Urine as a Sample for Alcohol Determination, and a policy statement regarding their use. See BA.09.

5. INSPECTION REPORTS - Audit reports by the California Department of Public Health (CDPH) will be maintained in the Alcohol Unit. ASCLD/LAB assessment reports will be maintained by the Quality Assurance Unit of the Forensic Services Division.

6. LAB PROFICIENCY TESTS - A complete original record of all Laboratory proficiencies and employee proficiencies will be maintained in the Alcohol Unit.

E. The following records will be maintained for **Personnel**: A file shall be maintained for each person certified to perform alcohol analysis and shall contain the following records

(Records may be kept in electronic format):

1. APPLICATIONS - A copy of all applications, attachments, and correspondence, with the California Department of Public Health, regarding qualifications to perform forensic alcohol analysis.

2. ANALYSIS RESULTS - A handwritten or electronic copy of the results of all analyses performed as a Forensic Alcohol Analyst Trainee. Such records shall include the dated signature of the qualified person responsible for supervising the training of the Analyst Trainee.

3. PROFICIENCY TEST RESULTS - Result of individual proficiency test performed. This requirement is satisfied by a copy of the California Department of Public Health list of qualified persons in the lab or a copy of the letter from the California Department of Public Health indicating an individual has passed the proficiency test.

F. The following records will be maintained for **Quality Control Data** (Records may be kept in electronic format):

1. QUALITY CONTROL REFERENCE MATERIAL: A complete, original record of all **Quality Control Reference** Material analyzed. Minimum information to include: results, date, and initials of analysts performing the analyses.

2. LABORATORY DEMONSTRATION DATA FOR METHOD: A complete, original record of all data demonstrating the laboratory method. Minimum information to include a copy of all graphs generated, results, date and name of analyst performing the analyses and the method of analysis. See BA.20.

3. REAGENTS: A complete, original record of all reagents prepared for forensic alcohol analysis. Minimum information to include weights, volumes, quantities prepared, date, and initials of analyst(s) preparing reagents. The reagent preparation logs will contain the lot number for each bottle, any results, date performed, and initials of analyst

4. EQUIPMENT CALIBRATION: A complete, original record of all equipment maintenance and calibration checks. Minimum information to include type of check, the results, the date and name of the analyst(s) performing check.

G. The following records will be maintained for **Analysis Results and Reports**

1. Records of all samples analyzed are kept for a minimum of seven years in the laboratory case files. The records shall include the results and the identity of the person(s) performing the analyses.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 12/16/11	**NUMBER:** BA.05
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: 5.2.7**	
CHAPTER: General Information	**SUBJECT:** Literature References	

I. Policy: The following is a list of references applicable to forensic alcohol analysis.

A. The following is a reference to the locations of references available to analysts in the Alcohol Unit. Analysts may also rely on references obtained through outside training. (Supplemental 5.2.7)

1. Literature in Muir Library
2. Binder 1: "Blood and Urine Articles"
3. Binder 2: "Breath Section"
4. Binder 3: "Impairment Section"
5. Binder 4: "General and Coroner"

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/16	**NUMBER:** BA.06 - List of Forms
	RELATED ORDERS: ALC.17 - Calibration Check Variable Pipette, ALC.19 - Calibration Check of Hamilton Diluter, ALC.14 - Solution Monthly Check Log, ALC.36 - Alcohol Authorization Checklist, ALC.11 - Calibration Check Bench Notes, ALC.22 - Perkin Elmer System Maintenance Log, ALC.05 - Balance Maintenance Log, ALC.06 - Balance Calibration Check Log, ALC.34 - Diluter Maintenance Log, ALC.24 - Pipette Maintenance Log, ALC.28 - Thermometer Maintenance Log, ALC.04 - Software Log, ALC.27 - Reagent Preparation Log: Internal Standard 0.02% N-PROPANOL, ALC.12 - Reagent Preparation Log: Resolution Check Solution, ALC.13 - Reagent Preparation Log: Quality Control Reference Material, ALC.15 - Purity Check Log: Ethanol, ALC.38 - Alcohol OLA Request Form, ALC.33 - Report Review Checklist, ALC.37 - Quality Assurance Correction Form	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: 4.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: General Information	**SUBJECT:** List of Forms	

I. Policy: The following are forms used in Forensic Alcohol Analysis. Forms may be controlled (required for use) or non-controlled (suggested for use but not required).

A. Controlled forms are located on PowerDMS and must be used.

1. Calibration Check Variable Pipette (controlled) ALC.17
2. Calibration Check Hamilton Diluter (controlled) ALC.19
3. Alcohol Authorization Checklist (controlled) ALC.36

B. Non-controlled forms may be located on PowerDMS and the minimum information that must appear on the form is listed below.

1. Calibration Check Bench Notes ALC.11
   a. Date
   b. Analyst
   c. Equipment Identification
   d. Thermometer serial # and reading
   e. Weights of water
2. The Perkin Elmer System Maintenance Log: ALC.22
   The system is inclusive of the GC, headspace and computer hardware/software.
   a. Date

b. Analyst
c. Identify the component of the Perkin Elmer system undergoing maintenance
d. Problem encountered
e. Action taken to remedy the problem
f. Instrument ID

3. Balance Maintenance Log ALC.05
   a. Date
   b. Problem or symptom
   c. Action taken
   d. Analyst
4. Balance Calibration Check Log ALC.06
   a. Date
   b. Analyst
   c. Results of check
5. Diluter Maintenance Log ALC.34
   a. Date
   b. Analyst
   c. Problem or symptom
   d. Action taken
   e. Indication that monthly visual checks are being done
6. Pipette Maintenance Log ALC.24
   a. Date
   b. Problem or symptom
   c. Action taken
   d. Analyst
7. Thermometer Maintenance Log ALC.28
   a. Date
   b. Problem or symptom
   c. Action taken
   d. Analyst
8. Software Log ALC.04
   a. Date

b. Analyst
c. Unique identification of software (version # or date)
d. approval

9. Reagent Preparation Log: Internal Standard 0.0025% N-PROPANOL ALC.27
   a. Date prepared
   b. Analyst
   c. Volume prepared
   d. Solution Identification (lab assigned lot #)
   e. Volume of N-Propanol
   f. Lot # of N-Propanol
   g. Serial # of Pipette(s) used
10. Reagent Preparation Log: Resolution Check Solution ALC.12
   a. Solution Identification
   b. Date prepared
   c. Analyst
   d. Volume prepared
   e. Serial # of Pipette(s) used
   f. Lot #s of reagents used
   g. Target concentration
11. Reagent Preparation Log: Quality Control Reference Material ALC.13
   a. Solution Identification
   b. Date prepared
   c. Analyst
   d. Volume prepared
   e. Instrument (DCPE1 or DCPE2)
   f. Date established
   g. Serial # of Pipette(s) used
   h. Lot #s of ethanol used
   i. Diluter used
   j. Date and results of instrumental analysis
   k. Passing criteria (acceptable range)
12. Alcohol Discovery/OLA Billing Sheet ALC.38

a. Charge and type of discovery
b. Charge for evidence transfer (OLA)
c. Subject's name
d. Lab # (if applicable)
e. Analyst
f. Date

13. Report Review Checklist ALC.33
    a. Components of the technical and administrative review policy
14. Quality Assurance Correction Form ALC.37
    a. Date
    b. Initiated by
    c. Type of problem
    d. Describe the quality issue
    e. Describe the correction or action taken
    f. Is there an impact on case results released?
    g. Does a Corrective Action Procedure need to be implemented?
    h. Evaluated by
    i. Date of Evaluation
15. Alcohol Electronic Signature Form
    a. Analyst signature/date and number of pages created
    b. Reviewer signature/date and number of pages reviewed

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/2016	**NUMBER:** BA.07 - List of Abbreviations
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: 4.13.2.13**	
CHAPTER: General Information	**SUBJECT:** List of Abbreviations	

I. Policy: The following is a list of abbreviations that may be used in the Alcohol Unit other than commonly used abbreviations. (Supplemental 4.13.2.13)

List of Abbreviations:

1.	BAC	Blood Alcohol Concentration
2.	VAC	Vitreous Alcohol Concentration
3.	UAC	Urine Alcohol Concentration
4.	UOM	Uncertainty of Measurement
5.	MA	Measurement Assurance
6.	IS	Internal Standard
7.	R, RS	Resolution Solution
8.	Conc.	Concentration
9.	Dil.	Diluter
10.	For.	Forwarded
11.	Ret.	Retention
12.	STD	Standard
13.	QC	Quality Control
14.	TS	Tape Sealed
15.	EVTS	Evidence Tape Sealed
16.	V	Vial
17.	w/	with
18.	%W/V	Percent Weight per Volume (typically grams per 100 milliliters of blood)
19	BLK	Blank
20	T17	Title 17 QC
21	B	Blood
22	U	Urine
23	C, Cor	Coroner
24	V, Vit	Vitreous
25	N	New QC
26	S, Sim	Simulator Solution
27	O	Other
28	WA	Water
29	Seq	Sequence
30	DC	Dual Column
31	PE	Perkin Elmer
32	GC	Gas Chromatograph

33	FID	Flame Ionization Detector
34	GT	Gray Top

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 10/22/2019	**NUMBER:** BA.08 - General Evidence Handling
	RELATED ORDERS: FSD.35 - Evidence Handling, FSD.38 - Evidence Itemization, QA.09 - Adding, Itemizing and Transferring Evidence in LIMS, FSD.31 - Subcontracting & Externally Directed Analysis, BA.31 - Using LIMS	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: None**	
CHAPTER: Evidence Handling	**SUBJECT:** General Evidence Handling	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/29/2019	**NUMBER:** BA.09 - Uniform Standards for Withdrawal
	RELATED ORDERS: Vehicle Code: 23158(f) Title 17: 1219, 1219.1 Business and Professional Code: 1242, 1242.5, 1246	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Evidence Handling	**SUBJECT:** Uniform Standards for Withdrawal	

I. Policy: The following are the standards for withdrawal, handling and preservation of blood samples for forensic alcohol analysis.

A. In accordance with Vehicle Code Section 23158(f), the Department of California Highway Patrol, in cooperation with the Department of Public Health and the Department of Justice, has adopted uniform standards for the withdrawal, handling and preservation of blood samples prior to analysis. The standards are outlined below (the text has been modified for use in Contra Costa County):

1. Blood samples collected from persons involved in traffic accidents or traffic violations shall be collected, handled and preserved as required by Sections 1219 and 1219.1 of Title 17 of the California Code of Regulations.

2. Blood samples are collected by venipuncture from living individuals as soon as feasible after the alleged offense, and only by persons authorized by Section 23158 of the California Vehicle Code (licensed physician or surgeon, registered nurse, licensed vocational nurse, duly licensed clinical laboratory technologist or clinical laboratory bioanalyst, phlebotomist, unlicensed laboratory personnel regulated pursuant to Sections 1242, 1242.5 and 1246 of the Business and Professions Code, or certified paramedic).

3. Alcohol or other volatile organic disinfectants are not used to clean the skin where a specimen is collected. Aqueous benzalkonium chloride (Zephiran), aqueous merthiolate, aqueous mercuric chloride or Povidine-Iodine (Betadine) disinfectants are suitable to disinfect the skin before venipuncture.

4. Sterile, dry hypodermic needles and syringes or clean, dry vacuum type containers with sterile needles are used. The blood sample is deposited into a clean, dry container (such as VACUTAINER or VENOJECT) which is closed with an inert stopper. Sample containers or reusable equipment are not reused. Tubes for collecting blood contain an anticoagulant (potassium oxalate) and a preservative (sodium fluoride). The minimum quantity of blood required to perform duplicate determinations by the laboratory and still provide sufficient quantity for referee analysis by the defendant is 3.0 mL.

5. All law enforcement agencies served are kept aware of the Uniform Standards for Withdrawal, Handling, and Preservation of Blood Samples for Forensic Alcohol Analysis (re: Section 23158(f) California Vehicle Code). Instructions are printed on the back of each submission envelope supplied by the Laboratory

B. Procedures for Obtaining Blood Samples for Alcohol Determination

1. The requesting officer must witness the withdrawal of the sample. When the officer witnesses the actual withdrawal of the blood, it may not be necessary for the person drawing the blood to appear as a witness at the time of the trial.

2. The person drawing the blood shall fill out, initial the label, and affix it firmly to the tube or vial. The sample shall then be given to the officer, who, in turn, shall initial the label and place the sample in the prescribed envelope or other container. The officer shall immediately complete the required information on the envelope or other container label and seal container securely.

3. Appropriate steps to insure integrity of sample shall be taken.

a. Once the envelope or other container is sealed by the agency, it should not be opened except for analysis in the laboratory.

i. If it has been opened before analysis, the reason should be evident from documentation (a note) on the evidence.

b. Each person having possession of the sealed sample shall record this electronically in the electronic chain of possession and may sign his/her name in the space provided on chain of possession on the envelope.

4. Any sample that is received not in compliance with these prescribed collecting and handling procedures shall be analyzed and the deficiency described in laboratory records.

C. Procedures for Obtaining Urine Samples for Alcohol Determination

1. In urine alcohol cases, a precaution is necessary that is not an element in blood cases. The urinary bladder must be emptied - then wait at least 20 minutes to collect a sample. It is important to carefully note the time when voiding is done in each instance.

2. When urine is submitted for alcohol analysis, the sample taken after the first voiding should be forwarded to the laboratory.

3. A member of the police agency, preferably the arresting officer or matron when appropriate, should supervise the collection of the sample so that there will be no question as to the source of the sample placed in the sample bottle.

4. Chemically clean bottles with tight fitting screw caps have been provided for collecting urine samples. A dry preservative has been added to the bottles. The preservative is sodium fluoride (250 milligrams per ounce of urine). CAUTION is urged since sodium fluoride is a hazardous chemical.

5. Sample bottles shall be secured tightly, properly labeled and sealed in a urine sample envelope in accordance with the procedures described under Uniform Standards for Withdrawal, Handling and Preservation of Blood Samples for Forensic Alcohol Analysis.

6. The minimum amount of urine necessary for duplicate analyses and still have sufficient sample for referee analysis by the defendant is 3.0 mL.

7. SUMMARY

a. HAVE SUBJECT VOID. NOTE TIME.

b. THEN, AFTER 20 MINUTES, TAKE SAMPLE FOR ANALYSIS. NOTE TIME.

c. SECURE CAP TIGHTLY AND LABEL BOTTLE AND ENVELOPE WITH "FOR ALCOHOL ANALYSIS".

8. EXCEPTION:

a. URINE AS A SAMPLE FOR DRUG ANALYSIS

b. For all drug analysis purposes (except alcohol), the best sample to be collected is the first void. A separate "Urine Sample for Alcohol/Drug Analysis" kit should be used to collect a sample for drug analysis. Collect a full bottle if possible.

9. Any sample that is received not in compliance with these prescribed collecting and handling procedures shall be analyzed and the deficiency described in laboratory records.

D. Procedures for Obtaining Blood Samples from Post Mortem Sources

1. A blood sample is obtained prior to the start of any embalming procedure. Blood samples are not collected from the circulatory system effluent during the arterial injection of embalming fluid. Care is taken to avoid contamination by alcohol from the gastro-intestinal tract, directly or by diffusion there from. The sample is taken from a major vein or the heart. Tubes for collecting blood contain an anticoagulant (potassium oxalate) and a preservative (sodium fluoride). Only containers for which Non-Interference data sheets have been completed will be used. To insure that coroner's office is kept aware of the proper procedures for collecting and handling samples from post mortem sources for Forensic Alcohol Analysis, a copy of this procedure is available upon request.

2. Any sample that is received not in compliance with these prescribed collecting and handling procedures shall be analyzed and the deficiency described in laboratory records.

E. Maintenance of identity and integrity of the sample, required by Section 1219 of Title 17 of the California Code of Regulations, shall include the following procedures:

1. Label for Tube or Vial: The label of the blood vial or tube shall contain at least the following information:

a. Full name of subject

b. Date blood drawn

c. Initials of person drawing blood

d. Initials of witnessing officer

2. Envelope or Other Container Used for Enclosing and Identifying Blood Sample Tube or Vial: The blood sample envelope or other container label shall include at least the following information:

    a. Full name of subject

    b. Submitting agency

    c. Geographical location where blood sample was drawn, i.e., name and/or address of hospital, jail or other facility

    d. Name of person drawing blood sample

    e. Date blood sample drawn

    f. Time blood sample drawn

    g. Signature of witnessing officer

    h. A form for establishing the chain of possession, such as:

        i. CHAIN OF POSSESSION: (To be filled in by each person having possession of sample)

Received From	Received By	Date

3. Blood and urine samples must be collected in the kits provided by the Forensic Services Division. **See Below** for example. The vials and jars in these kits contain preservative, which is necessary to prevent the production or breakdown of alcohol by bacteria. If all significant factors have not been considered, samples collected in other containers may not give reliable analytical results.

4. Blood and Urine kits may be obtained from the Drugs Alcohol and Toxicology Section during normal working hours (Mon.-Fri., 8:00-12:00 and 1:00-5:00). Kits are also kept in the alcohol testing room of the Martinez Detention Facility for use at that location.

5. Any blood samples that are received not in compliance with these prescribed collection, withdrawal, handling, and preservation procedures shall be analyzed, but the deficiency shall be described in laboratory records.

F. Blood Withdrawal-General Information

1. As a convenience to our client agencies, the Forensic Services Division has arranged for blood withdrawal in Contra Costa County. Since 1998, the Sheriff's Department, in cooperation with the Contra Costa County Health Services Department, arranged for blood withdrawal for HIV testing in Contra Costa County.

2. The Forensic Services Division contracts with a private group of phlebotomists (blood technicians) to provide blood withdrawal for law enforcement. The draws may be requested at police agencies, hospitals and any other location in Contra Costa County. This group has phlebotomists on-call around the clock. Their services are used most frequently in the following instances:

    a. To draw blood at the Martinez Detention Facility

    b. To draw blood at hospitals,

    c. To draw blood at police agencies with holding cells and who do not transport drinking drivers immediately to the Martinez Detention Facility, and

    d. On felony drunk driving and other felony criminal cases.

    e. HIV testing in criminal cases.

3. The contract blood technicians consider cooperation to be tacit consent. The contract blood technicians will participate in forced blood withdrawals when deemed necessary by the police agency. The forced draw is also performed in compliance with a court order specifically directing that the sample shall be taken with force when necessary.

4. The cost of blood withdrawal is borne by the agency requesting the sample. The contract company bills the Forensic Services Division for all blood withdrawals. The charge to the Division is passed on to the requesting agency in quarterly bills.

G. Procedures for Blood Withdrawal within Contra Costa County

1. Obtaining a Blood Withdrawal from a Contract Blood Technician

    a. Call Central Medical Laboratories (CML) dispatch at (800) 288-4441 any time 24 hours a day, and ask for the contract blood withdrawal on-call blood technician.

    b. Give the dispatcher your name, location, and name of the subject.

    c. If circumstances arise whereby the contract blood technician is no longer needed, call dispatch and notify them immediately. Agencies will have to pay for a call-out, even if no sample is drawn, if the blood technician is in transit.

2. Blood Withdrawal Procedures for Alcohol/Drug Testing

    a. Use a blood withdrawal kit distributed by the Forensic Services Division only. They can be found in the Alcohol Testing Room of the MDF and are carried by the contract blood technicians.

    b. The requesting officer completes the information on the front of the kit envelope, in full.

    c. On driving offenses, the blood withdrawal may be performed only by a licensed doctor, nurse, medical technologist, biotechnologist, paramedic or phlebotomist. Any qualified medical personnel may perform blood withdrawal in other types of cases.

    d. Using the contents of the kit, the person withdraws the blood according to the directions on the back of the envelope. If the sample is to be analyzed for drugs, two additional vials of blood are desirable using the same type of grey top vials. The extra supplies are carried by the blood technicians.

    e. The blood withdrawal must be witnessed by an officer. He/she must watch carefully enough so that he/she can testify in court regarding the procedures used. The person performing the blood withdrawal may refuse to perform the withdrawal if it is not witnessed.

    f. The person drawing the blood completes the information required on the labels for the vials, attaches them to the vial, and gives the vials to the requesting officer.

    g. The person drawing the blood completes the Declaration form enclosed in the kit.

    h. The person drawing the blood retains his/her copy of the Declaration, and gives the other copies to the requesting officer.

    i. The requesting officer places the seals over the tops of the vials and initials them and the vial labels.

    j. The copy of the Declaration for the District Attorney's Office is submitted by the requesting officer with the filing paperwork.

    k. The requesting officer places the seal over the envelope flap and initials it.

    l. The kit is submitted to the Drugs Alcohol and Toxicology Section, Monday through Friday between 8:00 a.m. and 5:00 p.m. or is placed in the refrigerated drop box in the Alcohol Testing Room at the MDF or at Property and Evidence Services if access is authorized to that facility.

3. Blood Withdrawal for HIV Testing

    a. Use blood tubes distributed by the County Health Services Department. These tubes are available from the Health Services Department and the on-call blood withdrawal contract blood technicians.

    b. The person drawing the blood uses the appropriate blood tube for HIV testing and standard medical practices for cleansing the withdrawal site.

    c. If the withdrawal is for evidentiary purposes, then the withdrawal should be witnessed by an officer so that he/she may testify in court regarding the procedures used.

    d. The blood tube should not be submitted to the Forensic Services Division. The tubes should be submitted to the County Public Health Laboratory at the Contra Costa County Regional Medical Center in Martinez for Contra Costa County cases or placed in the refrigerator marked for Health services at the MDF Breath Testing Room.

H. How to Submit a Request for Examination

1. Completing the information required on the front of one of these kits and submitting it to the Drug Alcohol and Toxicology Section of the Forensic Services Division is a sufficient request for analysis in most cases. The Coroners cases not submitted in one of the above listed kits must have a "Coroners Office Toxicology Request Form" attached. The information requested on the envelope must be completed in full.

2. Unless otherwise marked on the kit, a Blood Sample for Alcohol/Drug Analysis kit will be tested for alcohol and drugs unless the prior investigation warrants only an alcohol analysis be performed. If only alcohol analysis is

needed, this should be clearly noted in the check box near the top of the envelope by the requesting person or by the submission of a general examination request form.

3. Kits requesting analysis for both alcohol and drugs in a case of driving under the influence will be examined for alcohol first. Drug analysis will also be performed, if requested, in this laboratory or forwarded to another laboratory for testing based on the alcohol level and the arrangements made by the client agency unless special arrangements are made with the agency

    a. **Richmond Police Department and Pittsburg Police Department have requested special handling for alcohol/toxicology cases. See the most recent communications from these or other agencies for more information.**

I. Submitting Ante-Mortem Blood and Urine Cases

1. Blood and urine samples may be submitted to the Drug Alcohol and Toxicology Section Monday through Friday between 8:00 a.m. and 5:00 p.m. or placed in the drop box inside the refrigerator of the Alcohol Testing Room at the Main Detention Facility in Martinez 24 hours a day. Samples should be submitted as soon as possible after collection to avoid degradation of the drugs or alcohol. If a timely submission is not possible, blood and urine samples should be refrigerated, not frozen, until they can be submitted.

J. Submitting Coroners Cases

1. Blood, urine and vitreous can be submitted in Coroner Kits. A request form must be attached for toxicology analysis.

2. The blood alcohol equivalent on a postmortem urine sample will be reported using a conversion factor that is applicable when subjects have emptied their bladder recently. This factor may not be applicable if the urine was pooling in the bladder over a prolonged period prior to death.

3. The lab will not be able to give a blood alcohol equivalent for cavity fluids submitted. The sample type will be reported and the alcohol content will be reported.

4. Gastric and tissue samples will be forwarded to an outside laboratory under a Toxicology Request for analysis.

5. Decomposed samples may be forwarded to an outside laboratory under a Toxicology Request for analysis.

6. The vitreous alcohol concentration will be reported as a blood alcohol concentration or BAC.

K. Kits

1. Kits are provided by the Forensic Services Division for the submission of blood, urine and vitreous samples for alcohol and/or drugs:

    a. **Blood Sample for Alcohol/Drug Analysis**

        i. Each vacuum vial for blood collection has an expiration date, after which the vacuum in the vial cannot be guaranteed.

    b. **Urine Sample for Alcohol/Drug Analysis**

        i. For alcohol analysis the kit is intended to collect a second urine sample 20 minutes after first emptying of the bladder. Failure to do so can affect the reliability of test results.

        ii. Urine collection kits do not have an expiration date. They can be used indefinitely.

2. The containers in each of these kits contain particular anticoagulants and/or preservatives intended to ensure the quality of the sample for analysis and are in compliance with the California Code of Regulations, Title 17. Failure to use the proper anticoagulant or preservative can reduce the reliability of test results.

3. Other containers and kits from other laboratories are unlikely to contain the required anticoagulant and preservative. Consequently, only kits supplied by the Forensic Services Division should be used to collect urine or blood samples for analysis by this laboratory. Kits are available at no charge from the Division during normal working hours.

4. Each kit is assigned a unique container number that can be found on the kit envelope and on the label(s) for the container(s). These container numbers are intended to prevent accidental mix-up of samples from different subjects.

5. All kits are sealed when distributed to ensure that the contents are intact. Any kits, which are not sealed, should be returned to the Forensic Services Division.

6. Instructions for the use of the kits can be found on the back of each envelope. The instructions are self-explanatory and should be followed carefully to ensure proper collection of the sample and proper handling of the paperwork.

7. Example of Kits-Below
    a. **FRONT OF BLOOD SAMPLE FOR ALCOHOL/DRUG ANALYSIS KIT**
    b. **BACK OF BLOOD SAMPLE FOR ALCOHOL/DRUG ANALYSIS KIT**
    c. **FRONT OF URINE SAMPLE FOR DRUG ANALYSIS KIT**
    d. **BACK OF URINE SAMPLE FOR DRUG ANALYSIS KIT**
    e. **FRONT OF CORONER BLOOD/VITREOUS SAMPLE FOR ALCOHOL/DRUG ANALYSIS KIT**
    f. **BACK OF CORONER BLOOD/VITREOUS SAMPLE FOR ALCOHOL/DRUG ANALYSIS KIT**

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/31/2019	**NUMBER:** BA.10 - Technical Records
	RELATED ORDERS: FSD.42 - Case Record, BA.31 - Using LIMS	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.5**	
CHAPTER: Case Records	**SUBJECT:** Technical Records	

I. Policy: The following guidelines for the preparation of examination records must be followed in all cases. Failure to do so will result in the report and examination records being returned to the analyst for correction. These guidelines represent the most common note taking requirements. See the Division Manual policy for more information (FSD.42).

A. The case record is considered files containing administrative and examination documentation generated or received by a laboratory pertaining to a particular case . For more information about Case Records refer to the Division Policy. The case record consists of:

1. The report and notes/examination documentation (case file)
2. Administrative records may be any of the following and will be uniquely identified by the laboratory number.
   a. Communications (phone or e-mail communication)
   b. Drawings (photocopies are acceptable)
   c. Photographs
   d. Declaration of blood withdrawal (see B. 6. g. for details regarding the Declaration)
   e. Coroner's Request Forms
   f. District Attorney's Request Forms
   g. Police report
   h. Discovery requests or referee analysis requests are maintained
3. The electronic chain of custody. The official chain of custody is maintained in the Laboratory Information Management System (LIMS).
   a. The chain of custody at the time the case is submitted for review may be included in the case file.
4. The Lot # of the purchased NTRM standards (NIST-Traceable Reference Material), water-ethanol quality controls, blood matrix quality controls, internal standard, resolution solution and the equipment used for the analysis will be documented in the case notes.
5. The only methods used for quantitative analysis are BAC.MTH, BACa.MTH, and BACb.MTH.
   a. The operating parameters for these methods may be located in the maintenance binder or in the Validation Binders or in the Blood Alcohol Technical Unit Manual.
6. The following analytical sequence "batch" or "run" documents are generated and reviewed for each run.
   a. Analytical Worklist
   b. Sequence Traceability Worksheet
   c. Blood Alcohol Gas Chromatography Worksheet
   d. Alcohol Dispensing Tray Map(if used)
   e. Summary Report
   f. Cal Plots A & B (for calibration of methods: BACa & BACb)
   g. Alcohol Batch Review List

7. Sequence "batch" or "run" documents are entered as requests in LIMS. These "run" requests will follow the normal LIMS signature pattern at each milestone to show review of data. See below for additional information.

8. Communication on Business Record or Official Record for court is maintained electronically under case activities in the Laboratory Information Management System (LIMS).

B. Examination Records

1. Examination records (notes) and observations, data, and calculations shall be recorded at or near the time they are made and shall be identifiable to the specific task.

2. Examination records shall be of a permanent nature in ink or computer generated. See BA.31 for instructions on how to generate electronic notes.

3. The case notes and records shall be sufficiently detailed to include the test conditions and shall include the identity of the personnel responsible for performance of each test and checking of results.

   a. The individual responsible for Technical Review will be documented both on the electronic signature form for the run packet and the signature on the Blood Alcohol Report.

4. The records must be sufficiently detailed that in the absence of the analyst, another competent analyst or supervisor could evaluate what was done and interpret the data and would know the basis of the conclusions.

5. The date(s) of analysis will appear on the report.

6. The following information for each submission should be entered into the Laboratory Records (notes):

   a. Description of sample (including number of vials and matrix)

   b. Note about volume of sample

      i. if less than approximately 5 milliliters for blood vials

      ii. if less than approximately 10 milliliters for urine jars

   c. Condition of sample (sealed or unsealed)

   d. Kit number of the sample(s)/submission

   e. Notation about toxicology request on the envelope

   f. If a declaration form is submitted the analyst will note its presence.

   g. If a declaration form is submitted AND it contains additional information that is pertinent to the case, the analyst will note the information (eg. discrepancy or short draw) and maintain the declaration as an administrative record. See FSD.42.

7. Any remarks or discrepancies will be recorded in the Case File and on the final Report of Laboratory Examination.

   a. The following conditions should be noted, these include but are not limited to

      i. Any non-compliant conditions

      ii. Broken sample container(s) that would result in no analysis done

      iii. Insufficient sample

         1. for replicate analysis to be performed

         2. for any analysis to be performed

      iv. Sample not in a container provided by the laboratory (Non CCCSO Container)

      v. A urine sample with no void time indicated (as noted on the image of evidence envelope)

      vi. Expiration date of the kit (as noted on image of the evidence envelope)

      vii. Sample not tested

8. Only the approved procedures for analysis in the Blood Alcohol Technical Unit Manual will be used. Any discrepancies will be noted as indicated above.

9. Case notes will be single-sided on a page

10. For more information about retention of case records refer to the Division Manual.

11. In the alcohol unit, the analyst that prepares the report is the same as the analyst who tested the items. If an individual other than the analyst on the report interprets the findings, including testifying regarding the documentation (eg. Business Record or Official Record), that individual will document the review of the examination documentation in LIMS.

    a. The documentation should include:

        i. review of the report and notes

        ii. the purpose (eg. business/official record)

        iii. the reason for the review (eg. analyst retired, in training, on vacation, sick, etc.)

    b. For non-case related activity, click on the "activity button."

        i. Choose the appropriate activity

        ii. Add the time spent

        iii. Include specific details regarding the purpose of the activity performed.

    c. For cases that are associated with a lab number, the business record or official record activity should be related to the request.

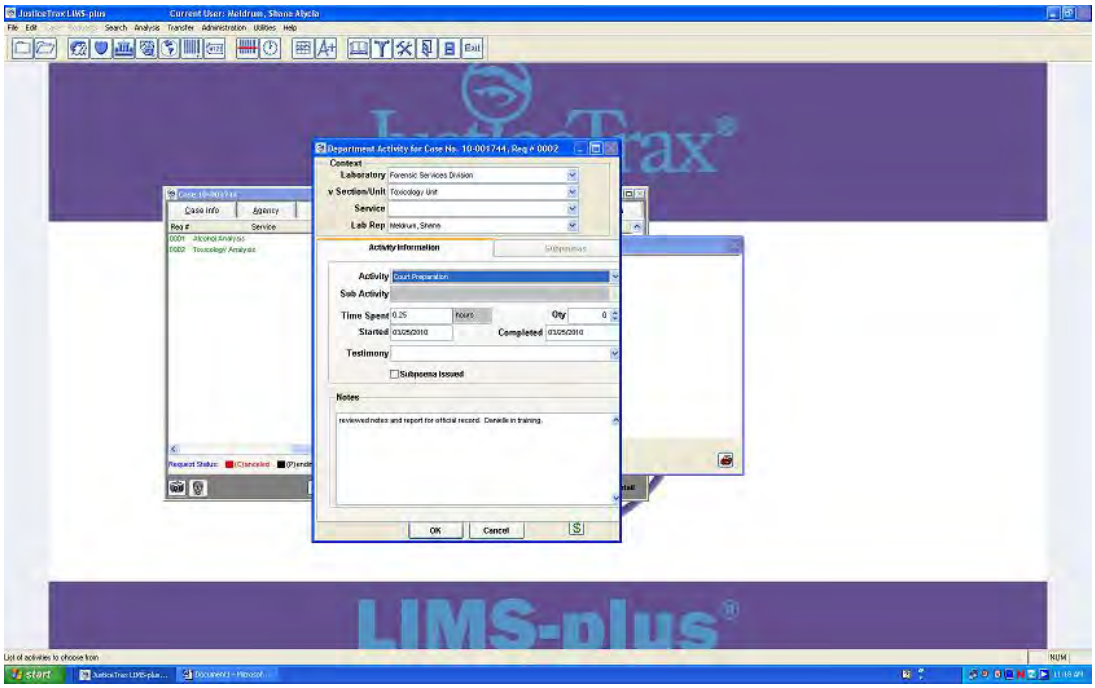
        i. Under the request tab, select the request

        ii. Right click and select "activity"

        iii. Click the green "+" button

        iv. Choose the appropriate activity (court prep or court testimony)

        v. Add the time spent and the notes should document the review of the report and notes as well as the purpose and why a business or official record was done



C. Page Identification

1. All note pages shall have the laboratory number, handwritten or computer generated initials of the examiner and the page number on the upper right hand corner of the page.

2. The first and last page shall have the total number of pages.

D. Corrections

1. Technical/Administrative Review Corrections:

a. Technical review corrections: All corrections will be recorded in LIMS in the request, in the "Notes: Reviewer" field.

i. Identify the correction(s) and include the reason for the correction.

ii. Record the date and technical reviewer's initials.

iii. The analyst will enter what correction was made and when the correction was completed with their initials and date.

b. Administrative review corrections: All corrections will be recorded in LIMS in the request, in the "Notes: Reviewer" field.

i. Identify any correction(s)

ii. Record the date and administrative reviewer's initials.

iii. It is recommended that the analyst enter when the correction was completed with their initials and date.

2. An electronic audit trail is maintained to view changes made electronically after a case has been draft complete.

E. Sequence "batch" or "run" procedure

1. The analyst will create a "Alc Sequence Data" request in LIMS. The Lab number will correspond to the year and instrument name (e.g. "2019 DCPE1" or "2019 DCPE2").

a. Each run or batch will get its own request number.

b. The requesting rep will be the analyst under the "Forensic Services Division" agency.

c. The request date will be date that the packet is first entered into LIMS.

d. No offense, evidence, or subject needs to be related to the request.

2. Under the request additional data form, enter the unique sequence number.

3. All documents generated for the run packet are placed into the request as attachments.

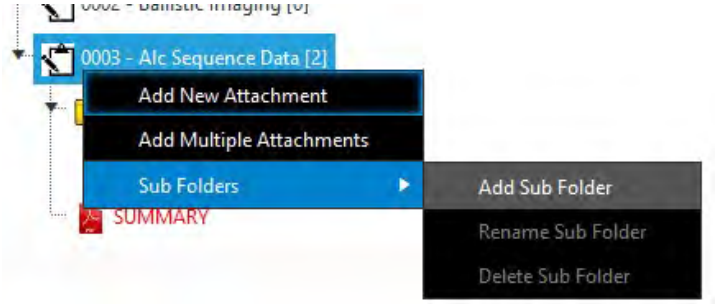
a. Documents can be .pdf or other types of documents. Unlike casework images they are not limited to .jpg or .tif file types.

b. If a non-contemporaneous edits are made to the documents, they must be preserved as separate file versions.

i. Change the attachment names to reflect the version order (e.g. "packet ver1" versus "packet ver2").

ii. Move the outdated version from the main request attachment folder to a sub-folder named "Drafts".

iii. To create an attachment sub-folder, Right-click on the request folder. Select "Sub Folders | Add Sub Folder".



iv. Only the final versions of any documents should remain in the main attachment folder for ease of technical and administrative review.

v. Attachments can be moved by clicking the "Move" button under the attachments tab. This will remove the file from the original location and move it to to the newly selected location.



1. Attachments are selected on the left-hand screen. Check the box of each attachment to be moved. More than one file can be moved at a time.
2. Select the destination on the right-hand screen. Note that attachments can be sent to a different lab number if that is edited at the top of the right-hand screen.

vi. Attachments can be copied by clicking the "Copy" button under the attachments tab. Copying functions similarly to the "Move" button, but will leave the original attachment in its place.



4. Enter Findings.
   a. In order to roll milestones, at least one finding must be entered.
   b. On the request tab, right-click on the request and choose "Edit Findings".
   c. Inside the module, right-click on the request number and choose "Add Result".
   d. The results type should be "Notes". Add text including any comments, initials, and date. Click Save.
5. Milestones
   a. The "run" request can be Draft Completed and signed as normal by the analyst.
   b. Any changes after the "Draft Complete" milestone should use the "Reject Findings" mechanism and enter notes within the reviewer's notes.
   c. The "run" request and documentation can be Tech. and Admin. Reviewed.
   d. The final report for the request will be a summary of packet information. This will be kept in LIMS but will not go out to ARIES.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 01/18/2019	**NUMBER:** BA.11 - Reports
	RELATED ORDERS: BA.31 - Using LIMS, BA.40 - Uncertainty Budget for Blood Alcohol, BA.10 - Technical Records, FSD.43 - Test Reports, BA.30 - Analysis of Samples by GC-FID	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.8**	
CHAPTER: Case Records	**SUBJECT:** Reports	

I. Policy: Reports will be written in accordance with the following guidelines.

A. Report Writing

1. Forensic alcohol analysis reports are to be prepared by the analyst at or near the time of completion of the analysis.

2. The results of each test or series of tests carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively, and in accordance with any specific instructions in the test methods. The results shall include all the information requested by the customer and necessary for their interpretation of the test results and all information required by the method used.

3. The results will be reported in a laboratory report of examination and include the information required by the customer necessary for their interpretation of the test result (the results of analysis) as well as the method used (analytical techniques). See BA.31 for instructions on how to generate electronic reports.

    a. If the request for analysis is cancelled by the requestor, the Laboratory will issue a report indicating no work was performed. See BA.31.

4. Reports will include information, **unless otherwise indicated**:

    a. Title of report or "Report of Laboratory Examination"

    b. Identity and location (address) of the testing laboratory

    c. Unique case identifier (laboratory number) and clear identification of the end of the report

    d. Name of the customer (submitting agency) the address of the customer is in the **report annex.**

        i. The address of the contracted agencies in Contra Costa County will be maintained by the Laboratory.

        ii. An *effort* will be made to obtain addresses for agencies that do not *routinely* use the services of the Drug, Alcohol, and Toxicology Section.

    e. Method(s) used or analytical techniques employed is in the **report annex.**

f. Description of, condition of and unambiguous identification of submitted evidence. This is the contents of the envelope. The tape-sealed condition of the outer packaging is also included.

g. The date of request is included on the report. The date of receipt of evidence is in the **report annex.**

h. The reference to the sampling plan is in the **report annex**.

i. Results of analysis including units of measurement

j. The disposition of the evidence will be stated in the **report annex**. Evidence associated with California Vehicle Codes (CVC) and tested for Alcohol will be kept for one year in the laboratory, then returned to the agency. All other evidence will be returned to the agency, unless otherwise noted on the report.

   i. Charges such as 655 H &N (Boating DUI), 192 PC (Vehicular Manslaughter), 215 PC (Carjacking), Accident, and Traffic will be evaluated on a case by case basis. The disposition will be noted on the report as a report comment if not returned to the agency.

k. Identity and signature (or electronic equivalent), for Alcohol Unit reports, the "approved by" signature refers to the individual who technically and administratively reviewed the case

l. Homogeneity is assumed among multiple vials within an envelope or kit as long as the vials were collected sequentially, from a single event, and into multiple similar containers, and having similar volumes. The reported results pertain to the entire item (all vials), not just the tested amount or the vial analyzed

5. In addition, reports shall, where necessary for the interpretation of test results, include the following, **unless otherwise indicated**:

   a. Any deviations in analytical techniques, will be included in the **case notes**

   b. Uncertainty of alcohol analysis, will be included in the **report annex** . For more information see BA.40.

   c. Opinions and interpretations. Results of alcohol analysis are conclusions. The report header will state "Examination Results and Conclusions".

   d. Additional information required by customer if necessary (eg. *information contained on the request*)

6. In addition, test reports containing the results of sampling shall include, where necessary, for the customer's interpretation of test results, include the following, **unless otherwise indicated**:

   a. The dates of analyses are typically from the dispensing until the data analysis

   b. Unambiguous identification of the item (contents of the envelope)

   c. Location of sampling or analysis is the crime laboratory, this in the **report annex.**

   d. The sampling procedure is in the **Blood Alcohol Technical Unit Manual.**

e. There are no environmental conditions that would affect sample selection, thus this is **not applicable**.

f. Any significant deviations from the casework protocol or sample selection plan in the SOP will be authorized by the Supervisor or Manager and be noted in the **case notes**

7. In addition, test reports will contain the following:

a. Date of report (Draft Complete date in LIMS)

b. If no definitive conclusions can be reached, the reason will be documented

c. The author of the report will have conducted the examination or testing

8. Laboratory personnel who issue findings, including writing reports and providing testimony, based on examination results documented and generated by another person will document the review of examination documentation in LIMS.

a. See BA.10 for a more detailed instruction.

9. For more information on the release of case report information refer to FSD.43.

10. The electronic release of reports will be done through the Automated Regional Information Exchange System (ARIES) and in accordance with FSD.43.

11. The format of reports will be in conformance with FSD.43.

12. Amendments to reports will be in conformance with FSD.43.

B. Expression of analytical results.

1. The average of the quadruplicate determinations is calculated to the fourth decimal place, and the result is reported by "dropping" or truncating the fourth decimal place of the mean. Results for blood, urine and vitreous samples are reported in terms of the **blood alcohol equivalent concentration** based on the number of grams of alcohol per 100 mL of blood, % Weight per Volume (W/V). Results for Cavity Fluid are reported in terms of alcohol concentration because of the unknown origin of the sample.

a. The calculated mean % (W/V) blood alcohol concentration for each subject sample analyzed is reported by the Perkin Elmer Blood Alcohol Reporting System. The results are printed in the Summary Report and on the Blood Alcohol Report.

b. Urine results are expressed as a blood alcohol concentration per Title 17. The results are based on the relationship: The amount of alcohol in 1 mL of urine is equivalent to that in 1.3 mL of blood. The Raw Average value is divided by 1.3 to obtain the Raw Converted Result. The corresponding blood alcohol level is reported by truncating the digit in the fourth decimal place, if present. Title 17 dictates the conversion factor to be used for urine.

c. Vitreous results are expressed as a blood alcohol concentration. The results are based on the relationship: The amount of alcohol in 1 mL of vitreous fluid is equivalent to that in 1.27 mL of blood. The Raw Average value is divided by 1.27 to obtain the Raw Converted Result. The corresponding blood alcohol level is reported by truncating the digit in the fourth decimal place, if present.

d. See BA.30 for more information about calculations.

2. **The (unconverted for urine and vitreous samples) analytical result with associated uncertainty will be reported on the annex to the report.**

3. Blood or urine samples from living subjects between 0.010% and 0.020% (W/V) will be reported as positive but below Limit of Quantitation.

4. Blood or urine samples from living subjects below 0.010% (W/V) and Postmortem blood samples below 0.020% (W/V) will be reported as "Not Detected".

5. For results that are above the reportable linear range (0.500%), the sample will be reported as "greater than" or "above" the upper limit of the reportable linear range or limit of quantitation.

    a. Urine and vitreous samples will be reported as "greater than" or "above" the upper limit of the reportable linear range or limit of quantitation when the **un-converted** result is above a 0.500%.

6. Where blood or urine samples are received not in compliance with prescribed collection, withdrawal, handling or preservation procedures the results are reported with an explanation of any non-compliant condition.

    a. Any remarks will be recorded in the Laboratory Examination Notes and on the final Report of Laboratory Examination. These remarks will include, but are not limited to, any non-compliant conditions (e.g., Broken Sample Container, Insufficient Sample for Replicate Analysis, Non CCCSO Container…).

7. The (LIMS) program will print a final Report of Laboratory Examination of the analysis. The following information will be maintained with the report as part of the case record for each case.

    a. Laboratory Examination Notes

    b. Forensic Alcohol Report

    c. Electronic Chain of Custody

8. For each set of samples examined, the following information will be stored in a file or binder:

    a. Forensic Alcohol Summary Report

    b. Calibration Plot for each column

    c. Traceability Worksheet

    d. Analytical Worklist

    e. Alcohol Batch Review List

    f. Blood Alcohol Gas Chromatography Worksheet and LIMS generated Alcohol Dispensing Tray Map (Optional)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/2016	**NUMBER:** BA.13 - Reference Materials
	RELATED ORDERS: BA.14 - Secondary Alcohol Standards, BA.28 - Balances	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: 5.6.3.1, 5.6.3.2, 5.6.3.3, 5.6.3.4** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Quality Assurance	**SUBJECT:** Reference Materials	

I. Policy: Reference Materials will be verified, labeled and stored in a manner to ensure the integrity of the standard.

A. Reference Materials

1. Reference Material (RM): A material, sufficiently homogeneous and stable with respect to one or more specified properties (properties can be quantitative or qualitative), which has been established to be fit for its intended use in a measurement process. A reference material is a substance of known concentration and/or composition from a known source. These are defined as follows:

   a. **Certified Reference Material (CRM)**: A reference material characterized by a metrologically valid procedure for one or more specified properties, accompanied by a certificate that provides the value of the specified property, its associated uncertainty, and statement of metrological traceability

      i. Some material sold as CRMs have no stated evidence of traceability

   b. **NIST Reference Material**: A material **issued** by NIST with a report of investigation or a certificate.

      i. A NIST RM meets the ISO definition for a RM and may meet the ISO definition for a CRM.

   c. **NIST-Traceable Reference Material™ (NTRM™)**: A commercially-produced reference material with a well-defined traceability linkage to existing NIST standards for chemical measurements established via criteria and protocols defined by NIST.

      i. A NIST NTRM may be recognized by a regulatory authority as being equivalent to a CRM.

2. Purchased NTRM (NIST-Traceable Reference Material (NTRM).

   a. The NTRM standards used to establish the calibration curve during each "run" for the quantitation of ethanol in samples are considered to be a reference material and will be traceable to NIST (NIST-Traceable Reference Material). The documentation of traceability will be maintained in the Alcohol Unit.

B. Storage, Handling, and Use (ISO/IEC 17025:2005 5.6.3.4)

1. All reference materials will be stored, handled, and used in a manner that prevents contamination, deterioration and protects their integrity. This includes:

   a. Storing**:** NTRM standards and quality control solutions are stored within the laboratory according to the vendor instructions on the reference material label or certificate.

   b. Handling: Handle the reference material with care when removing it from its storage location and returning it to the proper location.

      i. Movement of reference materials within the laboratory is not considered transport.

   c. When using the reference material, staff will utilize good lab practices to prevent against contamination and to protect the integrity of the reference material. This may include:

      i. Proper labeling.

         1. See BA.14 for more information about labeling.

         2. The Purchased NTRM are labeled by the vendor with all relevant information including concentration and expiration date.

      ii. Abiding by any expiration dates on the reference material label or certificate. Reference material or any solution(s) will not be made from reference material past the expiration date.

         1. The expiration date that is on the reference material label or certificate is transferred to any secondary bottle or solution made from that reference material.

         2. If the laboratory assigned expiration date is before the expiration date of the reference material, the laboratory assigned expiration date will be transferred to any secondary bottle or solution made from that reference material.

      iii. Following any safety warnings on the reference material label or certificate.

C. Reference Standards (Balance Check Weights)

1. See BA.28 for the program and procedure for calibration of check weights. (ISO/IEC 17025:2005 5.6.3.1)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** BA.14 - NTRM Standards
	RELATED ORDERS: BA.13 - Reference Materials	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: 5.6.3.2, 5.6.3.3, 5.6.3.4** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Quality Assurance	**SUBJECT:** NTRM Standards	

I. Policy: The following procedure for the use, labeling, and storage of the NTRM Standard Reference Material will be followed.

A. **Definitions and Usage of Known Alcohol Standards**

1. Standards of known ethanol concentration used by the laboratory for blood alcohol determinations may be the following:

   a. A **NIST-Traceable Reference Material** (NTRM) is a commercially-produced reference material with a well-defined traceability linkage to existing NIST (National Institute of Standards and Technology) standards for chemical measurements established via criteria and protocols defined by NIST.

2. The standard selected for casework will adhere to the performance criteria specified in BA.30.

3. The vendor supplied NTRM Standards will only be purchased from vendors accredited and capable of providing NTRM alcohol standards.

B. **General Information about NTRM Standard Solutions**

1. Analysts working in the Alcohol Unit must be aware of the proper procedures for labeling, checking the reliability during a blood alcohol run, storing, and using solutions.

2. The concentrations of the NTRM Standards are established by the vendor and documented in the Certificate of Analysis for each standard. The NTRM Standards are a reference material with traceability to NIST. See BA.13. (ISO/IEC 17025:2005 5.6.3.2)

3. **Purpose**: NTRM Standards are water solutions of ethanol at specific concentrations. These solutions are used to calibrate the method with each set of samples analyzed and used in the calculation to determine the ethanol content of the unknown. (ISO/IEC 17025:2005 5.6.3.4)

4. **Labeling**: All ampule bottles are be labeled by the manufacturer and should contain the following:

a. a solution identification number

i. The manufacturer's lot number on the NTRM Standard will become the Solution ID to be used with the Perkin Elmer TotalChrom Blood Alcohol Reporting System software. The last four numbers after the hyphen indicate the ethanol concentration of the solution.

1. i.e. Solution ID format: **FN0216201601-0100**, indicates that the Cerilliant lot # is FN0216201601 and the concentration is 0.0100 % w/v.

5. **Check of Reliability**:

a. The reliability of the NTRM standard will be checked by Gas Chromatography during each use.

b. The concentration of the NTRM standards will be used to establish a calibration curve for each run. The four individual results for each NTRM Standard must be with ± 5% of the vendor established value.

6. **Expiration**: The NTRM Standards will be not be used for forensic alcohol analysis past the expiration date established by the manufacturer.

7. **Storage**: Store refrigerated according to the manufacturer's recommendations. (ISO/IEC 17025:2005 5.6.3.4)

C. **Procedure for Storage and Retention of NTRM Standards and Documents:**

1. Ampules will be discarded after the expiration date established by the manufacturer.

2. The vendor supplied documentation (Certificate of Analysis) will be maintained for at least 5 years or the current ASCLD/LAB accreditation cycle.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 05/14/2019	**NUMBER:** BA.15 - Quality Controls
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Quality Controls	

I. Policy: The following procedure for the preparation, establishment, and storage of the Water-Ethanol Quality Control Solutions will be followed.

A. **General Information about Quality Control (QC) Solutions**

1. Analysts working in the Alcohol Unit must be aware of the proper procedures for labeling, checking the reliability, storing, preparing and using solutions.

2. It is **recommended** that at least one analyst, other than the analyst preparing the solution, initial and date the solution preparation paperwork to document that the procedures were followed and the paperwork was completed correctly.

3. A laboratory prepared Quality Control (QC) or a vendor purchased NTRM solution will be run at the beginning and end of each analytical sequence of samples, per Title 17, and may be interspersed throughout the sequence.

4. When A NTRM (NIST Traceable Reference Material) vendor purchased ethanol solution is utilized as a Quality Control solution within an analysis sequence, per Title 17, no laboratory establishment/verification is necessary. The NTRM ethanol solutions will be stored refrigerated or frozen as directed by vendor documentation. The NTRM solutions will not be used after the expiration date provided by the vendor. The Certificate of Analysis for each vendor purchased NTRM will be kept on file at the laboratory.

5. It is **recommended,** when the number of unknown samples allows for "interspersed" QC's within the sequence (more than 10 unknown samples), an NTRM vendor purchased ethanol solution will be run as an "interspersed" QC. It is recommended that various concentrations within the linear range of the Method be used.

6. The vendor purchased NTRM utilized as a Quality Control will not be from the same lot number (preferably, not the same vendor) as the NTRM standards used to calibrate the linearity of the method within the analysis sequence.

B. **General Information for the Preparation of Quality Control (QC) Solutions**

1. The concentrations of the quality control solution will be established by the method.

2. **Purpose**: The purpose of the Quality Control (QC) Program is to recognize any changes in the routine day-to-day response of the method. By monitoring this routine response, systematic errors that might arise in the method will be detected. The quality control reference material is a solution of water and ethanol. A separate

batch of quality control reference material shall be prepared for each gas chromatograph (DCPE1 & DCPE2).

3. **Labeling**: All bottles will be labeled with:

   a. A solution identification number (Lot number)

      i. The date, as Year, Month, Day (YYMMDD) and concentration (CONC) will be used as the Quality Control Reference Solution ID Number to be used with the Perkin Elmer TotalChrom Blood Alcohol Reporting System software- **QCYYMMDD-CONC**

         1. i.e. QC160112-1521 for a laboratory created water-ethanol QC solution with the concentration of 0.1521% prepared on 1/12/2016.

   b. Label the primary bottle "Quality Control" or "QC"

   c. GC number (DCPE1 or DCPE2)

   d. Date prepared

   e. Date to be discarded/expiration date

   f. Initials of preparer

   g. The determined alcohol concentration, % (W/V) value

4. **Check of Reliability for vendor purchased NTRM or in-house prepared Quality Controls**:

   a. The water-ethanol QC is tested with each analytical sequence. Passing criteria for an analytical result is as follows:

      i. +/- 5% (numerical value) of the expected target value for target concentrations between 0.080% $\leq$ X < 0.500%.

      ii. +/- 0.005 % (concentration) of the expected target value for target concentrations between 0.020% $\leq$ X < 0.080%.

   b. The reliability of the solution will be also be statistically evaluated on an on-going basis by checking the Measurement Assurance QC plots (see BA.42).

5. **Expiration**: Discard two years from date prepared.

6. **Storage**: Store refrigerated

Table 1
Dilution Table

% alcohol	mL absolute ethyl alcohol / 1L
0.08	**1.02**
0.10	**1.27**
0.15	**1.90**
0.20	**2.53**

C. **Procedure for Laboratory Preparation of the Quality Control (QC) Solutions:**

1. Fill a 1 L volumetric flask partially with distilled water.
2. Using Table 1, determine the amount of absolute ethyl alcohol needed to make up 1 liter of the desired concentration of quality control reference solution. The alcohol concentration of this solution is between 0.080 and 0.200 g /100 mL of water, per Title 17.
    a. **The bottle identification (lot #-alpha numeric designator) should be tracked on the Reagent Preparation Log: Quality Control Reference Material** (see BA.44).
3. Using an adjustable (variable) pipette, measure the desired amount of purity checked absolute ethanol and add to flask.
4. Fill to the volumetric mark with distilled water. Stopper and mix thoroughly by repeated inversions of the flask.
5. Determine the value of the solution following the procedure below.
6. Transfer the solution to a properly labeled glass storage bottle.
7. Store in a tightly closed bottle under refrigeration when not in use.
8. This solution should be stable for up to two years.
9. **Fill out the Solution Log in the Alcohol Database. See BA.44**

D. **Procedure for Establishment of Laboratory prepared Water-Ethanol Quality Control (QC) Solutions:**

1. After a suitable quality control reference material is prepared, as described above, it must be established..
2. The four decimal mean value for each lot of quality control reference material is determined by at least 20 replicate analyses, at the rate of no more than two analyses per day, with the method used for forensic alcohol analysis.
3. The established concentration should be the mean rounded to four decimal places (scientific rounding).
4. The results of these analyses will be entered into the **Alcohol Database. See BA.44**
5. Acceptable limits of variation are +/- 0.005% (W/V) from the mean. The mean and acceptable limits of variation are determined and entered into the log.

E. **Procedure for Using Laboratory prepared Quality Control (QC) Solutions:**

1. A laboratory prepared Quality Control (QC) solution will be run at the beginning and end of each analytical sequence of samples, per Title 17. A sample set or analytical sequence is defined as a continuous sequence of blood or urine samples analyzed in replicate, up to a maximum of 40 samples.
2. Sample results are reported only if analysis of the quality control reference material falls within the acceptable limits of variation. If analysis falls outside the acceptable limits of variation:
    a. Analytical results of the sample set will not be reported.
    b. The unsuccessful sequence should be entered in the Quality Assurance Correction Log.

c. The analyst will take remedial action to investigate and correct the source of the error.

d. No samples shall be analyzed for the purpose of forensic alcohol analysis until the error has been corrected, as demonstrated by return of the analysis of the quality control reference material to values within the acceptable limits.

e. The entire set of samples will be re-analyzed.

3. The results of all quality control analyses are recorded (can be electronic). The QC log contains the acceptable limits of variation and daily analysis results.

4. In addition the QC will be evaluated in such a way that trends are detectable and statistical techniques will be employed to review the data. The monitoring shall be at least monthly (see BA.42).

II. Policy: The following procedure for the verification and storage of the Blood-Ethanol "Matrix"Quality Control Solutions will be followed.

A. General Information for Blood-Ethanol "Matrix" Quality Control (BMQC) Solutions

1. The blood-ethanol quality control sample is a blood solution containing ethanol. The blood-ethanol "matrix" quality control solutions can be purchased from a vendor or created within the laboratory.

2. **Purpose**: The purpose of testing the blood-ethanol QC is to recognize any on-going matrix interference in the method.

3. The ethanol concentration of the quality control solution will be provided by the **vendor's COA or verified by the laboratory**. The concentration of the blood-ethanol quality control may be verified using the method.

B. Procedure for Preparing Blood Matrix Quality Controls

1. Blood matrix will be checked for interfering substances prior to preparation of the solution.

a. Analyze a portion of any new lot of blank blood using the method. The blood may be used if it is free of ethanol and interfering substances.

2. Use an NTRM ethanol-water ampule to prepare the blood matrix quality control.

a. The NTRM ampule used to make the BMQC, should not be the same NTRM ampule used to set the calibration curve for the analysis. Using an NTRM ampule from a different vendor is preferred. If the materials available in the laboratory do not allow for the use of different vendors, a different lot number from those used to set the calibration curve should be used when making the BMQC.

b. Using the equation $C_1V_1=C_2V_2$, BMQC concentrations should be prepared at a level within the method's linear range.

3. **Labeling**: All bottles will be labeled with:

a. Vendor assigned lot # or laboratory lot #

b. Concentration of the sample

c. Expiration date

d. The Quality Control Reference Solution Identification Number to be used with the Perkin Elmer TotalChrom Blood Alcohol Reporting Software will be as follows: VENDORLOT#-CONC i.e. **AAAA1214-1234 for vendor purchased BMQC's or CCCL150419-1672 for lab created BMQC's.**

i. For example, UTAK3604-0800 for blood purchased from Utak with a lot # of 3604, at a concentration of 0.0800%.

ii. For example, CCCL160316-1517 for blood created in the Contra Costa Crime Lab on the date of 3/16/16, at a concentration of 0.1517%.

4. **Check of Reliability**: The blood-ethanol QC is tested by analyzing the samples periodically and ensuring the analytical results pass within:

a. +/- 5% (numerical value) of the expected target value for target concentrations between $0.080\% \leq X \leq 0.500\%$.

b. +/- 0.005 % (concentration) of the expected target value for target concentrations between $0.020\% \leq X < 0.080\%$.

5. **Expiration**:

a. Samples will be discarded after vendor's or laboratory's expiration date.

b. BMQC's prepared in the laboratory expire 14 days from the date of preparation.

6. **Storage**:

a. For vendor purchased BMQC's store according to vendor recommendation.

b. BMQC's prepared in the laboratory will be stored refrigerated.

7. **Fill out the Solution Log for laboratory made QCs or enter vendor purchased QCs in the Alcohol Database. See BA.44**

C. **Procedure for Using the Blood-Ethanol Quality Control (BMQC) Solutions (Stored Frozen)**:

1. Thaw a frozen bottle containing the blood-ethanol QC and bring to room temperature. It is recommended to rock the sample for at least 30 minutes prior to dispensing sample for analysis.

2. Dispense the matrix QC in duplicate directly from the bottle.

3. The sample should be consumed the same day that it is thawed. Any unused sample will be discarded.

4. Sample results are reported only if the blood-ethanol quality control falls within the acceptable limits of variation. If analysis falls outside the acceptable limits of variation:

a. Analytical results of the sample set will not be reported.

b. The unsuccessful sequence should be entered in the Quality Assurance Correction Log.

c. The analyst will take remedial action to investigate and correct the source of the error.

d. No samples shall be analyzed for the purpose of forensic alcohol analysis until the error has been corrected, as demonstrated by return of the analysis of the quality control reference material to values within the acceptable limits.

e. The entire set of samples will be re-analyzed.

5. Any vendor supplied documentation will be maintained in the Alcohol Unit.

6. The blood-ethanol QC will be run on a periodic basis, at least once per month.

7. Blood-Ethanol QC samples will be discarded after their expiration date.

D. **Procedure for <u>Storage and Retention</u> of Quality Control (QC) Documents and Solutions:**

1. The vendor supplied documentation (Certificate of Analysis) will be maintained for at least 5 years or the current ASCLD/LAB accreditation cycle.

2. Portions of the Laboratory prepared water-ethanol QC solutions will be stored for at least 5 years after the expiration date.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/31/2018	**NUMBER:** BA.16 - Internal Standard
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.1**	
CHAPTER: Quality Assurance	**SUBJECT:** Internal Standard	

I. Policy: The following procedure for the preparation of the Internal Standard will be followed.

A. **General Information about Preparation and use of Internal Standard**

1. Analysts working in the Alcohol Unit must be aware of the proper procedures for labeling, checking the reliability, storing, preparing and using solutions.
2. It is **recommended** that at least one analyst, other than the analyst preparing the solution, initial and date the solution preparation paperwork to document that the procedures were followed and the paperwork was completed correctly.
3. This reagent is used as the internal standard in the calculation of the quantitative value of ethanol in samples.
4. **Labeling**: All bottles will be labeled with:
   a. "n-Propanol, Internal Standard"
      i. The date and solution type will be used as the Solution ID Number to be used with the Perkin Elmer TotalChrom Blood Alcohol Reporting System software-**ISYYMMDD**.
      ii. i.e. IS990116, for an internal standard solution prepared on 1/16/1999
   b. date prepared
   c. date to be discarded/expiration date
   d. initials of preparer
   e. Specify storage condition (for example: room temperature or refrigerator)
5. **Check of Consistency**: A consistency check is being performed each time a new lot of Internal Standard is made. The successful completion of an analytical sequence with the new internal standard showing the passing of all standards and quality controls will serve as the check of consistency.
6. **Expiration**: The solution cannot be used past the labeled date of expiration of 3 months of usage.
7. **Storage**: The stock solution is stored refrigerated. When the internal standard is in use, it is stored in an amber (~2L) bottle attached to the diluter at room temperature within the hoods.

B. Procedure for Preparation of the Internal Standard Solution, 0.0025% n-Propanol

1. The exact concentration of the internal standard is calculated by volume during the preparation. The exact concentration of the n-propanol in the internal standard need not be determined as it is used in the formula for the calibration and the calculation, therefore the numerical value cancels out.

2. Partially fill a volumetrically marked plastic carboy bottle with distilled/de-ionized water. Add 50.0 µL of reagent grade n-Propanol, using a pipette, for each 2 liters of solution being prepared and dilute to the desired volume with distilled/de-ionized water.

    a. example: To prepare 16 liters of internal standard, add 400 µL of n-Propanol and dilute to 16 liters.

    b. the solution may be prepared in the last week of the month prior to the effective date and then used for the next three consecutive months.

3. Mix thoroughly to allow for equilibration.

4. A portion of the internal standard is placed into an amber (~2L) bottle attached to the diluter and will be replenished/replaced as needed for alcohol analysis from the refrigerated stock solution.

5. Complete the **Solution Log in the Alcohol Database. (See BA.44)**

6. See **BA.44** for more information about populating the solution name of the internal standard in the Traceability Database.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/2016	**NUMBER:** BA.17 - Resolution Solution Standards
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005:none ASCLD-LAB International Supplemental 2011: 5.1.3.1**	
CHAPTER: Quality Assurance	**SUBJECT:** Resolution Solution Standards	

I. Policy: The following procedure for the preparation of the Resolution Solution Standard will be followed.

A. **General Information about Preparation of Solutions**

1. Analysts working in the Alcohol Unit must be aware of the proper procedures for labeling, checking the reliability, storing, preparing and using solutions.

2. It is **recommended** that at least one analyst, other than the analyst preparing the solution, initial and date the solution preparation paperwork to document that the procedures were followed and the paperwork was completed correctly.

B. **General Information for Resolution Solution:**

1. **Purpose**: This solution is used for the determination of column resolution and efficiency.

2. **Labeling**: All bottles will be labeled with:

   a. a sample identification number

      i. The letters "RS" and the date will be used as the Resolution Solution ID Number to be used with the Perkin Elmer TotalChrom Blood Alcohol Reporting System software-**RSYYMMDD**

      ii. i.e. RS160117, for a resolution solution prepared on 01/17/2016

   b. date prepared

   c. date to be discarded/expiration date

   d. initials of preparer

3. **Check of Reliability**:

   a. After a new Resolution Solution is prepared the Resolution Solution will be run on the Blood Alcohol Method. All components of the resolution check solution must show separation under the normal gas chromatograph conditions used for analysis of samples.

   b. During each run, all components of the resolution check solution must be identified or "named" by the method according to the retention time of each

component on each column.

4. **Expiration**: Discard after two years.
5. **Storage**: Store refrigerated.

C. **Procedure for Preparation of the Resolution Solution:**

1. In a 1.0 liter volumetric flask:
   a. add approximately 500 mL distilled/de-ionized water
   b. add 0.2527 mL of reagent grade methanol
   c. add 0.2546 mL reagent grade isopropanol
   d. and 0.0637 mL reagent grade acetone
   e. add 0.2534 mL 200 proof ethanol to the mixture
   f. add 0.1273 mL of reagent grade acetaldehyde
   g. dilute to the mark with distilled/de-ionized water and mix.
2. Transfer to amber bottle and cap.
3. Complete the **Reagent Preparation Log in the Alcohol Database. (See BA.44)**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 10/28/2019	**NUMBER:** BA.18 - Technical and Administrative Review
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Technical and Administrative Review	

I. Policy: The technical review process addresses the appropriate use of analytical controls; correct interpretation based on analytical controls; and the consensus of results between the examiner and the reviewer. This process ensures the conclusions of the analyst's are reasonable, within the constraints of validated scientific knowledge and supported by examination documentation. See FSD.17

A. Any significant differences in results by the reviewer must be resolved prior to issuing a final result and report.

1. If a discrepancy is found, the report and notes along with the notation describing the discrepancy is returned to the analyst for correction.

B. Technical review shall be conducted by individuals having experience gained through training in the Alcohol Unit.

1. Personnel who have completed and successfully passed the competency test for Forensic Alcohol Analysis on the current instrumentation and have been authorized by the Manager/Supervisor may perform technical review in the Alcohol Unit. However, based on the work load and experience of the analysts the Manager/Supervisor may choose to designate a specific Criminalist as Tech Reviewer in their absence.

C. Documentation of personnel authorized to perform technical review will be documented on the Training authorization checklist.

D. The technical reviewer of the sequence run packets will use the Alcohol Analysis Sequence Packet Review Checklist (See ALC.44) which includes, but may not be limited to, the scope listed in E. below for each sequence packet reviewed.

1. The checklist will be signed, dated, and added in LIMS. (In the same request as the run packet)

E. The technical reviewer will consider the following scope, which include, but may not be limited to:

1. Approved technical procedures used and documented, any deviations in analytical techniques will be included in the case notes.

2. All run packet documentation are present

3. Accuracy of test reports

4. The Traceability Worksheet properly documents the equipment used within the sequence
5. Results are properly transferred from notes to report
6. Perkin Elmer Forensic Alcohol Summary Report review
7. Ethanol standards' concentrations within tolerance
8. QC ethanol concentrations within tolerance
9. Blank sample is negative
10. Run Calibration Curve is within tolerance
11. Sample type (example: blood or urine) is entered properly
12. Any "failed" sample analysis listed over 5% is flagged
    a. Ensure that a quality log entry is made if applicable

F. The Technical Reviewer may use a **Report Review Checklist ALC.33** encompassing the scope listed above.

1. It is recommended that any newly competent analyst review ALC.33 prior to submitting cases for technical review.
2. It is recommended that any technical reviewer that is not currently proficiency tested to reference ALC.33 upon reassignment to this task.

G. The author of the report may not conduct the technical review.

H. The Administrative review milestone in LIMS reflects the technical and administrative review of the case.

1. The signature of the reviewer on the laboratory report designates approval.

II. Policy: The administrative review process addresses the case file for format and content. The reviewer verifies the requested examination has been performed and the basis for the conclusions is supported in the notes. See FSD.18

A. It is the responsibility of the analyst, not the Administrative Reviewer, to prepare and present a completed report package that complies with the Laboratory's policies and is free of errors.

B. All reports will be technically and administratively reviewed by a Manager/Supervisor or a person designated by the Manager/Supervisor.

C. The individual administratively reviewing the report will not be the person who authored the report.

1. Personnel who have completed and successfully passed the competency test for Forensic Alcohol Analysis on the current instrumentation and have been authorized by the Manager/Supervisor may perform administrative review in the Alcohol Unit. However, based on the work load and experience of the analysts the Manager/Supervisor may choose to designate a specific Criminalist as Administrative Reviewer in their absence.

D. Documentation of personnel authorized to perform administrative review will be documented on the Training authorization checklist.

E. The Administrative Reviewer may use a Report Review Checklist ALC.33 encompassing the scope listed below.

1. It is recommended that any newly competent analyst review ALC.33 prior to submitting cases for administrative review.

2. It is recommended that any administrative reviewer that is not currently proficiency tested to reference ALC.33 upon reassignment to this task.

F. Administrative review will take place prior to the release of the report. Refer to FSD.43 for release of information verbally.

G. The administrative reviewer will consider the following scope, which includes, but may not be limited to:

1. All information is correct on case report header (agency case number, name, agency, offense, request date, etc.)

2. The administrative and examination records are uniquely identified.

   a. The unique identifier is the laboratory number.

   b. There is a clear identification of the end of the report.

3. Proper report format followed per Division policy

4. The signature (or electronic equivalent) of the author appears on the report

5. Clarity of conclusions in report

   a. Date(s) of analysis are stated accurately

   b. Uncertainty of analyses are included in the report annex.

6. Method(s) used or analytical techniques employed listed on report

7. The description and identification of submitted items is clear

8. The tape-sealed condition of the outer packaging is noted

9. Chain of custody documented in report and LIMS.

   a. Chain of custody on envelope is consistent with LIMS.

   b. The date of receipt of evidence is in the report annex.

10. The date of request is included on the report.

11. Evidence items listed on request form correspond to reported items

12. The notes are legible

13. Correct grammar and spelling

14. All handwritten corrections to notes shown by initialed single strike-out, if applicable

15. All handwritten notes in ink, if applicable

16. All notes pages, including data, are properly marked with lab number, date and initials

17. The first and last notes page includes the total number of pages

18. Applicable worksheets used

19. Disposition of the evidence is included in the report.

20. Any communication is documented in the notes or telephone log documents and may be imaged into the case notes.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 04/25/2019	**NUMBER:** BA.19 - Court Testimony and Proficiency Testing
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Court Testimony and Proficiency Testing	

I. Policy: Managers/Supervisors or persons designated by the Manager will review the testimony of their staff annually according to the following procedure.

A. Court Critique Forms are available to staff members to encourage input from judges, attorneys, or peers regarding employee performance for courtroom testimony (FSDF.03).

B. There are other means of review of testimony that include, but may not be limited to, reviewing transcripts, or interview of an individual who witnessed the testimony. Refer also to the Division Manual policy on Courtroom Testimony Monitoring (FSD.17 and FSD.26).

C. Individuals shall be given a technical review of their courtroom testimony by a technically competent person. Feedback shall be documented through an internal court testimony review form (FSDF.02). A copy shall be provided to the analyst.

D. If performance is less than satisfactory, the Supervisor/Manager will gather appropriate information; this may take the form of interviewing the person filling out the Court Critique to determine the extent of the unsatisfactory performance.

1. The Supervisor/Manager will address the performance with the analyst if the performance is unsatisfactory.

2. Any remedial action taken will be documented; this may take the form of a corrective action if necessary.

E. The records of testimony monitoring shall be retained not less than one full ANAB accreditation cycle.

F. If an individual does not testify in the calendar year, the Supervisor/Manager will document this according to the Division Manual policy.

II. Policy: Proficiency samples will be submitted to each analyst who performs testing, or an activity which contributes to the quality of testing, on a yearly basis.

A. These samples will be supplied by an outside agency, internally, or blind.

1. See BA.41 for more information on using case samples or re-using samples for proficiency testing.

B. When participating in proficiency testing, the Alcohol Unit's own approved and documented test procedures shall be used

C. Criteria for passing blood/urine alcohol proficiency:

1. Criteria for passing an external (vendor provided) proficiency:

   a. The expectation is that staff correctly identify ethanol and its concentration.

   b. If the ethanol concentration is quantitated and the vendor provides statistics (grand mean and standard deviations), the laboratory quantitative value should be within 2 standard deviations of the grand mean. Values between 2 and 3 standard deviations will be evaluated and action may be taken by the laboratory. Values outside of 3 standard deviations are considered unsuccessful and corrective actions will be taken and documented through the QA Action process.

   c. If the vendor does not provide statistics, the laboratory quantitative value will be within:

      a. For target concentrations between $0.080\% \leq X \leq 0.500\%$ the criteria is the mean value of the sample results must be within +/- the current Method UOM (Uncertainty of Measurement; e.g. ~ +/- 6.27%) from the target (spiked) concentration provided by the vendor.

      b. For target concentrations between $0.020\% \leq X < 0.080\%$ the criteria is the mean of the sample results must be within +/- 0.005 (% concentration) from the target (spiked) concentration provided by the vendor.

2. For an internal proficiency (samples prepared in-house):

   a. The mean of the analyst's results must be within:

      i. +/- 5% (numerical value) of the expected target value for target concentrations between $0.080\% \leq X \leq 0.500\%$.

      ii. +/- 0.005 (% concentration) of the expected target value for target concentrations between $0.020\% \leq X < 0.080\%$.

3. If the analyst's results do not meet the passing criteria, the incident will be investigated and appropriate action will be taken, this may include issuing another test or providing remedial training. The unsuccessful test will be documented in a QA Acton.

D. See Division Manual policy on Proficiency Testing for more information (FSD.23)

E. The laboratory shall maintain records of proficiency testing, including:

1. The test set identifier
2. How samples were obtained or created
3. Identity of the person taking the test
4. Date of analysis and completion
5. All data and notes supporting the conclusions
6. Proficiency test results
7. Discrepancies noted (refer to the Division Manual Policy)

8. Indication that performance has been reviewed and feedback to the analyst
9. Details of any corrective action taken (refer to the Division Manual Policy)

F. Records shall be retained not less than one full ANAB accreditation cycle.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 02/08/2019	**NUMBER:** BA.20 - Validation
	RELATED ORDERS: Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.2**	
CHAPTER: Quality Assurance	**SUBJECT:** Validation	

I. Policy: New procedures or methods of analysis must be validated or verified before use in casework.

A. Any new method or procedure or adjustment to a current procedure must be tested in the laboratory to insure that the method or procedure works, the verification or validation shall be as extensive as necessary to meet the needs of identification and quantitation of ethanol in biological samples. The laboratory shall record the results and document the procedure. Approval of the method for use in casework is documentation that the method is fit for forensic alcohol analysis.

B. A Quality Action Request, or equivalent, will be generated and given to the Manager/Supervisor to be approved; then forwarded to the Quality Assurance Coordinator.

C. For more information on validation of methods see the Division Manual (see FSD.27).

D. Selection of Methods

1. The forensic alcohol analysis will be performed using the semi-automated gas chromatograph method for quantitation of ethanol in blood, urine and vitreous samples. This is appropriate for the reporting ethanol concentrations in samples and meets the needs of the customer. The semi-automated gas chromatograph method will be validated to allow for the quantitation of ethanol in blood, urine and vitreous samples. The objective and scope of analysis is the quantitation of ethanol in blood, urine and vitreous samples.

2. The customer shall be informed of the method chosen by the Alcohol Unit by listing the analytical technique on the report.

E. The following factors shall be taken into account in developing test methods and procedures:

1. **Human factors**
2. **Accommodation and environmental conditions**
3. **Test and calibration methods and method validation**
4. **Equipment**
5. **Measurement traceability**
6. **Sampling**

7. **The handling of test and calibration items**

F. Guidelines for Performance Verification

1. The purpose of performance verification is to ensure that a previously validated method, or method from a manufacturer, will work in the Laboratory with the Laboratory's personnel and instrumentation.

2. Performance verification should consist of evaluation of the validated method (without making significant changes to sample preparation or instrument parameters.) and demonstrating that the standards or controls have been carried through the process and yielded the expected results. Prior to implementation of a validated method new to the laboratory, or a method from a manufacturer, the reliability of the procedure shall be documented in-house against any documented performance characteristics of that procedure. Records of performance verification shall be maintained.

3. Qualified personnel criteria for a Performance Verification:

   a. For an instrument verification, an analyst who is competent in the unit can complete a performance verification.

   b. An analyst who is competency tested or in training can acquire data to be evaluated for the performance verification.

   c. For new technology (such as instrumentation), an analyst who is competent in the unit can complete a performance verification.

G. Guidelines for Method Validation

1. The purpose of method validation is to demonstrate that the method is suitable for the quantitation of ethanol in samples and is reproducible by the Laboratory's personnel with the use of the Laboratory's instrumentation.

2. Method validation is required on new methods, methodology or procedures. Validation is the confirmation the requirements for quantitation of ethanol in samples is fulfilled by examination of objective evidence.

3. The following SWGTOX criteria were taken into account for the current method and assessed for the use of quantitation of ethanol in samples and is relevant for the customer needs. :

   a. specificity and interference

   b. bias and precision (repeatability and/or reproducibility)

   c. calibration model & the linearity of the method including the range and accuracy of values obtained from the validated method

   d. estimation of the uncertainty of measurement

   e. carryover

   f. standards stability

   g. the detection limit (LOD) and limit of quantitation (LOQ)

   h. process stability and heat stability

4. Methods developed by the laboratory for its own use will be a planned activity and assigned to qualified personnel. Plans will be updated as development proceeds and effective communication between the analyst and Supervisor/Manager will be ensured.

5. Qualified personnel criteria for a Method Validation:

    a. For a method validation, an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

    b. An analyst who is competency tested or in training (with supervisor/manager approval) can acquire data to be evaluated by a competent analyst for a method validation.

    c. For new technology (such as instrumentation), an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

H. Software

1. When computers or automated equipment are used for the acquisition, processing, recording, reporting, storage or retrieval of test data, the laboratory shall ensure that **laboratory configured** software is suitably validated and documented as being adequate for use. In the Alcohol Unit, this may include, but is not limited to:

    a. TotalChrom Blood Alcohol Reporting Software

    b. LIMS Crystal Reports for Blood Alcohol Reporting

2. Documentation of software validation will be reviewed by a Supervisor/Manager prior to approval for use. If the software is controlled or approved through the use of a software log, the approval initials in the log will document the review and approval of the validation. If the software is controlled or approved through PowerDMS, the electronic approval signature will document the review and approval of the validation.

3. See BA.29 for more information.

I. Equipment

1. Equipment that is new to the laboratory shall be properly evaluated to ensure its reliability. The evaluation will be as extensive as necessary to meet the needs of the Alcohol Unit.

    a. If the type of equipment already exists within the laboratory and additional equipment of the same type is obtained, a check of the equipment may be satisfactory to ensure its reliability. This check shall ensure that the equipment is operating properly. This will be evaluated by the Supervisor/Manager.

    b. If the equipment is a new methodology or the operation is significantly different from equipment already in the laboratory, validation, training and an associated competency may be necessary. This will be evaluated by the Supervisor/Manager. The competency test will meet the requirements in the ASCLD/LAB Supplemental requirement 5.2.6.2.1.

2. Before being placed into service, equipment shall be calibrated or checked to establish that it meets the laboratory's specification requirements. It shall be

checked or calibrated before use in casework. See BA.21 for information on equipment.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 08/28/2018	**NUMBER:** BA.21 - Care and Maintenance of Equipment and Environmental Conditions
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.3, 5.5**	
CHAPTER: Equipment	**SUBJECT:** Care and Maintenance of Equipment and Environmental Conditions	

I. Policy: All equipment used for alcohol analysis is kept in good working order and routinely checked for accuracy and precision by an analyst trained in Forensic Alcohol Analysis.

A. The Alcohol Unit is furnished with the **measurement** equipment for the analysis of alcohol in samples for the correct performance of tests. This measurement equipment includes:

1. Computer with Windows 7 operating system or compatible operating system capable of running the following software:
    a. TotalChrom Navigator software v. 6.3.2.0646 Copyright 2008
    b. Turbo Matrix Headspace Autosampler software v. 2.5.0.0125
2. PerkinElmer Clarus 580 Gas Chromatograph with a flame ionization detector and Blood Alcohol Columns ELITE-BAC-1 Advantage and ELITE-BAC-2 Advantage (Perkin Elmer), 0.32 mmID, 1.8 µm df, 30 meter capillary column **or equivalent column.**
3. Perkin Elmer Turbo Matrix 110 Headspace Sampler
4. Hamilton digital dilutor with hand probe, Model 500, 600, or equivalent, used to pipette samples and dispense internal standard.
5. Eppendorf Pipettors, or equivalent, adjustable volume: 100 µl to 1000 µl and 500 µL to 2500 µl used to prepare solutions.
6. Balance, Analytical, capable of weighing 0.1 mg
7. Traceable VWR Digital Thermometer or equivalent

B. The Alcohol Unit is also furnished with the test equipment and supplies required for the correct performance of tests. This testing equipment and laboratory supplies include:

1. Volumetric flasks, Class A: 2 liter, 1 liter, 500 mL, 250 mL, 100 mL and 50 mL sizes used for preparation of solutions
2. Injection vials: 20 mL glass vials with butyl rubber stopper, or equivalent, and aluminum seals, 20 mm closure size.
3. Hand crimper, manual or automatic, 20 mm seal size.

4. Plastic carboy bottle that holds a minimum of 16 liters used to prepare and store the internal standard.

5. Oven capable of operating with stability as low as 40°C and as high as 105°C.

6. Ten Broeck Tissue Homogenizer, all glass, or equivalent, various sizes used to homogenize clotted blood specimens prior to analysis.

7. Desiccator containing a desiccant, such as activated silica gel.

8. Vials (blood sample vials that do not contain an anticoagulant or preservative, or small screw top glass jars) used to split samples for referee analysis.

9. Standard laboratory glassware such as beakers, watch glass, dropper bottles, graduated cylinders, magnetic stir bars, weigh boats and glass storage bottles.

C. The measurement equipment and software used for testing is capable of achieving the accuracy required for quantitative testing of ethanol in samples.

D. Equipment will be operated by authorized personnel. The authorization will be documented on the authorization checklist. See *Blood and Urine Training.*

E. Before being placed into service (to perform casework), equipment will be calibrated or checked to establish that it meets the laboratory's requirements.

1. All dilutors, dispensers/titrators, pipettes, balances and thermometers will be calibrated before being used in casework.

2. The measurement equipment (DCGC-FID, volumetric glassware) shall meet the vendor's performance check criteria or the laboratory criteria before being used in casework. The check criteria will be documented.

F. After being placed into service, equipment will be calibrated or performance checked to establish that is continues to meet the laboratory's requirements. If equipment does not pass a performance check criteria or calibration tolerances (eg. AS FOUND data listed on the calibration certificate), an evaluation of the equipment's impact on casework will be completed and documented.

1. When an evaluation determines that the reported results are not affected, a level 2 log entry will be cross referenced in the equipment calibration log.

2. When an evaluation determines the reported results are affected, the impact will be documented through the QA ACTION process. See FSD.15

G. Each piece of equipment and its software significant to the test result in the alcohol unit is uniquely identified. See below and *Software*.

H. Dual Column Gas Chromatograph Flame Ionization Detector (DCGC-FID)

1. Each uniquely identified DCGC-FID in the Alcohol Unit has an accompanying maintenance binder that includes, unless otherwise indicated :

a. The identity of the equipment (Laboratory assigned identifier) and software (version number or equivalent)

b. The manufacturer's name and serial number or other unique identification

c. The checks that the equipment complies with specifications are filed in the Alcohol Unit

d. The location of the equipment is the Alcohol Unit

e. The dates, results or reports of any adjustments

f. Any damage, modification, malfunction or repair

2. The instructions for use and the maintenance plan are contained in the Blood Alcohol Technical Unit Manual. See:

a. DCGC-FID-Routine Maintenance

b. DCGC-FID-Literature References

c. Analysis of Samples by DCGC-FID

d. Using LIMS

I. Balance

1. The uniquely identified balance in the Alcohol Unit has a maintenance binder that includes:

a. The identity of the equipment

b. The manufacturer's name and serial number or other unique identification

c. The monthly Calibration checks that the equipment complies with specifications

d. The dates, results and copies of reports or certificates of calibrations or any adjustments.

e. Any damage, malfunction or repair

f. Documentation of maintenance carried out

2. The instructions for use and the maintenance plan are contained in the Blood Alcohol Technical Unit Manual. See:

a. *Balances*

3. For any off-site service, the balance will be transported to the external calibration laboratory in a secure packaging to prevent any damage.

J. Diluters-Hamilton 500 or equivalent or Variable Eppendorf or equivalent

1. Each uniquely identified diluter, dispenser or pipette in the Alcohol Unit has a maintenance binder that includes:

a. The identity of the equipment

b. The manufacturer's name and serial number or other unique identification

c. The Calibration checks that the equipment complies with specifications

d. The dates, results and copies of reports or certificates of calibrations or any adjustments.

e. Any damage, malfunction or repair

f. Documentation of maintenance carried out

2. The instructions for use and the maintenance plan are contained in the Blood Alcohol Technical Unit Manual. See:

    a. *Diluters, Dispensers and Pipettes*

K. Glassware and Thermometers

1. Each uniquely identified thermometer and critical volumetric glassware that is in the Alcohol Unit will have the following records:

    a. The identity of the equipment

    b. The manufacturer's name and serial number or other unique identification

    c. The Calibration checks that the equipment complies with specifications

    d. The dates, results and copies of reports or certificates of calibrations or any adjustments.

    e. Any damage, malfunction or repair

    f. Documentation of maintenance carried out

2. The instructions for use and the maintenance plan are contained in the Blood Alcohol Technical Unit Manual. See:

    a. *Glassware and Thermometers*

L. Equipment that needs repair shall be taken out of service. It shall be clearly marked or labeled as being out of service until it has been repaired and/or shown by calibration or test to perform correctly. If there is a concern that the defect affected previous tests, the laboratory shall investigate.

M. See *Balances, Diluters, Dispensers and Pipettes, and Glassware and Thermometers* for information on calibration, and intermediate checks. See *Balances* for the calibration program for balance check weights

N. Test equipment will be handled according to procedures in the Blood Alcohol Technical Unit Manual such that the equipment is safeguarded from adjustments which would invalidate the test and/or calibration results. If any damage, malfunction or repair is needed the equipment will not be used for casework until remedial action is taken.

O. Accommodations and Environmental Conditions

1. The laboratory is in a climate controlled building and the lighting and energy sources are suitable for alcohol analysis

2. There are no environmental conditions in the technical requirements for forensic alcohol analysis that need to be documented or monitored

3. If power is lost to equipment, analysts will ensure that it is working properly prior to resuming alcohol analysis.

4. Reference materials that require refrigeration are stored refrigerated and the refrigerators are monitored. See TOX.17 for more information on monitoring.

5. Analysts are responsible for maintaining a clean work area and general lab cleanliness. Trash is picked up from the lab and routine cleaning is performed by General Services Department (GSD). Non-routine cleaning (eg.. floor waxing, etc.) is scheduled with General Services Department (GSD)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/29/2019	**NUMBER:** BA.24 - GC-FID Routine Maintenance
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** GC-FID Routine Maintenance	

I. Policy: The procedures for routine maintenance should be followed.

A. **General Maintenance**:

1. All maintenance must be logged in the Maintenance Binder. See BA.21 Care and Maintenance of Equipment and Environmental Conditions.

   a. When an instrument is not in use, an entry should be made in the Perkin Elmer System Maintenance Log indicating when it is out of service and when it is back in service.

   b. If the instrument is out of service for an entire calendar month, the Monthly Checks do not need to be performed. Monthly Checks will be performed prior to casework analysis.

B. **Preventative Maintenance: Clarus 580 Gas Chromatograph:**

1. Analysts should monitor chromatography from run data routinely.

2. When columns are showing poor chromatography (asymmetrical peaks, wider peak width, tailing…etc.) it may be an indication that column maintenance is necessary.

3. For further information regarding general trouble-shooting refer to the *GC-FID Literature References*.

4. **Changing the Column-Inlet End**:

   a. Turn off injector temperature by pressing A-CAP tab and pressing Heater Off on the touch pad for the GC.

   b. Make sure the carrier gas is set to PSI 5 and the oven is turned Off.

   c. Let temperature equilibrate for 15 min. and then open oven.

   d. When only the back column (Column B or BAC-2) is being serviced, analysts may need to remove the front column to gain access to the back column within the oven of the GC. This can be done by removing the entire front column and capping the ends with septa,

   e. Remove the old column by cutting the column on the detector end and plugging it with a septum to isolate the transfer line so no hot air goes in.

   f. Take out the inlet end, save the column nut.

g. The blood alcohol column does not have a guard column, either end of the column may be attached to the inlet.

h. Unwind a little of the column. Cut a septum into quarters with a scalpel so the space on the column can be marked.

i. Put on a septum, then the 1/8 inch column nut, then the 1/8 graphite vespel injector ferrule. The beveled end of the ferrule goes against the column nut.

j. Cut 10 cm off the column, look at the column under the magnifying glass, it should be smooth and not jagged.

k. When cutting the column with the column cutter, the rougher side of the column cutter should be used to cut the column.

l. Wipe off the column with a few drops of methanol on a lint free tissue.

m. Adjust the septum up the column until there is 44-51 mm of column sticking out from the end of the column nut.

n. Screw in the nut to the inlet end. Hand tighten inlet nut, then using a 1/4-inch wrench, tighten the fitting until the column cannot be pulled out of the fitting.

o. Look for the detector end of the column, cut the end and turn on the pressure. Stick the detector end of the column in a vial of methanol and look for bubbles to make sure there is pressure throughout the column.

p. Make sure the pressure is on before conditioning the column. Set the pressure to 5 PSI.

q. Turn Oven temperature to 120°C for two hours to condition the column.

5. **Changing the Column-Detector End:**

a. Unscrew the old nut on the detector end with the wrench; take out the old column from the transfer line leading to the FID.

b. Cut the old column on both sides of the nut and remove the old ferrule out, clean out the inside of the column nut (can use canned air to clean any debris) and the column nut may be reused.

c. Cut a rubber septa into 4 pieces

d. Insert a piece of the septum onto the new column (it is a guide)

e. Insert the 1/16 inch column nut

f. Insert the 1/16 inch graphite ferrule (the flat part goes into the nut)

g. Then cut the column accordingly (around 1-3 inches), check that the cut is straight and not jagged.

h. Back up the septum by how much the column was sticking out (approximately 7.1-7.4 cm), wipe down the column with a methanol kimwipe.

i. Insert the column into the detector, then move the septum and nut up to the screw and lightly screw the nut on

j. Hold the detector fitting steady with one of the 7/16-inch wrenches and gradually tighten the column nut with the other wrench. Tighten the column nut until only until the column cannot be pulled out of the nut. **DO NOT OVERTIGHTEN THE NUT.**

k. Push the septum up against the nut and close the door to the oven.

6. **Clipping the Column**:

a. The procedures for changing the column above can also be used to "clip" the column to extend the life of the column. Follow procedures above for the "Injector End" instructions (without replacing the column). Consider clipping the column approximately 10 inches from the injection end at a time. Run samples to compare chromatography for any improvement. If poor chromatography persists after consecutive column clippings, consider replacing the column. Note: Every time the column length is changed it must be conditioned according to the instructions in "changing the column-inlet end" above.

b. When clipping the column is necessary, the analyst should remove the entire front column to gain access to the back column within the oven. It is possible to only remove the inlet end of the front column and access the back column for clipping, however much care is needed to keep the front column free from harm (air and breakage). This can be done by capping the front end with a septum and keeping the front column from moving while the back column is being serviced.

c. The injector end of the column may become contaminated or get active sites over time. Remove 1 or 2 loops from the inlet side to bring the column to acceptable performance. One loop is approximately 50 centimeters

d. The column is replaced into the inlet.

e. For further information, refer to *GC-FID Literature References*

7. **It is recommended to run a method to bake out the column to prevent water retention in the GC column. The BAC_SHUTDOWN.MTH is part of the sequence and is run after all vials are injected. This method bakes out the column and shuts off the FID.**

C. **Resolution Solution-Column Performance Check**:

1. **Scope** of the Resolution Solution Check

a. **Whenever a column is clipped or replaced the Resolution Solution must be run to obtain the updated retention times for all compounds within the Resolution Solution.**

b. Separation of volatile components is checked by analysis of a resolution check solution.

2. **Procedure** for the Resolution Solution Check

a. Run the Resolution Solution using the Perkin Elmer Blood Alcohol Reporting System program using the BAC method.

b. Use the .RAW or .RST file created for each column to update the retention times in the BACa and BACb methods prior to running any casework

samples.

3. **Criteria** for the Resolution Solution Check

   a. All components of the resolution check solution must show separation under the normal gas chromatograph conditions used for analysis of samples.

   b. All components of the resolution check solution must be identified or "named" by the method.

D. Preventative Maintenance-Turbomatrix 110 Headspace Autosampler:

1. Change the O-rings of the headspace autosampler approximately every 3000 injections. Cleaning/changing the needle assembly can also be done while changing the o-rings.

   a. Consult the appropriate literature source for directions on cleaning the needle or changing the o-rings. See *GC-FID Literature References.*

2. Reset the injection counter after each replacement of O-rings by doing the following:

   a. On TurboMatrix 110 touch panel choose Tools -> Preferences -> Config -> Reset Counter. The maintenance alarm should be set to 3000.

   b. Consult the appropriate literature source for more information. See *GC-FID Literature References*.

E. Preventative Maintenance-Dell Computer Workstation:

1. To maintain the computer operating as efficiently as possible, the following should be performed:

   a. Back-up Data including C:\GC1\DATA or C:\GC2\DATA folder onto either a CD, DVD, or external hard drive will be done periodically. It is suggested that this is done annually.

   b. Archive old data as needed by organizing previous year's data into separate folders.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/16	**NUMBER:** BA.25 - GC-FID Literature References
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** DCGC-FID Literature References	

I. Policy: The following is a list of references in relation to the GC/FID. (ISO/IEC 17025:2005 5.5.3)

A. Clarus 500-580 GC Users Guide, Release C © February 2010

B. Clarus 500-580 GC Customer Hardware and Service Guide, Release E © January 2010

C. Clarus 500-580 GC Installation Guide, Release D © January 2010

D. TurboMatrix HS Control Software User's Guide, Release A © January 2005

E. TurboMatrix Headspace Sampler and HS/110 Trap, Release F © February 2008

F. AutoSystem XL GC IPM Installation Manual Release A © March 2001

G. HS 40 Control User's Guide for TotalChrom Client Server and TotalChrom Workstation, Release A © May 2001

H. TurboSEC User's Guide for TotalChrom Client/Server and TotalChrom Workstation, Release A © May 2001

I. TotalChrom Tutorial for Version 6.3, Release B © November 2004

J. TotalChrom Workstation Application Manager's Guide, © November 2004

K. TotalChrom Workstation User's Guide-Volume I, Release B © December 2004

L. TotalChrom Workstation User's Guide-Volume II, Release B © December 2004

M. Perkin Elmer website: www.perkinelmer.com

N. **HELP menu** on any version of TurboChrom

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 03/16/2017	**NUMBER:** BA.26 - Diluters and Pipettes
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6, 5.5.8, 5.5.10, 5.6.2.1.1** **ASCLD-LAB International Supplemental 2011: 5.6.1.1**	
CHAPTER: Equipment	**SUBJECT:** Diluters and Pipettes	

I. Policy: All instruments used for alcohol analysis are kept in good working order to ensure their reliability. Below are the procedures that should be followed for the care and maintenance of diluters and pipettes in the Alcohol Unit. (ISO/IEC 17025:2005 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6)

A. **New or Serviced Diluters or Pipettes**

1. A diluter (e.g. Hamilton) or pipette (e.g. Eppendorf) new to the laboratory, or a diluter or pipette that has been serviced or has undergone substantial maintenance will be calibrated by an ISO 17025 compliant vendor before being used in casework (ISO IEC/17025:2005 5.6.2.1.1, Supplemental 5.6.1.1).

B. **Yearly Calibration**

1. The diluters and pipettes in the Alcohol Unit will be calibrated yearly by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification (ISO IEC/17025:2005 5.6.2.1.1).
    a. If the equipment was found to be out of tolerance, an evaluation will be done to determine if there was any effect on casework.
2. The laboratory will maintain copies of the certificates obtained for at least the current five year accreditation cycle.
3. The external calibration service will affix labels to each diluter or pipette to indicate the calibration status, including the last calibration and the recommendation for the next calibration (ISO/IEC 17025:2005 5.5.8).

C. **Accuracy or Calibration Check** (ISO/IEC 17025:2005 5.5.10)

1. The diluters and pipettes in the Alcohol Unit will be checked to ensure that they are operating satisfactorily. See below for the specifications for each type of equipment. This procedure shall be performed by a Criminalist qualified to perform Forensic Alcohol Analysis.
2. The results of the check will be maintained in the Alcohol Unit.

3. If the diluters or pipettes fall outside the acceptable tolerance range the equipment must be taken out of service. Calibration may be performed by an external calibration service meeting the requirements of ISO IEC/17025:2005 5.6.2.1.1.

D. **Hamilton Diluter (Microlab 600 series)**

1. **Instructions for Use:** referenced from: Hamilton User's Manual MicroLab 500 B/C Part #69176 (rev. D) **©July 1999;** and MicroLab 600 Advanced Manual Wizards and Custom Method Operation Part #61441-01 (Rev. D) **©2008.** Refer to each manual for the proper instructions to create a method, if necessary (ISO IEC/17025:2005 5.5.3).

2. The Hamilton Microlab 600 series Digital Diluter is routinely used to dispense known quantities of sample mixed with known quantities of Internal Standard (n-Propanol or Buffer) for forensic alcohol analysis. The Hamilton 600 series is an instrument which accurately and precisely aspirates and dispenses fluid at the touch of a hand probe button or the tap of a foot switch.

3. The Hamilton Diluter as maintained within the laboratory is a dual liquid solution dispensing unit which combines liquid samples into a single mixture by incorporating two syringes each controlling the amount of each solution volume to be dispensed. One syringe extracts and dispenses solution from a bottle containing internal standard and the other extracts from a desired sampling source.

4. The Hamilton Diluter Microlab 600 series is an easily-programmed instrument ideal for performing multiple dilute and dispense methods. The programmed method is used to dispense the samples.

5. How a Hamilton Microlab Diluter works:

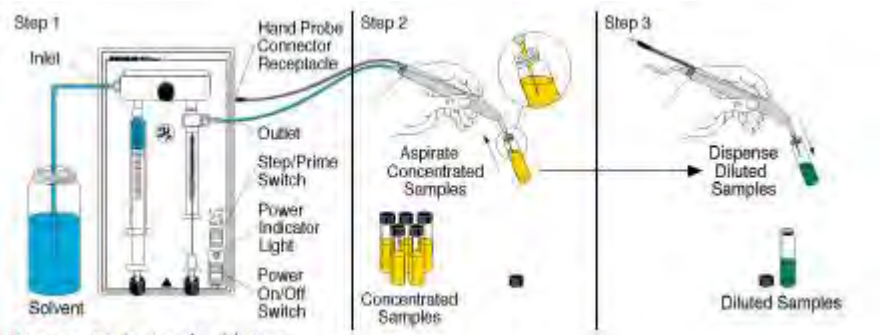


Figure 1: A simple dilution

a. **Step 1**: Fill the left syringe with the programmed amount of solvent (diluent) from the reservoir and aspirate the programmed amount of concentrated sample into the end of the probe using the right syringe.

b. **Step 2**: Dispense the sample and solvent into a vial to complete the dilution.

6. The instructions for general use of the Hamilton Diluter are as follows:

a. The Hamilton Diluter needs to be plugged in and the power switch turned ON.

i. The 600 series unit has a power button on the bottom front of the drive unit.

b. Make sure the correct bottle with the proper Internal Standard solution is connected to the left syringe unit prior to dispensing.

c. Flush the syringe several times (3-4 times) with the solution within the bottle to clear out any residual solution/bubbles in the syringe and tubing.

d. There are preset methods programmed into the controller and base unit for dispensing specific volumes.

i. ALCOHOL for forensic alcohol analysis: 1.25mL left syringe for Internal Std and 0.25mL right syringe for Sample.

ii. For the Hamilton 600 series:

1. From the MAIN MENU, select CUSTOM METHODS.

2. Select the desired method (i.e. highlight ALCOHOL), then select RUN.

3. If the syringe(s) has fluid inside, an "Empty Syringes" screen is displayed. Direct the probe towards a waste area and select OK. Any fluid in the syringes on the drive unit will be purged.

e. Aspirate sample using hand probe by pressing the probe wand or foot pedal.

f. Dispense the preset volume into desired vial by pressing the probe wand button or foot pedal one time. This will deliver the sample and the internal standard together.

g. Flush with water repeatedly in between sample dispensing to minimize any carryover.

7. **Handling of Equipment:**

a. Follow the instructions for using equipment.

b. The diluter's calibration should **not** be adjusted by laboratory staff as this may invalidate the calibration. If calibration adjustments are necessary, the equipment will be sent out for adjustment and calibration.

8. **Routine Maintenance-Monthly Visual Checks**: The purpose of the visual inspection is to assess wear or build-up. Visual inspections for leaks need to be conducted by either priming the diluter or while in use. Replacement or cleaning should be made if build-up, wear, or leaks are detected. The monthly check consist of:

a. Visual inspection of the tubing for leaks and/or build-up.

b. Visual inspection for leaks and/or build-up around syringes.

c. The check and any maintenance performed will be documented in the Maintenance Binder.

9. **Calibration Checks**:

a. A calibration check will be performed if there is reason to believe the diluter is not functioning as it should.

i. A gravimetric check should be performed. See below for procedure.

b. Minimally, the check will measure:

i. Left Syringe (Internal Standard): 1.25mL

ii. Right Syringe (Samples, Standards, and Controls): 0.250 mL

c. The diluters may also be checked at 1.5 mL, which is total volume (both syringes together) dispensed for forensic alcohol analysis.

d. The mean of six replicates must be within the criteria provided by the external calibration vendor (ie: percent imprecision).

e. Results will be recorded on ALC.19.

f. The check will be maintained in the Alcohol Unit.

E. **Pipettes - Variable**

1. **Instructions for Use**: referenced from: Eppendorf Reference Operating Manual © **2001** (ISO IEC/17025:2005 5.5.3).

a. **Aspirating liquid**

i. The liquid which is to be aspirated is taken from a suitable vessel.

ii. Attach suitable pipette tip to the pipette firmly.

iii. Press down the control button to the first stop.

iv. Immerse the pipette tip vertically approximately 3 mm into the liquid.

v. Allow the control button to slide back slowly.

vi. Pull the top out of the liquid slowly.

b. **Dispensing liquid**

i. Hold the tip at an angle against the inside wall of the tube.

ii. Press down the control button slowly to the first stop and wait until the liquid stops flowing.

iii. Press down the control button to the second stop (blow-out) until the tip is completely empty.

iv. Hold down the control button and pull the tip up the inner wall of the tube.

v. Tip is ejected by pressing the control button to the final stop.

c. **Special Notes**

i. To guarantee the highest degree of precision and accuracy, it is recommended to pre-wet the tip by aspirating and dispensing liquid two to three times before pipetting.

ii. Make sure to completely empty the liquid from the tip before pipetting (via blow-out).

2. **Handling of Equipment:**

a. Follow the instructions for using equipment.

b. The pipettes should be stored to prevent jostling that may invalidate the calibration.

c. The Pipettes should **not** be adjusted by laboratory staff as this may invalidate the calibration. If adjustments are necessary, the equipment will be sent out for adjustment and calibration.

3. **Calibration Check:**

a. A calibration check will be performed if there is reason to believe the pipette is not functioning as it should.

b. The pipette will be checked at the levels checked by the external calibration vendor. The mean of six replicates must be within the criteria provided by the external calibration vendor (ie: percent imprecision).

i. A gravimetric check should be performed. See below for procedure.

c. Results will be recorded on ALC.17.

d. The check will be maintained in the Alcohol Unit.

F. **Gravimetric Check Procedure**

1. The **gravimetric procedure** is done by weighing the amount of water delivered by the apparatus. The mean of six replicates is used to calculate the true volume delivered using the equation below. The temperature of the water is taken to determine the density, see Table I below. The results for each check are recorded on the corresponding instrument check form.

a. To calculate the volume of water from it's mass: **V = W/d**

i. Where:
V = volume of the water (mL)
W = weight of the water (grams)
d = density of water (see Table below)

b. Table from: Jones, Frank and Harris, Georgia. *ITS-90 Density of Water Formulation for Volumetric Standards Calibration,* Journal of Research of the National Institute of Standards and Technology, Volume 97, Number 3, May-June 1992, pg. 335-340.

2. If the results deviate more than the specifications for the equipment, as indicated above, the calibration check has failed. The equipment must be taken out of service. A forensic alcohol supervisor is required to take remedial action to investigate and correct the source of the failure. Calibration may be performed by an external calibration service meeting the requirements of ISO IEC/17025:2005 5.6.2.1.1.

Table 1. Density of *air-saturated* water (g/cm^3)from Eq. (6) using Kell [2] data

t(°C)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
5	0.999961	0.999959	0.999957	0.999955	0.999953	0.999950	0.999948	0.999945	0.999942	0.999939
6	0.999936	0.999933	0.999930	0.999926	0.999922	0.999919	0.999915	0.999911	0.999906	0.999902
7	0.999897	0.999893	0.999888	0.999883	0.999878	0.999872	0.999867	0.999861	0.999856	0.999850
8	0.999844	0.999838	0.999832	0.999825	0.999819	0.999812	0.999805	0.999798	0.999791	0.999784
9	0.999777	0.999769	0.999761	0.999754	0.999746	0.999738	0.999730	0.999721	0.999713	0.999704
10	0.999695	0.999687	0.999678	0.999669	0.999659	0.999650	0.999640	0.999631	0.999621	0.999611
11	0.999601	0.999591	0.999581	0.999570	0.999560	0.999549	0.999538	0.999527	0.999516	0.999505
12	0.999494	0.999482	0.999471	0.999459	0.999447	0.999435	0.999423	0.999411	0.999398	0.999386
13	0.999373	0.999361	0.999348	0.999335	0.999322	0.999309	0.999295	0.999282	0.999268	0.999255
14	0.999241	0.999227	0.999213	0.999199	0.999184	0.999170	0.999156	0.999141	0.999126	0.999111
15	0.999096	0.999081	0.999066	0.999051	0.999035	0.999019	0.999004	0.998988	0.998972	0.998956
16	0.998940	0.998923	0.998907	0.998891	0.998874	0.998857	0.998840	0.998823	0.998806	0.998789
17	0.998772	0.998754	0.998737	0.998719	0.998701	0.998683	0.998665	0.998647	0.998629	0.998611
18	0.998592	0.998574	0.998555	0.998536	0.998517	0.998499	0.998479	0.998460	0.998441	0.998421
19	0.998402	0.998382	0.998363	0.998343	0.998323	0.998303	0.998283	0.998262	0.998242	0.998221
20	0.998201	0.998180	0.998159	0.998138	0.998117	0.998096	0.998075	0.998054	0.998032	0.998011
21	0.997989	0.997967	0.997945	0.997924	0.997901	0.997879	0.997857	0.997835	0.997812	0.997790
22	0.997767	0.997744	0.997721	0.997698	0.997675	0.997652	0.997629	0.997606	0.997582	0.997559
23	0.997535	0.997511	0.997487	0.997463	0.997439	0.997415	0.997391	0.997366	0.997342	0.997317
24	0.997293	0.997268	0.997243	0.997218	0.997193	0.997168	0.997143	0.997118	0.997092	0.997067
25	0.997041	0.997015	0.996990	0.996964	0.996938	0.996912	0.996885	0.996859	0.996833	0.996806
26	0.996780	0.996753	0.996726	0.996700	0.996673	0.996646	0.996619	0.996591	0.996564	0.996537
27	0.996509	0.996482	0.996454	0.996426	0.996399	0.996371	0.996343	0.996314	0.996286	0.996258
28	0.996230	0.996201	0.996173	0.996144	0.996115	0.996086	0.996057	0.996028	0.995999	0.995970
29	0.995941	0.995912	0.995882	0.995853	0.995823	0.995793	0.995764	0.995734	0.995704	0.995674
30	0.995643	0.995613	0.995583	0.995553	0.995522	0.995491	0.995461	0.995430	0.995399	0.995368
31	0.995337	0.995306	0.995275	0.995244	0.995212	0.995181	0.995149	0.995118	0.995086	0.995054
32	0.995023	0.994991	0.994959	0.994927	0.994894	0.994862	0.994830	0.994797	0.994765	0.994732
33	0.994699	0.994667	0.994634	0.994601	0.994568	0.994535	0.994502	0.994468	0.994435	0.994402
34	0.994368	0.994334	0.994301	0.994267	0.994233	0.994199	0.994165	0.994131	0.994097	0.994063
35	0.994028	0.993994	0.993960	0.993925	0.993890	0.993856	0.993821	0.993786	0.993751	0.993716
36	0.993681	0.993646	0.993610	0.993575	0.993539	0.993504	0.993468	0.993433	0.993397	0.993361
37	0.993325	0.993289	0.993253	0.993217	0.993181	0.993144	0.993108	0.993071	0.993035	0.992998
38	0.992962	0.992925	0.992888	0.992851	0.992814	0.992777	0.992740	0.992702	0.992665	0.992628
39	0.992590	0.992553	0.992515	0.992477	0.992439	0.992401	0.992363	0.992325	0.992287	0.992249

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/2016	**NUMBER:** BA.27 - Glassware and Thermometers
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6, 5.5.8, 5.5.10, 5.6.2.1.1** **ASCLD-LAB International Supplemental 2011: 5.6.1.1**	
CHAPTER: Equipment	**SUBJECT:** Glassware and Thermometers	

I. Policy: All instruments used for alcohol analysis are kept in good working order to ensure their reliability. Below are the procedures that should be followed for the care and maintenance of glassware and thermometers in the Alcohol Unit. (ISO/IEC 17025:2005 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6)

A. Thermometers and Volumetric Glassware

1. A thermometer new to the laboratory will be calibrated by an ISO 17025 compliant vendor before being used in casework. (ISO IEC/17025:2005 5.6.2.1.1, Supplemental 5.6.1.1)

2. Class A Volumetric Glassware may be used for preparation of solutions prior to calibration. It is suggested that the Volumetric Glassware be calibrated periodically by an external calibration service that is ISO 17025 compliant.

3. Alcohol or other volatile organic solvents are not used to wash or rinse glassware and instruments used to perform alcohol analysis.

B. Calibration

1. The thermometers in the Alcohol Unit will be calibrated yearly by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification. (ISO IEC/17025:2005 5.6.2.1.1)

2. The laboratory will maintain copies of the certificates obtained for at least the current five year accreditation cycle.

3. The external calibration service labels each thermometer to indicate the calibration status, including the last calibration and the recommendation for the next calibration. (ISO/IEC 17025:2005 5.5.8)

C. Accuracy or Calibration Check (ISO/IEC 17025:2005 5.5.10)

1. Periodic calibration checks are not required for Class A Glassware or the thermometer

2. If there is an indication of an issue with the glassware or thermometer than the equipment must be taken out of service; Calibration may be performed by an external calibration service meeting the requirements of ISO IEC/17025:2005 5.6.2.1.1

D. **Instructions for Use of Volumetric Flasks** (ISO/IEC 17025:2005 5.5.3)

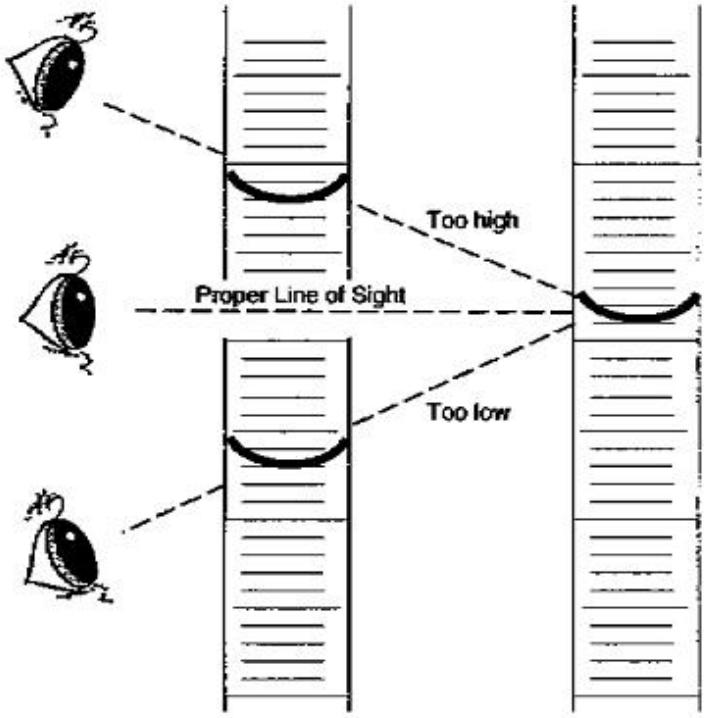
1. Volumetric flasks are generally graduated "to contain" (TC) known volumes of solutions and should never be used "to deliver" (TD) known volumes unless they have been so calibrated. Volumetric flasks are used to make up solutions to a given volume.

2. **Safety**: Volumetric flasks are fragile, and when shaken, should be held at both the neck and bottom. A flask should never be shaken when held at the neck only. When inserting a stopper, hold at the neck rather than at the bottom.

3. **Cleanliness**: Use a clean flask. It usually does not have to be dry, but it must be clean.

4. **Diluting to Volume**: Add the solution to be diluted to the flask, and add distilled water or specified diluent to bring to volume. While raising the meniscus to the graduation mark, hold the mark at eye level and add the last few drops from a wash bottle or from a small pipet. Stopper and invert 6 to 12 times to assure homogeneity. Care should be taken when making the initial inversion, loss of the solution may result if the stopper is not held firmly in place.

5. **Reading the Meniscus**: In the use of graduated cylinders, pipets, burets, and flasks, the lowest point of the meniscus should be taken as the reading. See below.



6. **Handling of Equipment**: Follow the instructions for use. The equipment will be handled in such a way to safeguard the equipment from adjustments that may invalidate test results. (ISO/IEC 17025:2005 5.5.12)

E. **Instructions for Use of Digital Thermometer (Traceable VWR)** (ISO/IEC 17025:2005 5.5.3)

1. Plug the probe into the receptacle located on the right side of the unit

2. Press the ON/OFF key to turn the unit on.

3. Press the °F/°C key to change the display to Fahrenheit or Celsius.

4. Press the .0/.00/.000 key to change the display to read the desired resolution.

5. Turn the ON/OFF key to the "OFF" position when the thermometer is not in use to prolong battery life.
6. Use the probe to monitor temperatures in air/gas, liquids, and semi-solids.
7. Place the stainless-steel portion of probe in contact with the material to be measured.
8. In most instances the depth of the probe needs to be approximately 1/2 inch.
9. **Handling of Equipment**: Follow the instructions for use. The thermometer should not be adjusted by laboratory staff as this may invalidate the calibration. If adjustments are necessary, the equipment will be sent out for adjustment and calibration. (ISO/IEC 17025:2005 5.5.12)



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 08/29/2018	**NUMBER:** BA.28 - Balances
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5, 5.6**	
CHAPTER: Equipment	**SUBJECT:** Balances	

I. Policy: All instruments used for alcohol analysis are kept in good working order to ensure their reliability. Below are the procedures that should be followed for the care and maintenance of balances and reference standards (check weights) in the Alcohol Unit.

A. New or Serviced Balances

1. A balance new to the laboratory, or a balance that has been serviced or has undergone substantial maintenance, will be calibrated by an ISO 17025 compliant vendor before being used in casework.

B. Annual Calibration

1. The balance in the Alcohol Unit will be calibrated yearly by an external calibration service that is ANAB ISO/IEC 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification.

2. The laboratory will maintain copies of the certificates obtained for at least the current five year accreditation cycle.

3. The external calibration service labels each balance to indicate the calibration status, including the last calibration and the recommendation for the next calibration.

4. The balance should not be adjusted by laboratory staff as this may invalidate the calibration. If adjustments and calibrations are necessary, they are performed by an external calibration laboratory either on-site or off-site.

5. The specifications for calibrations are determined by the external calibration laboratory and meet the guidelines of euramet cg-18 and ASTME 898.

C. Accuracy or Calibration Check

1. The balance in the Alcohol Unit will be checked monthly to ensure that it is operating satisfactorily. This procedure shall be performed by authorized staff.

2. Calibration or accuracy checks must be done with reference standards that are NIST (National Institute of Standards and Technology) traceable or American Society for Testing and Materials (ASTM) - ASTM 1 or ASTM 2 weights.

3. The results of the check will be logged. During the monthly check, the balance should also be checked for cleanliness and to ensure that it is level. The check should be logged in the Balance Calibration Check Log.

4. **Procedure for checking the calibration of the balances in the Drug, Alcohol and Toxicology Section.**

   a. Turn the balance on

   b. Ensure that the balance is level

   c. Tare the balance to a zero weight (0.000)

   d. Place the weight (M1) on the center of the balance. (See Table 1 for the reference standard M1 as appropriate for each balance).

   e. Record the weight result in the Balance Calibration Log

   f. Remove the reference standard (M1)

   g. Tare the balance to a zero weight (0.000)

   h. Repeat with the reference standard M2. (See Table 1 for the reference standard M2 as appropriate for each balance).

   i. Record the weight result in the Balance Calibration Log

   j. Remove the weight (M2)

5. Refer to Table 1 for the allowable error range

6. If the balance falls outside the acceptable range the balance must be taken out of service. Calibration may be performed by an external calibration service meeting the requirements of ANAB ISO/IEC 17025.

7. The following references were used during the development of this procedure:

   a. 1998 Annual Book of ASTM Standards, General Methods and Instrumentation. ASTM. Section E 898-88, pages 541-544.

D. **Instructions for weighing on the balance.**

1. Place the weighing media near the center of the scale. Tare the weighing media.

2. Remove weigh boat weighing media and place item in weighing media.

3. Place weighing media on scale, near center.

4. Close the draft cover, if applicable.

5. Weigh item. Allow enough time for balance to settle. If the balance will not settle (more than 10 seconds and still fluctuates) use the lowest weight.

6. Record the weight.

E. **Handling of Equipment**: Follow the instructions for using the equipment.

TABLE I

Balance ID#	Model	Serial #	Location	M1/M2	Error Range (+/-)
1	Mettler PB303-S	112116384	Drug Station 1	0.100g/10 g	0.005
2	Mettler BB244	J94874	Clan Lab Area	0.100g/10 g	0.005

	Delta Range				
7	Mettler PB303-S	1118390093	Drug Station 2	0.100g/10 g	0.005
8	Mettler PB303-S	1118390092	Drug Station 3	0.100g/10 g	0.005
10	Metter PG503-S Delta Range	1118190952	Toxicology Unit	0.100g/10 g	0.005
11	Mettler AB204-S	1119122298	Alcohol Unit	1.0 g/10 g	0.005 for 1.0 g & 0.005 for 10 g
12	Mettler PB303-S	1119122248	Drug Station 4	0.100g/10 g	0.005
13	Ohaus EP4102	N217 1123271769P	Drug Unit	50 g/1000 g	0.05

1. The The balance should not be adjusted by laboratory staff as this may invalidate the calibration. If adjustments and calibrations are necessary, they are performed by an external calibration laboratory either on-site or off-site. The specifications for calibrations have been determined by the external calibration laboratory and meet the guidelines of euramet cg-18 and ASTME 898.

F. Reference Standards

1. The reference standards, check weights, will be checked yearly by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification. See FSD.28 and FSD.30.
    a. The Drug unit will evaluate the certificates and report correction factors to the UOM committee for evaluation.
2. The laboratory will maintain copies of the certificates obtained for not less than the current five year accreditation cycle.
3. All reference standards will be stored, handled, used and transported in a manner that prevents contamination, deterioration and protects the integrity of the reference standard. This includes:
    a. **Storing** reference standards in the packaging provided by the manufacturer to prevent deterioration.
    b. **Handling** reference standards, when practical, with the tweezers provided to minimize deterioration.
    c. **Using** reference standards for their intended purpose i.e. balance calibration checks.
        i. If a reference standard is dropped, it will be sent out for calibration.
    d. **Transporting** reference standards in the packaging provided by the manufacturer to prevent deterioration. Transporting reference standards may

be necessary when weights are transported to/from the external calibration laboratory.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** BA.29 - Software
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.11**	
CHAPTER: Equipment	**SUBJECT:** Control of Software and Data	

I. Policy: The following is the policy for controlling software, tracking the version of software in use in the Alcohol Unit and ensuring the integrity and accuracy of data generated and electronically maintained.

A. Software.

1. Records shall be maintained of the identity of software (version or equivalent) significant to the result and shall, when possible, be uniquely identified. This will be tracked on the Software Log for each piece of equipment. See BA.21

2. Manufacturer's technical support personnel, technical personnel contracted by the Laboratory, technical services personnel and approved lab staff may make changes, additions or upgrades to software. The approval by the Manager or Supervisor in the Software log will be documentation of the Laboratory staff designation to do so.

3. Commercial off-the-shelf software used within its designed application range will be considered to be sufficiently validated. However the tracking of the identity and approval is required.

   a. The control or approval for use should be documented in the maintenance log by the Manager or Supervisor.

   b. Any version of Microsoft Word, Excel or Access, Adobe Reader, Adobe Pro, PDFcreator, or JusticeTrax Batch Image Capture is considered to be approved for use.

4. If the software is "custom" or developed by the user, then documentation of validation or verification is required. The tracking of the identity and approval is required.

5. The control or approval for use should be documented in the Software Log in the maintenance binder by the Manager or Supervisor.

B. The Alcohol Unit has a Traceability Database that is an MS Access database program created and maintained by laboratory staff. The purpose of the Traceability Database is to maintain records regarding all equipment used within the unit. Information from reference materials to glassware and instruments used to analyze samples for ethanol content. For more information on the Traceability Database see BA.44 Alcohol Tracking Database which includes operation, functionality, instructions for use, data entry, and backing up data.

1. The verification of the Alcohol Traceability Worksheet that is included in the notes of each blood alcohol report has been completed for the calculation of the quality control ranges within +/-5% of the target.

2. Changes to the alcohol tracking database are kept in a log for the database by laboratory staff.

C. The Alcohol Unit has developed proprietary software known as the Perkin Elmer Blood Alcohol Report System. It consists of a few programs that work in tandem with the Perkin Elmer TotalChrom Navigator instrument software. The instructions for use of this software in analyzing casework can be found in BA.30. The following programs make up the Perkin Elmer Blood Alcohol Reporting System created by Blaise Software, Inc.:

1. Make TotalChrom Sequence (MTCS) - creates a sequence containing the necessary standards, controls, blanks, resolution solutions, and unknowns in the proper order to be analyzed by the reporting software. The unknown information such as the laboratory number, request number, sample type, and request barcodes come from an exported text file from Justice Trax LIMS software to be incorporated into the MTCS sequence that is created.

2. Summary Report - creates a summary report that displays the results of the entire run including the chromatograms of standards, controls, blanks, resolution solutions, and unknown results in a concise manner for review by the analyst and technical reviewer.

3. Sample Report - creates a forensic alcohol report that displays an abbreviated summary of the standards, controls, blanks, resolution solution results and the chromatograms of the unknowns analyzed.

4. The unknowns' results data is transferred via a text file known as the PE12EXP.txt or PE22EXP.txt that is created containing results data to be imported by Justice Trax LIMS software into each laboratory number that was analyzed.

5. The functionality of each component of this software was validated and any changes made to the software are documented and kept within the laboratory Software Verification Binder.

6. The software and all raw data and results are backed-up at least weekly on an external hard drive.

D. The Alcohol Unit will validate crystal templates used as final LIMS Case Reports and Notes which involve calculations and data transfers.

1. The following is the procedure for LIMS generated report and note validation:

   a. Any relevant changes in the Technical Unit Manual and any other related procedures need to be updated prior to implementing the changes in the LIMS crystal reports.

   b. Ensure that all outstanding reports have been Administratively Reviewed.

   c. LIMS administrator can now make necessary changes.

   d. Log off and back on to LIMS to enure that the updated crystal reports are loaded into LIMS at your workstation.

   e. There are two Laboratory numbers that have been created for the verification of Alcohol Reports, Lab # 12-2375 and Lab # 12-2382

i. Lab # 12-2382 the Coroner's Office has to set as the primary agency

1. Go to the Agency tab
2. Right click the Agency "Coroner's Office" and choose "Edit Agency"
3. Check the box as the "Primary Agency"

ii. Print the report and notes for all of the requests associated with these two Lab numbers.

f. Open the Excel spreadsheet "LIMS Report Validation"located at L:\Lab\Muir\Alcohol\LIMS Report Verifications.

i. Update the UOM values in the spreadsheet.

g. Compare the values in the spreadsheets with what has been printed in the LIMS reports and notes.

h. Rounding Procedures are as follows:

i. The "analytical result" is truncated after the fourth decimal from the PE instrument and imported into LIMS

ii. The "report result" is truncated after the third decimal

iii. The "uncertainty reported" is rounded up using the GUM rounding method. (e.g. 0.024105 is rounded to three decimals as 0.025; 0.0052080 is rounded to four decimals as 0.0052)

iv. The uncertainty will be reported with two significant figures.

i. After reports and notes have been printed and verified, go back to Lab # 12-2382.

i. Go to Agency tab

ii. Right click agency "Coroner's Office" and choose "Edit Agency"

iii. Uncheck the box as the "Primary Agency"

j. Open the Word document titled "LIMS Report Verification..." located at L:\Lab\Muir\Alcohol\LIMS Report Verifications.

i. Update the applicable changes.

k. Save both the Excel and Word documents at L:\Lab\Muir\Alcohol\LIMS Report Verifications.

l. Ask the LIMS administrator to document (ie. e-mail) the changes made in the LIMS report and note templates. Print out document.

m. Submit the following documents to the Supervisor or Manager for review:

i. Excel Spreadsheets

ii. Word Document

iii. LIMS administrator document

iv. Printed or electronic copies of the reports and notes for all of the requests associated with the two laboratory numbers

n. Make a new entry in the "Alcohol Verification Log Binder for Software/Forms" for both of the reports and notes templates.

i. The entry should be signed off by a Supervisor or Manager.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 05/14/2019	**NUMBER:** BA.30 - Analysis of Samples by DCGC-FID
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.2**	
CHAPTER: Procedures	**SUBJECT:** Analysis of Samples by DCGC-FID	

I. Policy: The following procedures will be followed for the quantitative determination of ethanol in biological samples.

A. The instruments are prepared for analysis according to the settings as follows for the blood alcohol methods: BAC1.MTH (DCPE1) or BAC2.MTH (DCPE2)

1. If there is a problem with the power or electrical supply of the instruments performing the analyses due to environmental conditions, instrument power supplies, or power outages, the problem will be remedied prior to beginning the analysis of samples.
   a. Course of action will be dependent upon when disruption occurs.
   b. Staff will evaluate how analysis will be continued.

2. The blood alcohol method parameters are as follows:

Gas Chromatograph Parameters		DCPE1	DCPE2	FLOW
	Voltage Required	220V	220V	
	Oven Temperature	40°C	40°C	
	Injector Temperature	150°C	150°C	
	Dectector Temperature	250°C	250°C	
	Run Time	3.0 min.	3.0 min.	
Headspace Program Parameters				
	Voltage Required	110V	110V	
	Pneumatic Pressure (Crane Arm)	~80 PSI	~80 PSI	
	Vial Oven Temperature	60°C	60°C	
	Sample Equilibrate Time	16.6 min.	16.6 min.	
	Vial Pressure Time	0.5 min.	0.5 min.	
	Inject Time	0.03 min.	0.03 min.	

	Withdraw Time	0.5 min.	0.5 min.	
	Needle Temp	95°C	95°C	
	Transfer Line Temp	105°C	105°C	
	Injections Per Sample	1	1	
	GC Cycle Time	3.0 min.	3.0 min.	
Gas Flows				
	Flame Ionization Detector			
		Hydrogen	Hydrogen	~45 mL/min.
		Medical Air	Medical Air	~450 mL/min.
	Column Carrier Gas			
		Helium	Helium	~30mL/min.

B. Flame Ionization Detectors for both DCPE1 and DCPE2 are as follows:

1. The instrument automatically loads the TotalChrom method (BAC1.mth or BAC2.mth), however the default setting for the Flame Ionization Detectors for both DCPE1 and DCPE2 is "**off**".
2. Check that valves are on for the Hydrogen and Air before running the sequence.
3. The FID detector on both columns will be ignited **manually** by pressing the "IGNITE" button (flame icon on GC Panel) once the method has loaded on the Gas Chromatograph for columns A & B.
4. The gas flows are regulated internally by the Gas Chromatograph and the method.
5. Preferably, this process takes place 20 minutes prior to the start of the run.

C. **Analysis of Samples and Sampling Procedure**

1. Select one vial of blood for analysis after opening and documenting the evidence per *General Evidence Handling and Technical Records* procedures.
2. Homogeneity is assumed among multiple vials within an envelope or kit as long as the vials were collected sequentially, from a single event, and into multiple similar containers, and having similar volumes. The reported results pertain to the entire item (all vials), not just the tested amount or the vial analyzed.
3. The following sampling procedure will be **typically** used for alcohol analysis.
    a. Select the vial with the largest volume of blood for alcohol analysis.
    b. Mark the vial to be analyzed with a colored sticker to indicate which of the multiple vials was tested

c. Inspect the vials of blood for any visible clotting or discoloration. The analyst should note any clotting or discoloration.

d. Bring the samples to room temperature before analysis.

e. Gently mix the blood vial to be analyzed before pipetting. This mixing assures homogeneity within the sample. Typically samples are mixed for a minimum of 20 minutes.

f. A sample sequence is created. See section E. Create an Analysis Sequence below.

g. Open the blood vial to be analyzed by breaking the seal and removing the stopper, and aspirate a portion of the sample into a labeled headspace vial.

h. Using an approved autodiluter, dispense case samples in duplicate, 0.250 mL of sample and 1.250 mL of internal standard into the labeled heasdspace vial (see BA.26).

i. Cycle the dilutor with de-ionized water to ensure that no bubbles are present in the tubing or pump syringe before preparing a set of samples.

ii. Continue to check for bubbles in the dispenser tubing while dispensing samples.

iii. Wipe the dilutor hand probe and flush it at least three times between each different case sample.

i. The analyst may homogenize samples that cannot be pipetted because of clotting as follows:

i. Pour entire blood sample from one vial into homogenizer.

ii. Insert homogenizer plunger through sample in tube.

iii. Aspirate the portions of blood to be analyzed

iv. Pour entire homogenized sample back into original blood vial.

v. Document in the Laboratory Examination Notes if sample has been homogenized.

j. Dispense **TWO** aliquots of the subject's blood.

k. Stopper each headspace vial after addition of the sample; all vials are crimped prior to analysis.

l. Stopper the blood vial after the aliquots are removed.

4. Labeling and Dispensing

a. There are two forms an analyst may utilize to ensure samples are in the same order as the sequence.

i. The LIMS generated "Dispensing Tray Map" (Alcohol Worklist Tray): This is a visual map of the headspace vial trays. This form is optional.

ii. The Blood Alcohol Gas Chromatograph Worksheet: This is a checklist with corresponding vial numbers and sample names to be dispensed in the proper order.

b. The analyst will mark each injection headspace vial with the autosampler position number (e.g. 1, 2, 3….) and with the sample identification (lab number, QC, RS, etc.). After dispensing the samples, place the crimped, labeled vials into the corresponding slot in the headspace autosampler tray.

c. The analyst will utilize the checkboxes on either the Blood Alcohol Gas Chromatography Worksheet or the "Dispensing Tray Map" when dispensing samples.

d. The analyst will utilize the checkboxes in the Blood Alcohol Gas Chromatography Worksheet when placing the vials into the head space autosampler.

5. The analysis is performed by running the sequence with corresponding Sample Set Identification number in the Perkin Elmer Blood Alcohol Reporting System program. See BA.10 for an example of the Blood Alcohol Gas Chromatography Worksheet and the Perkin Elmer Blood Alcohol Reporting System Sequence.

6. The Perkin Elmer GC and headspace autosampler instruments are controlled by two software programs. The TotalChrom Navigator software communicates with both GC and Headspace units and the TurboMatrix software only controls the headspace autosampler. Both applications must be open on the computer which controls the instruments to be run.

D. **How to edit ALL solution names within the sequence (prior to creating a sequence).**

1. Click on the desktop icon named MakeTCSequence Shortcut. (BE CAREFUL WHEN EDITING THIS FILE. IT IS A .INI FILE THAT HOLDS ALL SETTINGS/CONTROLS FOR THE ANALYSIS.

2. Within the new text window find the section named [IDs] (6th paragraph from the top).

3. Review and correct the lot number names of the five level Standards, Quality Controls, and Resolution Solution with the current solution names to be utilized within your sequence. (ONLY EDIT THE SOLUTION LOTS: Standards, QC's, and Resolution Solution).

4. Save the edits made and exit the program.

E. **Create an Analysis Sequence (Automatic Entry from LIMS):**

1. The following directions are for the analysis of samples which were downloaded from LIMS to the Perkin Elmer Blood Alcohol Reporting System computers.

2. A sequence will include the following:

a. Five different NTRM Alcohol Standards at the Concentrations of 0.020%, 0.050%, 0.150%, 0.300%, 0.500%. (These are fixed concentrations)

b. Blank (distilled or de-ionized water).

c. Resolution Check Solution.

d. Water-Ethanol Quality Control reference solution (Beginning of sequence). This is the Title 17 compliant Quality Control.

e. Up to 40 subject samples, each analyzed in duplicate.

f. Optional: Blood-Ethanol (Matrix) Quality Control Reference Solution, in duplicate, may be periodically included in the run. See *BA.15*

g. Ethanol Quality Control reference solution will be run in duplicate after each set of 10 duplicate subject samples. This can be any Quality Control including: Blood Matrix QC, NTRM vendor purchased QC, or Title 17 QC.

h. Water-Ethanol Quality Control reference solution (End of sequence). This is the Title 17 compliant Quality Control.

i. An empty vial to allow the Cleanup-Shutdown method for column conditioning maintenance.

3. On the TotalChrom Navigator Menu choose "Apps", and then choose the application "MakeTCSequence".

4. When the window pops open, press the icon "Select" next to the "Justice Trax LIMS Import File" field.

5. Choose the correct text file generated by LIMS (correlating barcode from the Analytical Worklist) found in the pathway C:\PE1\ or C:\PE2 depending upon which instrument is being used. Folders C:\PE1\ or C:\PE2 are networked on both computers controlling DCPE1 and DCPE2.

    a. If the worklist needs to be sent to the other instrument or changes were made to the worklist, then create a new worklist and send the new one to the instrument.

6. Choose the Analyst's name from the pull down menu. The name formatting should use the first name initial and the first four letters of the last name. (ex: JSMIT for John Smith).

7. Choose the correct instrument name on which the sequence will be run (i.e. DCPE1 or DCPE2).

8. The analyst can add a comment for any sample by clicking the empty box in the "Comments" column in the appropriate lab number row (LIMS Identification).

9. In sequence runs containing more than ten unknown samples, the analyst must choose the appropriate quality controls from the pull-down box. There can be up to three quality controls chosen within a sequence, not including the Title 17 quality control. This is automatically placed at the beginning and end of the sequence.

10. Click on the icon named "Print Worksheet" and a "BLOOD ALCOHOL GAS CHROMATOGRAPHY WORKSHEET" will be printed as a .TIF file and placed in the location C:\PE1(or PE2)\IMAGING\ folder. Go to this folder and print a hard copy of the Worksheet. The printed Worksheet will serve as a checklist when dispensing the samples in the order to be run.

    a. Following the entry of a set of samples into the Perkin Elmer Blood Alcohol Reporting System program, a Blood Alcohol Gas Chromatography Worksheet is generated with a unique Sample Set Identification number assigned according to the date it was created (i.e., yymmddA). The letter after the date corresponds to the number of sample sets created on that date (i.e., A is the first set created, B and C would be the second and third set created respectively). See Below.

11. Create the sequence by pressing the icon labeled "Create Sequence" at the bottom of the window and exit the application.

12. Click YES on the window that pops open that discusses how we must confirm the overwriting function. Exit the MakeTCSequence window.

F. **How to Create an Analysis Sequence (Manual Entry):**

1. This procedure takes the place of a sequence text file being automatically created by LIMS and can be used in the same manner to be imported into the TotalChrom Navigator software when creating a sequence to be run using the method.

2. If the sequence is inputted manually, the analyst may use the LIMS Dispensing Tray Map to facilitate the input of the information into the Perkin Elmer Blood Alcohol Reporting System.

3. Open TotalChrom Navigator program by double-clicking the icon " TCNAV" (If software is not open already on desktop computer).

4. Open the TurboMatrix program by double-clicking the icon "TMatrix" (If software is not open already on desktop computer).

5. Connect the TurboMatrix 110 Headspace instrument to the computer by clicking on the "HS" Tab in the TurboMatrix software window and then choose "Instrument", "Connect" in the top menu (If instrument is not connectected already to desktop computer).

6. Open the text file named "Manual Sequence" (located on the desktop in the Folder called "Manual Sequence") to input the samples to be run.

7. The Manual Sequence will have a sample line of information in the proper format. Copy and paste the sample line for the same number of samples to be run in the sequence to be created. For example, this means there should be five lines for five samples, duplicate lines are not needed for duplicate analyses.

8. Replace the sample information with the correct names or laboratory numbers to be run. Do not include any standards or blanks. Only include unknown samples in the order to be run. The vital fields to enter are the "Sample Name" or "Lab Number" and the "Sample Type". Make sure the proper formatting remains in tact with quotes and commas. There should be five sets of quotes, each separated by a comma and an "ENTER" at the end of each line. Blank information within quotes is acceptable in all fields accept the "Sample Name" or "Lab Number". The following format is acceptable per line for each sample:

    a. "SAMPLE NAME OR LAB #","SUBMISSION #","BARCODE 1","BARCODE 2","SAMPLE TYPE"

9. Once the sequence is created with the proper number of entries, choose "File", then "Save As...". Choose the correct pathway C:\PE1 or C:\PE2 and name the text file with the correct date to be run. (Ex: 080129; Format: YYMMDD)

10. Follow the instructions "How to Create an Analysis Sequence (Automatic Entry from LIMS)" to continue the sequence creation by using the YYMMDD text file just created.

G. **Running a Sequence:**

1. The Status of the GC and Headspace units can be checked by reading within the window of the TotalChrom Navigator software.

    a. A red colored font indicates no method is set-up.

    b. Make sure the TotalChrom Navigator is not set-up with a previous method. Do this by clicking on the "RUN" icon and checking to see the "Clear Setup..." is grayed out or bold.

        i. If "Clear Setup..." is bold click Clear Setup.

2. When TotalChrom Navigator setup is cleared, press the icon Instrument "Setup" and the window titled "Setup Instrument" will pop open.

3. Choose the new sequence created by pressing the folder icon next to the "Sequence" line and choosing the folder with the title containing the date the sequence was created (ex: 080117 for January 17, 2008). The sequence will be within the folder and named with the same date and will have a letter at the end of the title (ex: 080117A.SEQ). Click SELECT.

4. Choose the same folder location for the "Raw File Path" and "Result File Path" data to be saved.

5. Unselect the "Single run data buffering" to avoid adding to the amount of GC run time for each sample injected.

6. Click "OK".

7. The instrument will load the sequence and methods to the Headspace and GC units. While the instruments are setting up, check the manual carrier gas pressure on the Headspace unit panel under the Status Tab. If necessary, set the value to 30.0 psi. by turning the manual

control knob on TurboMatrix 110 Headspace unit. Increase or decrease the pressure setting from the manual control knob. Let the pressure stabilize to 30.0 psi.

8. Once the method is loaded, the Air and Hydrogen valves will be opened and the gas flows will be displayed on the PE Clarus 580 GC touch sensitive panel. Check to make sure the ACTUAL pressures are close to the SET values. If the pressures are at the set point on the GC touch sensitive panel, press the "IGNITE" icon to light the FID (FIame Ionization Detector) for Column A.

9. Choose Column B in the upper tab on the screen, and "Ignite" the flame for Column B as well. Both Column A and B must be lit to collect data from each column. It is best to light both detector flames at least 20 minutes prior to starting the run in order to equilibrate the signal on each detector.

10. After dispensing the samples, place the headspace vials into the headspace unit's magazine in the proper numerical order by following the "BLOOD ALCOHOL GAS CHROMATOGRAPHY WORKSHEET" .

11. Place a second check mark on the "BLOOD ALCOHOL GAS CHROMATOGRAPHY WORKSHEET" when each vial is loaded on the headspace autosampler.

12. Once the samples are correctly placed in the autosampler magazine and the status reads "GC: Ready" on the TotalChrom Navigator window, start the run by pressing the "RUN" icon and choose the "Start Run" option.

H. **How to process and print out the Analysis Results (Forensic Alcohol Summary Report and Forensic Alcohol Reports):**

1. Once the entire analytical sequence has completed, the sample results can be calculated and printed. This function is performed by clicking on the "Publish" icon in the TOTALCHROM Navigator window. A new window will pop open titled "TC Publisher Report Console". This window contains the settings to choose the proper folder which contains the current data to process and print.

2. Choose the appropriate sequence file by clicking on the "Report Options" icon thereby opening a new window titled "TC Publisher Report Options". In the "Data" Field you can enter the proper folder by clicking on the "…" icon. Choose the proper data folder and " *.idx " file (i.e. 150803A.idx) which is labeled with the same title as the sequence listed on the Blood Alcohol Gas Chromatography Worksheet previously created. (ex: Data path: C:\GC2\Data\150803A\150803A.idx for the sequence 150803A.seq).

3. In the "Report" Field enter the first report to process a daily sample run by clicking on the "…" icon. Choose the correct report format labeled "CCCSD-SUMMARY-38.tpm" (ex: Data path: C:\PenExe\TcWS\Ver6.3.2\CCCSD-Summary-38.tpm).

   a. Be sure the pathway is highlighted before clicking "...". Otherwise, it will add a report instead of replacing a report.

   b. Leave the Output settings as is. Click OK.

4. If a preview is desired for viewing on the monitor before running the report, press the "Preview Report" icon. This function performs all of the necessary data processing by calibrating the method with the new data, but does not automatically print out the reports.

5. To print out the results, press the "Run Report" icon. This function performs all of the necessary data processing, updates the calibration of the method stored and displays the "Forensic Alcohol Summary Report". Print the "Forensic Alcohol Summary Report" to PDF Format and save in run data folder.

6. Check to make sure only one entry is recorded into the "Data" and "Report" fields in the "TC Publisher Report Console" window.

7. Click on the "Report Options" icon again and in the "Report" field enter the next report by clicking on the "…" icon. Choose the report "CCCSD-Sample-48.tpm" (ex : Data path: C:\PenExe\TcWS\Ver6.3.2\CCCSD-Sample-48.tpm).

    a. Be sure the pathway is highlighted before clicking "...". Otherwise, it will add a report instead of replacing a report.

    b. Leave the Output settings as is. Click OK.

8. Preview the report for viewing on the monitor by pressing the "Preview Report" icon. This function performs all of the necessary data processing, by calibrating the method with the new data but does not automatically create the images to be sent to LIMS. A PDF copy can be printed, if desired.

9. When ready to send the sample chromatogram images to LIMS, press the "Run Report" icon. Remember to delete ALL files in the folder C:\PE1(or PE2)\IMAGING before clicking on "Run Report". "Run Report" performs all of the necessary data processing, updates the calibration of the method stored, and saves the individual "Forensic Alcohol Report" (s) as .TIF files for each sample analyzed in the folder C:\PE1(or PE2)\IMAGING. See BA.43 for more Instructions for Imaging in LIMS.

10. Click on the "Report Options" icon again and in the "Report" field enter the last report by clicking on the "…" icon. Choose the report "CCCSD-LIMS-Export-11.tpm" (ex: Data path: C:\PenExe\TcWS\Ver6.3.2\CCCSD-LIMS-Export-11.tpm).

11. Press the "Run Report" icon. This function performs all of the necessary data processing, updates the calibration of the method stored and displays the individual results to the PE12Exp.txt or PE22Exp.txt file to be imported by LIMS. This .TXT file will be printed to the C:\PE1 or PE2 folder. Copy the PE12Exp.txt or PE22Exp.txt file to the run data folder.

12. After printing all three reports, navigate to the folder C:\PE1(or PE2)\IMAGING and delete all files except the .TXT and .TIF files that contain PE(1 or 2)_TcPub_CCCSD-Sample-480000XX.TXT or similarly named .TIF files with the time/date stamp that correspond to your run. The other files are printed because the JusticeTrax Imaging driver is active but these files are not needed. When JusticeTrax Batch Indexer imports files, it acquires all files within the folder including the unnecessary files if not deleted.

13. See BA.43 for procedures on how to import the individual "Forensic Alcohol Report" images to LIMS.

14. Print Calibration Plots for each column. Using the TOTALCHROM Navigator window click on the "Build Method" icon.

    a. Choose "Load recently edited method"

    b. Load the data path that corresponds with either column A or B

        i. C:\GC1\Methods\BACa.mth (or BACb.mth)

        ii. click OK. The Method Editor window will be displayed.

    c. Click on "Other" from the menu, then choose "Fit Analysis (CalPlot)."

        i. Navigate to the Ethanol plot by clicking on the icon of a graph with a right arrow to advance through the other analytes.

            1. Click "ok" to the Acetaldehyde error message that pops-up.

    d. Choose "Display" from the menu, then choose "Labels."

i. uncheck the box for "Automatically assign default labels" to correctly label the CalPlot

1. Plot Title: Ethanol CalPlot A (or B)
2. X-Axis label: Ethanol STD Concentration
3. Y-Axis label: Ethanol/ISTD Area Ratio

1. Click OK to display the CalPlot with the updated labels.

e. To print the CalPlots for the run packet, choose "File" from the menu, then chose "Print."

i. Uncheck the "Calibration Data" box.

1. The CalPlot should display the R-squared value, the linear equation, and the plot.

I. **Calculations:**

1. Calculations are performed automatically by the laboratory data system according to the equations below.

2. The linear equation is determined by calibration with the duplicate analysis of the five NTRM alcohol standards. These concentrations fall within the linear range of the instrument's calibration curve established during the validation of the method (See BA.20). The linear equation is used to calculate the concentration of ethanol in the unknown sample by the following equation: **Y = MX + B**

a. **Y = ratio peak area of Ethanol to peak area of n-Propanol**

b. **X = concentration of Ethanol**

c. **M = slope of the line**

d. **B = intercept**

3. The unknown sample concentration can be calculated using modified equation: X = (Y - B)/M

a. **Unknown Conc. = [(Ethanol Response/n-Propanol Response) – intercept]/slope ;**

b. Therefore, when substituting the responses into the equation the exact concentration of the internal standard n-propanol need not be determined as it is used in the calibration as well as the calculation and the numerical value cancels out.

4. The analytical results (concentration of ethanol in unknown sample) for each of the samples will be transferred from the Blood Alcohol reporting software (TotalChrom) to JusticeTrax LIMS. LIMS will assign uncertainty to the analytical result based on the concentration (see *Uncertainty*).

5. For blood samples, LIMS will average the analytical results and truncate to three-digits for a reported value that is compliant with Title 17 requirements.

Sample calculation: **Unknown Blood Sample with equation: Y = 59.768872X +**

(-0.091140) ;

Ethanol Response	219907.27
n-Propanol Response	25278.48
Y-intercept	-0.091140
Slope	59.768872

a. **Unknown Conc. = [(Ethanol Response/n-Propanol Response) – intercept]/slope or Conc = [(219907.27/25278.48) - (-0.0911400000)]/ 59.768872000**

b. **Blood Alcohol Concentration = 0.1470 % (W/V)**

c. **Reported value = 0.147 % (W/V)**

6. For urine samples, LIMS will average the analytical results, then divide the average result by 1.3, and truncate to three-digits for a reported value that is compliant with Title 17 requirements.

Sample calculation: **Urine**

Ethanol Response	219907.27
n-Propanol Response	25278.48
Y-intercept	-0.091140
Slope	59.768872

a. **Unknown Conc. = [(Ethanol Response/n-Propanol Response) – intercept]/slope or Conc = [(219907.27/25278.48) - (-0.0911400000)]/ 59.768872000**

b. **Conc. = 0.147075**

c. **Therefore, if the average concentration for four results is 0.147845, then divide by 1.3 = 0.113726**

d. **Converted Alcohol Concentration = 0.1137% (W/V) Blood Alcohol**

e. **Reported value = 0.113% (W/V) Blood Alcohol**

7. For vitreous samples, LIMS will average the analytical results, then divide the average result by 1.27, and truncate to three-digits for a reported value.

Sample calculation: **Vitreous**

Ethanol Response	219907.27
n-Propanol Response	25278.48
Y-intercept	-0.091140
Slope	59.768872

a. **Unknown Conc. = [(Ethanol Response/n-Propanol Response) – intercept]/slope or Conc = [(219907.27/25278.48) - (-0.0911400000)]/ 59.768872000**

b. **Conc. = 0.147075**

c. **Therefore, if the average concentration for four samples is 0.147938, then divide by 1.27 = 0.116486**

d. **Converted Alcohol Concentration = 0.1164% (W/V) Blood Alcohol**

e. **Reported value = 0.116% (W/V) Blood Alcohol**

J. **Performance Standards and Remedial Actions:**

1. The following criteria must be fulfilled for known alcohol samples for the results of analyses of a given set of samples to be considered valid and reportable:

   a. The result obtained for the Blank Sample is less than 0.01% (located in the Forensic Alcohol Report created by the Sample Report).

   b. The Calibration Curve shall be linear with an "R^2" value of 0.98 or higher (located in the Forensic Alcohol Report created by the Sample Report).

   c. The results obtained for the Ethanol Quality Controls (located in the Forensic Alcohol Summary Report created by the Summary Report and in the Forensic Alcohol Report created by the Sample Report) are as stated in procedures BA.15 - Quality Controls .

   d. The results obtained for the NTRM Standard are within ± 5 % of the reference target concentration (located in the Forensic Alcohol Summary Report created by the Summary Report or in the Forensic Alcohol Report created by the Sample Report).

   e. The compounds in the resolution solution shall indicate baseline resolution for all compounds listed except, on column A, the methanol and acetaldehyde peaks may have near baseline resolution that is allowable. Validation data did not always show baseline resolution in every run (located in the Forensic Alcohol Summary Report created by the Summary Report).

2. The following criteria must be fulfilled for unknown alcohol samples for the results of analyses to be considered valid and reportable:

   a. The results obtained for aliquots of each unknown sample shall be within ± 5% of the mean result (located in the Forensic Alcohol Summary Report created by the Summary Report or in the Forensic Alcohol Report created by the Sample Report).

   b. Unknown sample results with a mean that is below 0.010% will be exempt from the ± 5% of the mean criteria and will be reported as Not Detected (located in the Forensic Alcohol Summary Report created by the Summary Report or in the Forensic Alcohol Report created by the Sample Report).

   c. Acceptable chromatography must be observed in the ethanol and internal standard peaks within each sample's chromatogram as defined by the following:

      i. chromatography peaks that have good separation of compounds within the mixture.

3. If performance standards above are not fulfilled, the results of the analyses of the set will be considered in error and the situation will be reported to a Supervisor or designee for suitable remedial action.

4. No results will be reported until the performance standards above have been fulfilled for each set of samples analyzed.

5. If there is an indication of a problem with the equipment the equipment may be checked in-house or sent to an outside vendor for calibration and/or adjustment as deemed necessary.

K. **Inconclusive Results:**

1. Inconclusive results may be due to poor chromatography, interfering substances, instrument issues, matrix issues, insufficient sample size, or other reasons.

   a. An interfering substance can be any compound that may have a retention time within +/-3% of the retention time of ethanol or n-propanol on at least one column that may affect the chromatography or quantitation results.

2. Reanalysis or instrument maintenance may resolve the issue.

3. If the issue cannot be resolved, the sample will be reported as inconclusive and the reason will be included on the report. For example: Inconclusive due to ethanol not resolving on both columns due to a possible interfering substance.

4. The sample may be sent to an outside laboratory for additional analysis. See Procedure BA.37 - Outside Laboratory Analysis for instructions.

L. **Reporting:**

1. See BA.11 and BA.31 for information on how to generate a Laboratory Report of Examination.

2. See BA.39 and BA.40 for more information about reporting the associated estimation of uncertainty for quantitation of ethanol in blood, urine and vitreous samples.

3. Most ante mortem and post mortem results will fall within the Laboratory's reportable linear range (0.02-0.50%).

   a. For results that are above the reportable linear range, the sample will be reported as "greater than" or "above" the upper limit of the reportable linear range or limit of quantitation.

      i. Urine and vitreous samples will be reported as "greater than" or "above" the upper limit of the reportable linear range or limit of quantitation when the **un-converted** result is above a 0.50%.

   b. For results that are between 0.01% - 0.02%, the results will be reported as "Ethanol is present at a level less than 0.02% W/V".

   c. **For Other Volatile Compounds present:**

      a. From the information printed on the Summary Report, check the other volatile compounds (**Methanol, Acetaldehyde, Isopropanol, & Acetone**) that are populated in the Comments column. Any other volatile compound is listed when it is present above the integration cutoff.

      b. When listed on the Summary Report, compare the area counts of the annotated volatile compound in the unknown sample's chromatogram with the area counts of the same volatile compound within the Resolution Solution (RS) chromatogram.

c. If any of the four compounds listed on the Summary Report has an equal or higher area count than that compound in the Resolution Solution, it must be reported. For example, if the unknown sample area count for Acetone is 29321 and the area count for Acetone in the Resolution Solution is 26167, Acetone must be reported. A statement will be placed in the report such as "Detection of Possible Acetone"

d. Make a statement for each volatile compound present above the RS area counts for Methanol, Acetaldehyde, Isopropanol or Acetone.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 2/25/2019	**NUMBER:** BA.31 - Using LIMS
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2017**	
CHAPTER: Procedures	**SUBJECT:** Using LIMS	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/19/2016	**NUMBER:** BA.35 - Sodium Fluoride QA Checks for Kits
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedure	**SUBJECT:** Sodium Fluoride QA Checks for Kits	

I. Policy: The following procedure should be used for a quality assurance check of the sodium fluoride content of kits.

A. It is recommended to check new lots of blood and urine kits that are received for sodium fluoride content.

1. These checks are typically performed on at least one vial from two kits per lot of blood kits and two jars per lot of urine kits.

2. The results of these checks should be documented and maintained as a quality assurance check of the vendor that provides the kits. The documentation will be maintained in the Alcohol Unit.

3. **The check will be performed by an outside laboratory.**

   a. The referral laboratory should be consulted to determine if there are any preparation requirements prior to sending the sample.

   b. For example, NMS LABS requires the sample be diluted with water prior to shipment. It is recommended that each of the blood tubes be diluted to 10 milliliters and each of the urine jars be diluted to 2 fluid ounces or ~ 59.2 (29.58 x 2) millliliters quantitatively.

   c. The results for the concentration of fluoride ion should meet the Performance Criteria in this document.

4. More quality assurance information regarding the sodium fluoride content of the kits may be obtained from the vendor

B. Data interpretation

1. The results from the outside laboratory may not be provided in the proper units to determine if the amount of sodium fluoride is present.

2. An analyst must calculate the amount of sodium fluoride present in the samples in each lot from the results provided. This can be done by hand calculation or the use of MS Excel or equivalent software to help convert the results.

3. Use the following conversion formula:

   a. X mg Fluoride(F)/L x (1 mol NaF/1 mol F)x(1 mol F/18.9984 g F)x(41.9882g NaF/1 mol NaF)x(1g F/1000 mg F)x(1 L/1000 ml)x(100ml/100ml)= Y g NaF/100 ml

b. Ex: Result: Fluoride = 4400 (mg F)/L

i. 4400 mg F/L x (1 mol NaF/1 mol F)x(1 mol F/18.9984 g F)x(41.9882g NaF/1 mol NaF)x(1g F/1000 mg F)x(1 L/1000 ml)x(100ml/100ml)= 0.9724 g NaF/100 ml

ii. 0.97 g NaF/100 ml > 0.80 g NaF/100 ml.

iii. Therefore, the sample passes the criteria for Sodium Fluoride content and the lot of blood kits is acceptable for use.

C. Performance Criteria

1. All blood tube samples should have a fluoride ion concentration of at least **0.80 g/100ml.**

2. All urine container samples should have a fluoride ion concentration of at least **0.64 g/100ml.**

3. Blood, urine, and water matrices should not effect the fluoride ion concentration.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 08/13/2019	**NUMBER:** BA.36 - Blood Alcohol Discoveries
	RELATED ORDERS: FSD.45, CLER.DAT.12, CLER.DAT.07, TOX.10, BA.43	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Procedure	**SUBJECT:** Blood Alcohol Discoveries	

I. Policy: The Alcohol Unit staff shall comply with all reasonable and legitimate Discovery Requests.

A. All discovery criminal requests are routed to the Forensic Services Division via the District Attorney's Office. These requests typically pertain to documents related to the analysis of samples or records kept in the normal course of Laboratory business. Please see the Division Manual FSD.45 for more information on discoveries.

B. The Alcohol unit provides "basic discoveries" or "extensive discovery" records.

C. A "basic blood/urine discovery" is a pre-set package that consists of:

1. Copy of laboratory report and notes
2. Summary Report for the run
3. Monthly calibration (only for single column GC-FID analysis - PE1 / PE2)
4. Maintenance Log (to minimally cover six months before and after the date of analysis)
5. Chain of Custody
6. SOQ of analyzing Criminalist

D. An extensive discovery is not a pre-set package. It may be a request for more detailed documentation to include but not limited to the Examination Records, Instrument Records, Equipment used and their Calibration Records, Standard Operating Procedures, Proficiency Records etc.

1. If the discovery information sought appears to be unreasonable or irrelevant, a Supervisor or designee may contact the District Attorney's office for assistance in obtaining a modification or quashing the discovery. The District Attorney's office should review criminal discoveries for relevance, before sending the request to the laboratory.

E. Discovery Procedures:

1. The Clerical staff will create a discovery request in LIMS and image the request paperwork. CLER.DAT.12
2. The analyst within the unit will review the discovery request and determine if further information is needed.

3. The discovery requests may be completed electronically and posted via ARIES.

    a. The electronic files of the records requested will be gathered and uploaded into LIMS. If concatenation is desired, detailed procedures on how to concatenate .pdf documents can be found in "Electronic Batch Documents". TOX.10

    b. The Notification of Compliance Form is used when discovery records are being provided as a part of a Subpoena Duces Tecum (SDT) or being provided to the Sheriff's Department Records Office.

    c. The Affadavit of Custodian of Records Form will be completed, digitally signed and included in the electronic files.

    d. In the LIMS imaging module, right-click each image to be released as part of the discovery, and select "Send To iResults". A check mark will appear next to the "Send to iResults" menu.

    e. There must be "Findings Entered" before the request can be "Draft Complete." In LIMS, the analyst should:

        i. Right click on the discovery request and choose the result type: Summary

        ii. Add a comment describing what was completed and where it was sent.

        iii. Initial and date.

    f. The discovery request will be marked as "Draft Complete" by the analyst completing the discovery.

    g. The completed discovery will be checked and marked "Admin Reviewed" by another analyst or a Supervisor.

    h. The electronic discovery records will be accessible via ARIES for the District Attorney's office to retrieve. There is a 24 hour lag from the time the case has been Admin Reviewed before the records will be accessible to the DA's office.

4. Any records not amenable to be uploaded into LIMS (e.g. CD or DVD of raw data etc) will be provided outside of ARIES.

5. Any "Rush" discoveries request may need to be provided as paper or faxed copy. The Rush discoveries need to be approved by the Supervisor to assess the exigency of the circumstances FSD.45

F. See Breath Alcohol Technical Unit Manual BRA.15 for detailed information on producing records for breath discoveries.

G. Subpoena Duces Tecum (SDT) for DMV Hearings

1. The only form accepted as a request for a DMV hearing discovery is the SDT form (DMV Subpoena Duces Tecum) available from the DMV Office or at www.dmv.ca.gov.

2. Any other requests (informal or letter requests) will be rejected by lab staff and an official DMV SDT will be requested from the law office that submitted the discovery request.

3. A private citizen may request records from the laboratory with the proper SDT form for their own DMV hearing. However, the laboratory will only deliver the records to the DMV hearing office upon a citizen's request.

4. The Alcohol Unit staff will adhere to FSD.45 and CCCSO Policy 1.05.68 in properly completing and SDT

    a. The discovery will be completed and kept electronically in LIMS unless records that are not amenable to being uploaded to LIMS are provided (e.g. CD or DVD containing raw data).

    b. All DMV SDT's should be sent to the address as instructed on the first page of the DMV SDT and may be sent to the requesting attorney's offices upon request.

    c. A copy of each completed SDT discovery request should be forwarded to the CCCSO Records Office with a completed Notice of Compliance form when it is released.

    d. If the initial request for discovery records is unreasonable and overly burdensome, the laboratory will send a basic discovery and notify the requesting attorney and DMV offices of the records sent.

    e. If a second extensive DMV SDT is received by the laboratory, the laboratory will comply to the best of its abilities or notify the requesting attorney why items could not be produced when necessary.

H. See FSD.45 and CLER.DAT.12 for handling of Civil Discoveries and Subpoena Duces Tecum.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 08/28/2018	**NUMBER:** BA.37 - Outside Laboratory Analysis
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: none**	
CHAPTER: Procedures	**SUBJECT:** Outside Laboratory Analysis	

I. Policy: Occasionally, it is necessary to send samples to laboratories outside the FSD (Forensic Services Division) to perform alcohol analyses. This may occur when the alcohol analysis is requested and the Laboratory cannot perform the analysis (See BA.30 for inconclusive results examples for OLA's) or at the request of the defense (referee analysis).

A. Subcontracting or Outside Laboratory Analysis (OLA):

1. When analysis is requested that the laboratory is unable to perform, the sample may be sent out to a competent outside laboratory for analysis. This may occur due to the laboratory's inability to perform the analysis (i.e. decomposed blood samples, interfering substances, or other volatiles), inadequate staffing levels, or other unforeseen reasons. Samples are typically sent to NMS Labs; however, other competent laboratories may be used once their accreditation has been evaluated.

   a. When an outside laboratory is utilized, the report shall reflect that the sample was sent to an outside laboratory for analysis.

   b. The Crime Lab is responsible for selecting an outside laboratory unless the customer specifically requests that the sample be sent to a laboratory of the their choosing.

   c. A list of competent outside laboratories will be maintained along with documentation of competence.

      i. Compliance with ISO 17025 is considered a demonstration of competence.

      ii. Competence may also be determined by evaluation of accreditations, licensure, participation in proficiency testing programs, and participation in professional organizations.

2. Follow the instructions in TOX.56 (section "C. Procedure for Sending OLA Samples") for performing OLA's.

B. Referee Analysis:

1. Referee samples are those which are taken at the request of the Arrestee to verify the accuracy of the analytical result. The Vehicle Code permits the analysis of these samples by either the prosecution or the defense for use in subsequent proceedings.

2. Upon written request by the defendant's attorney and with authorization from the district attorney's office, submitting police agency, or receipt of a court order, a blood or urine sample will be released to the authorized person, institution, or laboratory.

    a. The laboratory has a long-standing blanket authorization from the DA's Office stating that a written authorization is not required for a referee analysis on CVC 23152 cases.

    b. If available, an unopened blood vial, which has not been examined by the Crime Lab, will be sent for referee analysis.

    c. In some cases, only one vial of blood is collected. If there is sufficient blood to divide, a portion of the original will be removed. The portion of the sample to be forwarded is placed in a new grey top vial (without preservative or anticoagulant) and labeled with the laboratory number, subject's name, the initials of the person preparing the sample, and the date. The vial is then tape sealed, with initials and date. Whenever possible, a portion of the sample should be retained by the laboratory for further or referee analysis, if needed. Samples of less than 3 mL are not considered adequate for "splitting". Therefore, if the sample is less than 3 mL, a court order or written authorization by the prosecuting district attorney must be received to forward the entire remaining original sample.

    d. If the sample for referee analysis is urine, a portion of the original urine sample is transferred to a clean glass vial. Aliquot approximately 5 mL into a small vial with no preservative. The vial will be labeled with the laboratory number, subject's name, the initials of the person preparing the sample, and the date. The vial is then tape sealed, with initials and date. Whenever possible, a portion of the sample should be retained by the laboratory for further or referee analysis, if needed. In rare cases, there is insufficient sample is available to divide. If there is insufficient sample available, a court order or written authorization by the prosecuting district attorney must be received to forward the entire remaining original sample.

3. The split sample is then placed into a new Alcohol envelope that is marked "DUPLICATE." All applicable information should be filled out on the duplicate envelope. The person preparing the sample will fill out the chain of custody on the envelope, tape seal the envelope, and then date and initial the seal.

    a. See Forensic Services Division Manual for information to transfer evidence to outside agencies. Please refer to the Division Manual for required documentation on release of evidence for referee analysis or outside laboratory analysis (OLA).

4. All authorizations and receipts shall be retained on file by the laboratory report number.

5. Golden State Overnight (GSO) shipping company is used for example purposes, but any a traceable shipping company may be used.

C. Storage of Referee Samples

1. Referee samples that were not analyzed by the laboratory will be returned immediately to the submitting agency for storage. Sheriff and contract city's referee samples will be forwarded to Sheriff's Property and Evidence Services for storage.

Each agency handles the storage and disposition of samples based on their evidence disposition policies.

2. Referee samples that were analyzed by the Forensic Services Division will be retained for at least one year, the same way other samples examined for driving offenses.

D. Defendant Requests for Reanalysis and Referee Analysis

1. The Forensic Services Division does not perform **reanalysis** of samples at the request of the defendant for cases that were analyzed by this Division.

   a. The defendant can request the reanalysis by an independent laboratory. The defendant, or the defense attorney, must arrange to have the Forensic Services Division forward the sample to the laboratory of his/her choice.

2. If the laboratory sends a sample out, the Forensic Services Division must have a written request provided by the attorney. A letter from the defendant's attorney, or defendant if representing themselves, a court order, or a copy of a letter to the referee laboratory of choice should state, in essence:

   a. that an alcohol analysis is being requested

   b. the name of the outside laboratory selected

   c. that the analysis is at the defendant's expense

   d. the laboratory number for the sample requested (or other sufficient information such as subject name, agency, agency case number, etc.)

   e. An authorization from the Contra Costa County District Attorney's Office is required for **non-DUI** cases and **felony DUI** cases.

   f. A check for sample handling and postage must also be received

E. Procedure for Sending a Referee Sample

1. Fill out an OLA request form and a Billing Sheet. These forms can be found on the Sheriff's Intranet or PowerDMS (AlC.38 and ALC.07).

   a. After the signature on the original referee request letter, the person completing the transfer should write "Done" with his/her initials and the date completed.

   b. The original referee request letter, the check, a copy of the OLA Request Form, and the OLA Billing Sheet are retained on file by the laboratory report number.

   c. A copy of the request letter and a copy of the OLA Request Form are sent to the outside lab with the sample.

2. Obtain the sample from it's storage location, such as the Muir Alcohol Long Term Refrigerators.

   a. Record each transfer in the chain of custody using both the electronic chain and the written chain on the envelope.

   b. Record the following on the chain of custody on the original envelope:

      i. Received From (complete as appropriate):

1. Split (1) grey top vial w/blood *analyst's initials*
2. Split portion from grey top vial *analyst's initials*
3. Split portion from urine jar *analyst's initials*

ii. Received By:

1. Via GSO to *other lab* (for example BAFL=Bay Area Forensic Laboratory)

iii. date of split

iv. For example:

Received From:	Received By:	Date:
EVID	*Your name*	*Date*
Split (1) grey top vial w/ blood *your initials*	Via *GSO* ----------> *Lab name*	*Date*
Your name	EVID	*Date*

3. Remove the vial (or jar) from the original envelope and add the following information to the vial being sent out:
   a. laboratory case number
   b. your initials
   c. date of the split
   d. subject name
4. Itemize the sample in LIMS, if it has not yet been done.
   a. In the "Evidence" tab, right click on the appropriate item of evidence and select "Itemize Evidence."
   b. In the "Description" section, enter the appropriate description:
      i. Split one grey top vial with blood for referee analysis via GSO to *other lab*
      ii. One grey top vial with blood split from one grey top vial for referee analysis via GSO to *other lab*
      iii. One screw top vial with urine split from jar for referee analysis via GSO to *other lab*
   c. Register an item barcode for the sample being split.
   d. Choose the correct type of sample for "Evidence Type," for example blood for blood evidence.

5. Attach the item barcode to the duplicate envelope, if not already printed.
6. Record the electronic chain of custody for the split item:
    a. From: *Analyst*
    b. Via: "Split Chain of Custody"
    c. Note: "Via GSO″
    d. To: *outside lab*
7. Complete the chain of custody on the duplicate envelope as appropriate:
    a. Received From:
        i. Split (1) grey top vial w/blood a*nalyst's initials*
        ii. Split portion from grey top vial *analyst's initials*
        iii. Split portion from urine jar *analyst's initial*
    b. Received By: Via GSO to *other lab* (e.g. BAFL=Bay Area Forensic Laboratory).
    c. date of split
8. Seal, initial, and date the duplicate envelope.
9. Initial and date previously opened vial on existing green label.
10. Seal, initial and date the original envelope with the remaining evidence inside.
11. Mailing the sample:
    a. package the sample for safe handling.
    b. schedule a pick up with the shipping company.
    c. evidence waiting to be picked up for shipment should be stored in the Muir Log In Refrigerator.
    d. return the sealed original envelope to it's storage location & record the transfer in LIMS and on the envelope.
12. The following will be given to the clerical staff:
    a. Original request letter with date and initials of the analyst
    b. Documentation of the cost (i.e. Billing Sheet)
    c. A copy of OLA request form
    d. Payment check

F. Procedure for sending entire evidence envelope when the lab has not analyzed the evidence (Trombetta sample)

1. A written request must be provided by the attorney in order for a sample to be sent to another lab for analysis. The request must include the following:
    a. payment for sending out the sample

b. name and address of laboratory that the referee sample is being sent to

c. laboratory number for the sample requested (or other sufficient information such as subject name, agency, agency case number, etc.)

d. District Attorney authorization (if needed)

2. Fill out an OLA request form and Billing Sheet. These forms can be found on the Sheriff's Intranet or PowerDMS (ALC.38 and ALC.07)

3. Obtain the sample from it's storage location.

   a. If the evidence is no longer at the laboratory, a request for the Blood Alcohol Envelope from the agency may need to be made.

4. Record each transfer in the chain of custody using both the electronic chain and the written chain on the envelope.

   a. Complete the chain of custody on the envelope as follows:

      i. Received From: Evid

      ii. Received By: *Analyst's name*

      iii. Date of transfer

      iv. On a new line, Received From: *Analyst's name*

      v. Received By: Via GSO to *other lab* (e.g. BAFL=Bay Area Forensic Laboratory.

      vi. Date of transfer

5. After the signature on the original referee request letter, the person completing the transfer should write "Done" with his/her initials and the date completed.

6. Include both a photocopy of the written request for referee analysis and a copy of the OLA request form with the envelope.

7. Sending the sample, a traceable shipping company should be used, such as GSO:

   a. package the sample for safe handling.

   b. schedule a pick up with the shipping company.

   c. evidence waiting to be picked up for shipment should be stored in the Muir Log In Refrigerator.

   d. record the transfer in LIMS

8. The following will be given to the clerical staff:

   a. Original request letter with date and initials of the analyst

   b. Documentation of the cost (i.e. Billing Sheet)

   c. A copy of OLA request form

   d. Payment check

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 12/16/11	**NUMBER:** BA.38 - Health and Safety
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: 5.3.6**	
CHAPTER: Health and Safety	**SUBJECT:** Health and Safety	

I. Policy: These guidelines in conjunction with the *Forensic Services Division Safety Manual* will be followed to ensure employee safety within the laboratory (Supplemental 5.3.6).

A. Wear appropriate personal protective equipment when handling chemical and bio-hazardous materials. Consult the *Forensic Services Division Safety Manual* for further information. Safety Data Sheets (SDS), located in the laboratory technical units, should be consulted whenever using an unfamiliar chemical.

B. The following personal protection equipment should be worn at all times when working with or near hazardous substances or activities:

1. Laboratory coat
2. Latex or nitrile gloves
3. Safety glasses when mixing and preparing reagents
4. Safety glasses with side shields that conform to the American National Standards Institute (ANSI) standards (prescription glasses with safety lenses and side shields are allowed).
5. No safety glasses are necessary while working within the fume hoods with the sash closed below the adequate ventilation line.

C. It is the responsibility of the analysts working within the lab to be familiar with the Division's Safety Manual and to comply with all safety requirements.

D. When using "Sharps" or "Sharps Biohazard" bins for disposing of glassware or other "sharps", the bin should not be filled past the "fill line" indicated on the bin.

E. All bins need to be labeled appropriately (regardless of any markings on the bags inside the bins). This includes: "Biohazard", "Chemical Waste" and "Debris Waste".

1. Typically, "chemical waste" consists of large amounts of chemicals like:
   a. corrosive acid inorganic waste or "acid waste"
   b. flammable organic waste or "organic waste"
   c. corrosive basic inorganic waste or "basic waste"
2. Typically, hazardous waste solids or "debris waste" contains items with chemical residue (eg. slides, pipettes, spot plates etc).

3. Biohazard waste consists of biohazard materials (eg. blood soaked gloves).

    a. gloves or "wipes" with small amounts of blood may be placed in the trash cans

F. Any larger container (e.g. 50 gallon drum) used to temporarily hold the bags of waste should also be labeled appropriately. This includes: "Biohazard", "Chemical Waste" and "Debris Waste".

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 1/17/2019	**NUMBER:** BA.39 - Uncertainty of Measurement
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Roberts	**ANAB ISO/IEC 17025:2017**	
CHAPTER: Uncertainity	**SUBJECT:** Uncertainty of Measurement	

I. Policy: The Alcohol Unit has assessed estimated uncertainty for analysis of blood, urine and vitreous samples for ethanol content.

A. Quantitation of ethanol in blood and urine are considered to be a measurement that matters as legal enhancements may be charged if certain concentrations are exceeded.

B. The Alcohol Unit has attempted to identify all components of uncertainty associated with quantification of ethanol in blood, urine and vitreous samples to make a reasonable estimation of uncertainty. The reporting of results will not give the wrong impression of uncertainty.

C. All components of uncertainty for quantification of ethanol in blood, urine and vitreous samples which are of importance have been taken into account. See BA.40 for more information.

1. Results of ethanol quantitation in biological samples will have an associated uncertainty reported when four replicate values are reported within the linear range.

2. The uncertainty will be reported on the average of the four analytical results; the final reported uncertainty will be rounded to no more than two significant figures.

3. The uncertainty for urine and vitreous samples will be reported on the unconverted average of the analytical results.

4. Uncertainty for blood, urine, and vitreous alcohol results will be reported in the report annex. See BA.11 for more information.

   a. Both unconverted and converted replicate values for urine and vitreous samples must fall within the linear range for the uncertainty to be reported.

5. The uncertainty will be reported in the same units as the result.

D. Refer to the BA.40 for specific information including the sources contributing to the uncertainty.

E. Definitions and Terms:

1. **Uncertainty** of a measured value is an interval around that value such that any repetition of the measurement will produce a new result that lies within this interval. This uncertainty interval is assigned by the experimenter following established principles of uncertainty estimation. Both type A and type B uncertainties exist.

a. Type A uncertainty is data from your laboratory (the lab generates based on control charts, etc)

b. Type B uncertainty is based on manufacturer's specifications, data from calibration reports, etc

2. Technical use of the word "uncertainty" indicates a level of confidence in the result or the test being performed or the measurement.

3. The laboratory has attempted to take into account in the uncertainty budget, the extent to which the following factors contribute to the total uncertainty of measurement of ethanol in blood, urine and vitreous samples.

a. Human Factors

b. Accommodation and Environmental Conditions

c. Test and Calibration Methods and Validation

d. Equipment

e. Sampling

f. Handling of Test and Calibration Items

4. **Accuracy** refers to the agreement between a measurement and the true or correct value. The concept 'measurement accuracy' is not a quantity and is not given a numerical quantity value.

5. **Traceability** refers to an unbroken chain of comparisons using acceptable and documented methods to national or international standards (SI) with each comparison having stated uncertainties. The measurement is what is traceable.

6. **Elements of traceability**:

a. An unbroken chain of comparisons: an unbroken chain of comparisons going back to national (NIST) or international (SI) standards.

b. Measurement uncertainty: the measurement uncertainty for each step of the traceability chain must be calculated and reported so that an overall uncertainty may be estimated.

c. Documentation: each step of the chain must be performed according to documented procedures, and the results must be documented.

d. Competence: laboratory performing steps in the chain must supply evidence of technical competence (eg. ISO 17025 accredited)

e. Reference to SI units: where possible the chain of comparisons must end at the primary standards for the realization of the SI units (eg. BIPM)

f. Recalibration at appropriate intervals: calibration must be repeated at appropriate intervals depending on the uncertainty required.

g. Measurement Assurance: validates and verifies steps above

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 1/17/2019	**NUMBER:** BA.40 - Uncertainty Budget for Blood Alcohol
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC: 17025:2017**	
CHAPTER: Uncertainty	**SUBJECT:** Uncertainty Budget for Blood Alcohol	

I. Policy: The following is an explanation of the procedure used to estimate the uncertainty of Blood Alcohol analysis.

A. NIST 8-Step to estimating uncertainty

1. **Specify the measurement process for the GC-FID**

Y=mx+b

Where:
Y=ratio peak area of ethanol to peak area of n-propanol
x=concentration of ethanol
m=slope of the line
b=intercept

2. **Identify and characterize the uncertainty sources**

   a. The Laboratory used "fishbone diagrams" and used brainstorming techniques to identify possible sources of error.

   b. See "Fishbone Diagram" at the bottom of the document.

3. **Quantify uncertainty measurements**

   a. The Laboratory uses "% W/V" (weight/volume) or grams per 100 milliliters of liquid.

4. **Convert factors to standard uncertainties**

   a. The Laboratory converted factors to standard uncertainties, one standard deviation equivalents, based on the distribution (normal or rectangular distribution) and the source of the data.

5. **Calculate combined standard uncertainties**

   a. The Laboratory uses the "root sum square" equation.

6. **Expand the uncertainty by "k"**

   a. The coverage factor is the multiplier used to establish the confidence level reported.

   b. The Laboratory uses a coverage factor of k=3 (approximately 99.73%)

7. **Evaluate the expanded uncertainty**

   a. The Laboratory evaluated the data and used Pareto charts to help visualize the significance of the contributing sources of uncertainty. The Laboratory plans to reevaluate the budget on an annual basis. If there is a change in the measurement process or the measurement instruments, the quarterly measurement assurance will be evaluated to determine if the changes are significant enough to require a full budget reevaluation.

8. **Report the uncertainty**

   a. The Laboratory reports the uncertainty in the same units as the blood alcohol result.

   b. The uncertainty for blood within the linear range of 0.02 - 0.50%: **6.26755536% of the average result**.

   c. Blood alcohol results outside of the linear range will not be assigned uncertainty.

   d. The final reported uncertainty will be rounded to no more than two significant figures.

   e. The uncertainty for urine and vitreous will be reported on the unconverted analytical average.

   f. When the uncertainty is evaluated and determined not to be significantly different than a previous assessment, it may be left unchanged in the laboratory reports.

      i. A change that is not significantly different can be a minor incremental change in the uncertainty which is less than 0.2% lower than a previously determined uncertainty.

B. **GC-FID Budget**

1. The method involves the analysis of blood and urine specimens that have been diluted with an internal standard, sampled by an automated headspace sampler, and analyzed by gas chromatography. The quantitation of ethanol is accomplished through calculation of the relative responses (peak areas) of the ethanol and internal standard by the gas chromatographic separation of ethanol from other volatile substances. For the GC-FID budget, the Laboratory includes:

   a. **Matrix QC reproducibility**

   b. **Hamilton Diluter**

   c. **Instrument Readability**

   d. **Uncertainty of the Reference Material**

C. **Matrix QC Reproducibility**: *The Matrix samples were prepared from certified reference materials using calibrated pipettes and flasks. The reproducibility of the samples incorporates many aspects of uncertainty including: instrument design, training, technique and environmental conditions.*

Reproducibility: The Laboratory evaluates the difference of each fortified blood matrix solution from its target value. The Laboratory subtracts the value obtained during analysis from the target value. The differences are converted to a % so that

different matrix solutions can be evaluated. The Laboratory evaluates both instruments and the instrument with the highest standard deviation is included in the budget.

For the GC-FID budget, the uncertainty is expressed as %. The data is derived from the laboratory generated data therefore it is a Type A uncertainty and the Expanded Multiplier = 1, and the distribution is normal (Divisor = 1).

D. **Hamilton Diluter**: *The digital diluter is used to dispense the blank, standards, QC's and samples by mixing the solution being dispensed with the internal standard. In the GC/FID budget, the dilutor is included twice as indicated below.*

1. **Hamilton Calibration Uncertainty (Sample Syringe):** The Laboratory uses the manufacturer's imprecision (%CV) from the Heusser-Neweigh certificate. The manufacturer's imprecision is used as opposed to the measured imprecision such that the uncertainty would encompass all diluters that could be used to dispense samples. The User's Manual (*Microlab 510B/511C, 530B/531C and 540B/541C*) states that 30-100% stroke volume uses the same precision across the range (0.2%). The amounts dispensed during analysis are within this range (0.25 ml in 0.25 ml syringe =100% stroke volume).

2. **Hamilton Calibration Uncertainty (Internal Standard Syringe):** The Laboratory uses the manufacturer's imprecision (%CV) from the Heusser-Neweigh certificate. The manufacturer's imprecision is used as opposed to the measured imprecision such that the uncertainty would encompass all diluters that could be used to dispense samples. The User's Manual (*Microlab 510B/511C, 530B/531C and 540B/541C*) states that 30-100% stroke volume uses the same precision across the range (0.2%). The amounts dispensed during analysis are within this range (1.25 ml in 2.5 ml syringes =50% stroke volume).

   The data is derived from the calibration certificate (and applied to the volumes used during alcohol analysis based on the Manufacturer's specifications) therefore it is a Type B uncertainty and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor = square root of 3).

E. **Instrument Readability for the GC-FID**: *The effect of readability of the Perkin-Elmer GC-FID was evaluated by the Laboratory. For inclusion in the GC-FID budget, the maximum effect of readability is included.*

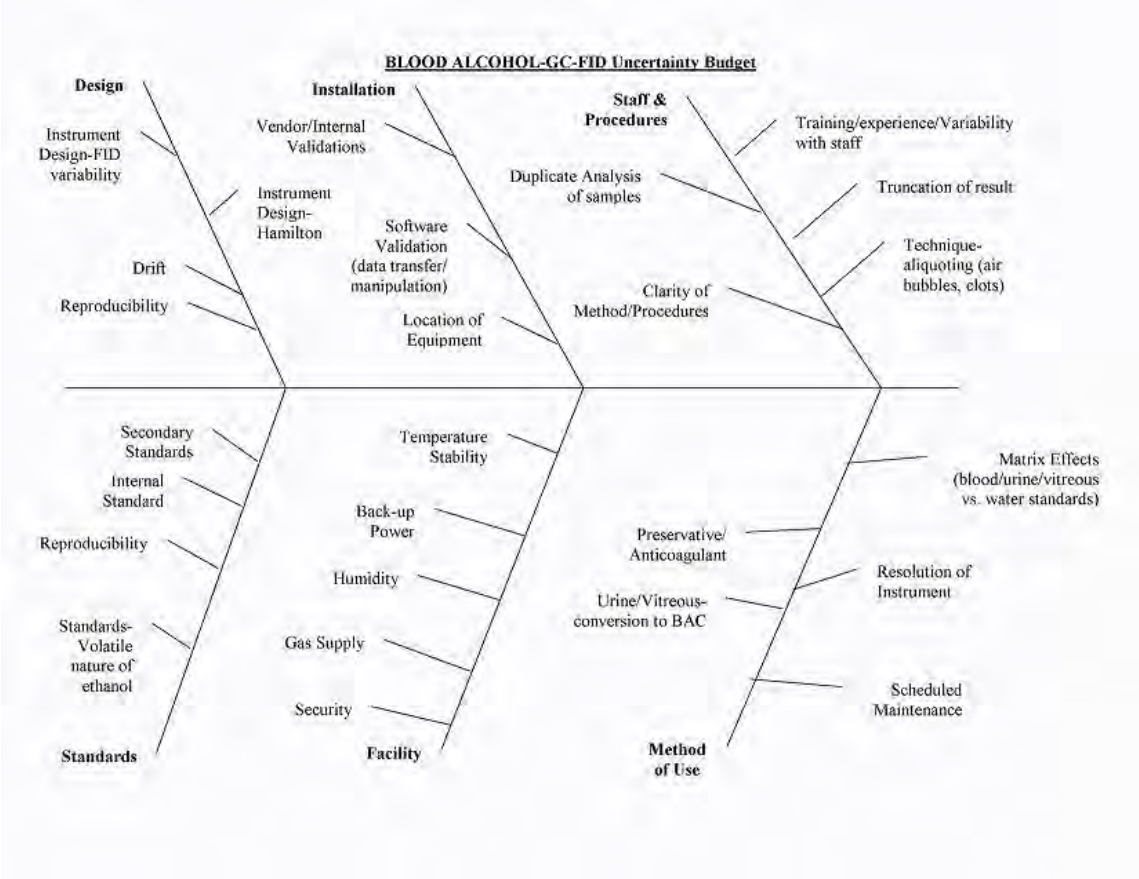
1. **Instrument Readability:** The Laboratory includes the instrument readability based on the area under the curve being reported to a 0.01. This area readability comes into the measurement of ethanol as well as the internal standard, n-propanol. The area readability was added and subtracted from the area counts of ethanol and n-propanol from a standard chosen at random. By subtracting the highest combination from the lowest combination, the lab obtains the maximum effect of readability. This is converted to a % by dividing the maximum effect by value of the standard and multiplying by 100.

   The data is derived from a calculation based on laboratory data, therefore it is a Type B uncertainty and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor =square root of 3).

F. **Uncertainty of the Certified Reference Material**: *The uncertainty of the certified reference material .*

1. **Certified Reference Material:** The uncertainty of the reference material is obtained from the manufacturer's certificate. The largest uncertainty for all concentrations used was included in the budget.

   The uncertainty is expressed as %. The data is derived from a certificate therefore it is a Type B uncertainty. The unexpanded uncertainty is used (as indicated on the certificate) and the distribution is normal (Divisor = 1).



G. Blood Alcohol-GC-FID Explanation of Fishbone Diagram

The purpose a fishbone diagram is to attempt to identify and characterize possible sources of uncertainty. The following explanation details where these sources are accounted for in the Laboratory's budget. The Laboratory attempted to account for each source on the fishbone diagram with at least one line item. There is not always a one-to-one relationship between the fishbone diagram and the line items.

1. **Design:**
   a. Instrument design (GC-FID Variability)
      i. Matrix QC Reproducibility
   b. Instrument design (Hamilton Diluter)
      i. Hamilton Diluter

c. Run drift
    i. Matrix QC Reproducibility
    ii. Validation
d. Reproducibility
    i. Matrix QC Reproducibility

2. **Installation:**
    a. Vendor/Internal Validation
        i. evaluated during Validation
    b. Software validation (data transfer/data manipulation)
        i. evaluated during Validation
    c. Location of equipment
        i. evaluated during Validation
3. **Staff: & Procedures**
    a. Experience/Training/Variability with different staff
        i. Matrix QC Reproducibility)
        ii. Hamilton Diluter
        iii. procedures in SOP
    b. Technique of aliquoting (air bubbles , blanks, clots)
        i. Matrix QC Reproducibility
        ii. Hamilton Diluter
        iii. procedures in SOP
    c. Duplicate analysis of samples
        i. Title 17 administrative requirement as well as procedures in SOP
    d. Clarity of method/procedure
        i. Title 17 administrative requirement as well as procedures in SOP
    e. Truncation of result
        i. Title 17 administrative requirement as well as procedures in SOP
4. **Standards:**
    a. Standards
        i. Uncertainty of reference material
    b. Internal Standard
        i. not significant because the exact concentration of the internal standard n-propanol need not be determined as it is used in the calibration as

well as the calculation and the numerical value cancels out.

c. Reproducibility

i. Matrix QC Reproducibility

d. Volatile nature of ethanol in standards

i. addressed in SOP (expiration dates for standards and QCs based on stability studies)

5. **Facility:**

a. Temperature Stability

i. Matrix QC Reproducibility

ii. *The correction factor for the thermometers was not taken into account in the budget as it is not a significant contributor to the overall uncertainty of the gravimetric checks.*

b. Back-up Power

i. not addressed in SOP

c. Humidity

i. Matrix QC Reproducibility

d. Gas Supply

i. Matrix QC Reproducibility

e. Security

i. addressed in Division Security policies

6. **Method of Use**

a. Matrix Effect (blood/urine/vitreous vs. water standards)

i. Matrix QC Reproducibility

b. Preservative/Anticoagulant

i. Matrix QC Reproducibility

c. Urine/Vitreous-conversion to Blood Alcohol equivalents

i. Uncertainty will be reported on the analytical results and will not encompass any uncertainty due to conversion.

d. Scheduled Maintenance

i. addressed in SOP

e. Resolution of Instrument

i. Instrument Readability

f. Linearity-

i. evaluated during Validation

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 07/29/2019	**NUMBER:** BA.41 - Blood and Urine Training
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2, 5.5**	
CHAPTER: Training	**SUBJECT:** Blood and Urine Training	

I. Policy: The following procedure is a guideline for training Criminalists to be authorized by the Laboratory as a Forensic Alcohol Analyst (FAA). An FAA performs analysis of biological samples for the presence/absence of ethanol and testifies to the analytical result in court.

A. Expectations

1. The training protocol for forensic alcohol analysis of biological fluids (blood, urine, vitreous and cavity fluid) will be used to train Criminalists in knowledge, skills, and abilities prior to being authorized to perform casework analysis. The laboratory's Forensic Alcohol Program is regulated by the California Department of Health Services (CDPH) and the "California Code of Regulations Title 17. Public Health Division 1. State Department of Health Services Chapter 2. Laboratories Articles 1-7" (Title 17). This training program in intended to supplement CDPH requirements and the requirements for testing in the ISO/IEC 17025 guidelines as the Laboratory is accredited by ANAB (ANSI-ASQ National Accredition Board).
2. The training will minimally address the following topics:
    a. Understanding and comprehension of Title 17 and other required readings
    b. Value and purpose of forensic alcohol analysis
    c. Physiological action of alcohol
    d. Laboratory methods of forensic alcohol analysis
    e. Practical laboratory demonstration of the trainee's ability to successfully perform forensic alcohol analysis
    f. Interpretation of results of alcohol analysis
    g. Court testimony
    h. Court decisions regarding chemical tests of alcohol to determine alcohol influence
    i. Ethics in Forensic Science

B. Purpose

1. To understand the requirements in the Administrative Code of Regulations known as Title 17, the regulating agency (the California Department of Public Health) and the Laboratory procedures followed to become authorized as a Forensic Alcohol Analyst who can perform forensic alcohol analysis on biological evidence submitted to the Laboratory.
2. To develop knowledge, skills, and abilities in the area of alcohol analysis culminating in the ability to perform casework independently.
3. To understand and implement the policies and procedures in the Blood Alcohol Technical Unit Manual and Division Manual to perform casework in accordance with ISO/IEC 17025 and ANAB accreditation guidelines.
4. To gain expertise and knowledge on the use of instrumentation culminating in the ability to troubleshoot and perform routine maintenance on instrumentation.
5. To gain expertise in courtroom testimony through training and experience.

C. Education

1. An analyst will also meet any educational requirements set forth by the CDPH and Title 17 for qualification as a Forensic Alcohol Analyst prior to performing casework in the Forensic Alcohol Unit of the Laboratory.
2. An analyst must meet the minimum educational qualifications set forth in the ISO/IEC 17025 and supplemental guidelines from ANAB.

D. Training Records

1. Training Binder: Analysts will maintain a training binder to document progress in the Forensic Alcohol Unit of the Laboratory. At minimum the training binder should include the following:
    a. Authorization Checklist (ALC.36)
    b. Reading List

c. Statement of Qualifications

d. Competency and Proficiency documentation

e. Study Questions/Practical Applications

f. Court Critiques

2. The appropriate training records will be placed in the employee's training binder maintained by the employee and reviewed by the Manager/Supervisor upon completion of training. A summary of the training submitted to the Manager/Supervisor may include:

a. Topic of training

b. Number of practice samples examined and/or analyzed

c. Record of time committed to training

d. Verification that the training and proficiency testing to assess competency were successfully completed

e. Copies of certificates from courses taken

f. Court testimony

g. Mock court, if applicable

E. Effectiveness

1. Successful completion of the study questions, practical exercises, a competency test, and mock court will demonstrate the ability to perform forensic alcohol analysis and testify regarding forensic alcohol analysis and results.

2. The following are actions that may be used to evaluate effectiveness of initial training:

a. Communication with Supervisor/Technical Lead throughout the training program

b. Practical and written exercises and assessments as indicated in the documented training program

c. Competency testing prior to assuming casework responsibilities

d. Mock court exercises

3. The following are actions that may be used to evaluate the effectiveness of ongoing training:

a. 100% technical and administrative review of casework

b. Court critiques

c. Oral or written feedback provided to Supervisor upon completion of training classes

d. Yearly performance evaluation that includes setting goals for the analyst, review of SOQ, and training binder. This assessment reviews analyst goals for development and evaluates the effectiveness of training actions and if further training actions are needed.

4. Maintenance of skills and re-training:

a. Maintenance of skills will be evaluated annually through proficiency training.

b. Staff will be encouraged to attend on-going training by attending courses, meetings, and workshops.

c. Presentation of evidence in court (eg. CCI class, courtroom monitoring, etc.).

d. Training will be provided on any new equipment or methodology.

5. Remedial training:

a. The need for remedial training may be implemented as a result of proficiency testing, courtroom testimony monitoring, and 100% technical review of casework. The remediation will be documented through a QA Action.

F. Timeline and Progress of Expectations

1. The training program for forensic alcohol analysis should take approximately 4 months culminating with a competency and mock court for alcohol analysis.

2. The progress or duration expectations for each section are as follows:

a. 2 weeks to 1 month: orientations, job-shadowing, review of safety, unit and FSD policies and procedures

b. 2-3 months: analysis of case-like samples, solution preparation and recordation, instrument theory and operation. The analyst should be assessed for readiness by the Supervisor prior to being given the competency test.

c. At approximately 4 months and after the completion of a successful competency test a mock court will be given to assess understanding and courtroom presentation of evidence

G. Authorization for Blood and Urine Alcohol Analysis

1. The use of the authorization checklist (ALC.36) in conjunction with the documented training program is the manner in which management can ensure the competence of all who operate specific equipment, perform tests, evaluate results, and sign reports.
2. The ability to sign reports is the authorization for a Criminalist/Analyst to give their testimony about the analysis performed.
3. Refer to Alcohol Impairment Training (BA.45) for authorization of testimony regarding interpretation of results, the effects of alcohol on the human body, and alcohol impairment.
4. Training must be done in accordance with the documented training program.
5. A checkmark in the "Analyst" column indicates that the analyst has completed training in the area indicated. Intitals in the "Trainer" column indicates who provided and supervised the training.
6. Personnel will be qualified on the basis of appropriate education (Supplemental 5.2.6.1.1), training as described in the training manual, and successful completion of competency test that demonstrate skills acquired.
7. The training program on pharmacology and pharmacokinetics of alcohol will be covered comprehensively in Alcohol Impairment Training (BA.45).
8. The trainee must successfully pass a competency before analyzing laboratory casework.
9. Refer to the Division Manual (FSD.21) for further information regarding training.

H. References

1. Trainer will review the references available and their locations with the trainee.
2. The location of the references may be within the Alcohol Unit, the Laboratory library, in PowerDMS, and/or electronically available to each trainee.
3. In addition to the specific references listed in each training Module, the trainee should also understand the following:
   a. Title 17-pertaining to Forensic Alcohol Analysis
   b. Blood Alcohol Technical Unit Manual
   c. Division Manual

II. Module 1: Historical Perspective on Blood Alcohol Analysis (Approximately 1 week)

A. Objectives/Topics of Study

1. Per Se Alcohol levels
   a. Current and historical perspectives of per se levels
   b. Per se level and impairment level
2. Theory
   a. Study of basic principles upon which forensic alcohol analysis is based
3. Single column vs. Dual column analysis
4. GC FID vs. GC/MS
5. California Department of Public Health Requirements
   a. Title 17. Public Health. Group 8. Forensic Alcohol Analysis and Breath Alcohol Analysis. Articles 1-7.
6. Basic physiology of the human body

B. References

1. Saferstein, Richard, "Forensic Toxicology," Criminalistics An Introduction to Forensic Science, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, USA, pp. 605-623 (1982).
2. Medicolegal Aspects of Alcohol Determination in Biological Specimens, James C. Garriott, editor, Lawyers and Judges Publishing Co., Tucson, AZ (2105), pages 259-263. (Garriott or Garriott's)
3. Blood Alcohol Analysis (ALCO.025)
4. Analysis of Samples by DCGC-FID (BA.30)
5. Determination of Liquid/Air Partition Coefficient for Dilute Solutions of Ethanol in Water, Whole Blood, and Plasma (ALCO.173)
6. The Top 20 Myths of Breath, Blood, and Urine Tests-Part 1
7. Chemical Tests for Intoxication: What Do the Numbers Really Mean? (ALCO.011)
8. Comparison of Ethanol Concentrations in Blood, Serum, and Blood Cells for Forensic Application (ALCO.002)

C. Study Questions/Practical Exercises

1. What is the Laboratory's current method?
2. Describe the difference between single column analysis and dual column analysis.
3. Describe direct injection and headspace analysis.
4. Define "Forensic Alcohol Analysis".
5. Define Chromatography.
6. What are the chemical properties of ethanol that lend itself to headspace chromatography?
7. Describe the path alcohol takes when alcohol travels into & out of the human body after being ingested?
8. In a DUI investigation, describe why time is important when obtaining a blood sample, analyzing the blood sample, and re-testing a blood sample?
9. Why does the concentration of alcohol in a person's body differ in their blood, urine, breath, vitreous...etc.?
10. Why does a person of 100 lbs and another person of 150 lbs. differ in blood alcohol concentration if they consume the same amount of alcohol?
11. What are the units of measurement for Blood Alcohol? Breath Alcohol?
12. Define the term "Proof" as it relates to alcohol content.

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions/Practical Exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist (ALC.36).

III. Module 2: Evidence Handling/Specimen Handling and Safety (Approximately 2 weeks)

A. Objectives/Topics of Study

1. Biological Evidence collection
   a. Preparation and distribution of Blood Kits/Urine Kits.
   b. Procedure to obtain a proper blood or urine sample done accordance with Title 17.
2. Proper evidence handling procedures including: opening evidence, selection of items to examine, marking of items, storage of evidence, disposition of evidence
3. Safe handling of specimens, blood borne pathogens
4. Proper documentation of specimens
5. Chain of custody documentation
6. Verification and marking of evidence
7. Note taking
8. Aliquoting requirements (sampling)
9. Sample storage
10. Evidence sealing
11. Sending out OLA/referee samples
12. Additional safety training classes are coordinated by the Safety Officer

B. References

1. BA.08 - General Evidence Handling
2. BA.10 - Technical Records
3. BA.11 - Reports
4. CLER.DAT.13 - Distribution of Reports
5. FSD Safety Manual (SAF.01 - SAF.34)

C. Study Questions/Practical Exercises

1. The trainee will observe the trainer, or an experienced analyst, performing the tasks identified above.
2. Describe how the laboratory accepts evidence for alcohol analysis from Contra Costa County agencies.
3. What happens to the lab report after it is draft completed by the analyst?
4. How is the lab report distributed after the report has been technically and administratively reviewed?
5. Describe how the evidence is handled after it has been analyzed and a report has been generated and reviewed.
6. Describe how to locate the procedure for checking the calibration on the variable pipette.
7. How is the Chain of Custody established and maintained when the evidence is received by the Laboratory?
8. What should an analyst do if the information on the blood vials does not match what is written on the evidence envelope?
9. Where is it documented if the blood evidence is consumed during analysis?

D. Assessment

1. Trainer, or designee, will observe the trainee handle evidence and provide feedback.
2. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist (ALC.36).

IV. Module 3: Analysis/Equipment (Approximately 2 weeks)

A. Objectives/Topics of Study

1. Nature of Ethanol: Application, properties and important characteristics to consider:
   a. Ethanol, also called alcohol, ethyl alcohol, and drinking alcohol, is a compound and simple alcohol with the chemical formula C2H5OH. Its formula can be written also as CH3−CH2−OH or C2H5−OH (an ethyl group linked to a hydroxyl group), and is often abbreviated as EtOH. Ethanol is a volatile, flammable, colorless liquid with a slight characteristic odor. It is used as a drug and is the principal type of alcohol found in alcoholic drinks. Ethanol is naturally produced by the fermentation of sugars by yeasts or via petrochemical processes, and is most commonly considered as a popular recreational drug. It also has medical applications as an antiseptic and disinfectant. The compound is widely used as a chemical solvent, either for scientific chemical testing or in synthesis of other organic compounds, and is a vital substance utilized across many different kinds of manufacturing industries. Ethanol is also used as a clean energy burning fuel source. (Source-Wikipedia)
2. When handling any sample containing ethanol to be analyzed consider the following:
   a. Caution taken when dispensing/testing sample to keep in a proper container to minimize exposure to air. The longer the sample is exposed to the air, the more ethanol loss over time.
   b. Flasks or beakers should not be utilized unless the sampling will occur immediately with few replicate analyses. Seal vials/containers with cap/lid when possible between dispensing.
   c. When a sample containing ethanol is to be stored, ensure the sample is kept in a tightly sealed container with minimal headspace to minimize evaporation and/or oxidation.
3. Solutions
   a. NTRM Standards
   b. Internal standard solution of n-propyl alcohol
   c. Quality control solution
   d. Resolution check solution
   e. Standards and quality control materials prepared and run with each batch
   f. Criteria for reporting
   g. Use of the traceability database
4. Instrumentation
   a. Learning the use and limitations of instruments
   b. Learning possible sources of error

c. Perkin Elmer Clarus 500 Gas Chromatograph with a flame ionization detector

d. Perkin Elmer Turbo Matrix 110 Headspace Sampler

e. Hamilton digital diluter with hand probe, Model 600, or equivalent

f. Pipettors, Eppendorf or equivalent, adjustable volume

g. Volumetric flasks

h. Thermometer

i. Balance

j. Sample preparation

k. Sample analysis and sampling

l. Checks of GC-FID and Headspace Unit

m. Prepare Blood alcohol kits for Coroner's cases

n. Sodium Fluoride Quality Assurance Check of Blood/Urine kits

B. References

1. Perkin Elmer User's Guide
2. Uncertainty of Measurement (BA.39 & BA.40)
3. Analysis of Samples by DCGC-FID (BA.30)
4. Care and Maintenance of Equipment and Environmental Conditions (BA.21)
5. Sodium Fluoride QA Checks for Kits (BA.35)
6. Uniform Standards for Withdrawal (BA.09)
7. GC-FID Routine Maintenance (BA.24)

C. Study Questions/Practical Exercises

1. Trainee will successfully make quality control standards at selected target concentration.
2. The trainee will analyze case-like materials as practice samples or mock casework. A lab report and notes will be generated to mimic actual casework. The reports will be reviewed by a current proficiency tested analyst to ensure current practices and procedures are being implemented and reviewed properly.
3. General
   a. For the following: NTRM Ethanol Standard, QC Solutions (water and blood), and the Run Calibration Curve, what criteria must be met for each for the results to be reported?
   b. The agreement between the replicate analyses of samples should not exceed what percentage? Why?
   c. What factors are taken into account for the uncertainty calculation? How is it reported?
   d. Why are there the four results given through the analysis of DCGC-FID? How is the uncertainty applied to the reported value?
   e. How is water-ethanol QC established? Why are there requirements?
   f. What volume is sampled for each of the following: Standards, QC's, Unknowns, and Internal Standard?
   g. How long are samples rocked before dispensing? Why?
   h. When choosing a blood vial for alcohol analysis, indicate the order of prefernce: red top serum separator tube, grey top tube, purple top tube. Why?
   i. What is the powder present in an unused blood vial? An unused urine container? Why is it there?
4. Dual Column GC-FID
   a. What are the gases used for in the blood alcohol DCGC-FID system? Identify the carrier and FID gases. Why are these gases used for analyzing ethanol in blood?
   b. Why is the lab using a dual column GC-FID system as opposed to the single column system?
   c. What are the temperature conditions in the dual column HS-GC? Why are those conditions important?
   d. Why is it important to turn on the FID approximately 30 minutes prior to starting a sequence run?
   e. How is the instrument being calibrated? Why is the lab not preparing the standards being used?
   f. How can an analyst determine if any maintenace is necessary on the instrumentation?

g. What type of maintenance can be done if the chromatography is not ideal?

5. Calculations

a. Calculate the alcohol concentration using the following information: Ethanol response: 206725.65, n-propanol response: 24394.81, slope: 59.625874, Y-intercept: -0.092496.

b. Calculate a vitreous alcohol result to be reported as a blood alcohol concentration.

D. Assessment

1. Trainer will observe the analysis of the samples and evaluate the completeness and accuracy of the exercises.

2. Trainer will evaluate the analytical results for accuracy.

3. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this documentation in the analyst's training binder.

2. Complete applicable sections of the Authorization Checklist (ALC.36).

V. Module 4: LIMS (Report & Notes)/Computer Systems and Worksheets (Approximately 2 weeks)

A. Objectives/Topics of Study

1. Proper note taking in JusticeTrax LIMS

2. Proper report writing in JusticeTrax LIMS

3. Generating worklists

4. Uncertainty

5. Traceability

6. General laboratory paperwork and organization

7. Preparation of discoveries

8. The trainer will review the available references and procedures with the trainee, including:

a. How to acquire a list of blood alcohol evidence awaiting analysis

b. Discovery paperwork

c. Referee paperwork

d. Instrument maintenance logs

e. Forms

f. Certificates

g. Alcohol files

h. Traceability database

B. References

1. Laboratory Information Management System (FSD.10)

2. Using LIMS (BA.31)

3. Uncertainty of Measurement (BA.39 & BA.40)

4. Blood Alcohol Discoveries (BA.36)

5. Referee Analysis (BA.37)

6. GC-FID Routine Maintenance (BA.24)

7. Alcohol Database (BA.44)

C. Study Questions/Practical Exercises

1. The trainee will be instructed on general laboratory work flow and will then have the opportunity to use the Laboratory Information Management System (LIMS).

2. Trainee to perform practice sequence(s) using LIMS and alcohol analysis instrumentation.

3. Trainee will observe the processing of referee samples, discoveries, certificate of analysis review performed by a trainer or designee.

D. Assessment

1. Trainer, or designee, will review and assess the study questions and practical exercises. Feedback will be provided to the trainee.

E. Documentation

1. Trainer, or designee, to review practice sequence analysis packet.
2. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
3. Complete applicable sections of the Authorization Checklist (ALC.36).

VI. Module 5: Urine/Coroners (Concurrent: Approximately 2 weeks)

A. Objectives/Topics of Study

1. Correlation ratios of urine and vitreous to blood
2. 20 minute waiting period between void and urine sample collection
3. Accuracy of results for urine vs blood analysis
4. Peripheral and heart blood coroner samples
5. Postmortem redistribution
6. Potential issues with decomposition coroner's samples
7. Other volatile substances present in coroner's samples

B. References

1. Postmortem Production of Ethanol and Factors That Influence Interpretation: A Critical Review (ALCO.140)
2. Postmortem Redistribution (ALCO.139)
3. The Distribution of Ethanol in Postmortem Blood Specimens (ALCO.138)
4. The Unreliability of Using a Urine Ethanol Concentration to Predict a Blood Ethanol Concentration (ALCO.048)
5. Urine-Blood Alcohol Ratio: A Survey and Some Comments (ALCO.052)
6. Garriott's pages 114-117, 127-128, 195-210

C. Study Questions/Practical Exercises

1. Why is there a 20 minute waiting period when collecting a urine sample for alcohol analysis?
2. When a urine sample leaks and pools into the secondary container (bag), explain whether or not it is acceptable to test the leaked sample for alcohol content.
3. What are the advantages/disadvantages to each sample type for alcohol analysis: peripheral, heart, cavity, vitreous?
4. What special concerns are there when analyzing coroner's case samples?
5. How can an analyst know if the alcohol present in a coroner's sample is due to ante-mortem consumption?
6. What is the correction factor for UAC to BAC? What is the acceptable range from literature?

D. Assessment

1. Trainer, or designee, will review and assess the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises will be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist (ALC.36).

VII. Module 6: Stability/Fermentation (Concurrent:Approximately 2 weeks)

A. Objectives/Topics of Study

1. Stability of alcohol in water/ethanol solutions and matrix/ethanol solutions.
2. Fermentation of alcohol in biological samples.

3. Measures and safeguards taken by the Laboratory to ensure proper collection and storage of biological samples and reference solutions for alcohol analysis.
    a. Preservative and anticoagulant testing for blood kits.
    b. Storage conditions for biological evidence.
    c. Storage conditions for reference solutions.

B. References

1. Garriott's pages 279-286
2. The Accuracy of Blood Alcohol Analysis Using Headspace Gas Chromatography When Performed on Clotted Samples (ALCO.001)
3. Blood Analysis by Headspace Gas Chromatography: Does a Deficient Sample Volume Distort Ethanol Concentration?
4. Efficacy of 1% Sodium Fluoride As a Preservative in Urine Samples Containing Glucose and Candid albicans (ALCO.041)
5. Alcohol Loss Arising from Microbial Contamination of Drivers' Blood Specimens (ALCO.037)
6. The Stability of Ethyl Alcohol in Forensic Blood Specimens (ALCO.034)
7. Methods of Assessing the Effect of Microbes in Blood and Urine on Ethanol Levels (ALCO.042)
8. The Bacterial Production of Ethyl Alcohol (ALCO.036)
9. The Stability of Ordinary Blood Alcohol Samples Held Various Periods of Time Under Different Conditions (ALCO.032)
10. The Stability of Alcohol in Stored Forensic Blood Samples (ALCO.039)
11. A Study of Blood Alcohol Stability in Forensic Antemortem Blood Samples
12. The Effect of Storage at Various temperatures on Blood Alcohol Concentration (ALCO.154)

C. Study Questions/Practical Exercises

1. What is fermentation? What are the conditions needed that would allow fermentation to occur in a blood sample collected for forensic alcohol analysis?
2. Does fermentation happen in every blood tube over time?
3. Is it possible for the alcohol content in a blood or urine sample to change over time? If so, why? If not, why not?
4. What are the typical changes in blood alcohol concentration over time for grey top tubes?
5. What causes these typical changes in concentration over time?
6. How long is the alcohol concentration stable in a grey top tube when stored at room temperature? Refrigerated? Why?
7. When dealing with a decomposition case, what should be tested? Why?

D. Assessment

1. Trainer, or designee, will review and assess the study questions. Feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions must be submitted to the Trainer, or designee, for review. Include this documentation in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist (ALC.36).

VIII. Module 7: Legal/Ethics (Concurrent: Approximately 2 weeks)

A. Objectives/Topics of Study

1. Court proceedings
    a. Preliminary Hearings
        i. Court 115's
    b. 402 hearings
2. Court decisions
    a. Frye vs United States
    b. Melendez-Diaz vs Massachusetts
    c. California vs Trombetta

d. Daubert vs Merrell Dow Pharmaceuticals
e. Birchfield vs North Dakota
f. Brady vs Maryland

3. California Vehicle Code
   a. Violations or Public Offenses
      i. 23136
      ii. 23140
      iii. 23152
         1. 23152(a) & (b)
         2. 23152(d) & (e)
         3. 23152(f) & (g)
      iv. 23153
4. Communication regarding Laboratory examination results
   a. Required Laboratory documentation
   b. Helpful information to gather before going to court
   c. Limitations of testimony if not qualified in the area of alcohol impairment
5. Courtroom etiquette and protocol
6. ANAB and CAC code of ethics
7. Integrity of sample analysis and reporting true and accurate results

B. References
1. California Vehicle Code book and California Penal Code book
2. ANAB and CAC code of Ethics (PowerDMS)
3. Laboratory suggested Court topics for Alcohol Analysis provided to attorneys.
4. Garrott's pages 581-587

C. Study Questions/Practical Exercises
1. Observe a 115 with an experienced analyst (FAA).
2. Observe phone conversation with Deputy District Attorneys and experienced analyst (FAA) when a case is going to court.
3. Observe courtroom testimony for alcohol analysis with an experienced analyst (FAA).
4. Write a brief synopsis for each of the court decisions listed above.
5. Define each California Vehicle Code listed above.
6. Review ANAB and CAC Code of Ethics and discuss with trainer or designee
7. How does an analyst ensure that true and accurate results are being reported for a given sequence?

D. Assessment
1. Trainer, or designee, will review and assess the study questions/practical exercises. Written feedback will be provided to the trainee.

E. Documentation
1. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete the applicable sections of the Authorization Checklist (ALC.36).

IX. Module 8: Traceability/UOM (Concurrent: Approximately 2 weeks)

A. Objectives/Topics of Study
1. Measurement Traceability
2. Uncertainty of Measurement
   a. Components of uncertainty associated with the quantification of ethanol in biological samples

b. Reporting of uncertainty associated with quantitative results

3. Measurement Assurance
4. Reference Materials
   a. NIST Traceable Reference Solutions
5. Reference Standards
   a. NIST Traceable Standard Solutions

B. References

1. BA.39 Uncertainty of Measurement
2. BA.40 Uncertainty Budget
3. Measurement Traceability (FSD.28)
4. Equipment Service and Calibration (FSD.33)
5. Garriott's pages 531-563
6. An Uncertainty Budget for the Measurement of Alcohol in Blood by Headspace Gas Chromatography (UM.04)
7. Uncertainty in Estimating Blood Ethanol concentrations by Analysis of Vitreous Humor

C. Study Questions/Practical Exercises

1. Define Uncertainty of Measurement.
2. Observe the preparation when sending equipment being calibrated by an outside calibration vendor.
3. Review the documentation included when receiving equipment from the outside calibration service.
4. What is the current uncertainty of measurement associated with blood alcohol analysis in the forensic Alcohol Unit?
5. What factors are considered in the Blood Alcohol Uncertainty Budget?
6. Why is it important to use NIST Traceable solutions when performing alcohol analysis?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist (ALC.36).

X. Module 9: Testimony (Concurrent with other modules: Approximately 3 weeks)

A. Objectives/Topics of Study

1. Presentation of evidence in court.
2. Evidence handling
   a. Process by which evidence is received into the Laboratory
   b. Transfer of evidence in the Lab
   c. Chain of Custody
3. Analysis of biological samples for the presence/absence of ethanol.
4. Uncertainty associated with analytical results.
5. Theory and operation of instrumentation used during analysis.
6. Title 17 requirements
7. Safeguards and precautions taken by the Laboratory to ensure evidence integrity and preservation
   a. Blood Alcohol Evidence Kits
   b. Evidence storage conditions
   c. Evidence retention
8. Court critique

a. Requirement of obtaining an annual court critique

i. Internal Court Critique Form (FSDF.02)

ii. External Court Critique Form (FSDF.03)

b. Review of court critique with Supervisor/Manager

B. References

1. Court Testimony and Proficiency Testing (BA.19)
2. Court Testimony Monitoring (FSD.26)
3. Nonverbal Communication in the Courtroom (ALCO.116)
4. The Expert Witness and Communications Competency (ALCO.110)
5. Jury Preconceptions and Their Effect on Expert Scientific Testimony (ALCO.117)
6. Preparing Witnesses for Cross-Examination (ALCO.112)
7. The Technical Presentation (ALCO.113)
8. Garriott's pages 641-654
9. Court topics for blood alcohol analysis provided to the attorneys upon request

C. Study Questions/Practical Exercises

1. Explain the case workflow from the time you receive it until you seal it.
2. Diagram the HS-DCGC-FID. Show how the sample moves from the vial through the instrument.
3. Review the Court topics for Blood Alcohol Analysis and discuss with trainer or designee.
4. Review court critique for critical content being reviewed when performing testimony

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.
2. Review of court critique with Supervisor, as necessary.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist (ALC.36).
3. Include copy of court critique in analyst's training binder once the mock court is assessed (from module 10).

XI. Module 10: Competency/Mock Court (Concurrent: Approximately 2 weeks)

A. Objectives/Topics of Study

1. The Criminalist may begin performing case work after successful completion of competency and upon authorization from the Manager/Supervisor. The training program may be abbreviated for analysts with previous experience in alcohol analysis.

a. It is at the discretion of the Manager/Supervisor to abbreviate the training program based on previous experience. If the program is abbreviated, the previous experience will be documented.

2. At minimum, the competency will include:

a. A Test of Knowledge will be completed encompassing alcohol analysis and Title 17 requirements with the following criteria:

i. The test will be a closed book test

ii. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 10 questions = 10 points per question). Trainee must receive $\geq$ 80% score on the Test of Knowledge to pass the written exam. Scores between 70-80% can be remediated with follow up clarification. Scores below 70% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.

b. An examination of 25 samples of known alcohol concentration. The results of these samples must not vary more than 5% from the re-analyzed result.

i. Previously analyzed proficiency/competency samples may be used when any of the following steps are taken:

1. The identifying information of a previously used Proficiency sample will be coded by assigning it a different Agency Case #. For example, a previously used ACN like CTS 12-564 will be assigned an internal coded ACN with the unit and date - DRG-060412, ALC-060512, or TOX-060512 etc.
2. Ensure any identifying information is obscured and re-name the sample or samples may be transferred into new clean containers and labeled.
3. Previously analyzed samples and samples prepared in house (sample set) will be re-analyzed by a laboratory qualified analyst before assigning to trainee for testing. The results will be used for comparison.
4. The competency test will be performed within 10 days of the re-analysis of the sample set.
5. Samples may be prepared in house by a qualified analyst. Results of these samples will be within:
    1. +/- 5% (numerical value) of the expected target value for target concentrations between $0.080\% \leq X \leq 0.500\%$.
    2. +/- 0.005 % (concentration) of the expected target value for target concentrations between $0.020\% \leq X < 0.080\%$.

c. Ability to generate written report to properly convey results. The report should be generated in the same manner in which reports are generated for casework purposes.

d. An oral exam (mock court) to assess the individual's knowledge of the category of testing or task being performed.

B. References

1. Competency, Training, Authorizations & Ethics (FSD.21)
2. Jury Preconceptions and Their Effect on Expert Scientific Testimony (ALCO.117)
3. Training for Blood Alcohol Levels (ALCO.004)
4. Non-Verbal Communication in the Courtroom (ALCO.116)
5. Preparing Witnesses for Cross-Examination (ALCO.112)

C. Study Questions/Practical Exercises

1. Trainee will analyze practice samples of blood and urine prior to completing the Competency.
2. Trainee will produce at least one written report according to laboratory procedures for review by trainer or designee
3. The trainee will be given an in-house Mock Court regarding analysis of biological samples for ethanol.

D. Assessment

1. An oral exam (mock court) to assess the analyst's knowledge of the category of testing or task being performed to show that the analyst can articulate their understanding in a clear and concise manner.
2. Results of all 25 samples analyzed must fall within allowable tolerance for the competency. If unsuccessful, remedial training will consist of more samples to be analyzed and a review of the trainees analysis procedures/technique.
3. Trainer, or designee, will review and assess the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Oral exam (mock court) written feedback provided to the trainee will be recorded in the analyst's training binder.
3. Complete applicable sections of the Authorization Checklist (ALC.36).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** BA.42 - Test Quality and Corrections
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.9**	
CHAPTER: Quality Assurance	**SUBJECT:** Test Quality, Corrections, and Measurement Assurance	

I. The Alcohol Unit has quality procedures in place to ensure the reliability of test results.

A. **Assuring the Quality of Test Results**

1. The validity and quality of test results are ensured by doing the following:

   a. Regular use of reference materials water-ethanol quality control samples, with defined tolerance limits for quantitative purposes. See BA.13 and BA.15

   b. Periodic use of blood-ethanol quality control samples, with defined tolerance limits. See BA.15

   c. Participation in proficiency testing. See BA.19

   d. Functional check(s) of measuring and testing equipment. See BA.24 and BA.26

   e. Use of check or working standards with control charts. See BA.39

   f. Intermediate checks on measuring equipment. See BA.18 and BA.21

   g. Replicate tests or calibration using the same or different methods. See BA.30

   h. Retesting of retained items. See BA.37

   i. Review of reported results. See FSD.17, BA.10 and BA.18

   j. Intralaboratory comparisons. See BA.19

   k. Technical and administrative review. See BA.10 and BA.18

2. Procedures and Test Methods

   a. Appropriate methods and procedures for all tests for testing alcohol. See BA.30

   b. Procedures for test data interpretation. See BA.30

   c. All methods, procedures, software or equipment must be validated or performance checked prior to use in casework. See BA.20.

   d. Instructions on the use and operation of equipment (see BA.24 and BA.30) and handling of evidence (see BA.08).

e. Sampling occurs prior to the lab handling the evidence when evidence is obtained from the subject. Procedures for further sampling see BA.08.

f. There is no comparison of unknown to a known as completed in other forensic disciplines. However, there are performance standards that must be met in order for the knowns' and unknowns' data to be considered suitable for the results to be valid and reportable. See BA.30

3. Environmental Conditions

a. See BA.21 for Accommodations and Environmental Conditions for forensic alcohol analysis.

b. For access to and use of areas affecting laboratory activities, see FSD.32 and BA.08

c. Prevention of contamination, interference, or adverse influences on laboratory activities, see BA.08

d. Effective separation between areas with incompatible laboratory activities are not an issue for alcohol analysis but proper care when cleaning glassware with any solvents is addressed in BA.27.

e. Incorporating good housekeeping measures within the laboratory see BA.21.

4. Remedial Actions for Unsatisfactory Criteria

a. If any issues arise from monitoring the quality control procedures listed above, the Supervisor or Manager will make a determination of the extent of the problem and take planned action. The following includes some, but not all, planned actions to correct any significant technical problems:

b. If reference materials are found to be unacceptable due to deterioration or contamination they will not be used for casework.

c. If a significant technical issue arises from the results of proficiency testing, the Supervisor or Manager will determine the extent of the issue, and if necessary open a corrective action to ensure incorrect results are not reported in casework.

d. If a significant technical issue arises from 100% technical review of casework, the Supervisor or Manager will determine the extent of the issue and may open a corrective action that may entail: halting casework, retraining of an analyst, or rewriting of procedures. If the issue is not technically significant, the analyst will be given back the case for correction to ensure the correctness of test results.

5. The use of Quality Controls and Standards are specified in the procedure, and their use is recorded in the case record.

a. For Quality Controls: See BA.15

b. For Analysis of Samples: See BA.30

c. For Technical Records: See BA.10

6. Quality Control samples will be recorded in a manner where trends are detectable and the data will be reviewed statistically. See Measurement Assurance below for the procedures.

B. Measurement Assurance

1. General Information:

a. Measurement Assurance should be performed monthly.

b. The evaluation should include the previous three months of data. If necessary, longer time periods may be evaluated to attempt to identify trends.

c. Software may be used to perform a statistical evaluation using software, such as Access or Excel.

   i. The instructions included below are for using Excel.

d. The measurement assurance should be documented and maintained within the unit.

e. If there is a change in the measurement process or the measurement instruments, the quarterly measurement assurance will be evaluated to determine if the changes are significant enough to require a full budget reevaluation.

2. Instructions for Using Excel for Measurement Assurance:

a. Open the Excel spreadsheet called **Alcohol-Dual MA Template.xls**, located in: L:\Lab\Muir\AlcDB.

b. Once the spreadsheet is open, click on **File**, then **Save As** to save a copy of the spreadsheet. Save the copy in a location on your PC so that it can be edited without making any changes to the template.

c. If not opened to the first tab, click on the first tab, named **MAIN.**

d. Ensure the historical standard deviation is current.

   i. This can be found in UM.04, listed as the Combined Standard Uncertainty for the GC-FID Budget.

e. Enter the **Start Date** for the beginning of the 3 month date range.

f. Enter the **End Date** for the end of the 3 month date range.

g. Click on the **Update All** button.

h. Go to the first QC tab, i.e. DCPE1-Water.

i. Evaluate the data and charts.

   i. See Evaluation and Criteria below.

j. Adjust the charts so the data is legible.

k. Once it is ready to print, click on the chart, click on **File** and then **Print**.

l. Save as an electronic PDF copy in the **L:\LAB\MUIR\Secure Alcohol\DISCOVERY RECORDS\Measurement Assurance** folder.

m. Repeat steps **i.** through **l.** for the second column chart.

n. Click through the tabs and repeat steps **i.** through **m.** for all of the other QCs that have been run during the time period.

o. If a different time period is needed for a QC, the time period can be edited.

i. Go to the QC tab that needs a different time period.

ii. Edit the start and end date as needed and click **Import Data**.

iii. Complete steps **i.** through **m.**

iv. Repeat **i.** through **iii.** for any other QCs that need a different time period.

p. Once all of the charts have been electronically printed, they should be concatenated into one file and saved in the **L:\LAB\MUIR\Secure Alcohol\DISCOVERY RECORDS\Measurement Assurance** folder.

i. The individual files should then be deleted.

3. **Evaluation**:

a. Evaluate the percent difference of the results from the target value against the unexpanded uncertainty of the current blood alcohol budget. The limit lines correspond to k=1, k=2, and k=3, which are the standard deviations. The standard deviation can be found in UM.04, as the Combined Standard Uncertainty for the GC-FID Budget. This evaluation should be performed for:

i. Water-ethanol QCs

ii. Blood matrix QCs

4. **Criteria**:

a. It is acceptable, and expected, that most data points will fall within the 1st limit line (k=1).

b. It is acceptable for points to fall within the 2nd limit line (k=2). However, trends of data points beyond the 1st limit line may need to be explored as this may affect the blood alcohol uncertainty budget.

c. If points fall beyond the 3rd limit line (k=3), then a written explanation should be included with the measurement assurance documentation. The written explanation should address potential sources of variation or larger percent differences and actions taken, if necessary.

i. If there are any explanations are necessary, they should be entered in the Notes tab. The Notes tab should then be printed and concatenated with the charts.

C. **QA Action-Correction (QAC)**

1. An action taken to correct non-conforming work that has already occurred. The action taken to correct the nonconformity will be based on the severity of the non-conformance. QAC-3 is the least significant, QAC-2 is somewhat significant, and QAC-1 is the most significant non-conformity. Refer to FSD.15 for explanation of the types of QA Actions.

a. Non-conformity: any aspect of testing or work product that does not conform to laboratory policies, procedures, or the agreed requirements of the customer.

2. **QAC-3:** an action taken to correct a non-conformity when the significance of the non-conforming work is minimal and is unlikely to reoccur. The correction is readily

apparent and can be made quickly. The action will be taken immediately, often by the person observing the non-conformity. The non-conformity or action may or may not be documented. Examples may include:

a. A mis-shot on the instrument for case sample.

   i. Correction would be to fix any apparent issue and re-analyze.

b. Typographical error or data entry error that can be fixed before released.

c. Wrong Evidence type in LIMS that changes divisor (e.g. blood versus urine).

3. **QAC-2:** action taken to correct a non-conformity when the non-conforming work is of some significance and the investigation demonstrates that the non-conformity did not affect the validity and accuracy of the test result. QAC-2 corrections are actions made to prevent non-conformity in casework from being reported and will be documented. QAC-2 issues will be documented and maintained (electronically) in the Alcohol Tracking Database. The correction will be made. The documentation will be evaluated by a Supervisor/Manager periodically. The Supervisor will evaluate for issues or patterns of problems that may need to be elevated to a QAC-1. Examples of a QAC-2 may include:

   a. Quality controls not giving expected results (e.g. for the water and blood QCs).

   b. Standards not giving expected results (e.g. the STD's not passing criteria).

   c. Inappropriate storage of reagents or controls (e.g. left unrefrigerated) when it is subsequently demonstrated its use did not affect the validity and accuracy of the test result.

   d. Persistent problems identified during checking of reports (this would be documented by Tech Review).

   e. Unsuccessful runs.

4. **QAC-1:** an action taken to correct a problem or error resulting in erroneous results or conclusions issued for casework, proficiency testing or court testimony, when evidence is compromised or if the problem or error could recur. These issues must be documented immediately by a Supervisor/Manager, who must use the QA Action Procedure. The correction should be made as soon as possible. The action may involve stopping casework, re-training, competency testing, re-writing procedures, etc. Examples of non-conformities that would likely immediately rise to a Quality Action Correction-1:

   a. A technical problem or error results in erroneous results or conclusions being reported in casework.

   b. A technical problem or error results in an unsuccessful proficiency test.

   c. Erroneous court testimony is identified.

   d. Evidence is compromised.

   e. A non-conformity is identified in an audit.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 09/29/2016	**NUMBER:** BA.43 - Case Record Imaging
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Case Record Imaging	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** BA.44 - Alcohol Tracking Database
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Alcohol Database	

I. The Alcohol Database is an Access database used to prepare logs and reports of supplies, consumables, and equipment that may effect analytical results. This may include NTRM standards, solutions, chemicals, equipment, and services that are critical to the quality of tests.

A. General Information

1. The database is split into a front end and a back end. The back end resides on a network server and contains the data. The front end resides on an individual's computer and contains forms and reports for use. Multiple interfaces of the front end may exist to meet the needs of the various users.

   a. The front end is provided to users by placing a copy from the network server. **For use of the database, the user should copy the front end to their computer. The user should not use the copy on the server or create a shortcut to the copy on the server.**

   b. Changes can be made to forms or reports in the individual front ends without affecting other users. This allows the user to address issues with printer margins and labels.

2. The forms and reports are designed to provide the information required by the SOP, see BA.11. The appearance and location of forms and reports within the database as well as those produced by the database may change from the description here as long as it supplies the required information.

3. The Access database does not provide electronic audit trails of the information entered, therefore database/log records are printed from the database and maintained in the Alcohol Unit. Changes made after the record is created must be made on the printed copy and should also be updated in the database.

4. The database has been designed to include warnings to the analyst about expired and archived equipment and consumables. However, it is the responsibility of the analyst to ensure the equipment and consumables used are appropriate for analysis, and should not rely solely on the database.

5. For many categories, there is an option to have a reviewing analyst and a verification.

   a. Reviewing Analyst: It is **recommended** that at least one analyst, other than the analyst preparing a solution, initial and date the solution preparation log

and database log to document that the procedures were followed and the paperwork was completed correctly.

b. Verification: Procedures for the specific category should be followed in regards to verification, if one is needed. If a verification is done, it should be noted in the database and the sequence linked to the item. For solutions, this may or may not be the same analyst that made the solution.

B. Main Database

1. The primary consumables must be entered into the database in order to track sequences and preparation of laboratory generated solutions. These include:

   a. Chemicals

   b. Reference materials or ampules

   c. Matrix blanks

   d. Dry gas standards

   e. Solutions

   f. Reagents

2. For the various categories, there is an "Add" and a "View" button.

   a. The "Add" button opens a blank form for data entry.

   b. The "View" button opens a form listing all entries for that category in the database. The form includes some filter fields to narrow down the records. Basic Access filters and sorts can also be used.

3. Adding Consumables to the database

   a. In each of the categories, the lot number is the primary key. This means the database will not allow the user to enter multiple records with the same lot.

      i. If the “duplicate record” error is received, check the existing record to ensure the information previously entered is the same. Make sure the “archive” box is not checked.

   b. Chemicals

      i. Enter the chemical name, manufacturer, manufacturer lot number, and expiration date.

      ii. Many chemicals do not have expiration dates. If no expiration date is listed, leave blank.

      iii. The bottle must be initialed and dated when it is received into the laboratory.

      iv. If a certificate of analysis (COA) or other documentation is available, it can be linked to the record.

   c. Blank Matrix

      i. This includes blood and urine obtained from lab staff or from an outside vendor.

ii. Enter the type of matrix, lot number, source and expiration date, if applicable.

1. If an outside vendor provides a lot number, that should be used.

2. Matrix from lab staff can be named based on the date obtained and the initials of the individual providing the sample.

1. For example, the lot number for a sample collected from John Doe on November 1, 2017 would be: 171101JD.

3. Matrix from an outside vendor may have an expiration date, matrix from lab staff do not.

iii. Verification or screening for interfering substances may need to be performed.

1. Matrix from lab staff or certified by vendor does not require verification.

2. Blood obtained from a blood bank usually requires screening before use.

1. Once screened, the documentation should be hyperlinked in the database and the lot should be marked as verified.

iv. There is a comment box that can be used to list anything important about the matrix. This may include if any substances were detected during the verification process or if preservative was added.

d. Standards - Ampules or Reference Materials

i. Most of the reference materials used in the Alcohol Unit are NTRM ampules of ethanol in a solvent and are received with a certificate of analysis (COA). Another reference material would be the dry gas canisters used for the breath instruments.

ii. For purchased standards, enter the manufacturer lot number, concentration, manufacturer, matrix, expiration date, number of items received.

1. When entering the manufacturer lot number, the database will indicate when a duplicate entry is being created. A dialog box will open and clicking yes will delete the duplicate record being created.

2. The concentration field is for the nominal concentration, located on the COA.

3. For number of items received, enter the number of items received and be sure the "transaction" is "received." The date field will automatically populate. If the lot number was already entered in the database, add another "received" transaction and enter the number received in the new shipment.

iii. The “COA Link” field allows the user to link this record to a saved copy of the COA. Right click on the field, select the hyperlink menu, and then select “Edit Hyperlink.” A navigation window will open – navigate to the desired file and click OK. The link can also be created

by dragging the icon of the file to be linked from the Explorer window to the hyperlink field. Once saved, clicking on this field will open the file. COAs provided as print copies can be scanned to an electronic format for linking.

1. When hyperlinking, the COA file address should start with \\fs1 (preferred) or G:.

e. Review Ampules by date

i. Enter the date new ampules were added to the database. A report will be generated showing all ampules added on that date. This can be checked by another analyst to review the entries for completeness.

4. Inventory

a. Manufacturer Information

i. In this form, new items can be entered. Enter the manufacturer, catalog number, concentration, and minimum number to have in stock, if needed.

b. Current Inventory

i. This prints a report of all ampules that have not been marked as archived and the number of ampules calculated to be present in the lab.

1. It will list the total number present as well as the number present for each individual lot.

c. Order Report

i. This prints a report of ampules, with the catalog numbers, that need to be ordered.

1. The report lists the number currently in stock based on the entries in the database, the minimum number to have in stock, and how many to order.

ii. For the ordering report to work, **it is important the ampules are tracked accurately.** When an ampule is used in the making of standards or for analytical sequences it will be tracked in the database by entering the number of ampules used. Ampules that are not used directly (ie: discarded due to expiration) must be logged in the database. This is done by adding a "used" transaction and the number of ampules "used." It is recommended to do this from the record of the lot number of the ampule.

d. Detailed Inventory

i. The Detailed Inventory report tracks the transactions of physical ampules or gas standards. The report shows when an ampule was received and/or used.

5. Equipment

a. Pipettes, volumetric flasks, diluters, balances, and GC/FID instruments are tracked within the database for calibrations and use in solutions and analytical sequences.

b. Equipment is added to the database using this form.

i. Click "Add Equipment" and enter the equipment ID, serial number, type, manufacturer, model, and lab ID.

ii. If a physical log was created, scan the log sheet and hyperlink it to the entry.

c. The Equipment form will display the records for all equipment in the database.

i. Checks of the equipment are entered for in-house and professional checks.

1. Click "edit record" and scroll to the empty boxes. Include whether it was an in-house or professional check, the date, the next calibration due date, and analyst. If it was an in-house check, enter the equipment used in the boxes below the check information on the form.

ii. Supporting documentation should be hyperlinked.

iii. The "Logs" section, on the right, shows the hyperlinked physical maintenance logs.

d. It is important to add the next calibration date so that it will show up on the "Cal Due" list. This can be accessed from the main menu.

e. DCPE1 and DCPE2 have buttons on the main menu that allow an analyst to view and add a maintenance log entry.

i. To add a log entry, select the component, the date, analyst initials, the problem, and the action taken.

6. Solutions

a. Laboratory generated solutions include internal standards, resolution solutions, water/ethanol QCs, and matrix QCs.

b. Adding a solution

i. The assigned lot number must be unique, and is typically based on the type of solution, date of preparation, and concentration (if applicable). For example: YYMMDDXXXX, where XXXX is the concentration. The following conventions may be used:

1. IS: Internal Standard - IS*YYMMDD* (Refer to BA.16)

2. RS: Resolution Solution - RS*YYMMDD* (Refer to BA.17)

3. QC: Water/Ethanol QC - QC*YYMMDD-XXXX* (Refer to BA.15)

4. CCCL: Lab prepared Blood Matrix QC - CCCL*YYMMDD-XXXX* (Refer to BA.15)

5. For purchased blood matrix QCs, the solution ID is the lot number from the vendor and concentration. For example, a 0.084% blood matrix QC from Utak with a lot number of A5005 would be UTAKA5005-084.

1. For date prepared, enter the date received.

ii. Enter the Solution ID, prep date, analyst, solution type, target value, expiration date, and volume prepared, including units. Include all chemicals, standards, equipment, and matrix, if applicable, used to create solution.

1. If any of these have not been entered in the database, a "null" error will appear. That information will need to be entered before continuing. Close the subform and the record will be deleted. Once the information has been entered, click "Add Solution" and start over.

2. When an ampule is used, **it is important the ampules are tracked accurately.** Correctly enter how many ampules were used to make the solution. The default number is 1, but if using a previously opened ampule, set the number to 0.

3. If the ampule has been linked to a saved COA, click on the link to view it. Check the COA to ensure the certified concentration is the same as the nominal concentration. If different, use the certified concentration for preparation of solutions.

4. The expiration date should be entered based on procedures or the earliest expiration date of the components. If there is no expiration date, leave blank.

5. The "Print Record" will print the solution log. Print the log and keep on file in the Alcohol Unit. Once the solution has been verified and reviewed, both the physical log and database log need to be updated.

6. The "Print Label" will print a label that can be placed on the bottle. This information must be on the bottle, but it is not necessary to print this label. If desired, print this label and tape it to the bottle.

7. The "Biohazard-med" will print identification labels. Enter the amount of blank spaces/labels to skip, enter the number of copies needed, and then physically print the label(s). The Avery 2/3 x 1-3/4" (Avery 5155) labels are used for this button. This can be used on a small, refillable bottle.

8. The "Biohazard-small" will also print identification labels, but uses the Avery 1/2 x 1-3/4" (Avery 5167) labels. Enter the amount of blank spaces/labels to skip, enter the number of copies needed, and then physically print the label(s). This can be used on a small, refillable bottle.

iii. Once verified, the supporting documentation should be hyperlinked, as well as the verified box checked, the date verified, the sequence ID, if applicable, and the analyst.

iv. When making a Title 17 QC solution, the target value cannot be entered until it has been established. All other information should be entered into the database before preparation to ensure all chemicals, standards, etc., are not expired. The intended target concentration may be entered

until the established concentration can be entered. Once the QC concentration has been established per procedure, it is important that the established value be entered in the database as the "target value."

7. Verify Solutions

    a. Laboratory generated solutions must be verified. This will generate a list of all items entered but not verified.

        i. Most solutions are verified by successful use in a sequence. Independent verification prior to use in casework is not required.

        ii. Verification must be recorded in the database and on the physically printed form.

            1. The purpose of verifying in the database is to keep track of solutions that need to be verified.

            2. If a solution is not successfully verified and will not be used or will be discarded, the verified box should be checked in the database so that it will not appear in forms/reports. A comment can be added in the sequence field that it will not be used. Include the date and your initials.

        iii. Individual solution forms also contain a section to add verification.

8. Archive

    a. Archiving consumables and solutions is important to prevent inadvertent use of old lots and will minimize the size of drop-down lists.

    b. The form contains tabs for each of the different consumables/solutions.

        i. Within each tab is a list of all unarchived consumables/solutions. Find the item to be archived and check the archive check box.

    c. Archiving should be done once a lot has been consumed, discarded, or expired.

    d. If additional supplies of a consumable are received and it has already been marked as archived, the archive box should be unchecked before adding another transaction.

9. Sequence

    a. The traceability form allows data entry of all the lot/serial numbers used in an analytical sequence.

    b. To start a new sequence, click "Add Sequence."

        i. The sequence ID must be unique. It is typically based on the date analysis begins and the instrument. Sequences are designated A, B, C, etc., as needed to ensure each sequence on the same instrument on the same day has a unique identifier. For example, 160701A DCPE1 would be the first sequence run on July 1, 2016 on instrument DCPE1.

        ii. Lot numbers for solutions and standards must already be in the database.

1. Any ampule used in a sequence would be a standard. The "Standard ID" is the lot number assigned by the manufacturer. The correct number of ampules used must be entered. **It is important the ampules are tracked accurately.** The default number is 1, but if using a previously opened ampule, set the number to 0.
    1. If the Title 17 QC was an ampule, it would be put in the standards.
2. The IS, RS, and Matrix QC, if used, would be the solutions used.
    1. If the Title 17 QC used was made in house, it would be put in the solutions.
3. By entering the lot number, all other information should be populated automatically. Barcodes can be scanned where available.

c. Adding Results

i. Results are added after the instrument has completed the sequence.

ii. Results can be entered manually or imported.

1. To enter manually, click "Add Results" and simply type in the results for each standard and QC.
2. To import the results, the text file created from running the sample report on the instrument is used.
    1. In the sequence entry, click "Import Std Results." Navigate to an odd numbered case text file (generated when the sample report is run) and select it. Since all odd numbered files have the same formatting and information needed, it does not matter which one is chosen. The results for the standards will be imported automatically, assuming the curve levels are as follows:
        1. Level 1: 0.0200%
        2. Level 2: 0.0500%
        3. Level 3: 0.1500%
        4. Level 4: 0.3000%
        5. Level 5: 0.5000%
    2. A form will then show the QC results. The correct QC lot must be assigned to the correct results. Then click "Update," otherwise the QC results will not be imported.
        1. If the same lot of QC was used more than once in the sequence, only one set of results will import. The rest will need to be put in manually.

3. The "Sequence Traceability Worksheet" will open. Double check that all information has been imported and is correct. If all is correct, digitally print the worksheet by clicking "PDF or XPS." Save the file so that it can be included in the summary run packet.

    1. If something failed to import, close the worksheet and go back to "Add Results" and manually enter the data. Then print the "Worksheet w/ Results" and verify all information is now there. If all is correct, digitally print the worksheet to be included in the summary run packet.

iii. Once the sequence packet is completed, it should be hyperlinked to the sequence. The Tech/Admin reviewer can sign the packet and it will stay linked **so long as the name of the file and file path does not change**.

iv. The comment field may be used as necessary.

1. **Note:** whatever is written in this field will print on the traceability sheet.

v. The "Sequence Traceability Worksheet" will also need to be added to the case notes.

1. In order to do this, the LIMS worklist must be imported.

    1. Within the sequence screen, click on "Import Worklist." Then navigate to the text file generated by LIMS when sending the worklist to the DCPE instrument.

2. Once all information on the traceability worksheet is verified, click "LIMS Worksheets." A dialog box will open with a reminder to ensure all other worksheets have been deleted from the C:\Temp folder. If all other worksheets are deleted, click ok. All of the worksheets will automatically print to the C:\Temp folder. Use JusticeTrax Batch Imager to load from a batch file and select "worksheetBatch" in the C:\Temp folder. Uncheck the box "Send BA Val to LIMS", login with your LIMS username and password. Review the Traceability Worksheet to be placed into each lab number request and send to LIMS by clicking "Submit to LIMS".

10. Quality Form

a. **All failed runs must have a log entry.** An entry related to a sequence should be added by clicking the "Quality Log" button on the sequence form. An entry not related to a sequence can be added through the "Quality Form" button on the main menu. The log can also be reviewed by using the "Quality Form" button.

i. The log allows for additional information to be added but will not appear on the traceability worksheets. This may include information such as running the sequence on a different instrument or changes in instrument parameters. If the run was completely unrecoverable, check the “Failed” box. This may be used to track any other “non-

conformities." See BA.42 – Test Quality and Corrections for the types of issues that require a log entry.

11. Backup

    a. The front and back end of the database should be backed up periodically. It is recommended to be backed up weekly to an external hard drive. The external hard drive should be checked at least quarterly to ensure the backup files are stored properly.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Blood Alcohol Technical Unit Manual	**REVISION DATE:** 05/21/2018	**NUMBER:** BA.45 - Alcohol Impairment Training
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Alcohol Impairment Training	

I. Policy: The training protocol for the Forensic Alcohol Unit will be used to train Criminalists in knowledge, skills, and abilities prior to being authorized to testify regarding the effects of alcohol on the human body and alcohol impairment. The Laboratory's Forensic Alcohol Program is regulated by the California Department of Public Health Services (CDPH) and the "California Code of Regulations Title 17. Public Health Division 1. State Department of Health Services Chapter 2. Laboratories Articles 1-7" (Title 17). This training program is intended to supplement the requirements of CDPH and Title 17. This training is also part of the authorization by the laboratory to be a Forensic Alcohol Analyst (FAA).

A. Expectations

1. Understanding and comprehension of Title 17 and the Laboratory's Forensic Alcohol Program.
2. Interpretation of results of alcohol analysis, including correlation of alcohol analysis with subjective observations of the demeanor and behavior of persons who have ingested known amounts of alcohol.
3. The trainee will coordinate and conduct an alcohol impairment study to observe the effects of alcohol and alcohol impairment in a controlled environment.
4. The trainee will participate in Ride-Alongs to observe driving patterns, objective signs and symptoms, and field sobriety testing of subjects suspected of driving under the influence of alcohol in the field.
5. To gain expertise in courtroom testimony and alcohol impairment through training and experience.
6. The training will minimally address the following:
    a. Value and purpose of forensic alcohol analysis.
    b. Physiological action of alcohol.
    c. Pharmacology and toxicology of alcohol.
    d. Laboratory methods of forensic alcohol analysis.
    e. Instruments and procedures for breath alcohol testing.
    f. Interpretation of results of alcohol analysis, including correlation of alcohol analyses with subjective observations of the demeanor and behavior of

persons who have ingested known amounts of alcohol.

g. Field Sobriety Testing.

h. Drink Calculations.

i. Retrograde extrapolation.

j. Court testimony.

k. Requirements of Title 17.

l. General Forensics

a. Analysts should develop a general knowledge of other forensic disciplines that may often be related to evidence processing such as:

i. Latent prints

ii. Biology/DNA

iii. Toxicology

1. Toxicology involves drugs, uses similar instrumentation and is often related to drug cases. Analyst should have an understanding of the differences in analysis, how instruments are used and reporting of results for toxicology evidence compared to drug evidence.

iv. Firearms

b. This knowledge may be obtained from a variety of sources

i. Formal education in Criminalistics or Forensic Science

ii. Supplemental reading of general forensic texts

iii. Observation of analysts in other disciplines at the laboratory

iv. Certification that has a general knowledge requirement

B. Purpose

1. To meet the requirements of the CDPH and Title 17 to be qualified as a Forensic Alcohol Analyst who can provide expert witness testimony regarding all aspects of the Laboratory's Forensic Alcohol Program, the effects of alcohol on the human body, and alcohol impairment.

2. To understand and implement the policies and procedures in the Forensic Alcohol Unit for the analysis of biological samples for ethanol, the interpretation of the results, the effects of alcohol on the human body, and alcohol impairment.

C. Education

1. Analysts working in the Forensic Alcohol Unit shall possess a baccalaureate or an advanced degree in a natural science, criminalistics, or a closely related field (Supplemental 5.2.6.1.2). Analysts will additionally meet any educational requirements set forth by the CDPH and Title 17 for qualifications as a Forensic Alcohol Analyst (FAA).

D. Training Records

1. The appropriate training records will be placed in the analyst's training binder. The training binder will be maintained by the analyst and reviewed by the Manager/Supervisor. Minimally the training binder will include the following:

    a. Authorization Checklist (ALC.35 and ALC.36)

    b. Reading list

    c. Study questions/practical exercises

    d. Summary of Ride-Alongs

    e. Competency and proficiency records

    f. Updated analyst Statement of Qualifications (SOQ) after attendance at any workshop, technical meeting, or training class

    g. Court critiques

2. Report summary of Alcohol Impairment Study

    i. Calculations done for drinking subjects

    ii. Results from breath, blood, and urine analysis

    iii. Subject performance on divided attention tasks and sFST's

    iv. Conclusions reached based on findings of in-house impairment study

E. Effectiveness

1. The following are training actions and can be used to evaluate the effectiveness of initial training:

    a. Communication with trainer and/or Supervisor throughout the training program.

    b. Practical and written exercises as indicated in the documented training program.

    c. Impairment Study summary report.

    d. Mock court exercises.

2. A Forensic Alcohol Analyst will demonstrate the ability to provide expert witness testimony regarding the effects of alcohol on the human body and alcohol impairment upon successful completion of the following:

    a. Study questions

    b. Alcohol impairment study

    c. Mock court for alcohol impairment

    d. Written forensic alcohol analyst questions

3. The following are training actions and can be used to evaluate the effectiveness of on-going training:

    a. Oral or written feedback provided to trainer upon completion of training classes.

b. Court critiques

i. Internal Court Critique (FSDF.02)

1. To be completed by experienced Laboratory personnel

ii. External Court Critique (FSDF.03)

1. To be completed by the Prosecution, Defense Counsel, or presiding Judge

4. Remedial Training

a. Remedial training may be implemented as a result of:

i. Proficiency testing

ii. Courtroom testimony monitoring

iii. 100% of technical review of casework

b. The remediation will be documented through a QA Action.

5. Duration of Training:

a. In general, the trainee is expected to complete the Alcohol Impairment Training within approximately one year after entering the alcohol unit.

b. The training duration can be altered depending upon the trainees prior knowledge, experience, and initiative to complete the modules.

i. If training is adjusted, written documentation (email, letter, or memo) will be provided by the Supervisor or Manager.

c. The Alcohol Impairment Training is intended to happen concurrently with blood alcohol and breath alcohol analysis training.

6. A yearly performance evaluation will be an assessment to review an analyst's development and evaluate the effectiveness of training actions. The yearly review includes:

a. Setting goals for the analyst

b. Review of SOQ

c. Review of training binder

F. References

1. Trainer will review the references available and their locations with the trainee.

2. The journal articles referenced are mandatory readings.

3. The textbook references are mandatory so far as the sections of the book that are pertinent to the topic of study within each module where they are referenced.

4. In addition to the specific references listed in each training Module, the trainee should also understand the following:

a. Title 17 - Forensic Alcohol

b. Blood Alcohol Technical Unit Manual

c. Breath Alcohol Technical Unit Manual

d. Division Manual

e. Alcohol Literature Binder Index (ALCO.211)

i. Articles and references are available on PowerDMS and the Laboratory shared drive.

II. Module 1: Pharmacology and Physiology of Alcohol - (Duration ~2 months)

A. Objectives/Topics of Study

1. Chemistry and Biochemistry of Alcohol
2. Pharmacokinetics of Ethanol
3. Pharmacodynamics of Ethanol
4. CNS Depressants
5. Absorption, Distribution, Elimination
6. Arterial/Venous Differences
7. Coroner's samples

B. References

1. Absorption, Distribution and Elimination of Alcohol: Highway Safety Aspects (ALCO.021)
2. Widmark's Hypothesis; ABC of Widmark's Beta and Rho (ALCO.031)
3. Variation in Blood Alcohol concentration Following the Last Drink (ALCO.008)
4. Blood Alcohol: The Concentration-Time Curve and Retrospective Estimation of Level (ALCO.027)
5. Chemical Tests for Intoxication: What Do The Numbers Really Mean? (ALCO.011)
6. Elimination of Ethanol in Humans (ALCO.009)
7. Garriott Chapter 2 (3.5), (3.6), (3.7) (4.3), (4.4) Variation in Blood Alcohol Concentration Following the Last Drink
8. Evaluation of Blood-Ethanol Profiles After Consumption of Alcohol Together with a Large Meal
9. Influence of Age, Gender, and Blood-Alcohol Concentration on the Disappearance Rate of Alcohol from Blood in Drinking Drivers (ALCO.014)
10. The Calculation of Blood Ethanol Concentrations in Males and Females (ALCO.015)
11. Peak Blood-Ethanol Concentration and the Time of Its Occurrence After Rapid Drinking on An Empty Stomach
12. The Metabolism and Pharmacokinetics of Alcohol in Man (ALCO.006)
13. Blood Alcohol Concentration Determined from Urine Samples as a Practical Equivalent or Alternative to Blood and Breath Alcohol Tests (ALCO.049)

14. Ethanol Distribution Ratios Between Urine and Capillary Blood in Controlled Experiments and in Apprehended Drinking Drivers (ALCO.050)

15. Urine-Blood Alcohol Ratio (ALCO.052)

16. Pharmacology of Ethyl Alcohol and Disposition of Alcohol in Man (ALCO.023)

17. Pharmacology, Toxicology and Physiology of Alcohol (ALCO.124)

18. Disposition of Alcohol in Man (ALCO.126)

19. Physiological Aspects of Breath-Alcohol Testing (ALCO.131)

C. Study Questions/Practical Exercises

1. Draw a blood alcohol curve.

2. What is the acceptable range for elimination rates? What are some of the factors that may affect the elimination rate?

3. What is the acceptable range for absorption rate? What are some of the factors that may affect absorption?

4. What role does the gender or weight of an individual play in absorption, if any?

5. Explain how alcohol is distributed throughout the body after it is ingested by the mouth.

6. How do A/V alcohol concentrations change over the course of the breath curve?

7. What is the scientific basis for correlation ratios?

8. How does the correlation ratio change as the alcohol curve changes?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee.

2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.

3. Complete applicable sections of the Authorization Checklist (ALC.36).

III. Module 2: Impairment/Impairment Study - (Duration ~2 months)

A. Objectives/Topics of Study

1. Behavioral and Performance Effects of Alcohol on Driving

2. The Role of BAC and Complexity of Driving Task Impairment

3. Tolerance

B. References

1. NHTSA website: https://www.nhtsa.gov/risky-driving/drunk-driving (many resources within NHTSA website)
2. Alcohol Tolerance and Its Significance in Driving (ALCO.102)
3. Tolerance at High Blood Alcohol Concentrations: A Study of 110 Cases and Review of the Literature (ALCO.103)
4. Acute Intoxication and Tolerance Pharmacology of Alcohol (ALCO.020)
5. Laboratory Studies of the Effects of Alcohol on Some Variables Related to Driving (ALCO.059)
6. Alcohol Effects on Driver Performance Under Conditions of Divided Attention (ALCO.062)
7. The Role of Drinking Drivers in Traffic Accidents (ALCO.068)
8. The Influence of Alcohol on Automobile Driving Ability (ALCO.070)
9. Skill Performance at Low Blood Alcohol Levels (ALCO.072)
10. Alcohol and the Driver Council on Scientific Affairs (ALCO.074)
11. The Effect of Alcohol on Human information Processing Rate (ACLO.075)

C. Study Questions/Practical Exercises

1. Practical Exercise: Coordinate and conduct an alcohol impairment study.
   a. Participant coordination:
      i. Locate male and female volunteer drinking subjects
      ii. Officers to administer sFST's
      iii. Blood technician
      iv. Laboratory Staff for their assistance
   b. Calculate amount of alcohol needed for the drinking subject to reach a blood alcohol level of 0.08% - 0.10%.
   c. Design tasks/tests that require divided attention and associated clues to assess the performance on the divided attention tasks.
   d. Calculate elimination rate for the drinking subjects.
   e. Correlate subjects' blood alcohol level and impairment.
   f. Correlate subjects' blood, breath, and urine results.
2. What is tolerance as it relates to alcohol? Despite a person's tolerance, is there a level at which all people are significantly impaired for the purpose of safely operating a motor vehicle?
3. Defend your opinion about impairment with literature sources and articulate why you believe individuals are impaired for the purpose of driving at the level chosen in 2.
4. What is the difference between fine motor skills and gross motor skills? Which are affected first by alcohol?

5. Can a person be impaired at 0.05% BAC? Why? What signs, symptoms or clues of impairment would you expect to observe at low BAC levels?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee, for review.
2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.
3. Alcohol impairment study summary report: Compile results from psychomotor tests and chemical tests. Include a summary of results, interpretations, and conclusions made during the study. Submit summary report to the trainer for review. Trainer will review, sign and date, and provide written feedback.
4. Complete applicable sections of the Authorization Checklist (ALC.36).

IV. Module 3: Calculations/Statistics/Uncertainty - (Duration ~1 month)

A. Objectives/Topics of Study

1. Consideration of assumptions to be made when asked to do a retrograde extrapolation
2. Approaches to Widmark Calculations
3. Practice and pitfalls of Retrograde Extrapolation
4. Drink Calculations
5. Blood correlation calculations
   a. Blood to breath alcohol concentrations
   b. Blood to urine alcohol concentrations
6. Basic principles of Mathematics and Statistics in Alcohol Toxicology

B. References

1. Uncertainty of Measurement (BA.39)
2. Uncertainty Budget for Blood Alcohol (BA.40)
3. Dealing With Uncertainty in Chemical Measurements - March 2003 (ALCO.207)
4. Alcohol Content of Beer and Malt Beverages: Forensic Considerations (ALCO.125)
5. Widmark's Hypothesis; ABC of Widmark's Beta and Rho (ALCO.031)
6. Blood Alcohol: The Concentration-Time Curve and Retrospective Estimation of Level (ALCO.027)

7. The Calculation of Blood Ethanol Concentrations in Males and Females (ALCO.015)
8. Widmark's Equation (ALCO.030)
9. Pharmacology and Toxicology of Ethyl Alcohol (ALCO.029)

C. Study Questions/Practical Exercises

1. What assumptions should be made when considering a back calculation?
2. Is there an error rate associated with the calculation of the number of drinks in a person's system? Explain.
3. If the test subject's correlation factor is 1600, with a breath alcohol result of 0.07%, calculate what this person's breath result would be. What is the scientifically accepted blood:breath correlation?
4. Given: 150 lb. male who consumes (5) glasses of wine from 6pm - 9pm. What is his BAC at 11 pm?
5. Given: 150 lb. male with a PAS result of 0.10% BrAC at 11pm. Same person had their blood drawn at 1:30 am and the blood result was 0.09%. Can you back extrapolate to 11 pm with the given blood result? How and why? Explain the discrepancy between the PAS and back-extrapolated result.
6. Given: 150lb male with a BAC of 0.09% from a blood draw at 1:00 am. Can you back extrapolate to 11 pm with the given blood result?
7. Can you back extrapolate to 11 pm with the given blood result if the individual says that their last drink was consumed at 10:55 pm?
8. Given: 170 lb. female who consumes (4) 40 oz. beers from 6pm-9pm. What is her BAC at 11 pm?
9. Given: 170 lb. female who consumes (4) 8% beers from 6pm-9pm. What is her BAC at 11 pm?
10. Given: Breath alcohol results: IR 0.09%, FC 0.10%, IR 0.09%, FC 0.11%, how many drinks were in this 135 lb female subject at the time of the test?
11. If it was determined that ten 12 oz. beers (4% ethanol) were consumed for an individual to be at 0.20%, how many drinks would have been consumed if the beers were 8% microbrew? How many drinks would be consumed if it was a 15% malt beverage? How many drinks if it were a Long Island Iced Tea?
12. Given: 240 lb male with blood alcohol results of 0.25%. How many drinks are in his system at time of blood draw? How many 40 oz. malt liquor (8.2%) drinks are in his system? How many 1 oz. shots of Tequila?
13. Given 220 lb female at 0.19%; how many beers did she have in her system? How many 22 oz. microbrew beer (9%) drinks did she have?
14. Given 95 lb female at 0.21%; how many ounces of NyQuil (10%) did she have? Tequila shots? Sam Adams Utopias (28%)?
15. If a 200 lb male crashed car into a light pole across the street from home and drank after driving, how many drinks would he have had to consume after driving to be

0.15% one and a half hours after driving, if he was less than 0.08% (and no longer absorbing) when he crashed?

16. If a subject's BrAC is 0.12%, what would their BrAC be if their correlation ratio was 2400:1? 2000:1? 1000:1? Are these reasonable values to perform the calculation?

17. What would the level of a subject be if they had a correlation ratio of 1500:1 when they blew into the breath instrument and it read 0.11%?

18. If a subject's BrAC is 0.093%, would they still be above 0.08% if the defense contends that the subject had a correlation ratio of 1800:1 at the time of the breath test?

19. If a subject had a blood alcohol level of 0.08%, what would their breath alcohol level be if their correlation ratio at that time was 1600:1?

20. If a person has blood and breath taken at the same time (BAC = 0.14% and a BrAC = 0.11%), what would their correlation ratio be?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee, for review.

2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.

3. Complete applicable sections of the Authorization Checklist (ALC.36).

V. Module 4: Field Sobriety Tests and Evaluation - (Duration ~1 month)

A. Objectives/Topics of Study

1. Validations

2. Principles, Application, and Evaluation

3. Standardized FST's vs. FST's

4. Law enforcement Ride-Alongs/DUI Checkpoints

B. References

1. 1997, Florida Field Validation Study

2. 1998, California Field Validation Study

3. Field Sobriety Test Are They Designed for Failure? (ALCO.082)

4. NHTSA and FSTS True Lies and False Advertising (ALCO.83)

5. Development and Field Test of Psychophysical Tests for DWI Arrest (ALCO.081)

6. Colorado Validation Study of the Standardized Field Sobriety Test (SFST) Battery (ALCO.084)
7. An Overview of Field Sobriety Test Research (ALCO.085)
8. Gaze Nystagmus As a Roadside Sobriety Test (ALCO.100)
9. Use of Horizontal Gaze Nystagmus as a Part of Roadside Sobriety Testing (ALCO.089)
10. Is the Driver Drunk? Oculomotor Sobriety Testing (ALCO.090)
11. Horizontal Gaze Nystagmus The Controversy and the Issues (ALCO.093)
12. Gaze Nystagmus and Blood Alcohol (ALCO.088)
13. The Horizontal Gaze Nystagmus Test Fraudulent Science in the American Courts (ALCO.096)
14. A Behavioral Optometry Vision Science Perspective on the Horizontal Gaze Nystagmus Exam for DUI Enforcement
15. DRE Handbook

C. Study Questions/Practical Exercises

1. Define FST's.
2. What does standardized mean?
3. Which FST's are the Standardized FST's?
4. What are the validated clues for each of the Standardized FST's?
5. Are the clues/evaluation for SFST's objective or subjective? Explain.
6. Describe the training that you've received for SFST's clues and administering SFST's.
7. Does a person pass or fail FST's? How are FST's evaluated?
8. During the WAT validation study, how many clues were deemed necessary to determine that the individual was over 0.10%?
9. During the OLS validation study, how many clues were deemed necessary to determine that the individual was over 0.10%?
10. During the HGN validation study, how many clues were deemed necessary to determine that the individual was over 0.10%?
11. Would you draw a conclusion about impairment from one FST without a chemical test?
12. Would you draw a conclusion about impairment from all three SFST's without a chemical test?
13. Are non-SFST's a useful tool for an officer when deciding whether or not a subject is too impaired to drive? Why?
14. Practical Exercise: Participate in at least two Ride-Alongs with law enforcement. Ride-Alongs with law enforcement allow the analyst to observe driving patterns,

objective signs and symptoms, and field sobriety testing of subjects suspected of driving under the influence of alcohol and/or drugs in the field. It is recommended to request a Ride-Along with a DUI Enforcement officer. Prepare a summary of observations.

15. Practical Exercise: Attend DUI Checkpoint with a trainer, or designee, to observe the process of breath instrument installation and removal. DUI Checkpoints are also an opportunity for an analyst to observe officers using FST's to evaluate drivers suspected of being under the influence of alcohol and/or drugs. Prepare a summary of observations.

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee, for review.

2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.

3. Complete applicable sections of the Authorization Checklist (ALC.36).

VI. Module 5: Non-Driving Issues - (Duration ~1 month)

A. Objectives/Topics of Study

1. Black-outs

2. Gastroesophageal Reflux Disease (GERD)

3. Diabetes

4. Gastric Bypass

5. Chronic Obstructive Pulmonary Disease (COPD)

6. Asthma

7. Body/Breath Temperature

8. Lung Volume/Body Size

B. References

1. Alcoholic Ketoacidosis (ALCO.026)

2. APRI - Alcohol Toxicology for Prosecutors

3. Blackouts: What are they? How do They Relate to Understanding and/or Diagnosing Alcoholism? Kevin J. Drab, MA, M.Ed., LPC, CAC Dipl.

4. Effect of Low Doses of Alcohol on Driving-Related Skills. (ALCO.066)

5. Faster Absorption of Ethanol and Higher Peak Concentration in Women After Gastric Bypass Surgery, H. Klockoff, I Naslund, & A.W. Jones

6. Does Gastric Bypass Alter Alcohol Metabolism? Surgery for Obesity and Related Diseases; 2007, Sep-Oct; Vol 3 (Issue 5)

7. Perspective: Alcohol and the Gastric Bypass Patient; Cynthia K Buffington, PhD, Bariatric TimesVolume 3, Issue 8, Oct 2006

8. Reliability of Breath-Alcohol Analysis in Individuals with Gastroesophageal Reflux Disease; Kechagias, S, Jonsson, K-A, Franzen, T, Anderson, L, Jones, A.W. (ALCO.183)

9. Breath Alcohol Analysis in One Subject with Gastroesophageal Reflux Disease; Gullberg, RG, Journal of Forensic Science, 2001, 46(6)

10. DUI Defense; 1006, Drug Abuse Handbook, A.W. Jones, Bary K Logan, CRC Press 1998

11. Are Women at Greater Risk? An Examination of Alcohol-Related Consequences and Gender; Dawn E Sugearman, Kelly S. DeMartini, Kate B. Carey, Am J Addict, 2009; 18(3)

12. Let's Party Tonight: Drinking Patterns and Breath Alcohol Values at High School Parties, Schwatrz, R.H., Little, D.L.; Fam Med, 1997, May; 29(5)

13. Alcohol-Induced Blackout, Hamin Lee, Sungwon, Roh, Dai Jin Kim; International Journal of Environmental Research and Public Health 2009, 6, 2783-2792

14. What Happened? Alcohol, Memory Blackouts, and the Brain, Aaron M. White, Ph.D. National Institute on Alcohol Abuse and Alcoholism

15. The Alcohol Blackout: Walking, Talking, Unconscious and Lethal; Donal F. Sweeney M.D., and Robert A Liston, 2003

16. Diabetes and Driving: Desired Data, Research Methods and Their Pitfalls, Current Knowledge, and Future Research; Stork, ADM, Van Haeften, TW, Veneman, TF; Diabetes Care 29:1942-1949, 2006

C. Study Questions/Practical Exercises

1. Does alcohol affect short-term or long term memory?

2. What is a Black-out?

3. What conditions are more likely to cause a Black-out?

4. What is GERD?

5. Is GERD a viable defense for a blood alcohol case? For breath alcohol case? Why?

6. What are the signs and symptoms of a person that is experiencing a diabetic eposide? How does that relate to impairment?

7. What blood alcohol results would you expect to see for a person's whose defense is a diabetic episode?

8. How is the breath alcohol concentration affected when someone has an elevated body temperature?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee, for review.
2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.
3. Complete applicable sections of the Authorization Checklist (ALC.36).

VII. Module 4: Legal/Ethics - (Duration ~1 month)

A. Objectives/Topics of Study

1. The Legal Framework for DUI - Constitutional Issues and Case Law
2. General Forensics -
    a. Review of laboratory procedures
    b. Review of general forensic textbooks
3. Analyst role as custodian of records
    a. Providing testimony for another analyst
    b. Laboratory records
4. Response to Defense Challenges in Forensic Alcohol Testing
5. Expert Testimony: Basic Principles
    a. Scope of Expertise
    b. Testify to facts presented in court
    c. Presentation of evidence
        i. Biological sample/evidence envelope
        ii. Analytical results
            1. Fluid analysis
            2. Breath analysis

B. References

1. Competency, Training, Authorizations & Ethics (FSD.21)
2. QA and Ethics Training (Powerpoint in PowerDMS)

C. Study Questions/Practical Exercises

1. What is a 115?
2. What is a business record?

3. What is a prelim?
4. What is a 402 hearing?
5. Does the Laboratory only analyze cases in anticipation of court? Why?
6. What is the purpose of your courtroom testimony?
7. What should you do if you realize you made an error in your testimony?
8. What does it mean to be a custodian of records for this Laboratory?
9. In general, how is evidence processed in other disciplines: DNA, Latent prints, Firearms, Seized Drugs?
10. Discuss the role of the following in a trial: Expert witness, judge, prosecution, defense counsel, defendant, bailiff, & jury.
11. Define the following: voir dire, direct examination, cross examination, redirect, rebuttal witness, discovery, subpoena, SDT, deposition, and chain of custody.

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee, for review.
2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.
3. Complete applicable sections of the Authorization Checklist (ALC.36).

VIII. Module 7: Mock Court - (Duration ~1 month)

A. Objectives/Topics of Study

1. The trainee will be familiar with the line of questioning from the prosecution and the defense.
2. The trainee will be familiar with proper etiquette while in the courtroom.
3. The trainee will perform a practical exercise for courtroom testimony that will test the analyst's knowledge, skills, and abilities in being able to be a present evidence in a courtroom setting and provide their expert opinion.
4. The trainee will be able to articulate the knowledge in this Alcohol Impairment Training procedure.
5. Interpretation of results of alcohol analysis, including correlation of alcohol analyses with subjective observations of the demeanor and behavior of persons who have ingested known amounts of alcohol.

B. References

1. Title 17

2. APRI - Alcohol Toxicology For Prosecutors
3. Expert Witness and Communications Competency (ALCO.110)
4. Preparing Witnesses for cross-Examination (ALCO.112)
5. The Technical Presentation (ALCO.113)
6. Tips for Technical Talks (ALCO.114)
7. Nonverbal Communication in the Courtroom (ALCO.116)
8. Jury Preconceptions and Their Effect on Expert Scientific Testimony (ALCO.117)

C. Study Questions/Practical Exercises

1. Become familiar with the common questions asked for alcohol impairment cases. Write your own answers to these common questions asked of an expert witness.
2. Become familiar with the common defense tactics that are encountered on blood alcohol and breath alcohol cases such as: fermentation, hemolysis, contamination, alcoholic swab to clean arm, salting out, GERD, mouth alcohol, elevated breath alcohol with fever, breath instrument not calibrated properly, etc.

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.
2. The final assessment of the trainee will be determined by the successful completion of a written test and a mock court
3. Upon successful completion of BRA.17, BA.41, and both the written test and the mock court, the trainee will be authorized as an FAA by the laboratory and deemed capable of testifying in court on alcohol impairment cases.
    a. Title 17 Written Test:
        i. A written test will be completed by the trainee to assess the knowledge, skills, and abilities acquired by the trainee after completing all modules within the Alcohol Impairment Training procedures.
        ii. The trainee must pass the test with a minimum of 80 out of 100%.
        iii. If the trainee completes the written test satisfactorily, they will progress to the mock court assessment.
        iv. If the trainee completes the written test unsatisfactorily, remedial training will occur at the discretion of the Supervisor/Manager. Remedial training will be documented with a QA Action.
    b. Mock Court:
        i. A practical exercise for courtroom testimony will be completed by the trainee such as a mock court.
        ii. The prosecution and defense counsel will be two experienced analysts qualified as FAA's by the laboratory.

iii. The two analysts assigned as the prosecution and the defense counsel will also act as the assessors determining the satisfactory or unsatisfactory completion of the mock court.

iv. Oral feedback will be provided to the trainee at the end of the mock court.

v. The Supervisor/Manager will be notified of the satisfactory or unsatisfactory completion of the trainee's mock court.

vi. Written feedback will be provided to the trainee after the completion of the mock court.

vii. If satisfactory completion of the mock court was determined by the mock court assessors the trainee will be authorized as an FAA by the laboratory, providing the Title 17 requirements have been met.

viii. If the performance of the trainee's mock court was unsatisfactory, remedial training will occur at the discretion of the Supervisor/Manager. Remedial training will be documented with a QA Action.

E. Documentation

1. Answers to the study questions/practical exercises must be submitted to the trainer, or designee, for review.

2. The trainer or designee will review and provide written feedback (signed and dated) and the trainee will include this documentation in their training binder.

3. Assessors written feedback of the trainee's written test, mock court performance, and any remedial training will be kept in the analyst's training binder

4. Complete applicable sections of the Authorization Checklist (ALC.36).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 10/20/2017	**NUMBER:** BRA.01 - Introduction
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** General Information	

I. Policy: The administration of breath tests to determine breath alcohol levels is performed by trained operators of the various client agencies having jurisdiction within Contra Costa County. The Forensic Services Division oversees the breath-testing program and provides training to the client personnel.

A. The breath alcohol instruments in Contra Costa County analyze breath samples by infrared spectroscopy and electrochemical fuel cell technologies.

B. The California State Department of Public Health (CDPH) regulates forensic blood alcohol analysis and forensic breath alcohol analysis according to the pertinent Code of Regulations listed below:

1. Title 17. Forensic Alcohol Analysis
    a. Group 8. Forensic Alcohol Analysis and Breath Alcohol Analysis
    b. Articles 1-8
2. The Laboratory must adhere to Title 17. Some of the requirements the laboratory must meet include:
    a. qualifications of the analysts
    b. quality control program
    c. proficiency testing
    d. collection and handling of samples
    e. standards of performance
    f. standards of procedure
3. A copy of Title 17 is located on PowerDMS.
4. The Breath Alcohol Technical Unit Manual is designed to supplement the Title 17 requirements.
5. Prior to April 1, 2017, the California State Department of Public Health (Title 17) qualified analysts working in a Forensic Alcohol Laboratory as one of the following: a Forensic Alcohol Supervisor (FAS), a Forensic Alcohol Analyst (FAA), or a Forensic Alcohol Analyst Trainee (FAAT). As of April 1, 2017, it is the responsibility of each Forensic Alcohol Laboratory to authorize their personnel to perform duties in accordance with qualifications outlined in Title 17.

C. Terminology

1. The verbs "shall", "must", and "will" indicate mandatory requirements, while "should" is used to denote compelling or recommended practices and "may" is used in the permissive sense.

D. Methods

1. All instructions, standards, manuals, and reference data relevant to the work of the Forensic Alcohol Unit shall be kept up to date and made readily available to personnel through the use of this Technical Unit Manual.

2. All methods shall be documented and the documents readily available for review by laboratory personnel through PowerDMS (see the Division Manual for more information).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 05/14/2018	**NUMBER:** BRA.02 - Breath Test Requirements
	RELATED ORDERS: Ca. Administrative Code Title 17: 1219.3 & 1221.4	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Breath Test Requirements	

I. Policy: The following are general breath test requirements.

A. Breath tests on subjects are performed on the Intoximeters, Inc., Intox-DMT Dual Sensor as described under Breath Test Operator Training-General and Operator Training Course Outline documents.

B. Only personnel trained and certified by the Laboratory are authorized to administer a subject breath test.

C. Operators shall adhere to the precautionary checklist for the instrument operated.

D. A breath sample is collected only after the subject has been under continuous observation for at least 15 minutes prior to collection of the breath sample, during which time the subject must not have ingested alcoholic beverages or other fluids, regurgitated, vomited, eaten, or smoked.

E. Breath is expired into the instrument until a sample of essentially alveolar air has been collected.

F. For each person tested, breath alcohol analysis shall include the analysis of at least two separate breath samples which result in determination of breath alcohol concentrations which do not differ by more than 0.020 g/210L.

G. For each person tested, a valid subject breath test shall include duplicate analysis of an external standard.

1. The purpose of the external standard check is to ensure accurate and reliable results at the time of the subject breath test.

    a. The external standard check must be within +/- 0.010 g/210L of the nominal value.

    b. The Intox-DMT will remove itself from service if the external standard check is unacceptable. The instrument will not be able to be used until it has been evaluated by Lab staff.

2. The external standard analysis during a subject breath test does not replace a Periodic Determination of Accuracy, a Tank Change, or an Accuracy Check.

H. The units of breath alcohol concentration in these procedures are grams of alcohol per 210 L of breath (W/V).

1. When using the Intox-DMT, the reported analytical breath alcohol results are averaged and truncated to the third decimal place.

2. Breath alcohol concentrations less than 0.01 g/210L from test subjects will be reported as negative.

3. The Intoximeters, Inc., Intox-DMT Dual Sensor instrument measures the breath alcohol concentration of a subject, reporting the results in grams of alcohol per 210 L of breath. Per the California Vehicle Code, Section 23152(b), "percent, by weight, of alcohol in a person's blood is based upon grams of alcohol per 100 ml of blood or grams of alcohol per 210 L of breath."

I. Infrared and fuel cell results will be flagged as IR-FC Disagreement (Intox-DMT) if the following criteria are not met:

1. For results below 0.08 g/210L, there must be an agreement between the infrared and fuel cell results of +/- 0.008.

2. For results above 0.08 g/210L, there must be an agreement between the infrared and fuel cell results of 10%.

J. The following criteria for the Intox-DMT Dual Sensor must be met to have a valid result:

1. Interference will be triggered by a disagreement between filters 1 and 2, or filters 1 and 3, for a sample. The filter agreement threshold will be a percentage of the sample concentration measured at filter 1 down to a minimum value of 0.005 g/210L. For wet bath solutions and breath samples the agreement percentage is 4%. For dry gas standards the agreement is 5%. This means that during an adjustment, when a known ethanol concentration is introduced, the instrument records how it is perceived at all three filters. If a breath sample is measured as a 0.193 at filter 1, the instrument compares the reading to the values at filters 2 and 3. If the values are comparable at all three filters based on the last calibration, the measurement is valid. If either of the values (difference at filter 2 or difference at filter 3, as seen in parenthesis on the "View Test Details" report) are more than 4% of the 0.193, it will be flagged as interference. Similarly, if a dry gas is read as an 0.099, and the difference at filter 2 or filter 3 is more than 5% of an 0.099, it will be flagged as an interference.

2. Additionally, there is a combinational check, where the sum of the differences at filter 2 and filter 3 is 7/5 of the filter agreement threshold. If a breath sample is measured as an 0.193 at filter 1, the instrument will compare the value to filters 2 and 3 (as described above). It could be that neither of the readings are outside of the 4%. If the difference at filter 2 is 0.006 and the difference at filter 3 is 0.005, then together they are 0.011. 7/5 * 5% of 0.193 is 0.0135. This situation will not flag interference.

3. A calculation is done by the instrument's software to offset how a dry gas is perceived at filter 3, based on the initial adjustment having been done using a wet bath solution. This compensation for the dry gas value means the instrument is less likely to erroneously flag interference from the difference at filter 3.

K. Each of the following minimum criteria must be met for a valid breath sample on each instrument:

1. Intox-DMT Dual Sensor breath instrument:

a. Minimum Flow Rate: 3.0 L/min.

b. Minimum Breath Volume: 1.5 L.

c. The slope of the alcohol concentration curve must meet the following criteria at the point when the flow rate drops back below 3 L/min. after having met the 1.5 L total volume requirement:

   i. The increase from the second to last 2 point average to the last (at the time the flow rate drops below 3 L/min.) must be less than or equal to 0.001 g/210 L and not a negative slope. In order to be considered a negative slope, the change in consecutively compared averages must be greater than 0.001 in the negative direction.

   ii. Therefore, in order to be a slope that will allow a sample to be accepted, the absolute value of the change between the final two 2 point averages must be 0.001 g/210 L or less.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 5/08/2018	**NUMBER:** BRA.03 - Breath Test Records
	RELATED ORDERS: Ca. Administrative Code Title 17: Section 1222.1	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Breath Test Records	

I. Policy: The following is general information for breath alcohol analysis records.

A. The Laboratory shall maintain Breath Alcohol Analysis records for at least five years over an accreditation cycle. The records will be arranged as prescribed below. All official Breath Analysis records shall be maintained and located in such a manner that they will be immediately available (upon request) for inspection by representatives of the California Department of Public Health.

B. All information that is generated by entry into the Intox-DMT Dual Sensor breath alcohol instrument will be uploaded to a Secure File Transfer Protocol site (SFTP) and transferred to the DMHost database. The data is uploaded to the Laboratory's database from DMHost. Periodic Determinations of Accuracy, Subject Test Logs, and Maintenance Logs will be generated as needed from the Laboratory's database. The database will be backed up periodically by Technical Services.

C. Breath alcohol analysis records, or copies thereof, shall not be released to any unauthorized agency or person without a properly executed court order, authorization of the prosecuting attorney, or specific authorization from the Chief or Forensic Manager of the Laboratory. Refer to BRA.15 Breath Alcohol Discoveries for procedures for generating discovery documents.

D. Certified Laboratory Personnel

1. The Laboratory will maintain a record of qualified Forensic Alcohol Analysts as required in Title 17, Section 1222.1.

E. Instrument Records, Subject Related Records, and Operator Training Records

1. **Instrument File**:

a. The Laboratory shall maintain an instrument file for each breath alcohol instrument.

b. The instrument file contains records such as packing slips, calibration certificates, and letter correspondence. The records may be imaged and stored electronically in the alcohol unit.

c. Any information in the instrument file should be referenced in the maintenance log.

2. **Maintenance Log**:

a. The Laboratory shall maintain a maintenance log for each breath alcohol instrument.

b. For each instrument the following will be recorded electronically in the maintenance log of the Database:

i. description of activity

ii. date and time

iii. location

iv. analyst performing the maintenance

c. Transactions entered include, but are not limited to:

i. installation and removal at field sites

ii. instrument calibration

iii. linearity checks

iv. instrument repair/maintenance





4. **Determination of Accuracy Records**:

   a. The Laboratory shall maintain a record for each determination of accuracy performed (PDOA) on an instrument that is installed at a field location. The data is stored in the memory of the instrument until it is uploaded to the Laboratory database. The data will include:

      i. Instrument Serial Number

      ii. Test Type

      iii. Test Date and Time

      iv. Type of reference used (Dry Gas or Simulator Solution)

      v. Concentration of reference solution

      vi. Name of person performing/reviewing the test

      vii. Duplicate test results for the Infrared and Electrochemical Fuel Cell analysis

      viii. Tech Notes - Notes that are added to the database.

[redacted]

5. **Breath Test Operator Records**:

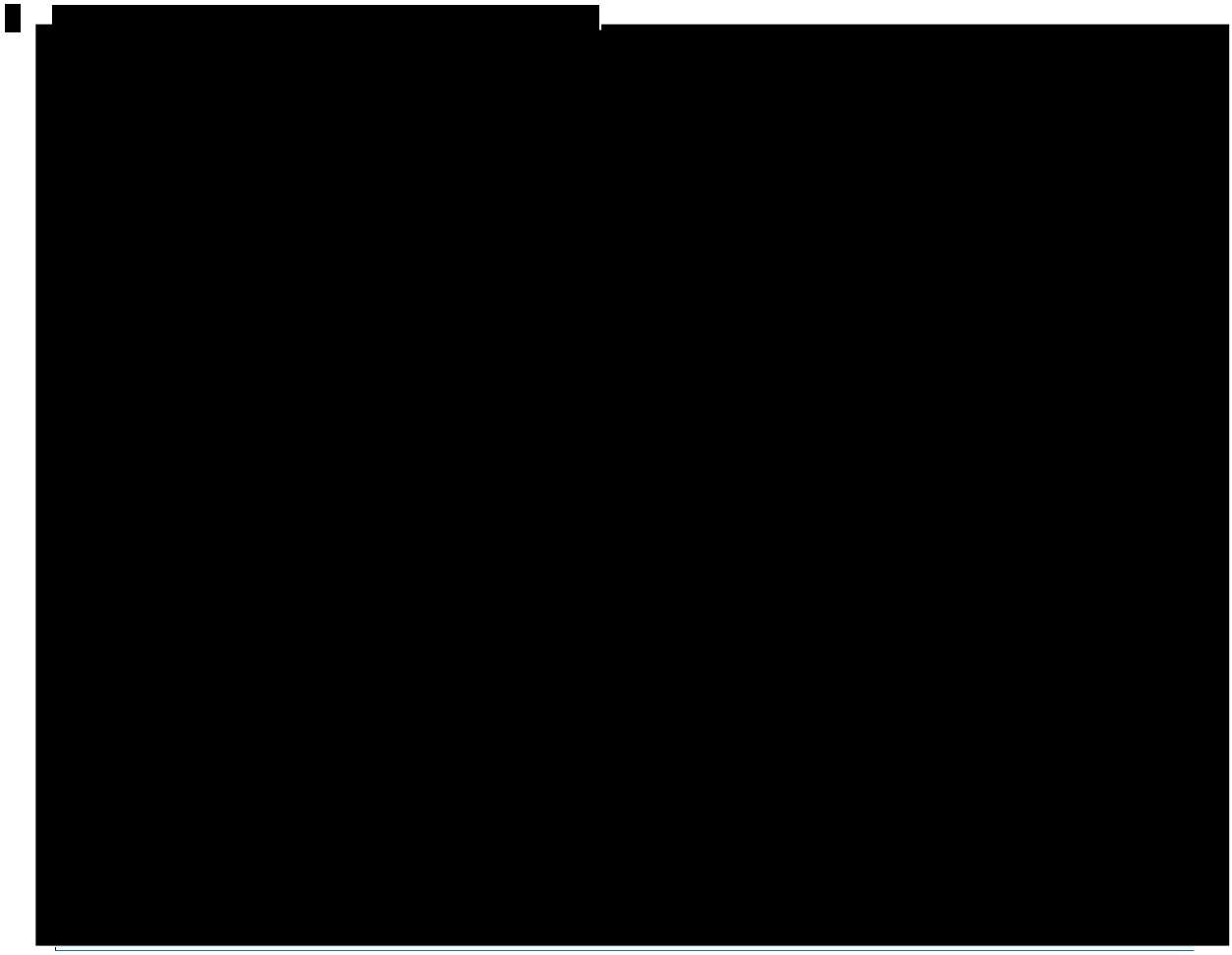
   a. The Laboratory shall maintain a database of persons trained and certified as breath test operators. This database will contain a minimum of:

      i. Operators name

      ii. Agency

      iii. Date of the training course

      iv. Name of the instructor.



F. Records kept at all Field Locations

1. Precautionary Checklist

[redacted]

2. The Laboratory shall supply each instrument location with copies of the Precautionary Checklist. The Precautionary Checklist contains the testing procedure to be used by the operator.

3. The record of all analyses performed, results, and identities of the persons performing the analyses are stored in the memory of the instrument. This information is periodically retrieved with data transfer via modem or network upload to the Laboratory database.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 6/27/2019	**NUMBER:** BRA.04 - Breath Testing Sites
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Breath Testing Sites	

I. Policy: The location of breath testing sites is based, in part, on geographical distribution and, in part, on frequency of tests. The Chief of the Forensic Services Division may, with the approval of the Sheriff, discontinue services to a breath testing location if the number of tests performed at that location fails to justify the continued expenditure of Forensic Services Division staff time to service the instrument.

A. Breath Testing Sites

1. Agency Locations with an Intox-DMT Dual Sensor:

a. Antioch PD

b. Brentwood PD

c. CHP-Martinez

d. Concord PD

e. Danville PD

f. El Cerrito PD

g. Lafayette PD

h. Martinez DF

i. Moraga PD

j. Oakley PD

k. Orinda PD

l. Pinole PD

m. Pittsburg PD

n. Pleasant Hill PD

o. Richmond PD

p. San Pablo PD

q. San Ramon PD

r. Walnut Creek PD

s. CCC S/O-Discovery Bay (typically summer season)

2. FOR DUI CHECK POINTS:

a. DUI CK PT-Agency in charge

i. Example: DUI CK PT-Antioch PD

3. FOR FOB TRAINING:

a. Example: Train-FOB Training Room

4. FOR CCC S/O ACADEMY TRAINING:

a. Example: Train-CCCSO LETC

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 6/27/2019	**NUMBER:** BRA.05 - List of Forms
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** List of Forms	

I. Policy: The following are forms used in Forensic Alcohol Analysis. Forms may be controlled (required for use) or non-controlled (suggested for use but not required).

A. Controlled forms are located on PowerDMS and must be used.

1. Calibration Check Variable Pipette (controlled) ALC.17
2. Solution Monthly Check Log (controlled) ALC.14

B. Non-controlled forms are located on PowerDMS. The minimum information that must appear on the form is listed below.

1. Calibration Check Bench Notes ALC.11
   a. Date
   b. Analyst
   c. Equipment Identification
   d. Thermometer serial # and reading
   e. Weights of water
2. Balance Maintenance Log ALC.05
   a. Date
   b. Problem or symptom
   c. Action taken
   d. Analyst
3. Balance Calibration Check Log ALC.06
   a. Date
   b. Analyst
   c. Results of check
4. Pipette Maintenance Log ALC.24
   a. Date

b. Problem or symptom

c. Action taken

d. Analyst

5. Thermometer Maintenance Log ALC.28

a. Date

b. Problem or symptom

c. Action taken

d. Analyst

6. Barometer Maintenance Log ALC.20

a. Date

b. Problem or symptom

c. Action taken

d. Analyst

7. Alcohol Discovery/OLA Billing Sheet ALC.38

a. Charge and type of discovery

b. Charge for evidence transfer (OLA)

c. Subject's name

d. Lab # (if applicable)

e. Analyst

f. Date

8. Intox-DMT Dual Sensor Installation Checklist ALC.40

a. Documentation of the steps taken to correctly install an instrument

9. Intox-DMT Dual Sensor Removal Checklist ALC.41

a. Documentation of the steps taken to correctly remove an instrument from service

10. Intox-DMT Service Checklist ALC.42

a. Documentation of the steps taken to verify the instrument adequately meets the Lab's criteria before an instrument may be installed into service.

11. Intox-DMT Dual Sensor Adjustment Worksheet ALC.43

a. Documentation of the steps done to make an adjustment on the Intox-DMT.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 6/27/2019	**NUMBER:** BRA.06 - General Requirements and Procedure for Periodic Determination of Accuracy
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** General Requirements and Procedure for Periodic Determination of Accuracy	

I. Policy: The following are the general requirements for periodic determinations of accuracy (PDOA) on the breath instrument.

A. Breath alcohol instruments listed in the Laboratory procedure are maintained by Qualified Laboratory Personnel.

1. The PDOA checks are performed at least every 10 days or following the testing of 150 subjects, whichever comes sooner.

2. Each instrument is programmed to disable after 150 subject tests if a PDOA check is not performed.

3. PDOA's shall be conducted in duplicate using reference samples of known alcohol concentration, these samples are provided by a wet-bath simulator or a NIST traceable dry gas cylinder.

4. The concentration of the reference solutions for PDOA's will be from 0.080 g/210 L to 0.300 g/210 L BrAE.

B. The PDOA's are performed automatically and the results are reviewed by a Laboratory authorized analyst.

1. Each instrument installed for use at an agency is programmed to perform the PDOA weekly (example: every Tuesday morning at 6:00 am).

C. The results for each PDOA are recorded to four decimal places and must be within $\pm$0.010 g/210 L of the known value of the reference concentration.

1. If any of the four results (duplicate IR and FC) is not within $\pm$0.010 g/210 L of the known value, the instrument will disable itself. The instrument will not function until it is serviced by a qualified laboratory member and passes a PDOA check.

D. The results of the PDOA are stored in the memory of the instrument until they are uploaded to the laboratory computer.

1. The results are evaluated by a Laboratory authorized analyst after the data retrieval.

2. The data from each test done will be downloaded to the Laboratory's SFTP server.

3. The results of the PDOA will be reviewed the same day, or near the time of the test, by qualified laboratory personnel.

4. The results of these tests will be stored in the computer database in the Accuracy Check Log.

E. The dry gas cylinders and reference solutions of known alcohol concentration will be transported to the instrument sites and installed by qualified laboratory personnel.

1. The dry gas cylinders will be replaced prior to the expiration date marked on the cylinder or when it is empty, whichever comes first.

2. The wet bath reference solutions will be replaced after 5 weeks or after 15 duplicate tests, whichever comes first.

3. Each time a reference solution or a dry-gas cylinder is replaced it is noted in the Accuracy Check Log as a Tank Change.

4. Each time a new dry-gas cylinder or reference solution is installed the known BrAE value is programmed into the instrument.

II. Policy: The following are the procedures for periodic determinations of accuracy on the breath instrument. The following procedure is performed by qualified personnel.

A. **DISTRIBUTION OF SOLUTIONS**:

1. If a wet bath reference solution is used, it is brought to the location on the first full week of the month. If a dry gas reference solution is used, it will be replaced when empty or by expiration date, whichever occurs first.

2. The analyst will perform a Tank Change. The Tank Change function will save the lot number, expiration date, simulator serial number (if applicable), and concentration of the reference standard installed in the instrument.

B. **FUNCTION SETTINGS when using the Intox-DMT -Dual Sensor**:

1. The PDOA is automatically performed by the instrument. The instrument function settings for the accuracy configuration and the automatic accuracy checks are described in Function Settings and is repeated below:

a. Tap the main menu on the home screen of the Intox-DMT

i. choose Set Up

ii. choose PDOA Test

1. Test Day of Week: Tuesday

2. Test Hour: 6

3. Number of Weeks Valid: 1

4. Number of Tests Valid: 150

iii. click Save and Exit from the set up menu

iv. The instrument uses the information stored for the dry gas standard or wet bath reference solution from the most recent Tank Change.

C. **DATA RETRIEVAL**:

1. The Intox DMT will send results to the SFTP server immediately after any test. All tests will be uploaded from the SFTP server when DMHost software is opened.

D. **REVIEW OF RESULTS OF THE WEEKLY PERIODIC DETERMINATION OF ACCURACY**

1. The PDOA will be performed by the instrument according to the PDOA settings in the Main Menu.

2. The Intox DMT will perform the PDOA and store the information in the memory of the instrument. If the PDOA does not pass, the instrument is programmed to immediately disable itself. The Intox-DMT will send the data via network transfer to the SFTP server to be viewed by an analyst in the DMHost software.

3. The laboratory computer will be on 24 hours a day to receive messages from the instruments in the field. The Laboratory authorized analyst shall check the computer screen at least weekly to ensure a timely response to any instrument problems. Operators are instructed to use another agency's breath instrument or the obtain urine or blood for alcohol testing, when any agency instrument is disabled.

4. A qualified analyst of the laboratory will check the PDOA results for any disabled instruments that are displayed and respond accordingly.

5. A qualified analyst will check the results of the PDOA by entering their name in the table listing the results of the automatic PDOA in the following procedure:

    a. Intox-DMT:

        i. Click on the DMHost.exe Icon on the desktop

        ii. Answer question: Do you want to transfer tests from SFTP? Click YES and wait for upload of data

        iii. Click on the listed item titled RECORDS to expand the list

        iv. Double-click on the PDOA item in the list under RECORDS

        v. When the PDOA window opens, check the setting APPROVAL NEEDED box

        vi. Click on the APPLY FILTERS icon

        vii. Double-click on the record row to be reviewed

        viii. When the details window opens, review the following:

            1. Test date, Location, Nominal & Target (concentrations), Expiration date. (look for discrepancies)

            2. In the Test Results inner window, check to determine if the Alcohol IR and FC results are within 0.010%

            3. Click on whether results are APPROVED or NOT APPROVED

            4. Enter the initial of the analyst's First Name

            5. Enter the analyst's Last Name

            6. Click icon to CONFIRM

            7. Click [X] to exit the record

            8. Click on the next record row of PDOA data to be reviewed and complete steps When all PDOA's have been reviewed, click on

the disk icon (Save button).

9. Click [X] on the inner window to exit the PDOA records window.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 3/16/2018	**NUMBER:** BRA.07 - Reference Solutions
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Procedures	**SUBJECT:** Reference Solutions	

I. Policy: Reference Solutions are aqueous solutions of known alcohol concentration. The reference solutions are used to check the accuracy of breath testing instruments.

A. Chemicals used for Reference Solution Preparation

1. **Refer to the Blood Alcohol Technical Unit Manual** (BA.03)
2. An entry is made in the Alcohol Tracking Database for each new solution prepared. Refer to BA.44.

B. Equipment Required for Reference Solution Preparation and Analysis

1. **Refer to the Blood Alcohol Technical Unit Manual**
2. Variable pipette
3. Graduated cylinder
4. Volumetric flask
5. Nalgene carboy
6. Dual column gas chromatograph-flame ionization detector (DCGC-FID)
7. Breath testing instrument
8. Simulator(s)
    a. For example: Guth Models 34C and 2100 Simulators
9. Ethanol dry gas canisters
10. Dry gas regulators

C. Care and Maintenance of Equipment

1. **Refer to the Blood Alcohol Technical Unit Manual** (BA.21)

D. Verification of Purity of U.S.P. Absolute Ethanol

1. **Refer to the Blood Alcohol Technical Unit Manual**

E. Preparation of Reference Solutions of Known Alcohol Concentration

1. **DILUTION TABLE**

BrAE @ 34.0 °C	ml of Ethanol	ml of Ethanol	Ethanol Conc.

grams/210 L	per 6 gallon jug	per gallon of solution	%(W/V)
0.0570%	20	3.3	0.069
0.1008%	35	5.8	0.122
0.1124%	39	6.5	0.136
0.1207%	42	7.0	0.146
0.1298%	45	7.5	0.157
0.1438%	50	8.3	0.174
0.1579%	55	9.2	0.191
0.1728%	60	10	0.209
0.2075%	72	12	0.251
0.2588%	90	15	0.313
0.2935%	102	17	0.355

Example: To prepare 6 gallons of a 0.1579% BrAE reference solution: Following the above dilution table, partially fill a large plastic carboy (*Nalgene*) container marked at a volume of 6 gallons with distilled or de-ionized water. Using a graduated cylinder deliver 55 ml of purity checked or NIST traceable absolute ethanol. Bring to volume with distilled or de-ionized water and mix well. The solution should be allowed time to equilibrate before establishing the concentration.

2. A Reference Solution can be made quantitatively if a calibrated flask, calibrated pipette, and an NTRM ethanol is used. The above Dilution Table may still be utilized.

3. Enter the solution preparation in the Alcohol Tracking Database. See BA.44.

4. Label the bottle with the Solution ID, Breath Alcohol Equivalent (BrAE) at 34.0°C, date prepared, initials of analyst, and date to be discarded. The reference solution ID will start with R, and is followed by the date prepared (YYMMDD) and the four digit value reflecting the BrAE of the reference solution. Example: The solution ID for a reference solution prepared on October 25, 2016 with a BrAE of 0.1246% would be R1610251246.

5. The shelf life of reference solutions is two years and it will be stored at room temperature.

F. Establishment and Analysis of Ethanol Reference Solutions

1. The concentration of Reference Solutions that are not made quantitatively are established by analysis using DCGC-FID.

   a. Analyze the Reference Solution six times (in duplicate) such that there will be twelve replicate sample (aliquots) results. Three times (six replicates) on each DCGC-FID instrument available, if possible. Refer to BA.30 for analysis using the DCGC-FID.

   b. Enter the DCGC values in the Reference Solution Establishment Form (ALC.31). The completed Reference Solution Establishment Form should be maintained in the Alcohol Unit and linked to the solution in the Alcohol Tracking Database (BA.44).

   c. Monthly checks will be performed by Heated Headspace Dual Column Gas Chromatography (done in duplicate). Use ALC.14 to record the monthly

check. The completed form is maintained in the Alcohol Unit. The results will not differ by more than 5% of the of the known concentration. If the results are outside 5%, the solution will be discarded.

2. The concentration of the Reference Solution is converted to a Breath Alcohol Equivalent (BrAE) by adjusting for the conversion factor as found in references provided by experimental data in work originally done by Harger, Raney, Brindwell, and Kitchell, *The Partition Ratio of Alcohol Between Air and Water, Urine and Blood; Estimation and Identification of Alcohol in these Liquids from Analysis of Air Equilibrated With Them*, J. Biol. Chem., 183, 1950; 197-213.

    a. The breath alcohol equivalent (BrAE) is the value obtained when air equilibrated with the reference solution in a simulator is analyzed with a properly calibrated breath alcohol analysis instrument.

    b. The calculations in Harger's original work were not specific to breath alcohol and therefore did not have a specified conversion value at 34 degrees Celsius which is crucial for breath alcohol analysis.

3. Subsequent work done by R. G. Gullberg addresses the need for a better approximation of the conversion factor at 34.0°C. The laboratory uses the conversion factor of 0.827, which is derived from the dimensionless value recommended by Gullberg (1.21 at 34.0°C), being the best value for forensic purposes (lowest calibration when used for adjustments).

    a. For more information refer to ALCO.204 DETERMINING THE AIR/WATER PARTITION COEFFICIENT TO EMPLOY WHEN CALIBRATING FORENSIC BREATH ALCOHOL TEST INSTRUMENTS; Can. Soc. Forensic Sci. J. Vol. 38. No 4 (2005) pp. 205–212

4. The BrAE is calculated by multiplying the conversion factor of 0.827 by the ethanol concentration of the reference solution obtained by GC/FID.

    a. **Example 1:** For a reference solution of 0.200% and a temperature of 34.0°C:

        i. Conversion factor is 0.827

        ii. BrAE = 0.827 x 0.2000% = 0.1654% at 34.0°C

    b. **Example 2:** A reference solution of 0.1500% would give the expected instrument reading:

        i. Simulator Temp 34.0°C: Conversion Factor = 0.827

        ii. (0.827) X (0.1500%) = 0.1240 g/210L (BrAE)

G. Usage

1. The reference solutions having a value between 0.10% and 0.20% ethanol may be used for a maximum number of 15 duplicate accuracy checks.

2. The solutions having values at or above 0.200% ethanol may be used for a maximum of six duplicate accuracy checks.

3. Monthly checks will be performed on Reference Solutions by Heated Headspace Dual Column Gas Chromatography (HHDCGC) done in duplicate. A monthly check will be performed on reference solutions. If the results differ by more than 5% from

the known concentration the solution will be discarded. Use ALC.14 to record the monthly check. The completed form, ALC.14, is maintained in the Alcohol Unit.

4. When ready to use, the reference solutions will be dispensed into 500 ml bottles and properly labeled for transport to the instrument sites by qualified laboratory personnel. Each bottle will be labeled with the lot number, date prepared, date of expiration, and initials of analyst.

H. Preparation of Out of Measuring Range Solution

1. This solution is used during breath alcohol instrument maintenance.

2. Prepare an ethanol-water solution at a concentration slightly above the linear range. The ethanol concentration should not be high enough that the analytical system is overwhelmed.

   a. This solution may be prepared by adding 8 mL of ethanol to 1 L of water in 1 L flask (for a ~0.509% BrAE). Solution may be adjusted drop-wise with ethanol as needed.

3. The solutions may be transferred to labeled 500 ml bottles for storage and transport; or placed into labeled simulators for use during breath alcohol maintenance.

4. Each bottle will be labeled with Out of Measuring Range Solution and an expiration date no more than two years from the date of preparation.

I. Preparation of Interference Solutions

1. Interference Solutions are used during breath alcohol instrument maintenance.

2. Prepare the Interference Solutions as follows:

   a. **Interference Table**

Interferent	**Solution Volumes**
Methanol Solution	0.6 ml Methanol 2 L dH2O
Acetone Solution	0.6 ml Acetone 2L dH2O
Isopropanol Solution	0.6 ml IPA 2L dH2O

   b. This solution should be made using the volumes in the table above. Solutions may be adjusted drop-wise using the appropriate volatile compound as needed.

3. The solutions may be transferred to labeled 500 ml bottles for storage and transport; or placed into labeled simulators for use during breath alcohol maintenance.

4. Each bottle will be labeled with the interfering substance and an expiration date no more than two years from the date of preparation.

J. Usage

1. Out of Measuring Range and Interference Solutions are not reference solutions and therefore will not be checked monthly. These solutions are not considered quantity critical solutions. Checking these solutions will be at the discretion of the analyst using the solutions as needed.

2. When ready to use, the Out of Measuring Range and Interference solutions will be dispensed into 500 ml bottles and properly labeled for transport to the instrument sites by qualified laboratory personnel.

3. Each bottle will be labeled with the lot number, date prepared, date of expiration, and initials of analyst.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 6/27/2019	**NUMBER:** BRA.08 - Gaseous Ethanol Breath Standards (EBS)
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Gaseous Ethanol Breath Standards (EBS)	

I. Policy: Gaseous Ethanol Breath Standards (EBS) are a reference material consisting of a dry mixture of nitrogen gas and ethanol vapor used to deliver a known ethanol concentration to a breath instrument during an accuracy check.

A. Traceability

1. A solution traceable to a National Metrology Institute (NMI), and on the NHTSA Conforming Products List published in the Federal Register, will be used to check the accuracy of evidential breath instruments maintained by the Crime Lab. See FSD.33 for more information about traceability.

   a. NIST is an example of a NMI.

   b. Dry Gas Standard (Ethanol, Balance Nitrogen) manufactured by Mid-America Airgas for Intoximeters, Inc. is an example of a reference solution approved for use with the Intox-DMT Dual Sensor.

2. The laboratory will maintain Certificate of Analysis (COA) traceability records for each lot of dry gas reference material.

B. General Information and Use

1. Intoximeters, Inc. programs the Intox-DMT to use a 4.5% wet/dry offset, therefore, only Uncorrected dry gas standards are to be used.

2. The Intox-DMT is configured with an integrated dry gas compartment that houses a 108 liter dry gas cylinder.

3. The reference material is delivered from an EBS cylinder through a gas flow regulator that provides a flow of 3 liters per minute.

4. The alcohol concentration provided by each EBS cylinder will be between 0.080 to 0.300 grams/210 L at Standard Pressure for the Periodic Determination of Accuracy (PDOA) check.

   a. Additional accuracy checks may be performed at higher or lower concentrations.

5. Each lot of EBS cylinders is filled with reference material from the same larger container. The cylinders within a lot contain aliquots of a homogeneous nature.

6. EBS cylinders have a shelf life if stored under ambient conditions. The manufacturer marks an expiration date on each EBS cylinder. The EBS cylinders will not be used

past the manufacturer's expiration date.

7. Upon receipt, each EBS cylinder, within a lot, will be identified by the manufacturer's lot number and tank number as identified on the dry gas cylinder.
    a. For example, if the lot number is AG907710 and the Tank number is 009, it will be identified as AG907710009.
8. Several hundred samples may be obtained from each EBS cylinder. The cylinders will be replaced as needed, this will be prior to the expiration date indicated on the cylinder. Each time an EBS cylinder is changed it will be indicated in the Accuracy Check Log by performing a Tank Change.
9. Each new lot of dry gas standards received into the laboratory should be entered into the alcohol unit tracking database.
    a. For dry gas standards received from Intoximeters, Inc., a COA is obtained by going to the Intoximeters, Inc. website.
        i. Click on the Customer Service Tab
            1. Click on True-Trace Certificate of Analysis
                1. Enter the Lot number, Tank number, DEV Code, then click on Trace My Tank
                    1. Print the COA to PDF and save in the secure alcohol folder
    b. Refer to BA.44 for procedures for linking the COA.

C. Storage

1. Upon receipt, EBS cylinders shall sit overnight in the laboratory to allow each EBS to reach room temperature. Bringing the cylinders to room temperature overnight allows the ethanol and nitrogen to become homogenous within the cylinder.

D. Atmospheric Pressure Compensation

1. Barometric pressure has an effect on the ethanol concentration target values analyzed by the Intox-DMT Dual Sensor when delivered from a compressed gas cylinder. Therefore, a check and adjustment (if necessary) of the instrument's internal barometer are done during regular maintenance.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 10/31/2019	**NUMBER:** BRA.09 - Breath Instrument Maintenance
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Breath Instrument Maintenance	

I. Policy: Breath alcohol testing shall be performed with instruments, accessories, calibrating units and devices which meet the requirements specified in Health and Safety Code section 100701. State regulations require that the accuracy and maintenance of breath instruments be checked on a regular basis. Routine accuracy checks and maintenance at the various instrument sites must be performed by the Forensic Services Division per the procedures in accordance with Title 17.

A. For the Intoximeters Inc., Intox-DMT Dual Sensor the routine accuracy and maintenance testing consists of the following:

1. Instrument Verification and routine service
2. An Instrument Service Checklist form ALC.42 will be used to document each of the following:
    a. When first received into the Laboratory, any Intox-DMT will have an Instrument Verification to ensure the instrument is functioning properly.
    b. When an instrument returns from service at Intoximeters, Inc.
    c. Every year as a part of a routine annual maintenance check.
    d. When a significant change to the DMT software criteria involved in the analysis of results of subject breath tests, PDOA's, accuracy checks, linearity checks, tank changes, maintenance checks and other software driven instrument checks are done by Intoximeters, Inc.
3. A forensic alcohol analyst or Laboratory qualified analyst may perform maintenance on the instrument if necessary to satisfy the verification process.
4. If a Laboratory analyst is not able to correct an issue with an instrument, the instrument may be returned to the manufacturer for necessary maintenance.

B. Refer to the Intoximeters, Inc., Intox-DMT Dual Sensor Contra Costa County Technical Training Workbook for specific instrument parameters and additional information.

1. The Intox DMT Dual Sensor Technical Training Workbook is provided in the Intox DMT Technical Training Course provided by Intoximeters, Inc. It is provided as a hardcopy binder to students who complete the training course. A copy of the most current workbook will be kept in the Alcohol Unit as a lab reference resource. When any significant changes occur in the breath instrument's hardware/software, Intoximeters, Inc. will be providing a more current workbook documenting those

changes for our lab to keep as a reference. Contact the alcohol unit supervisor if the lab copy is not found within the unit's work area.

2. Intoximeters, Inc. document statement, "Information in this document is subject to change without notice and is intended for use in conjunction with a training lecture by an authorized Factory representative. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the written permission of Intoximeters, Inc. This information is confidential and proprietary."

3. The Laboratory will not copy or distribute Intoximeters, Inc. documentation for any discovery purposes. Any discovery request for this documentation will be rejected and the requestor will be informed of the lab's policy regarding copyrighted materials.

C. Intox-DMT Dual Sensor Instrument Verification process:

1. Unpackage and set-up instrument
    a. Connect all peripheral accessories, including a printer
    b. Turn the instrument on
        i. The instrument is required to warm-up for 2 hours prior to conducting verification tests
        ii. To access the main menu, tap the Intox-DMT button located on the top left corner of the home screen
    c. Install a dry gas canister
    d. Fill a wet bath simulator(s) with reference solution(s) for verification. Turn on and allow for equilibration (approximately 30 minutes).
2. Record the pressure of the dry gas canister on the verification form
    a. The tank pressure is displayed on the bottom right corner of the home screen
    b. A rapid drop in dry gas pressure may indicate a leak in the system
3. Verify the instrument's serial number
    a. Check the electronic serial number on the home screen with the external label on the back of the instrument
4. Verify the the software version loaded on instrument
    a. From the main menu,choose Help, About
        i. Record the software version on the verification form
5. Instrument Function and Parameter setup
    a. Tap on the Intox-DMT menu button located on the top left corner of the home screen. Some functions require a technician password.
        i. Choose Setup (F3)
            1. Choose DMT
                1. Update Title to Intox-DMT

    2. Update location to CCCSO Lab
2. Choose Units
    1. Set Alcohol to g/210L (grams of ethanol/210 L of breath)
    2. Pressure should be set to mmHg by the factory
3. Choose Simulator
    1. Set Tolerance Check to yes
    2. Set Standard Type to dry
    3. Set Nominal to 0.1000
    4. Set Digital Simulator to None
4. Choose Subject
    1. Set Ask Questions to yes
    2. Set Number of Tests to 2
    3. Set Alcohol Display to no
    4. Set Volume Display to yes
    5. Set Graph Display to no
    6. Set Graph Alcohol to no
    7. Set Graph Flow to no
    8. Set Query Refusal to yes
    9. Set Wait Between Tests to 120
    10. Set Signature On to no
    11. Set Copies to 1
    12. Set Save PDF to yes
    13. Set Simulator Before to no
    14. Set Simulator Between to yes
    15. Set Simulator After to yes
    16. Set Observation Time to 0
5. Choose Accuracy Check
    1. Set Ask Questions to yes
    2. Set Number of Tests to 2
    3. Set Signature On to no
    4. Set Copies to 1
    5. Set Save PDF to yes

6. Choose Tank Change
    1. Set Enable to yes
    2. Set Number of Days Valid to 0
    3. Set Print Graphs to yes
    4. Set Number of Tests Valid to 0
    5. Set Print Graphs to yes
    6. Set Number of Tests to 2
    7. Set Signautre On to no
    8. Set copies to 1
    9. Set Save PDF to yes
7. Choose PDOA Test
    1. Set Test Day of Week to Tuesday
    2. Set Test Hour to 6
    3. Set Number of Weeks Valid to 1
    4. Set Number of Tests Valid to 150
8. Choose Linearity
    1. Set Ask Questions to yes
    2. Set Number of Tests to 3
    3. Set Print each Control Test to no
    4. Set Signature On to no
    5. Set Copies to 1
    6. Set Save PDF to yes
9. Choose Adjustment
    1. Set Ask Questions to yes
    2. Set Standard Type to wet
    3. Set Nominal(Wet Bath) to 0.1000
    4. Set Nominal(Dry Gas) to 0.1000
    5. Set Number of Tests to 3
    6. Set Adj Thru Sim Tube to no
    7. Set Signature On to no
    8. Set Save PDF to yes
10. Choose Diagnostic

1. Set Save PDF to yes

11. Choose Printer
    1. Set Printer On to yes
    2. Set Print in Color to no
    3. Set Printer name to HP PCL5
12. Choose Internet
    1. Set Hour to Connect to 1
    2. Set SFTP Enabled to yes
    3. Set SFTP Address
        1. When in the Lab: 10.212.248.18
        2. When installed at an Agency: 63.192.159.75
    4. Set SFTP Port to 22
    5. Set SFTP User Name to sftp_dmt (case sensitive)
    6. Set SFTP Password
    7. Set Time Server to time.nist.gov
13. Choose Hardware
    1. Set Dry Gas Enabled to yes
    2. Set Tank Pressure Enabled to yes
    3. Set Gas Valve 2 Enabled to no
    4. Set Modem Enabled to yes
    5. Set Heated Sim Hose to yes
14. Choose Software Configuration
    1. Set Use altitude to yes
    2. Set Operator Card Reader Enabled to yes
15. Choose Control Panel
    1. Double click Stylus to recalibrate the touch screen if necessary
    2. Double click Time Zone to verify the date and time and time zone
        1. Time Zone: Pacific Time
        2. Select the box to Automatically adjust clock for daylight saving
        3. Apply before exiting screen

1. If any changes/updates are made, the instrument will need to be restarted to take effect

6. From the main menu, choose Technician Mode (F7)
    1. Set the Radio Frequency Sensitivity
        1. Locate the RF Sensitivity at the top left portion of the screen
        2. Open the graph of the IR Plot by clicking on the "PLOT" tab
            1. Using a hand held radio attempt to trigger RFI by depressing the button to communicate on the radio
                1. Watch for fluctuations on the IR plot on the graph
                2. Watch for fluctuations of the Flow and Detector Voltages
            2. Adjust the sensitivity if there are fluctuations to the IR plot or the voltages are affected
                1. Tap the Set button
                    1. Adjust with the + or - button
                        1. (-) Will make the instrument less sensitive
                        2. (+) Will make the instrument more senstive
    2. Verify the Barometer reading
        1. Check the instrument's Barometer reading in mmHG against the NIST Barometer, adjust if necessary
        2. Record the instrument's barometer reading on the verification form
    3. Verify that the suction switches between the breath tube and the sim tubes
        1. Turn on the Pump
            1. Cycle the Sim Valve open and closed at least 5 times
            2. Check the suction of the tubes by placing your hand over the tube opening
    4. Refer to the Intoximeters, Inc., Intox-DMT Dual Sensor Contra Costa County Technical Training Workbook for specific instrument parameters and settings
7. Perform a Filter Test
    1. From the main menu, choose Functions, Filter Test
        1. Run at least 15 cycles
        2. Record the number of cycles and errors
8. Perform a Diagnostic Test (F4)
    a. When the Diagnostic Test is selected, the instrument will automatically begin a series of self tests.

i. Refer to the Intox-DMT Technical Workbook for acceptable parameter settings.

b. The Diagnostic Test is a check of the following instrument parameters:

i. Software/firmware/programming versions

ii. Temperature for sample chamber and breath hose

iii. Settings for:

1. Lamp voltage

2. Cooler Voltage

3. Bias voltage

4. Chopper frequency

5. Barometer

iv. Flow rate of the pump

v. Detector information

vi. Filter readings

vii. Internal standard check

viii. A copy of the record will print when it is complete

1. keep a copy with the verification form

c. If any of the self tests result in a "Fail," refer to the Intox-DMT Technical Workbook for troubleshooting.

9. External Standard/Accuracy Checks

a. Wet Bath

i. Perform an Accuracy Check

1. Use an ethanol/water simulator solution in a value between 0.200-0.300 g/210L

2. If using a digital simulator, update the Simulator setting in the Main Menu to "Guth."

1. Connect the digital simulator to the Intox-DMT using the RS232 cable.

3. Keep a copy of the Accuracy Check printout with the verification form

b. Dry Gas

i. Perform a series of Accuracy Checks

1. Check the accuracy of the instrument over a linear range

2. Keep a copy of the Accuracy Check printout with the verification form

c. If the results of the Accuracy Checks are outside of the acceptable limits, perform an Adjustment

a. See below for Adjustment Procedures

10. Maintenance Test

1. The purpose of the Maintenance Test is to trigger errors on the instrument to ensure the safeguards put in place for a proper breath test are functioning properly.

1. From the main menu choose Maintenance Test

1. Purge Error: cover the breath hose to stop the flow of air into the instrument during the purge cycle

2. Incomplete Sample: when prompted, do not provide a breath sample into the instrument

3. Ambient Fail: introduce ethanol tainted air into the breath tube during the purge cycle

4. Interference: connect a water bath simulator with a methanol/water solution to the breath hose

5. Invalid Sample: provide a breath sample with mouth alcohol

6. Standard Out of Range: connect an external standard that is a different concentration than what the instrument is set to

11. Perform a Tank Change (F8)

1. Install a dry gas standard

2. When performing a Tank Change, the instrument will automatically do an Accuracy Check

12. Subject Breath Test

1. Initiate a subject breath test (F1)

1. Introduce a breath sample before the instrument displays "Please Blow"

1. Record whether or not the test was stopped on the verification form

2. Inhale during the breath test instead of exhale

1. Record the resulting error, if any, on the verification form

3. Provide a breath result above 0.45 g/210L

1. Using a wet bath simulator containing an ethanol/water solution above a 0.45 g/210L, provide a breath sample through the simulator

2. Attach printout to verification form

4. Provide a blank breath sample

1. Attach printout to verification form

D. Accuracy Checks

1. The accuracy of the Intox-DMT will be checked for a period of time not exceeding 10 days or following the testing of 150 subjects, whichever comes sooner.

2. The instrument shall be checked for accuracy with reference samples which are known as water solutions (wet bath) or dry-gasses of alcohol (ethanol breath standards-EBS).

3. Determination of accuracy shall consist, at minimum, of periodic analysis of a reference sample of known alcohol concentration within accuracy and precision limits of +/- 0.010 g/210L of the true value.

4. Known ethanol/water solutions and/or dry gas reference samples of alcohol may range in concentration from 0.08 to 0.30 g/210L.

5. The results of the determinations of accuracy will be reviewed by a forensic alcohol analyst to determine if the instrument continues to meet the accuracy set forth by Title 17.

6. Accuracy checks are performed on the Intox-DMT in the following ways:

    a. Periodic Determination of Accuracy (PDOA)

        i. A PDOA is an automatic accuracy check done once a week.

            1. PDOA results are downloaded to DMHost and reviewed for accuracy by a forensic alcohol analyst. Refer to BRA.13 for Database Procedures.

        ii. The schedule for PDOA's is set up when the instrument is installed into service in the field.

    b. Accuracy Check

        i. Performed by a forensic alcohol analyst, or qualified Laboratory staff.

            1. From the main menu, choose Accuracy Check (F5)

            2. Scan technician card or complete the required fields:

                1. Technician Information:

                    1. Technician name: First initial of first name, full last name

                    2. Badge number: employee number

                    3. Agency: CCCSO Lab

                2. Control Information

                    1. Sim. type: choose dry gas or wet bath

                        1. If using a digital simulator, update the Simulator setting in the Main Menu.

                        2. Connect the digital simulator to the Intox-DMT using the RS232 cable.

                    2. Nominal: enter the nominal value of the solution

3. Lot #: lot number and tank number if dry gas or lot number of simulator solution
4. Expiration date: enter expiration date of solution

3. After the required fields are completed, the instrument will begin an accuracy check.
4. At the completion of the accuracy test, enter technician notes. Refer to BRA.16 for common technician notes.

c. Tank Change

i. Performed by a forensic alcohol analyst, or qualified Laboratory staff.

ii. A Tank Change is necessary to ensure the information regarding the external standard is correct for PDOAs and Subject Breath Tests.

iii. From the main menu, choose Tank Change (F8)

iv. Scan technician card or complete the required fields:

1. Technician Information:
    1. Technician name: First initial of first name, full last name
    2. Badge number: employee number
    3. Agency: CCCSO Lab
2. Control Information
    1. Sim. type: choose dry gas or wet bath
    2. Nominal: enter the nominal value of the solution
    3. Lot #: lot number and tank number if dry gas or lot number of simulator solution
    4. Expiration date: enter expiration date of solution
3. After the required fields are completed, the instrument will begin an accuracy check.
4. At the completion of the accuracy check for a Tank Change, technician notes are not required. The forensic alcohol analyst should enter technician notes in the Maintenance Log in the database.

E. Periodic routine maintenance

1. Every 3 months the Intox-DMT should be checked over a linear range. Refer to BRA.10 for directions for the Multi-Level Check.
2. The Intox-DMT will be checked on an annual basis using the Instrument Service Checklist ALC.42.

F. Adjustments

1. The Adjustment sequence of the Intox-DMT establishes a reference in the software that all external tests are measured against.

a. Water and known ethanol solutions are analyzed at three filters

b. Analyzed values are checked against acceptable tolerances for the set levels and stored in the software.

c. Calibration factors are created and applied to each external test.

d. Refer to the Intox-DMT Technician Workbook for Calibration/Adjustment Factors.

2. An Adjustment may need to be performed on the Intox-DMT if:

a. There is an IR/FC Disagreement

i. No 0.020 agreement between an IR/FC result.

b. The results of an accuracy check are outside of the allowable limits

i. Refer to the Instrument Verification form for specific criteria. ALC.42

3. Performing an Adjustment on the Intox-DMT

1. Refer to the Intox-DMT Technical Workbook for additional explanation and instruction.

2. Document the adjustment on an Adjustment Worksheet ALC.43

3. Supplies needed:

1. Wet bath simulator containing a traceable 0.100 g/210L ethanol/water solution

1. After filled with solution, turn the wet bath simulator on and allow to warm up for at least 30 minutes prior to use.

2. Wet bath simulator containing blank dH2O

1. After filled with water, turn the wet bath simulator on and allow to warm up for at least 30 minutes prior to use.

3. Traceable dry gas standard in a concentration of 0.100 g/210L ethanol, uncorrected

1. Do not use a 0.100% dry gas lot number installed for weekly PDOA's or subject test accuracy tests.

4. A 12" length of tubing, 1/4" ID, 3/8" OD, 1/16" wall

4. Print a copy of the last adjustment factors saved in the DMT

1. From the main menu, choose Reports, then Adj. Factors

5. From the main menu, choose Setup, then choose Adjustment

1. Set the Number of Tests to 3

6. If a digital simulator is being used, update the Simulator

1. From the Main menu, choose Simulator, then Digital Simulator, choose Guth

7. From the main menu, choose Adjustment

1. Scan Technician card or complete required fields
2. Follow instrument prompts
    1. When prompted, hook up the water or ethanol simulator, then press "OK"
        1. Pressing "OK" is confirmation to the instrument that the action has been taken and the instrument may proceed with the next step of the process.
    2. When prompted, connect the dry gas tank, press "OK"
        1. Do not disconnect the tank as instructed by the instrument.
3. Once the process is complete, the Intox-DMT will produce a set of Adjustment Factors (Adj Factors)
    1. The Adj Factors will be stored in the software as the reference for all subsequent tests
    2. The Intox-DMT will ignore any incomplete adjustments. Only completed adjustments are stored in the instrument's memory.

8. Verify the Adjustment by analyzing wet bath and dry gas standards
    1. Refer to the Adjustment Worksheet for specific accuracy check instructions. ALC.43
9. Status Messages for the Intox-DMT Dual Sensor
    a. A list of common Status Messages can be found in the Intox-DMT Technical Training Workbook.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 02/28/2018	**NUMBER:** BRA.10 - Multi-Level Check
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Multi-Level Check	

I. Policy: A multi-level check consists of analyzing two or more reference solutions of known alcohol concentration. This is done using the Accuracy check function and performing a duplicate test at each level.

A. A multi-level check will be performed on each instrument at the following times:

1. Upon original receipt
2. Every 3-months
3. After any service or repair is performed which could potentially affect the calibration

B. Refer to BRA.09 for accuracy test procedures.

C. Levels should be inclusive of the instrument's analytical range.

1. For example the following levels of dry gas or wet bath solutions can be used:
   a. 0.040% - range of 0.020% - 0.080%
   b. 0.200% - range of 0.150% - 0.250%
   c. 0.300% - range of 0.300% - 0.400%
2. The same level or lot number of the dry gas standard installed for PDOAs and breath tests should not be used for the multi-level checks.

D. The results for each test shall not differ by more than $\pm$ 0.010% from the target concentration for reference solutions from 0.080% to 0.300%. For reference solutions between 0.020% to values below 0.08% the results must be within +/- 0.005% from the target concentration. For reference solutions greater than 0.300% the results must be within +/- 5% from the target concentration. If the instrument does not pass the multi-level check it will not be used for breath testing until the problem is corrected by a qualified laboratory member or repair technician.

E. The results are downloaded to the laboratory computer.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 08/13/2019	**NUMBER:** BRA.11 - Installation of Breath Instrument
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Installation and Removal of Breath Instrument	

I. Policy: Technical procedures to be performed by a forensic alcohol analyst for the installation or removal of an evidentiary breath alcohol instrument. These procedures are to be followed when installing an instrument into service or removing an instrument from service at law enforcement agencies in Contra Costa County. All procedures will be done in accordance to the California Code of Regulations for forensic alcohol testing, as outlined in Title 17.

A. Installation of the Intox-DMT Dual Sensor

1. Items required for installation:
    a. Intox-DMT Dual Sensor breath alcohol instrument, including power supply adapter
    b. Breath hose
    c. Keyboard
    d. Traceable dry gas standard
        i. Acceptable range of ethanol concentrations: 0.080-0.300 grams/210 L
    e. 6-outlet power strip with surge protection
    f. Mouthpieces
    g. USB ethernet adapter
        i. example: TRENDnet model TU2-ET100, USB to 10/100 Mbps adapter or equivalent
    h. Ethernet and modem cables
    i. External desktop printer compatible with the instrument's operating system
2. Optional equipment
    a. 2-D barcode scanner with ethernet cable and power cord
        i. example: E-SEEK Model 260 or equivalent
    b. Wet bath simulator
        i. example: Guth 34C, 2100, or 12V500

ii. Traceable simulator solution

iii. serial data cable for simulator temperature sensor

3. Install instrument at police agency, making sure the following are properly connected:
   a. Power cord from Intox-DMT to power strip
   b. Breath hose into port and electrical into appropriate receptacle
      i. The breath hose must be connected to warm up to temperature
   c. Keyboard to the Intox-DMT
   d. Card reader to the Intox-DMT and power strip
   e. Printer to Intox-DMT and power strip
   f. Dry gas canister to regulator
   g. USB ethernet adapter
   h. Ethernet and modem cables from Intox-DMT to connection port(s)
4. Turn on instrument and allow to warm up.
   a. The Intox-DMT may need to acclimate to the room conditions.
5. While the instrument warms up, check the settings in the following sections of the Setup Menu (see ALC.40 or BRA.09):
   a. DMT
   b. Units
   c. Simulator
   d. Subject
   e. Accuracy Check
   f. Tank Change
   g. PDOA
      i. Set the PDOA at the end of the instrument installation. If required, the instrument will automatically perform a PDOA.
   h. Diagnostic
   i. Printer
   j. Internet
      i. The instrument needs to be turned off and on to reset the Internet connections.
   k. Hardware
   l. Software
   m. Control Panel

6. After the settings have been checked and the instrument has finished its warm up, perform a filter test.
    a. Allow the instrument to perform at least 15 cycles.
    b. Record the number of cycles and number of errors on ALC.40 .
        i. Remedial action may be need to be taken if there are any errors during the Filter Test.
7. Perform a diagnostic test and retain the printout with ALC.40.
8. Perform a Tank Change.
    a. Record the target concentration on ALC.40 and retain the results printout with the form.
9. Check the modem and ethernet connections.
    a. The lab's host computer will need to call the instrument to check the modem is set up.
    b. While at the instrument, check to see if the internet connection icon is present at the bottom right of the screen, and if the blue arrow appeared to indicate communication with the SFTP server.
    c. Upon returning to the lab, ensure the data downloaded from the instrument.
10. Enter service notes in the instrument maintenance log.

B. Removal of the Intox-DMT Dual Sensor from service at an agency, see ALC.41 .

1. Perform an accuracy check, if possible.
    a. Retain printout with ALC.41
2. Change the location of the instrument (in the Setup Menu) to CCCSO Lab.
3. Change the PDOAs to every 52 weeks.
4. Turn off the instrument, unplug from outlet, and return instrument to the lab.
5. Enter service notes in the instrument maintenance log.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 6/27/2019	**NUMBER:** BRA.12 - DUI Check Point Procedures
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Roberts Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** DUI Check Point Procedures	

I. Policy: Breath testing instruments used at DUI Checkpoints must be installed, checked for accuracy, and removed by Laboratory qualified personnel. The procedures for instrument installation and removal for a DUI Checkpoint must be done in accordance to Title 17.

A. Intox-DMT Dual Sensor Equipment/Materials

1. Intox-DMT Dual Sensor breath alcohol instrument, including power supply adapter
2. Breath hose
3. Keyboard
4. Traceable dry gas standard
    a. Acceptable range of ethanol concentrations: 0.080-0.300 grams/210 L
5. 6-outlet power strip
6. Mouthpieces
7. Printer
    a. Power supply cord
    b. cable to connect to Intox-DMT
    c. paper
8. Precautionary checklist
9. Optional equipment
    a. 2-D barcode scanner with ethernet cable and power cord
        i. example: E-SEEK Model 260 or equivalent
    b. Wet bath simulator
        i. example: Guth 34C or 2100
        ii. Traceable simulator solution

B. Starting DUI Checkpoint (Set-up Procedure)

1. Install instrument, connecting all external components, and allow instrument to warm up.

2. While the instrument is warming up, update the instrument:
3. Change location
    a. Go to the main menu, choose Setup (F3)
        i. Choose DMT
        ii. Choose Location and update to DUI CK PT-Host Agency
            1. example: DUI CK PT-Concord PD
    b. Choose Accuracy Check
        i. set Number of Tests to 2
    c. Choose Tank Change
        i. set Number of Tests to 2
4. After the instrument has warmed-up and is ready for testing perform a Tank Change
    a. Go to the main menu and choose Tank Change (F8)
        i. When performing a tank change, the instrument will save the information for the dry gas standard that will be used for any breath test administered during the DUI Checkpoint.
    b. Enter the required information in the requested fields.
    c. The Lot number entered for the dry gas standard is the lot number and tank number of the tank being used.
        i. For example: Lot # AG707401, tank #021 is entered as AG707401021
    d. The Tank Change will serve as the installation accuracy test.
    e. After the successful completion of the Tank Change the instrument is ready for use.

C. Ending DUI Checkpoint (Break-down Procedure)

1. Perform an Accuracy Check (F5)
    a. Go to the main menu, choose Accuracy Check
        i. Enter the required information in the requested fields.
        ii. Enter the dry gas tank lot number as above.
    b. Upon successful completion of the Accuracy Check, enter technician notes as:
        i. Pass-removing instrument from DUI Checkpoint
2. Change Location back to CCCSO LAB
3. Disconnect external components and carefully pack instrument in carrying case.
4. At earliest convenience, retrieve the data to the Crime Lab breath alcohol database.
    1. Add a note in the Maintenance Log for the instrument used for the DUI Checkpoint

1. Entry for the installation
    1. example: Instrument 500510 installed at DUI Checkpoint per procedures. Instrument functioning properly.
2. Entry for the removal
    1. example: Instrument 500510 removed from service at DUI Checkpoint per procedures. Instrument functioning properly.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 06/06/2018	**NUMBER:** BRA.13 - Database Procedures-Retrieving Data and Appending Tables
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Database Procedures-Retrieving Data and Appending Tables	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 10/24/2019	**NUMBER:** BRA.14 - Intoximeter Breath Test Operator Training
	RELATED ORDERS: California Code of Regulations	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER:	**SUBJECT:** Intoximeter Breath Operator Training	

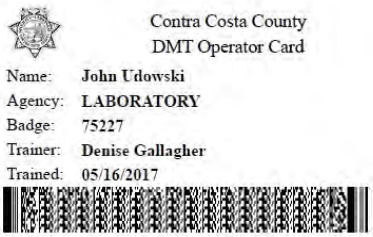
I. Policy: The following is general information about Breath Test Operator Training. Only qualified Operators shall perform breath tests on subjects. Such qualified Operators are Forensic Alcohol Analysts (FAA) or persons who have received and passed the Breath Test Operators Training course as described below. Breath test operator training applies to the Intoximeters, Inc. Intox DMT Dual Sensor breath alcohol testing device.

A. **General Information**

1. All breath test operators, that are not FAA shall have successfully completed the approved training course designed for the instrument model used. The course will consist of at least 4 hours of classroom lecture and practical experience operating the breath testing instrument.

2. The Operator Training Course shall be under the direct supervision and instruction from a Forensic Alcohol Analyst. A Forensic Alcohol Analyst is a Laboratory staff member who meets the qualifications of Title 17 and has successfully completed the breath instrument training and have at least 6 months of practical experience with the instrument. Assistance in training may be rendered to the instructor by a currently qualified operator of the instrument model used.

3. A person who successfully completes the Operator Training Course shall be issued an Operator Card, which serves as a training certificate. The operator card is labeled with the instrument which the operator is certified to use, operator's name, ID/badge number, agency, and the instructor's name. The Operator Cards also contain a bar code that can be used with the card reader installed with the instrument. Such certification shall be valid indefinitely for that model of breath instrument or until the operator demonstrates to the laboratory an inability or refusal to follow proper breath test procedures. Under such conditions, certification shall be revoked and the Operator and the Operator's agency shall be notified.


Contra Costa County
DMT Operator Card
Name: John Udowski
Agency: LABORATORY
Badge: 75227
Trainer: Denise Gallagher
Trained: 05/16/2017

4. Operator training records shall be maintained by the Laboratory for at least three years.

   a. See the CLER.DAT.11 for instructions on using creating Operator cards using the Operator Database. Operator cards will serve as a certificate of operator class completion.

B. **Training**: The instructor shall cover the following outline in the procedures for breath alcohol analysis. The instructor will cover, at minimum, theory of operation, detailed procedure of operation, practical experience, Precautionary Checklist, and a written examination. All students will receive a copy of the Operator Course Handout (see below).

1. Introduction

   a. Explain nature of course.

   b. Explain Title 17 and its requirements as they apply to breath testing and breath test operators.

2. Alcohol as a chemical

a. Give a brief background of the physical properties of alcohol.

b. Discuss various types of alcohol (wood, drinking, and rubbing).

3. Alcohol and the Human Body

a. Explain the absorption, elimination, and physiological effects of alcohol.

b. Emphasize route of elimination, particularly physiology of breath elimination.

4. Chemical tests for alcohol

a. Discuss Title 17 and its requirements for blood and urine as samples for alcohol analysis.

b. Discuss blood, breath, and urine as samples, point out attributes of each.

c. Discuss which samples are best for various types of drug detection.

d. Discuss Trombetta sample.

5. Breath test devices

a. Briefly describe the Federal Department of Transportation approval process for breath test instruments.

b. Discuss the common elements of all breath test instruments such as one specific function, alveolar breath, California Department of Public Health approval, and use by qualified operators with an approved Precautionary Checklist.

6. Role of the operator

a. Administer breath tests.

b. Follow instrument procedures, as instructed by the laboratory including the Precautionary Checklist.

c. Adhere to Title 17 requirements.

d. Operators who are not Forensic Alcohol Analysts, as deemed by the Title 17 and the Laboratory, are not responsible for maintenance, periodic determination of accuracy, or any ancillary activities for the Intox DMT Dual Sensor breath testing instrument.

e. It is the responsibility of the agency to monitor and replace the paper and ink cartridge in the external printer installed with the Intox-DMT Dual Sensor. Replacing printer paper and ink cartridges is not considered a Laboratory maintenance function.

f. Notify the Laboratory if there are any issues with the instrument.

i. Notify supervisor to contact the Crime Lab during regular business hours.

ii. Call the Forensic Alcohol Unit, leave a message if necessary.

iii. Use a breath instrument at a different agency or at the Martinez Detention Facility

iv. Draw blood instead of administering a breath test.

7. Role of the laboratory

a. Train operators.

b. Maintain breath test instruments.

i. Perform or check periodic determination of accuracy on the breath test instruments.

1. Accuracy checks are done by an FAA using a dry gas standard or a wet bath simulator solution.

ii. Perform maintenance tests.

iii. Perform tank changes.

iv. Troubleshoot instrument issues installed for service at each agency.

c. Maintain forensic alcohol records. The following records are downloaded to a host computer in the Crime Laboratory:

i. Accuracy check

ii. Tank change

iii. Periodic Determination of Accuracy (PDOA)

iv. Maintenance tests

v. All breath records

d. Supply expert testimony in court regarding theory and operation of instrument.

e. Interpret alcohol levels and provide opinion regarding impairment.

f. Adhere to Title 17 requirements.

8. Theory of operation

a. Explain the value and purpose of forensic alcohol testing.

b. Explain the theory of breath alcohol analysis.

c. Discussion of the required 15 minute wait period.

d. Explain the methods of breath alcohol testing.

9. Instrument Description

a. Use an instrument, its accessories and visual aids to point out and discuss the components.

b. Describe function and use of the digital display, tubes, buttons, keyboard, magnetic strip reader, etc.

10. Detailed procedure of operation and precautionary check list

a. Read and explain the precautionary check list to the students. This checklist will be maintained at each instrument site.

b. Give a detailed description of each step of the test.

c. Explain the effects of mouth alcohol on a breath test and why the 15 minute observation time is necessary. Emphasize that another 15 minute observation time must be performed if mouth alcohol is detected.

d. Re-emphasize the need and procedure for obtaining alveolar (deep lung) breath.

e. Discuss the Advisory Concerning Sanitary Practices During Administration of Breath Alcohol Tests.

f. Discuss the expression of analytical results.

g. Emphasize the necessity to obtain two separate breath samples which result in determinations of breath alcohol concentrations which do not differ from each other by more than 0.02 grams per 210 liters. Explain steps to be taken if a third breath sample is needed to obtain 0.02 agreement.

h. Explain the test card and the precautionary checklist and emphasize that it is to be retained in the officers' case file.

11. Written exam

a. The individual must pass with a score of 80% correct answers.

b. Allow the students 25 minutes to complete the exam.

c. See written exam below.

12. Practical experience and examination

a. Each instrument screen prompt shall be discussed and reviewed the instructor.

b. The operation of the breath instrument shall be demonstrated by the instructor.

c. The instructor shall observe the trainee(s) perform a successful test on the instrument.

d. The practical examination is successfully complete when the student demonstrates to the instructor correct hands-on operation of the Alcotest 7110 MK III C or the Intox-DMT

e. Dual Sensor using the precautionary check list.

f. The instrument test record and the precautionary check list will be submitted by each student and retained in the laboratory records.

II. INTOXIMETERS – INTOX-DMT DUAL SENSOR OPERATOR TRAINING COURSE HANDOUT

A. Introduction

1. Nature of Course: The purpose of this course is to train operators on how to properly conduct a breath test on the Intoximeters, Inc. Intox DMT Dual Sensor breath alcohol instrument. The content of this course will include theory of operation, detailed procedure of operation, and practical experience on the instrument. The course will also cover the physical properties of alcohol and its physiological effects on the body. This course handout is to be used in conjunction with the Operator Training course instructed by a qualified Forensic Alcohol Analyst employed by the Contra Costa County Criminalistics Laboratory.

2. Regulatory Aspects of Forensic Alcohol Analysis

   a. In California, the agency authorized by law to regulate forensic alcohol testing programs is the California State Department of Public Health. This department has set forth its requirements in Title 17 of the California Code of Regulations.

   b. Forensic alcohol analysis means the use of specialized equipment, instruments, and methods to measure the concentration of alcohol in samples of blood, urine, or tissue of persons involved in traffic accidents or traffic violations.

   c. Forensic alcohol analysis shall be performed by a laboratory that meets the requirements of Title 17 set by the California Department of Public Health as a Forensic Alcohol Laboratory.

   d. All aspects of forensic alcohol analysis, including the content of this class and handout, are subject to review by the California Department of Public Health.

B. Alcohol as a Chemical

1. “Alcohol”, as written in Title 17 and this laboratory's methods, refers specifically to ethyl alcohol (ethanol). Ethanol is the alcohol found in alcoholic beverages such as beer, wine, vodka, and rum. Alcoholic beverages also contain chemicals known as congeners which give the beverage its flavor, color, and odor. The odor detected, in a drink or on the subject's breath, is usually due to the congeners not the ethanol.A few types of alcohol or similar compounds are:

   a. Ethyl Alcohol: Grain alcohol. Ethanol is completely soluble in water. Alcoholic beverages will often list the alcohol concentration as Proof. The proof is two times the percentage of alcohol by volume. A bottle of vodka labeled "100 proof" will be 50% alcohol by volume.

      i. TOXICITY: 13 to 16 oz.

   b. Methyl Alcohol: Wood alcohol. Methanol is used as a solvent or fuel and very small amounts may be found in wines and liquor. Methanol metabolizes (is broken down in the body) into formic acid, which damages the optic nerve. Consumption may lead to blindness.

      i. TOXICITY: 1 to 3 oz. (five times as toxic as ethanol).

   c. Isopropyl Alcohol: Rubbing alcohol. Isopropanol is used as a solvent, fuel, antiseptic, antifreeze, and is also found in colognes. Isopropanol metabolizes to acetone.

      i. TOXICITY: 8 oz. (twice as toxic as ethanol).

   d. Acetone: Acetone is found in fingernail polish remover and may be present in a persons system if they are diabetic, on a fasting diet, or had consumed Isopropyl alcohol. It is produced naturally in the body, at very low levels, from the metabolism of fats.

C. Alcohol and The Human Body

1. Absorption

a. When ethyl alcohol is ingested, (when a person drinks an alcoholic beverage), it will travel first to the stomach where approximately 20-25% is absorbed into the blood stream. The remaining alcohol will then be emptied into the small intestine where it will be absorbed into the blood stream. The absorption of alcohol into the blood stream is by diffusion across the walls of the stomach and small intestine. There are many factors that can affect the rate of absorption including the type of drink consumed, the concentration of alcohol in the drink, how fast it is consumed, and the contents of the stomach while drinking (empty or full).

2. Distribution

a. The alcohol, after it has been absorbed into the blood stream, will be distributed throughout the body via the blood supply. The distribution of the alcohol is based on the water content of the body tissues; those with a high water content such as brain and muscle tissue will receive more alcohol than the bone or fatty tissue, which have a very low water content.

3. Elimination

a. Approximately 90% of the alcohol consumed is eliminated from the body by oxidative metabolism occurring largely in the liver. The remaining alcohol is excreted through the breath, urine, and skin by perspiration. The passive, predictable elimination of small amounts of alcohol through the breath and urine makes it possible to use urine or breath samples in determining the blood alcohol concentration.

b. Urine is produced as water and metabolic wastes are removed from the blood in the kidneys. The small amount of water removed will carry with it the same concentration of alcohol as the water in blood. This is because alcohol and water are infinitely soluble. It has been well established that the concentration of alcohol found in the urine will be higher than the concentration of alcohol in the blood by a ratio that has been determined to be 1.3 to 1.

c. Because urine is constantly being produced by the kidneys, it is necessary to have a subject void his or her bladder before giving a urine sample for analysis. The void eliminates urine that would reflect the average blood alcohol level for the time interval since the previous urination (which could have been several hours prior). The sample collected at least 20 minutes after the void reflects the blood alcohol over those 20 minutes.

d. As blood circulates through the lung tissue an exchange of gases occurs. Carbon dioxide is exchanged for oxygen. At body temperature (37°C) a small amount of alcohol will become a gas. This amount has been determined to be one part of alcohol as gas for every 2100 parts of alcohol that stays in the blood as a liquid. This equilibrium between blood and breath is established almost instantly in millions of tiny “pockets” in the lung called alveoli (deep lung tissue). The breath in the channels leading to the alveoli (throat, trachea, bronchial tubes, etc.) contains various mixtures of room air and deeper lung air. Consequently, this “top lung” air does not reflect the true blood-breath equilibrium. It is a varying amount less in alcohol concentration than in the deep lung air. For this reason the first part of an exhalation has the lowest concentration of alcohol in the breath. The highest concentration is reached from the last part of exhalation and contains the breath that reflects the true blood alcohol concentration.

e. The total rate of elimination of alcohol (metabolism, breath, excretion) varies slightly from person to person. The average rate is about 0.02% of blood alcohol concentration per hour, or about 1oz. of 100 Proof alcohol for a 180 lb. man.

4. Physiological Effects

a. Alcohol is a drug that depresses the central nervous system. It first affects inhibition and judgment and then impairs motor performance of all kinds, including vision, hearing, and muscular coordination. Pharmacologists agree that the effects of alcohol on the brain are always a deterioration of function and never an improvement.

b. The following information is from a Council Report by the Council on Scientific Affairs (JAMA 1986;255:522-527). "There is scientific consensus that alcohol causes deterioration of driving skills beginning at 0.05% BAC or even lower, and progressively serious impairment at higher BACs." There is accumulating evidence that demonstrates a direct relationship between BAC in drivers and the risk of a motor vehicle crash. Alcohol impairs driving skills by its depressant effect on the central nervous system. Alcohol slows and decreases the efficiency of both information acquisition and information processing, making divided attention tasks such as steering and braking more difficult to perform without error.

c. The American Medical Association supports a policy recommending:

i. Public education urging drivers not to drink

ii. Adoption by all states of a 0.04% BAC as per se illegal for driving (per policy H-30.986, modified in 1997)

iii. 21 years as the legal drinking age in all states

iv. adoption by all states of administrative driver's license suspension in DUI cases

5. Perspective

a. At this point it is important to emphasize that a chemical test for intoxication can substantiate the arresting officer's observations as to the individual's impairment. However, it should not be considered the only available criterion as to whether or not a person is under the influence. The totality of a well documented investigation, a properly administered breath test along with field sobriety tests and observations are extremely valuable in determining an individual's degree of alcohol impairment.

D. **Chemical Tests for Alcohol**

1. There are three types of samples, blood, breath, and urine, which may be used for alcohol analysis. The standards for withdrawal, testing, and preservation are established by Title 17.

2. Blood

a. Blood samples are collected by venipuncture only by persons authorized by Section 23158 of the California Vehicle Code (i.e., only licensed physician and surgeon, registered nurse, licensed vocational nurse, duly licensed clinical laboratory scientist or clinical laboratory bioanalyst, a person who has been issued a “certified phlebotomy technician” certificate pursuant to Section 1246 of the Business and Professions Code, unlicensed laboratory personnel regulated pursuant to Sections 1242, 1242.5, and 1246 of the Business and Professions Code or certified paramedic acting at the request of a peace officer may withdraw blood for the purpose of determining the alcohol content therein.

b. The vials used to collect the blood sample must contain a preservative and anticoagulant.

c. The officer must witness the blood withdrawal, initial the blood labels, and sign the chain of custody on the envelope. This is done to establish the chain of custody.

d. The advantages of taking a blood sample include:

i. Sample available for reanalysis

ii. Sample may be tested for other drugs

e. The disadvantages are:

i. Requires a trained third party

ii. Invasive

iii. Test results are not immediately available

3. Breath

a. Only persons who have passed the Operator Training Course may conduct a breath test on a subject.

b. The subject must be observed continuously for at least 15 minutes prior to the breath test.

c. The breath test is conducted by following the Precautionary Checklist.

d. An acceptable test must have 0.02 agreement between two duplicate breath samples.

e. The advantages of taking a breath sample include:

i. Test results are immediate

ii. Non-invasive

f. The disadvantages are:

i. Tests only for alcohol

ii. Sample is not retained for reanalysis

4. Urine

a. The sample bottles must contain a preservative.

b. The urine sample for alcohol analysis must be taken at least 20 minutes after the subject voids their bladder.

c. The advantages of taking a urine sample include:

i. Sample available for reanalysis

ii. Sample may be tested for other drugs

iii. Non-invasive

d. The disadvantages are:

i. Test results are not immediate

ii. Waiting period between void and sample

iii. Officer must witness the sampling

E. **Breath Test Devices**

1. All breath testing instruments used must be on the Federal Department of Transportation's list of approved instruments. The following are elements common to all breath testing instruments used in California:

a. One specific function - to measure the amount of alcohol present in a subject's breath sample

b. Designed to measure the alveolar (deep lung) breath

c. Approved by the California Department of Public Health

d. Used by qualified operators using an approved Precautionary Checklist

F. **Role of the Operator**

1. The operator is required to do the following:

a. Administer the breath test

b. Follow the Precautionary Checklist

c. Follow instrument procedures as instructed by the laboratory

d. Adhere to Title 17

e. Provide testimony as to how the breath test was administered

f. Follow the "California Department of Public Health" Advisory Concerning Sanitary Practices During Administration of Breath Alcohol Tests"

G. **Role of the Laboratory**

1. The laboratory is required to do the following:

a. Train operators

b. Maintain the breath test instruments

c. Perform or check periodic determinations of accuracy on the breath test instruments

d. Maintain forensic alcohol records

e. Supply expert testimony in court regarding the theory and operation of the instrument

f. Interpret alcohol levels

g. Adhere to Title 17 requirements.

H. **Theory of Operation**

1. The Intoximeters, Inc. Intox-DMT Dual Sensor contains two independent measuring systems, infrared absorption (IR) and an electrochemical fuel cell sensor (FC), to determine the amount of alcohol present in a subject's breath sample. By combining two distinct analytical systems to analyze a subject's breath sample, the Intox-DMT Dual Sensor is able to provide two precise, accurate, and independent test results. The raw results are expressed to the third decimal place and the reported result is averaged and truncated to the second decimal place. The reported result is expressed as g/210L of breath alcohol. Due to the fact that these systems are based on different technologies, it is therefore not unusual to observe slightly different results.

2. Infrared Absorption

   a. General:

      i. INFRARED ABSORPTION is a property of all organic molecules. This property obeys the well-known Lambert-Beer Law of Absorption where:

      ii. I=I0e^ -abc

      iii. I is the energy emerging from the gas absorption cell

      iv. I0 is the incident energy entering the gas absorption cell

      v. e is the natural logarithm base

      vi. a is the absorption coefficient for ethyl alcohol at the wavelength in question

      vii. b is the light path length in the gas absorption cell

      viii. c is the concentration of alcohol in the breath

      ix. The concentration of alcohol, c, is readily determinable since a and b are constants and I/I0 is measured by the instrument.

   b. Specific to the Intoximeters, Inc. Intox-DMT Dual Sensor:

      i. The Intox-DMT Dual Sensor detects alcohol at 3.44 μm in the IR spectrum.

      ii. The infrared absorption sample chamber, where the breath sample is analyzed, is the central part of the measuring system. The breath sample is transferred into the system via the breath hose. The sample chamber is heated to 46-50° C to avoid condensation and to guarantee defined conditions for the analysis. The sample chamber is a multi-reflection cell which provides a long absorption path for high precision. The sample chamber also has a small volume, which makes it possible to trace the concentration-time profile very carefully because fast changes are noticed.

      iii. The Intoximeters Intox-DMT has a kanthal infrared source lamp at one end of the sample chamber. At the other end of the sample chamber is a thermo-electrically cooled lead selenide detector. The detector is cooled to improve the signal sensitivity and precision.

3. Electrochemical Fuel Cell Sensor

   a. General:

      i. The ELECTROCHEMICAL FUEL CELL SENSOR (FUEL CELL) measures the current between a working and reference electrode with contact leads that are separated by a porous membrane filled with an electrolyte. Ethanol trapped on the working electrode is converted according to:

      ii. Working electrode: C2H5OH + 3H2O => 2CO2 + 12H+ + 12e-

      iii. Reference electrode: 3O2 + 12H+ + 12e- => 6H2O

      iv. The change in the electronic configuration causes a current between the electrodes.

   b. Specific to the Intoximeters Intox-DMT:

      i. When the FC detector is ready to analyze a sample, it opens to allow a fixed amount of the sample from the IR cuvette to enter the FC sensor. In its simplest form, the fuel cell consists of a porous acidic membrane (electrolyte) which is laminated by two platinum black plates.

This assembly is packed into a sealed case which has one small hole (sample inlet) leading to the sample chamber.

ii. Only one platinum plate will be exposed to the breath sample. A chemical reaction is triggered. The chemical reaction produces an electrical current between the two platinum plates, the voltage of which is measured. This becomes the usable indicator of the amount of alcohol consumed by the fuel cell, and is directly proportional to the amount of alcohol in the breath sample.

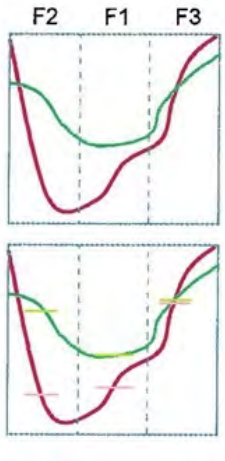
4. Detection of Interfering Substances

   a. The Intox – DMT fuel cell is designed for specificity to alcohol. The main response of the fuel cell is to ethanol. However, there is some mild sensitivity to other low molecular weight alcohols, such as isopropyl alcohol and methanol. There is virtually no sensitivity to butanol, which has 4 carbons.

   b. The fuel cell has no reaction at all to acetone, and only a very mild reaction with acetaldehyde. The fuel cell memorizes the response to ethanol in the form of a curvature analysis profile. The presence of another substance can be detected by comparing the time constant of the curve to the saved ethanol curve. If the subject's breath sample reveals different curvature characteristics, the message INTERFERENCE will be generated. The test will be invalidated.

   c. The Intox – DMT infrared absorbance is measured at 3.445 µm (filter 1), at 3.373 µm (filter 2), and at 3.501 µm (filter 3). Although multiple substances also have absorption at 3.445 µm, the signal ratio between the three filters is unique to ethanol. If a signal is detected, but the expected ratio between the filters is exceeded, the instrument will display and print out INTERFERENCE.

   d. For example, the absorbance profile in red is ethanol. The filter with the highest absorbance is filter 2, the second highest absorbance is filter 1, and the least absorbance is filter 3. The absorbance profile in green is an interfering substance. The filter with the greatest absorbance is filter 1, followed by filter 2, and finally by filter 3. The ratios between the filters are exceeded, and the instrument will display and print out INTERFERENCE.



5. Radio Interference (RFI)

   a. There is a radio frequency detection antenna on the breath hose of the Intox - DMT that looks for possible interfering radio frequencies. If this circuit was activated, RFI DETECTED will be printed on the subject test print-out. The RF circuit is not designed to detect all RF signals that may be generated, but only those that are of sufficient strength.

6. Flow Sensor

   a. There is a flow sensor that measures the breath flow (how hard the subject is blowing into the instrument) during a subject's test. This detector reacts quickly and interruptions in the flow of the breath sample can be easily detected.

7. Breath Hose

   a. The breath sample is transferred through a breath hose into the cuvette. The flexible breath hose is heated to 48 degrees C (+2 degrees C or -8 degrees C) to avoid condensation of the breath sample.

8. Mouth Alcohol Detection

a. Mouth alcohol is characterized by a sharp increase of alcohol concentration in the beginning of the subject's breath sample followed by a decrease of alcohol concentration until the end of the sample. A negative slope is detected if the change in consecutively compared averages are greater than 0.001 in the negative direction.

9. Profile Analysis

a. Various criteria must be met in order for the instrument to accept a breath sample and to ensure that the breath sample analyzed represents an alveolar (deep lung) air sample. The following conditions must be satisfied before the profile analysis is activated:

i. MINIMUM FLOW RATE: 3.0 L/min.

ii. MINIMUM BREATH VOLUME (at minimum flow rate): 1.5 L

iii. PLATEAU OF BREATH CURVE: The increase from the second to last 2 point average to the last (at the time the flow rate drops below 3.0 L/min) must be less than or equal to 0.001 grams / 210 liters and not a negative slope.

iv. A negative slope is detected if the change in consecutively compared averages are greater than 0.001 in the negative direction.

I. **Detailed procedure for operation for the Intox-DMT Dual Sensor**

1. To perform a proper breath test on the Intoximeters Intox-DMT, an operator must:

a. FOLLOW THE PRECAUTIONARY CHECKLIST (See copy of the Precautionary Checklist)

2. Preparing for Breath Test

a. Subject: The subject must be under continuous observation for a minimum of 15 minutes prior to performing a breath test. Per Title 17, during this period the subject must not have ingested alcoholic beverages or other fluids, regurgitated, vomited, eaten, or smoked. The subject should also not use a mouth spray, mouth drops, place anything in their mouth, or belch.

i. The purpose of the waiting period is to prevent mouth alcohol, which is any residual alcohol remaining in the mouth due to drinking an alcoholic beverage, vomiting, or regurgitating, from interfering with the test. It is NOT recommended that this observation be performed in the patrol car. The observation should be performed while in the same room as the subject to ensure that the subject has not ingested alcoholic beverages or other fluids, regurgitated, vomited, eaten, or smoked.

b. Intoximeters, Inc. Intox-DMT Dual Sensor: The Intox-DMT is equipped with a touch screen. A dedicated stylus should only be used and located near the instrument. If the screen on the Intox-DMT is blank or the screen saver is on, tap the screen. The home screen will appear. If the date and time are not correct on the instrument, make a note of it in your report and notify the Crime Lab.

3. Performing a Breath Test

a. To start the test, tap the green START TEST circle on the home screen.

b. The instrument will display: Has the 15-minute observation period been completed? Tap the Yes or No button on the screen.

c. The instrument will display: Scan Driver’s License? Tap the Yes or No button on the screen.

d. The instrument will now display the Test Information screen. Information is entered into each box/field using the keyboard. Switch between boxes/fields either by tapping on the one you want or by using the Tab button on the keyboard to navigate through each of the boxes/fields.

e. Under Observation Information, enter the observation start time and end time in the format HH:MM.

f. Under Subject Information, enter the subject’s name (first, middle initial, last), the subject’s license, and choose the gender from the pull-down menu. Enter the date of birth in the format MM/DD/YYYY. The age of the subject will auto-populate.

g. Under Operator Information, enter the operator’s name (first, middle initial, last), badge number, and agency. The operator will be alerted if “enter” is hit prior to entering the required information.

Tap on the empty field and enter the required information. Alternatively, press Tab to navigate through the fields. To continue, press the NEXT button.

h. The instrument will now display the Arrest Information screen. Enter the arrest city and choose whether this location is a City (C) or an Unincorporated (U) location via the pull-down menu. Enter the street address, the nearest cross-street, and the case or citation number. Entering remarks is an optional field.

i. When completed, tap one of the following options:

   i. Previous – To return to the previous screen

   ii. Cancel – To stop the test

   iii. OK – To start the subject breath test

      1. If the OK button was tapped, the instrument will display the test screen. A series of self-tests are automatically performed by the instrument. This includes a purge, ambient zeroing, diagnostic check, and blank test.

j. The instrument will display: Did the subject refuse? Tap the Yes or No button on the screen. Yes will end the test. No will continue the breath test.

k. Insert a new mouthpiece into the breath hose. Follow the Advisory Concerning Sanitary Practice During Administration of Breath Alcohol Tests section.

l. The instrument will display “Please Blow” and will give a series of beeps when the subject is to deliver the breath sample. The Operator may hold the breath hose or allow the subject to hold the breath hose while the breath sample is being given. Instruct the subject to inhale calmly and to blow continuously and evenly into the mouthpiece until they are out of breath. The beeps will change to a solid tone when the breath sample is being delivered. A green bar on the bottom right of the screen elongates as the breath sample is being delivered. The green bar should reach at least the halfway mark during the breath test. Remove the mouthpiece at the completion of the breath sample.

m. During the 2 minute waiting period between subject breath test, the instrument will perform the following: purge, ambient zeroing, blank, external standard, purge, ambient zeroing, and a blank.

n. The instrument will again display: Did the subject refuse? Tap the Yes or No button on the screen.

   i. Yes will end the test.

   ii. No will continue the breath test.

o. Insert the mouthpiece into the breath hose. Follow the Advisory Concerning Sanitary Practice During Administration of Breath Alcohol Tests section.

p. The instrument will again display “Please Blow” and will give a series of beeps when the subject is to deliver the breath sample. The Operator may hold the breath hose or allow the subject to hold the breath hose while the breath sample is being given. Instruct the subject to inhale calmly then blow continuously and evenly into the mouthpiece until they are out of breath. The beeps will change to a solid tone when the breath sample is being delivered. A green bar on the bottom right of the screen elongates as the breath sample is being delivered. The green bar should reach at least the halfway mark during the breath test. Remove the mouthpiece at the completion of the breath sample.

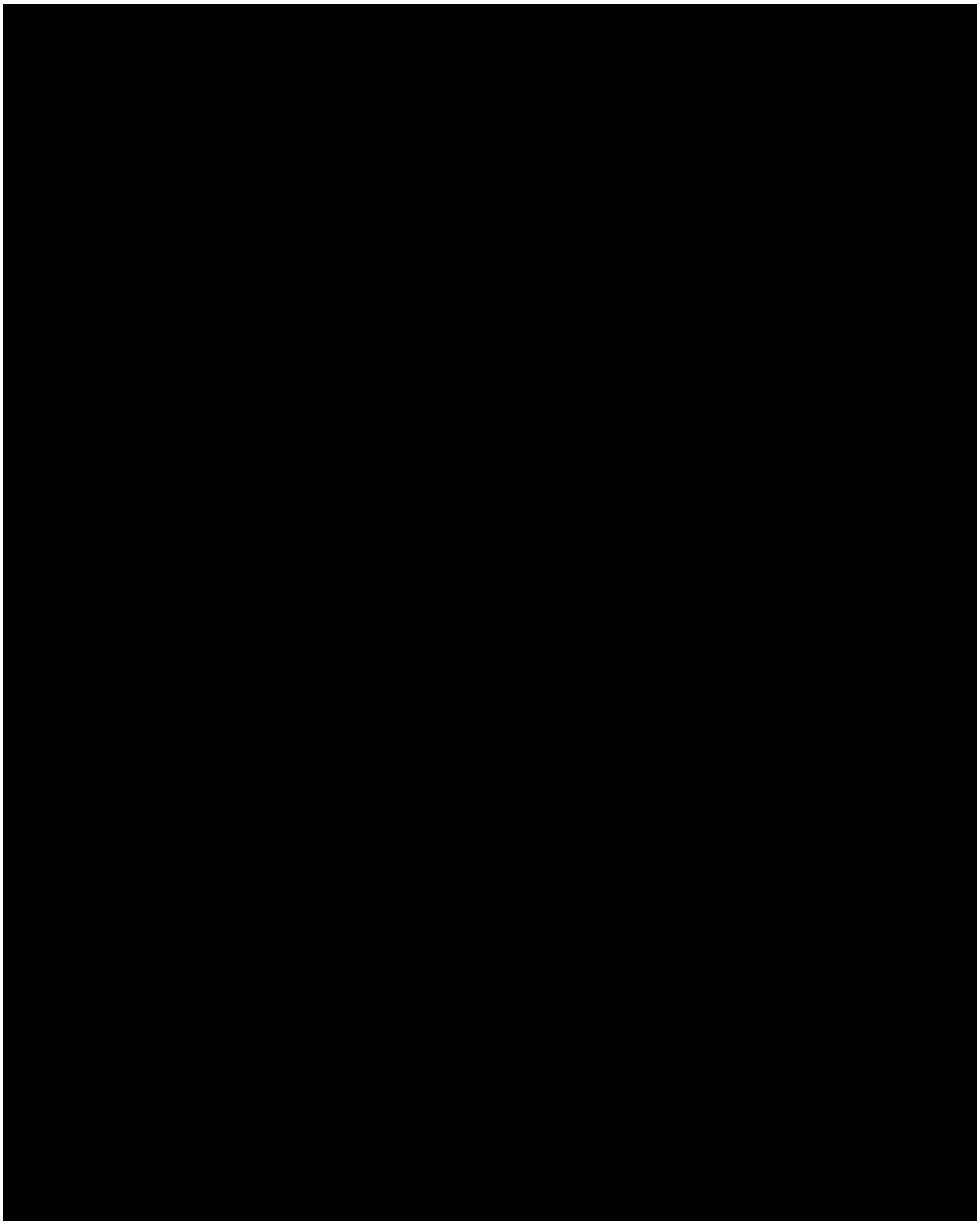
q. The instrument will automatically perform more self-tests: a purge, ambient zeroing, blank, external standard, purge, ambient zeroing, and a blank.

4. This is the end of the subject breath test. A report will be generated.

   a. Sign the bottom of the report. Retain the signed Breath Alcohol Analysis Report with the officer’s case file. If during the breath test the subject refused, or the test was stopped due to a status code, the printout(which includes the precautionary checklist)should be included with the officer's case file.

   b. If an additional copy of the breath alcohol analysis report is desired, tap the COPY button on the home screen. Tap LAST TICKET and then tap PRINT.

5. Printout of Final Result – Breath Alcohol Analysis Report (see below).



a. If a printing problem occurs, tap the COPY button on the home screen. Tap LAST TICKET and then tap PRINT.

J. **Status Messages - Causes and Remedies**

1. The following are some of the common status messages which may occur during a breath test. The status message will be shown on the instrument's digital display.

   a. PUMP ERROR – The message "PUMP ERROR" will be generated if at any time during the purge cycle the flow rate drops below 3 liters per minute. Repeat breath test. If the error persists, contact the Crime Laboratory.

   b. FILTER (1, 2, or 3) WON'T ZERO – The message "FILTER (1, 2, or 3) WON'T ZERO" will be generated identifying which filter (3.44µm, 3.37µm, or 3.50µm) won't zero. If encountered, contact the Crime Laboratory.

c. AMBIENT FAIL – The INTOX-DMT checks for changes in alcohol concentration in the ambient air. The detector quantifies any signal produced both at the beginning and at the end of the purge cycle. If the difference between these two readings is ≥ 0.12 Vdc, the message "AMBIENT FAIL" will be generated. A possible cause of an ambient fail is the presence of a subject with a strong odor of alcohol or perfume in proximity to the instrument.

d. BLANK ERROR – The INTOX-DMT checks for baseline levels of alcohol concentration in the ambient air. Blank tests are performed before and after each breath sample when the 3.44µm filter is in the optical path. If a value ≥ 0.004g / 210L is measured, the message "BLANK ERROR" will be generated. A possible cause of a blank error fail is a baseline level of alcohol in the air caused by hand-sanitizers, Lysol, air fresheners, etc. in proximity to the instrument. Remove any of these items from the breath testing room and retry the test.

e. STANDARD OUT OF RANGE – The external standard measurement must fall within the specified range of the target value. If the measurement falls outside of this range, the message "STANDARD OUT OF RANGE" will be generated. The instrument will disable itself. If encountered, contact the Crime Laboratory.

f. INTERNAL STANDARD ERROR – During the PDOA and the Diagnostic Tests, the internal quartz standard is measured. This internal standard measurement must fall within ± 4% of the stored Xq value established when the instrument was calibrated. If it falls outside of this range, the message "INTERNAL STANDARD ERROR" will be generated. If encountered, contact the Crime Laboratory.

g. INVALID SAMPLE – While a breath sample is being delivered, the instrument is continually measuring the concentration of alcohol. A decrease in the concentration of alcohol over time would result in a negative slope in the breath alcohol curve. If specific negative slope criteria are met, the message "INVALID SAMPLE" is generated. The current subject breath test will end, a print-out will be generated with the message "INVALID SAMPLE" and the instrument will return to the home screen. The most likely reason the "INVALID SAMPLE" message was triggered was because of mouth alcohol in the subject's breath. Re-start the 15 minute observation period, then retry the test.

h. DETECTOR OVERFLOW – When the detector voltage exceeds the maximum measurement of ± 2 Vdc, the message "DETECTOR OVERFLOW" will be generated. This corresponds to approximately a 0.83% BrAC. A possible cause of this is excessive mouth alcohol. Re-start the 15 minute observation period, and retry the test.

i. SAMPLE CHAMBER TEMPERATURE CHECK – The Intox – DMT will only operate if the sample chamber is in the range of 46°C to 50°C. Anything outside of this range will trigger the message "SAMPLE CHAMBER TEMPERATURE CHECK" to be generated. Typically, it takes 20 minutes from the time that the instrument is first powered on for the sample chamber to reach 46°C. Allow sufficient time for the instrument to warm up. If the correct temperature still is not reached, contact the Crime Laboratory.

j. BREATH TUBE TEMPERATURE CHECK – The Intox – DMT will only allow a breath sample to be administered if the breath hose is heated to 48.1°C (+2°C or -8°C.) If the breath hose temperature is outside of this range, the message "BREATH TUBE TEMPERATURE CHECK" is generated when a test is attempted. Wait for the instrument to ready itself. If it does not reach a ready state, contact the Crime Laboratory.

k. RFI DETECTED – An antenna wire in the breath hose monitors the environment around the DMT for elevated levels of radio frequency. If the radio frequency level exceeds the RFI limit, the message "RFI DETECTED" will be generated. Remove cell phones, hand held radio, any blue tooth connected device from the immediate testing area. Repeat the breath test. If the error persists, contact the Crime Laboratory.

l. INCOMPLETE SAMPLE – If the required breath sample parameters are not met during the 2 minute breath sample window, the message "INCOMPLETE SAMPLE" will be generated. This message is not generated if it is determined to be a refusal. Repeat the breath test or draw blood.

m. FILTER WHEEL ERROR – Two optical sensors are used to validate proper positioning of the filters and quartz standard in the optical path. The software monitors the movement of these wheels and if there is misalignment during any of the movement sequences, the message "FILTER WHEEL ERROR" is generated. If encountered, contact the Crime Laboratory.

n. INHALATION DETECTED – The instrument has a mass airflow sensor, which can determine the direction of airflow. If it detects an airflow in the reverse direction (e.g. the subject is inhaling back the breath sample recently provided), the message “INHALATION DETECTED” will be generated. The breath test will be aborted and the Breath Alcohol Analysis Report will be printed with the status message “INHALATION DETECTED.” Repeat the breath test and instruct the subject to blow inhale calmly and continuously blow until out of breath.

o. INTERFERENCE DETECTED – Each sample measured by the Intox – DMT is done so to determine the ethanol concentration. In addition, by measuring the sample at 3 wavelengths, we determine whether or not the sample is specific to ethanol. If a discrepancy is found compared to what is expected at the three separate filters, the sample is said to be non-specific to ethanol and the message “INTERFERENCE DETECTED” is generated. The Intox – DMT will terminate this test and a Breath Alcohol Analysis Report is printed with the “INTERFERENCE DETECTED” message. A possible cause of this message is the presence of another volatile substance, such as methanol or isopropanol, in the breath. Collect a blood sample in lieu of a breath sample.

p. STATIC ANALYSIS ERROR – When the sample has been accepted and is being analyzed, it is in the static state, and a valve closes off the breath tube from the sample chamber. In the event that the perceived alcohol value changes from the beginning of measuring the static sample to the end, it is suspected there might be a leak or another undesired reason for this, and the message “STATIC ANALYSIS ERROR” is generated. If encountered, contact the Crime Laboratory.

q. SAMPLE AGREEMENT ERROR - There must be an agreement of 0.02 between any two subject breath results. If the results do not meet the 0.02 agreement, the instrument will require a third subject breath sample. If there is an 0.02 agreement between any of the three tests, it is a valid breath test. If there is no 0.02 agreement between any of the three subject breath results, the instrument will print a test card that indicates "Sample Agreement Error." Repeat the subject breath test after a 15 minute waiting period or draw blood.

r. TANK PRESSURE TOO LOW - The Intox-DMT will only allow a breath test to be administered if there is adequate PSI for the external dry gas standard. If the PSI is too low to complete a breath test, the message "Tank Pressure Too Low" will appear on the screen when an Operator initiates a breath test. If this occurs, a new dry gas standard needs to be installed by the Crime Laboratory. If encountered, contact the Crime Laboratory.

K. **Precautionary Checklist**

PRECAUTIONARY CHECKLIST FOR THE INTOXIMETERS – INTOX DMT

The breath sample shall be collected only after the subject has been under continuous observation for at least 15 minutes prior to collection of the breath sample. During this time the subject must not have ingested alcoholic beverages, or other fluids, regurgitated, vomited, eaten, or smoked.

CONDUCTING A SUBJECT BREATH TEST:

1. If the screen is black or the screen saver is on, tap the screen to obtain the home screen.
2. To start the test, tap the green START TEST circle.
3. The instrument will display: **Has the 15 minute observation period been completed?** Tap *Yes* or *No*.
4. The instrument will display: **Scan Driver's License?** Tap *Yes* or *No*. **Scan Operator Card?** Tap *Yes* or *No*.
5. Enter the **Test Information**
    a. **Observation information:** Enter observation start and end time in *HH:MM*
    b. **Subject information:** Enter subject name (F/M/L), license number, choose gender, and enter date of birth in the format *MM/DD/YYYY*. The age will auto-populate.
    c. **Operator information:** Enter operator name (F/M/L), badge number, and agency.
6. To continue, tap *NEXT*
    a. If an error message is displayed, fix/enter the appropriate fields.
    b. The operator can add information by tapping the required box/field or by pressing Tab to maneuver through all the boxes/fields.
7. Enter **Arrest information:** Enter city of arrest, choose City (C) or Unincorp (U), enter street, nearest cross-street, and case or citation number. (Optional) Enter remarks.
8. When finished, choose one of the following: *Previous* – to go back to the previous screen; *Cancel* – to stop the test; *OK* – to start the test.
9. The instrument will perform several self tests: purge, ambient zeroing, diagnostic check, and blank test.
10. The instrument will display: **Did the subject refuse?** Tap *No* to continue the breath test. Tap *Yes* if the subject refused. A Subject Refusal will end the test and a report is generated indicating the subject refused.
11. Insert a new mouthpiece into the breath hose.
12. The instrument will give a series of beeps when the subject is to deliver the first breath sample. Instruct the subject to inhale calmly and continuously blow until out of breath when the instrument displays "Please Blow."
    a. The beeps turn into a solid tone when the breath sample is being delivered.
    b. A green bar at the bottom right of the screen monitors how much breath sample is being delivered. The green bar should at least meet the halfway mark.
13. Remove the mouthpiece from the breath hose after the subject delivers the breath sample.
14. The instrument will perform several self tests: purge, ambient zeroing, blank test, external standard test, purge, ambient zeroing, and blank test.
15. The instrument will display: **Did the subject refuse?** Tap *No* to continue the breath test. Tap *Yes* if the subject refused. A Subject Refusal will end the test and a report is generated indicating the subject refused.
16. Insert mouthpiece into the breath hose.
17. The instrument will give a series of beeps when the subject is to deliver the next breath sample. Instruct the subject to inhale calmly and continuously blow until out of breath when the instrument displays "Please Blow."
    a. The beeps turn into a solid tone when the breath sample is being delivered.
    b. A green bar at the bottom right of the screen monitors how much breath sample is being delivered. The green bar should at least meet the halfway mark.
18. Remove the mouthpiece from the breath hose after the subject delivers the breath sample.
19. The instrument will perform several self tests: purge, ambient zeroing, blank test, external standard test, purge, ambient zeroing, and blank test.
20. End of test – A report is generated. Discard mouthpiece.
21. **Sign** the bottom of the report.
22. (Optional) If a copy of the last report is desired, tap the COPY box. Select *Last Ticket*, then tap *PRINT*.

RETAIN SIGNED BREATH ALCOHOL ANALYSIS REPORT WITH OFFICER CASE FILE

L. **Advisory Concerning Sanitary Practice During Administration of Breath Alcohol Tests**

1. The following is taken from an advisory released by THE FOOD AND DRUG LABORATORY BRANCH of the CALIFORNIA DEPARTMENT OF PUBLIC HEALTH.

    a. Persons administering breath alcohol tests should recognize the possibility of acquiring or transmitting infectious diseases as a result of handling mouthpieces. The procedures employed to eliminate this possibility include:

        i. The operator must use a new mouthpiece for each breath test. The plastic bag enclosing the mouthpiece is opened at one end. The distal end of the mouthpiece exposed from the plastic is then inserted into the breath tube of the instrument.

        ii. The breath tube, with the mouthpiece attached, is handed to the subject by the operator. The remaining plastic is removed and the subject is requested to blow into the instrument.

iii. At the completion of the breath test the mouthpiece is removed and discarded by the operator. This is done using the plastic bag that originally contained the mouthpiece to avoid handling the mouthpiece directly.

M. **Uniform Standard for Withdrawal, Handling and Preservation of Blood Samples for Forensic Alcohol Analysis**

1. In accordance with Vehicle Code Section 23158(j), the Department of California Highway Patrol, in cooperation with the California Department of Public Health and the Department of Justice, has adopted uniform standards for the withdrawal, handling and preservation of blood samples prior to analysis. The standards are outlined below. The text has been modified for use in Contra Costa County.

2. Blood samples collected from persons involved in traffic accidents or traffic violations shall be collected, handled and preserved as required by Sections 1219 and 1219.1 of Title 17 of the California Code of Regulations.

3. Blood samples are collected by venipuncture from living individuals as soon as feasible after the alleged offense, and only by persons authorized by Section 23158 of the California Vehicle Code (i.e., only licensed physician and surgeon, registered nurse, licensed vocational nurse, duly licensed clinical laboratory scientist or clinical laboratory bioanalyst, a person who has been issued a "certified phlebotomy technician" certificate pursuant to Section 1246 of the Business and Professions Code, unlicensed laboratory personnel regulated pursuant to Sections 1242, 1242.5, and 1246 of the Business and Professions Code or certified paramedic acting at the request of a peace officer may withdraw blood for the purpose of determining the alcohol content therein. Alcohol or other volatile organic disinfectants are not used to clean the skin where a specimen is collected. Aqueous benzalkonium chloride (Zephiran), or Povidine-Iodine (Betadine) disinfectants are suitable to disinfect the skin before venipuncture.

4. Sterile, dry hypodermic needles and syringes or clean, dry vacuum type containers with sterile needles are used. No reusable equipment is used. The blood sample is deposited into a clean, dry container (such as VACUTAINER or VENOJECT) which is closed with an inert stopper. Sample containers are not reused. Tubes for collecting blood contain an anticoagulant (potassium oxalate) and a preservative (sodium fluoride). The minimum quantity of blood required to perform duplicate determinations by the laboratory and still provide sufficient quantity for referee analysis by the defendant is 3.0 ml.

5. Maintenance of identity and integrity of the sample, required by Section 1219 of Title 17 of the California Code of Regulations, shall include the following procedures:

   a. Label for Tube or Vial. The label of the blood vial or tube shall contain at least the following information:

      i. Full name of subject

      ii. Date blood drawn

      iii. Initials of person drawing blood

      iv. Initials of witnessing officer

   b. Envelope or Other Container Used for Enclosing and Identifying Blood Sample Tube or Vial from living individuals.

      i. The blood sample envelope or other container label shall include at least the following information:

      ii. Full name of subject

      iii. Submitting agency

      iv. Geographical location where blood sample was drawn, i.e., name and/or address of hospital, jail or other facility

      v. Name of person drawing blood sample

      vi. Date blood sample drawn

      vii. Time blood sample drawn

      viii. Signature of witnessing officer

ix. A form for establishing the chain of possession to be filled in by each person having possession of sample that includes "Received From" and "Received By" accompanied by a date.

x. Other information such as agency or laboratory number, offense charged, anatomical location from which blood sample was drawn, or any special instructions may be added.

6. Procedures for Obtaining Blood Samples from living individuals

a. The requesting officer must witness the withdrawal of the sample. When the officer witnesses the actual withdrawal of the blood, it may be unnecessary for the person drawing the blood to appear as a witness at the time of the trial.

b. The person drawing the blood shall fill out and initial the label and affix it firmly to the tube or vial. The sample shall then be given to the officer, who, in turn, shall initial the label and place the sample in the prescribed envelope or other container. The officer shall immediately complete the required information on the envelope or other container label and seal container securely.

c. A "Declaration" form is to be completed by the person collecting the blood sample. It will be distributed as follows:

i. White copy to the District Attorney's office

ii. Yellow copy retained in officer's report

iii. Pink copy to the person making the blood withdrawal

d. Appropriate steps to insure integrity of sample shall be taken.

i. Once the envelope or other container is sealed, it must not be opened except for analysis in the laboratory.

ii. Each person having possession of the sealed sample shall sign his/her name in the space provided for recording the "chain of possession."

N. **INTOX-DMT Dual Sensor Operator Training Written Test** (Time 25 minutes)

1. How long do state regulations (Title 17) require that the subject be under continuous observation before a breath sample is taken, during which time he hasn't ingested alcoholic beverages or other fluids, regurgitated, vomited, smoked or eaten?

a. 15 minutes

b. 20 minutes

c. 25 minutes

2. The INTOX-DMT uses which of the following methods for measuring alcohol concentration in the breath an

a. Infrared (IR) absorption method

b. an ultra-violet (UV) absorption method

c. an electrochemical fuel cell (FC) method

d. both (a) and (c)

3. If a problem occurs with the instrument during the evening hours, the trained operator can_____.

a. notify their superior to contact the Crime Lab during regular office hours

b. call the Crime Lab’s Alcohol Section phone number and leave a message

c. use a different agency’s/detention facility’s breath instrument or draw blood from the subject

d. all of the above

4. Which of the following is NOT an advantage for using blood to test for impairment?

a. blood can be reanalyzed at a later time

b. blood can be used to test for drugs, in addition to alcohol

c. blood requires a trained physician, nurse, or technologist to perform the withdrawal

d. blood alcohol is directly related to impairment

5. Which agency controls the regulations governing alcohol analysis, as found in the California Code of Regulations, Title 17?

a. California Highway Patrol

b. California Department of Public Health

c. Department of Motor Vehicles

6. A valid breath test has a maximum allowable deviation of _____ between two breath samples taken from an individual suspected of driving under the influence of alcohol.

a. 0.02 g/210L

b. 0.03 g/210L

c. 0.01 g/210L

7. The INTOX-DMT should always be left on?

a. True

b. False

8. What should an Operator do if the instrument displays “INVALID SAMPLE” during a breath test?

a. Immediately start a new breath test

b. Observe subject for another 15 minutes and then start a new breath test

c. Nothing, it happens and doesn’t mean anything is wrong

d. none of the above

9. The purpose/value of conducting an evidentiary breath test is to:

a. Obtain a breath alcohol level

b. Obtain a blood alcohol level

c. Measure impairment

d. Measure THC content

10. If the subject has alcohol in their mouth while giving a breath sample, the INTOX-DMT will display and printout a Breath Alcohol Analysis Report that indicates _____.

a. "BLOWING NOT ALLOWED"

b. "AMBIENT FAILURE"

c. “INVALID SAMPLE”

d. "PURGE ERROR"

11. The officer is responsible for providing court testimony regarding _____.

a. the internal operation of the INTOX-DMT

b. the regulations covered in the Title 17 Code of Regulations

c. the operations involved in conducting the breath test

12. What should an Operator do if the instrument displays “STANDARD OUT OF RANGE” during a breath test?

a. Try a breath test on a different agency’s INTOX-DMT or request a blood draw

b. Contact your agency’s IT department

c. Nothing, even smart instruments can have gas problems

d. None of the above

13. The INTOX-DMT is designed to determine the alcohol level present in the _____.

a. mouth

b. blood stream

c. deep lung air

14. Persons authorized to supervise this course are _____.

a. Forensic Chemists

b. Forensic Alcohol Analysts

c. Forensic Pathologists

15. The green bar appearing at the bottom right corner of the visual display during a breath test indicates that _____.

a. the breath sample does not meet the minimum requirements

b. the subject should stop blowing immediately

c. an adequate breath sample is being delivered

16. After a breath test is completed, what is the proper procedure for the Operator to follow regarding the original Breath Alcohol Analysis Report?

a. Sign and keep a copy for your records

b. Forward the printout to DOPH

c. Forward the printout to the Criminalistics Laboratory

d. Give the print out to the subject

17. If three breath sample results are obtained and the values are:
IR-0.15 g/210L IR-0.18 g/210L IR-0.16 g/210L
FC-0.15 g/210L FC-0.18 g/210L FC-0.16 g/210L
the INTOX-DMT will _____.

a. print out a valid test result

b. require a fourth breath sample

c. signal the operator to begin the test sequence again

18. The alveolar breath, which contains the _____ concentration of alcohol in the breath, will reflect_____ blood alcohol level of a subject.

a. lowest, the true

b. highest, a false

c. highest, the true

d. lowest, a false

19. An INCOMPLETE SAMPLE occurs when the subject:

a. does not provide a sample within 2 minutes

b. does not meet the minimum breath sample criteria

c. inhales when asked to provide a breath sample

d. both (a) & (b)

20. The correct manner for conducting a test on the INTOX-DMT is to _____.

a. practice running the instrument before testing

b. follow the Precautionary Check-list

c. ask for assistance from other qualified operators

21. During the 15 minute observation period, the subject is observed placing something into his mouth, the appropriate step is _____.

a. to wait 5 minutes and then start the breath test

b. request that a blood or urine sample be taken

c. clear the mouth and wait an additional 15 minutes

22. After the person withdrawing a blood sample fills out the DECLARATION, the signed copies are to be _____.

a. released to the officer to keep in the report

b. forwarded to the District Attorney for filing

c. released to the person performing the blood withdrawal

d. all of the above

23. The INTOX-DMT is periodically checked for accuracy by _____.

a. having alcohol-free subjects blow into the instrument

b. using a device known as a Breath Simulator or dry gas unit containing a known alcohol concentration

c. a California Department of Public Health technician

24. It is the responsibility of the officer to witness the blood withdrawal in order to_____.

a. establish and maintain the chain of custody for the blood sample

b. comply with the California Department of Public Health requirements

c. release hospitals of any civil liabilities

25. If the subject's breath contains acetone, the INTOX-DMT will _____.

a. display "INTERFERENCE DETECTED" on the visual display, abort the test, and print a Breath Alcohol Analysis Report

b. subtract the acetone level from the alcohol level

c. display the "OUT OF MEASURING RANGE" on the visual display

d. Not detect the acetone

26. Where can a trained Operator obtain instructions for completing a proper breath test?

a. Title 17

b. The Precautionary Checklist

c. Vehicle Code Book

d. Google

27. The INTOX-DMT uses which of the following criteria to determine deep lung air:

a. flow rate.

b. breath curve plateau.

c. breath volume.

d. all of the above.

28. When the INTOX-DMT detects the presence of an interfering substance in the breath _____.

a. the instrument will display "INTERFERENCE DETECTED"

b. the test will be aborted

c. the instrument will display "INVALID SAMPLE"

d. both (a) and (b)

29. When blowing into the breath hose the subject should be told to _____.

a. blow as hard as one can

b. blow into the hose for 10 seconds

c. blow continuously until out of breath

30. What are the most important elements that should be included in a complete DUI investigation that a Criminalist could use to offer an informed opinion about impaired driving:

a. The color of hair and eyes of the subject.

b. The drinking history (time of drinking) and the driving pattern.

c. The subject’s shoe size.

d. The performance on Standardized Field Sobriety Tests, the objective signs and symptoms, and chemical test results.

e. Both (b) and (d).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 10/22/2019	**NUMBER:** BRA.15 - Breath Alcohol Discoveries
	RELATED ORDERS: FSD.45, CLER.DAT.12, CLER.DAT.07, TOX.10, BA.43	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Breath Alcohol Discoveries	

I. Policy: The Alcohol Unit staff shall comply with all reasonable and legitimate Discovery Requests. (FSD.45).

A. **Types of Discoveries:**

1. The Alcohol unit provides "basic discoveries" or "extensive discovery" records related to subject breath tests.

   a. A "basic breath discovery" is a pre-set package that typically consists of:

      i. Instrument Maintenance Log (6-12 months before and after the incident date)

      ii. Accuracy Check Log (3 months before and after the incident date)

      iii. Subject Breath Test Log (1 month before and after the incident date)

      iv. Operator's Certification

   b. An "extensive discovery" is a request for more information than is included in the pre-set package of the "basic discovery". It may be a request for more detailed documentation to include but not limited to more extensive Instrument Records, Standard Operating Procedures, Proficiency Test Records etc. Once all required paperwork is received, the discovery request can be fulfilled.

B. **Searching for the correct subject breath test information:**

1. **Finding the correct subject breath test information** is dependent upon **when** the breath test occurred and **which instrument** the breath test was conducted on.

   a. If the subject breath test was conducted prior to January 1, 2009, the breath test information will be in the Drager Access Database (see Alcohol Unit Intoximeters DMT computer).

   b. If the subject breath test was conducted between January 1, 2009 and February 2018, search records in the Online Drager Database to generate records related to the Drager Alcotest MKIIIC (See online Intox DMT Database).

   c. If the subject breath test was conducted between November 2017 to the present, search records in the Online Intoximeters Database to generate

records related to the Intox-DMT Dual Sensor (See online Intox DMT Database).

C. **Discovery Procedures:**

1. The Clerical staff will create a discovery request in LIMS and image the request paperwork and deliver the requisite paperwork to the Alcohol Unit as described in CLER.DAT.12.

2. The analyst within the unit will review the discovery request and determine if further information is needed.

3. The discovery requests may be completed electronically and posted via ARIES.

   a. If the analyst is compiling the records on the Intox DMT Database Computer, see instructions for printing out discovery records from the Draeger Database Computer.

   b. If the analyst is compiling the records on a computer with a COPY of the Draeger Database, see instructions for printing out discovery records from a computer with a COPY of the Draeger Database Computer.

   c. The electronic files of the records requested will be gathered, concatenated and uploaded into LIMS. For detailed procedure on how to concatenate .pdf documents see "Electronic Batch Documents" under Tox.10 .

   d. In the LIMS imaging module, right-click each image to be released as part of the discovery, and select "Send To iResults". A check mark will appear next to the "Send to iResults" menu.

   e. The discovery request will be marked as Draft Complete by the analyst compiling the discovery.

   f. The completed discovery will be checked and marked as Admin Reviewed by another analyst or by a Supervisor.

   g. The electronic discovery records will be accessible via ARIES for the District Attorney's office to retrieve. There is a 24 hour lag from the time the Case has been Admin Reviewed before the records will be accessible to the DA's office.

4. Any records not amenable to be uploaded into LIMS will be provided outside of ARIES.

5. Any "Rush" discoveries request may need to be provided as paper or faxed copy. The Rush discoveries need to be approved by the Supervisor to assess the exigency of the circumstances FSD.45

D. **Instructions for printing out discovery records from the online Intox DMT Database.**

1. Ensure the most recent downloaded information has been uploaded in the Intox DMT Database.

2. To obtain a “Basic” Breath Alcohol Discovery Packet or a Laboratory Copy of the Breath Alcohol Analysis Report:

   a. Go to the Intox DMT Database by going to secure intranet webpage found here: http://lab.so.cccounty.us/MuirLab/Account/Login

b. Login using your secure username and password provided by Technical Services.

c. Click on the **Intoximeters** instrument icon

d. Click the **Discovery** heading and select **Subject Related**.

e. In the search page your search criteria then click **Search** button.

f. When you find the desired record, click **Select**.

g. Select the report you wish and click **Display** Button.

h. Reports open as PDF files

3. To obtain the Operator Training Record for a specific Officer trained on the Intox-DMT Dual Sensor:

   a. Click the **Discovery** heading and select **Operator Training Record**.

   b. In the search field enter the operator's name and click on the search icon or enter.

   c. When you find the desired record, click **Select**.

   d. Reports open as PDF files.

4. If you cannot find the desired records or need extensive discovery records:

   a. Click the Discovery heading select **Request More Information** and follow the instructions.

E. **Instructions for printing out discovery records from the Online Drager Database**:

1. Ensure that the most recent downloaded information has been uploaded into the Draeger Database.

2. Open the Draeger Database by double-clicking on the icon.

3. Log-in to the Database.

4. To obtain a "Basic" Breath Alcohol Discovery Packet or a Laboratory Copy of the Breath Alcohol Test Card click the **Discovery Documents** heading and select **Subject Related Documents.**

5. In the search field enter the subject's name and search.

6. Find the desired record and click **Select**.

7. Choose the report by selecting either the **Breath Test Card** or **Basic Breath Discovery Packet**, click Display.

8. Print by clicking the **Print** Icon.

9. To obtain the Operator Training Record for a specific Officer trained on the Drager Alcotest MKIIIC:

   a. Click the **Discovery Documents** heading and select **Operator Training Record**.

   b. In the search field enter the operator's name and search.

c. Find the desired record, click **Select**.

d. Print by clicking the **Print** Icon.

F. **Instructions for printing out discovery records from the Drager MS ACCESS Database on the Intox DMT Database Computer:**

1. Open the Drager Database by double-clicking on the icon on the Home screen
2. Log-in to the Database
3. Click on Report Forms button
4. Click on Subject Related Reports
5. Highlight the Subject Field
6. Type the last name of the subject, first name
7. If the correct date and time automatically are listed, click the Time field and choose the matching date and time (pull-down box).
8. Click on Basic Discovery Reports for Basic Breath Discoveries or Click on Court Testimony Reports for records being taken to court or Drager 115.
9. Other reports on this window can be printed pertaining to the subject test listed in the Subject Test Field.
10. Officer training records can be accessed using the Officer Training Info query.

G. **Instructions for printing out discovery records from a computer with a COPY of the MS Access Drager Database:**

1. Ensure that the copy on the computer is recently updated by clicking on the Drager Back End Update icon.
2. Open the Drager Database by double-clicking on the Drager Records icon.
3. Log-in to the Database.
4. Click on Subject Related Reports.
5. Highlight the Subject Field.
6. Type the last name of the subject, first name.
7. If the correct date and time automatically are listed, click the Time field and choose the matching date and time (pull-down box).
8. Click on Basic Discovery Reports for Basic Breath Discoveries or Click on Court Testimony Reports for records being taken to court or Drager 115.
9. Other reports on this window can be printed pertaining to the subject test listed in the Subject Test Field.
10. Officer training records can be accessed using the Officer Training Info query.

H. **For handling of Civil discoveries, and Subpoena Duces Tecum**, see FSD.45 and CLER.DAT.12.

I. **For DMV SDT hearing discovery requests** follow BA.36 & FSD.45 in obtaining the correct DMV SDT request form, completing the discovery properly, and distributing the

records to the appropriate party.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 08/13/2019	**NUMBER:** BRA.16 - Instruments Used
	RELATED ORDERS: Ca. Administrative Code Title 17	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Instruments Used	

I. Policy: All equipment used for alcohol analysis is kept in good working order and routinely checked for accuracy and precision by a Laboratory authorized analyst.

A. State regulations require that only those models of breath instruments approved by the U. S. Department of Transportation may be used by law enforcement to test the breath of drivers for alcohol. Only such types and models of instruments and related accessories as are named in the "Conforming Products List" published in the Federal Register by the U.S. Department of Transportation shall be used for breath alcohol analysis in this state. The Alcohol Unit is furnished with the equipment for the analysis of alcohol in breath samples. This equipment includes:

1. The Intoximeters, Intox-DMT Dual Sensor with an integrated dry gas compartment (Intox-DMT) will be used for the analysis of breath samples in places other than the forensic alcohol laboratory and by Laboratory authorized personnel only when such places and persons are under the direct jurisdiction of a governmental agency or the forensic alcohol laboratory.

2. USB ethernet adapter (TRENDnet USB to 10/100 Mbps Adapter, Model TU2-ET100) for use with the Intox-DMT.

3. A personal computer equipped with a modem, SFTP access, Windows operating system, DMHost retrieval software, and a data base application such as SQL

4. A Breath Alcohol Simulator (Guth Model 34C, Guth Model 2100, Guth Model 12V500 or equivalent) or an Uncorrected Dry Gas Ethanol Breath Standard (EBS) cylinder (produced by Mid-America Airgas for Intoximeters, Inc.) is used to perform periodic determinations of accuracy (PDOA).

5. A temperature sensor serial data cable (either RS232 to RS232 for Guth Model 2100 or RS232 to 3.5 mm for Guth Model 12V500).

6. 2-D Barcode scanner (such as E-SEEK Model 260). The barcode scanner is an optional piece of equipment that may be used when an Intox-DMT is installed for service.

7. Eppendorf Pipettors, or equivalent, adjustable volume: 100 µl to 1000 µl and 500 µl to 2500 µl used to prepare solutions.

8. Balance, Analytical, capable of weighing 0.1 mg

9. Volumetric flasks, Class A: 2 liter and 1 liter used for preparation of reference solutions.

10. NIST Thermometer

11. NIST Barometer

B. Before being placed into service (to perform casework/analysis), equipment calibration should be checked to establish that it meets the laboratory's requirements.

C. Each piece of equipment and its software significant to the test result in the alcohol unit should be uniquely identified.

D. For information about Balances, Pipettes (Variable Eppendorf or equivalent), Glassware, Thermometers, and Barometers see the Blood Alcohol Technical Unit Manual.

E. Equipment that needs repair shall be taken out of service. It shall be clearly marked or labeled as being out of service until it has been repaired and/or shown by calibration checks or test to perform correctly. If there is a concern that the defect affected previous tests, the laboratory shall investigate.

F. Test equipment should not be handled such that the calibration is compromised. If any damage, malfunction, or repair is needed the equipment will not be used for casework until remedial action is taken.

G. Repair and Other Services

1. Forensic Services Division staff has been trained in simple repairs of breath instruments and breath alcohol simulators. More complex problems may require removing a breath instrument and sending it to the manufacturer. The cost of repairs to equipment, which does not belong to the County, will be paid by the agency.

2. When an instrument must be removed for repairs, another instrument will be placed into service if one is available. When there are multiple malfunctions at several sites, a replacement instrument may not be available.

3. When instrument malfunctions do occur, the instrument may become disabled. The operator experiencing the problem should contact the Drugs, Alcohol, and Toxicology Section, Forensic Alcohol Unit by calling 925-313-2844. If an analyst is not available, a message needs to be left on the voice mail. Very often it is possible to resolve the instrument problem over the phone. If not, it is still important for a laboratory staff member to discuss the problem with the operator experiencing the problem in order to perform the proper repair.

4. Instrument service and repairs will be performed by a qualified laboratory member or by an Intoximeters, Inc. certified technician. Any service performed will be documented in the instrument's maintenance log.

5. When performing ANY special functions on the Intox-DMT breath instruments manually or remotely, service notes are needed to explain each special function performed or any results obtained.

H. Accommodations and Environmental Conditions

1. The laboratory is in a climate controlled building and the lighting and energy sources are suitable for the equipment in the Crime Lab.

2. Reference materials that require refrigeration are stored refrigerated and the refrigerators are monitored.

3. Analysts are responsible for maintaining a clean work area and general lab cleanliness. Trash is picked up from the lab and routine cleaning is performed by

General Services Department (GSD). Non-routine cleaning (eg. floor waxing, etc.) has to be specifically scheduled with General Services Department (GSD)

I. The following is a list of common notes entered WHEN APPROPRIATE for each function performed:

1. **Accuracy Check:**

a. Pass

b. Pass-Install check

c. Pass-High SOLN ACC Check

d. Pass-Low SOLN ACC Check

e. SIM not at equil-see repeat test

f. Pass-Removing instrument

2. **PDOA:**

a. Notes are automatically populated by DM Host software

b. Add notes to Maintenance Log if necessary

3. **Maintenance Test:**

a. Pass-Annual Maintenance and the analyst's initials

b. Pass-3 month maintenance

c. See repeat test

II. The Intox-DMT Dual Sensor uses Windows CE based software. A secure password must be entered to access technical functions and menus.

A. To access the various menus on the Intox-DMT, tap the Intox-DMT button located at the top left corner of the home screen. Most fields are editable by Crime Lab staff and may be changed if necessary. Refer to ALC.40 for settings for normal operation of the instrument.

1. Setup (F1)

a. DMT

i. Serial Number: Instrument serial number - not editable by Crime Lab staff

ii. Title: Intox-DMT

iii. Location: see BRA.04 for a list of sites

iv. Altitude

b. Units

i. Alcohol: g/210L

ii. Pressure: mmHG (cannot be edited)

c. Simulator

i. Tolerance Check

ii. Standard Type

iii. Nominal

iv. Digital Simulator

v. Subject

1. Ask Questions
2. Number of Tests
3. Alcohol Display
4. Volume Display
5. Graph Display
6. Graph Alcohol
7. Graph Flow
8. Query Refusal
9. Wait Between Tests
10. Signature On
11. Copies
12. Save PDF
13. Simulator Before
14. Simulator Between
15. Simulator After
16. Observation Time

vi. Accuracy Check

1. Ask Questions
2. Number of Tests
3. Print Graphs
4. Signature On
5. Copies
6. Save PDF

vii. Tank Change

1. Enabled
2. Numbers of Days Valid
3. Number of Tests Valid
4. Number of Tests

5. Print Graphs
6. Signature On
7. Copies
8. Save PDF

viii. PDOA Test

1. Test Day of Week
2. Test Hour
3. Number of Weeks Valid
4. Number of Tests Valid

ix. Linearity

1. Ask Questions
2. Numbers of Tests
3. Print each Control Test
4. Signature On
5. Copies
6. Save PDF

x. Adjustment

1. Ask Questions
2. Standard Type
3. Nominal Wet Bath
4. Nominal Dry Gas
5. Number of Tests
6. Adj. Thru Sim Tube
7. Signature On
8. Save PDF

xi. Diagnostic

1. Save PDF

xii. Printer

1. Printer On
2. Print in Color
3. Printer Name

xiii. Internet

1. Hour to Connect
2. SFTP Enabled
3. SFTP Address
4. SFTP Port
5. SFTP User Name
6. SFTP Password
7. Time Server

xiv. Hardware

1. Dry Gas Enabled
2. Tank Pressure Enabled
3. Gas Valve 2 Enabled
4. Modem Enabled
5. Heated Sim Hose

xv. Software Configuration

1. Use Altitude
2. Operator Card Reader

xvi. Control Panel

1. Display
2. Keyboard
3. Mouse
4. Regional Settings
5. Stylus
6. Time Zone
7. Windows Explorer

d. Functions Menu

i. Set Date/Time

ii. Return to Service

iii. Remove From Service

iv. Purge Sample Chamber

v. Clear Memory

vi. Import/Export

vii. Reset Options

viii. Filter Test

ix. Network Utils

e. Reports (F2)

i. Access a copy of the PDF created for tests performed on instrument

f. Subject Test (F1)

i. Choose this to begin a subject breath test

g. Accuracy Check (F5)

i. Choose this to begin an Accuracy Check

h. Diagnostic (F4)

i. Instrument will run a Diagnostic Test and create a record of the functions/settings checked

i. Adjustment (F6)

i. Choose this option when an Adjustment is required.

ii. Refer to BRA.09 for adjustment procedures.

j. Technician Mode (F7)

i. Access to instrument parameters for:

1. RFI sensitivity settings
2. Barometer
3. Filter cycling
4. Voltages
5. Temperatures
6. Pump
    1. Sim valve
    2. Gas valve
7. Settings for the Lamp, Bias, Cooler and Chopper
8. Plot for flow
9. Fuel Cell command lines
10. Card Reader commands

k. Tank Change (F8)

i. Updates the information provided for accuracy tests done using the External Dry Gas Standard

ii. An accuracy test is initiated automatically with every tank change

l. Linearity Test (F9)

m. Maintenance Test
    i. Evaluation of the safeguards for a valid test
        1. Purge Error
        2. Incomplete Sample
        3. Ambient Fail
        4. Interference
        5. Invalid Sample
        6. Standard Out of Range
n. Security
    i. Log on/off
    ii. Enter Password
o. Help
    i. About
        1. List of version of software and available memory for the instrument

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 6/27/2019	**NUMBER:** BRA.17 - Breath Alcohol Training
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Breath Alcohol Training	**SUBJECT:** Breath Alcohol Training	

I. Policy: The training protocol for forensic alcohol analysis (breath) will be used to train Criminalists in the knowledge, skills and abilities prior to being authorized to perform instrument maintenance, review of instrument accuracy results, and perform operator training for breath alcohol testing.

A. Introduction - The Laboratory maintains the county's program for evidential breath alcohol testing adhering to Title 17 of the California Administrative Code of Regulations. Criminalists who have successfully completed breath alcohol training offered by the Laboratory will have acquired the knowledge, skills, and abilities to be authorized by the Laboratory to help maintain the breath alcohol program.

B. Expectations

1. The goals of the Breath Alcohol Training Program are to:

a. Develop knowledge, skills, and abilities in the area of breath alcohol analysis and be proficient in all the tasks and assignments in this area of expertise

b. Understand and implement the policies and procedures in the Breath Alcohol Technical Unit manual and Division Manual

c. Gain expertise and knowledge and use of instrumentation culminating in the ability to troubleshoot and perform routine maintenance on instrumentation

d. Gain expertise in courtroom testimony through experience

C. Purpose

1. The training will minimally address the following topics

a. California Department of Public Health (CDPH) Regulation: The laboratory's forensic alcohol program is reviewed by the CDPH and regulated by Title 17. All analysts working in the breath program will read and follow:

i. Title 17. Public Health. Group 8. Forensic Alcohol Analysis and Breath Alcohol Analysis. Articles 1-7

ii. Laboratory of Forensic Services Breath Alcohol Operating Procedures

iii. All field operators of the laboratory's breath instruments are trained by laboratory personnel. The CDPH recognizes instructors who are Forensic Alcohol Analysts as authorized by the Laboratory.

iv. How to deliver training to prospective field operators, including the following:

1. Value and purpose of forensic alcohol testing
2. General processes of absorption, distribution, and elimination of alcohol
3. Theory of breath alcohol analysis
4. Discussion of the requirements of Title 17 which includes the 15 minute waiting period
5. Methods of breath alcohol testing
6. How to administer the required written and practical examinations and evaluate results

b. Knowledge

i. Breath Alcohol Technical Unit Manual

1. Breath Operator Training

ii. Understanding and application of Title 17

iii. Studying basic scientific principles upon which analysis is based

iv. Reviewing relevant literature

v. Reviewing procedures generally accepted in the discipline

vi. Attending outside courses, meetings and workshops, when possible

c. Learning specific procedures used in the laboratory

i. Learning the use and limitations of instruments

ii. Learning possible sources of error

d. Practice

i. Performing specific tasks under supervision

1. Instrument verification
2. Instrument installation/removal
3. Instrument maintenance
4. Maintaining instrument related records

ii. Performing training exercises

iii. Take the INTOX-DMT Dual Sensor Operator Training course as a student

iv. Assist in teaching the Operator Training course with the trainer

e. Interpretation and Testimony

i. Observing experienced analysts testify

ii. Practicing testimony outside of the courtroom (mock court)

f. Remedial training: In some circumstances, remedial training may be indicated by review of testimony as well as mock trial performance (if one is given).

D. Education

1. Criminalists working in the Alcohol sub-discipline shall possess a baccalaureate or an advanced degree in natural science, criminalistics or a closely related field. In addition, the analyst will meet the qualifications of Title 17.

E. Training Binder

1. The appropriate training records will be placed in the employee's training file maintained by the employee and reviewed by the Manager/Supervisor upon completion of the training:

a. A summary of the training plan submitted to the Manager/Supervisor includes

i. Topic(s)

ii. Number of practice exercises. For example: maintenance tests, breath instrument adjustments, review of test results, etc.

iii. Record of time committed to training

b. Verification that the training and assessments were successfully completed

c. Copies of certificates from courses taken

d. Breath Alcohol Training Checklist ALC.35

F. Effectiveness

1. The training programs may evolve as needed with the addition of new instrumentation/techniques. The effectiveness of the training program will be evaluated when the Breath Alcohol Technical Unit Manual is periodically evaluated and additions or deletions to the training program will be documented. The following are all the training actions and can be used to evaluate the effectiveness of training:

a. On-the-job training as indicated in the documented training program

b. Review of the Unit SOP as well as training materials indicated in the documented training program

c. Practical and written exercises as indicated in the documented training program

d. Goals set for the analyst to increase responsibility, technical expertise, knowledge and skills as indicated in the documented training program

e. Court training (mock court exercises, as applicable) and court critiques

f. Ongoing training, including outside training classes, yearly performance evaluations that include setting of goals for the analyst, review of Statement of Qualifications and training binder. This assessment reviews analyst goals for development and evaluates the effectiveness of training actions and if further training actions are needed.

2. Assessment: The trainee will work under the close supervision of a trainer designated by the Manager/Supervisor. The trainer, an analyst with experience in the breath alcohol program, is responsible for coordinating the training as well as monitoring and assessing the trainee's progress.

    a. The trainee may not, without supervision, perform any task until training in that task has been successfully completed and the trainer has assessed the trainee. See Breath Alcohol Tasks Checklist below for documentation of the trainer's authorization for the trainee to perform specific tasks.

    b. The trainee who meets title 17 requirements may independently perform tasks for which training has been successfully completed and assessed prior to completing the entire program.

    c. The trainer will observe the trainee teach the course program and approve when they can independently perform the task. The approval should be documented on the Breath Alcohol Tasks Checklist.

        i. Copies of the trainee's practical and written examination (generated when taking the operator's course as a student) may be retained by the trainee.

    d. Operator Certification

        i. After successful completion of the Operator training, the trainee will be issued a certificate or Operator Card by the Laboratory. The certificate will indicate the operator's name, ID/Badge #, agency, and include the instructor's name.

        ii. Operator cards can be issued to trained officers. See CLER.DAT.11

3. Refer to the Division Manual (FSD.21) for further information regarding training.

G. References

1. Trainer will review the references available and their locations with the trainee.

2. The location of the references may be within the Alcohol Unit, the Laboratory library, in PowerDMS, and/or electronically available to each trainee (ALCO.211).

3. In addition to the specific references listed in each training Module, the trainee should also understand the following:

    a. Title 17-pertaining to Forensic Alcohol Analysis

    b. Blood Alcohol Technical Unit Manual (BA)

    c. Forensic Services Division Procedures (FSD)

    d. QA Procedures (QA)

II. Module 1: Historical Perspective on Breath Alcohol Analysis

A. Objectives/Topics of Study

1. Theory

2. Single vs. Dual Technologies

3. Fuel Cell and Infrared Technologies

4. Title 17
5. Basic Physiology (2100:1)
6. Preliminary Alcohol Screening device vs Evidentiary Breath Alcohol Instrument
7. General Forensics
    a. Analysts should develop a general knowledge of other forensic disciplines that may often be related to evidence processing such as:
        i. Latent prints
        ii. Biology/DNA
        iii. Toxicology
            1. Toxicology involves drugs, uses similar instrumentation and is often related to drug cases. Analyst should have an understanding of the differences in analysis, how instruments are used and reporting of results for toxicology evidence compared to drug evidence.
        iv. Firearms
    b. This knowledge may be obtained from a variety of sources
        i. Formal education in Criminalistics or Forensic Science
        ii. Supplemental reading of general forensic texts
        iii. Observation of analysts in other disciplines at the laboratory
        iv. Certification that has a general knowledge requirement

B. References

1. Technology of Breath-Alcohol Testing
2. Physiological Aspects of Breath-Alcohol Measurement
3. Breath-Alcohol Analysis Uses, Methods, and Some Forensic Problems - Review and Opinion
4. Fuel Cell Technology
5. A Historical and Experimental Study of the Breath Blood Alcohol Ratio
6. General Forensics See BA.45

C. Study Questions

1. What is the difference between an evidentiary breath test and a preliminary alcohol test?
2. What are some physiological aspects associated with breath testing? How do they affect a breath test?
3. Who developed the first roadside breath-testing device? Please describe.
4. What is a breath alcohol instrument measuring?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.

2. Complete applicable sections of the Authorization Checklist ALC.35.

III. Module 2: Intox-DMT Dual Sensor Technical Training

A. Objectives/topics of Study

1. Fundamental concepts and theory of operation of the Intox-DMT Dual Sensor

2. Specificity and Interference

3. Methods of analysis and criteria for valid results

4. How to use the instrument to effectively perform accuracy checks, PDOA's, adjustments, maintenance tests, and installation of the Intox-DMT for service at agencies or training

5. Understand "Status Messages" and "Error Codes"

6. Understand and identify physical components of the Intox-DMT

7. Dry gas standards and simulator solutions used for adjustments and any type of accuracy check

B. References

1. Intoximeters, Inc. Intox DMT Dual Sensor Technical Training manual

2. Intox-DMT Dual Sensor Technician training power point presentation

3. Breath Alcohol Technical Unit Manual

C. Study Questions/Practical Exercises

1. What is the main principal that makes breath testing possible?

2. What are the dual technologies employed by the Intox-DMT Dual Sensor? How do they analyze a sample introduced into the instrument?

3. Describe the criteria for a valid analytical result.

4. When should an adjustment be performed on an Intox-DMT?

5. What is the accuracy of the Intox-DMT?

6. How does the Intox-DMT recognize interference?

7. Generate a copy of the calibration factors associated with the last adjustment done on an Intox-DMT. What do each of the items listed represent?

8. When possible, observe an FAA performing an adjustment and a verification on the Intox-DMT.

9. Review a copy of a COA for a dry gas standard and understand the information being provided.

10. With an FAA, open the lid of the Intox-DMT and identify the IR bench, filter wheel, and fuel cell.

11. List three status codes or error messages that may be encountered when using the Intox-DMT. Provide a brief explanation of each.

12. Why it is necessary to perform an in-house verification on an instrument when it is received into the Lab?

13. Explain how to correctly download information from the Intox-DMT to DM Host. Start with the IP address on the Intox-DMT.

14. Why is uncorrected dry gas used with the Intox-DMT?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions/practical Exercises must be submitted to the Trainer, or designee, for review. Include the document in the analyst's training binder.

2. Complete applicable sections of the Authorization Checklist ALC.35

IV. Module 3: Breath Analysis

A. Objectives/Topics of Study

1. Solutions

a. Preparing Reference Solutions

b. Periodically checking reliability of Reference Solutions

c. Determining correct concentrations of the solutions

2. Instrumentation

a. Instruments used by the Laboratory for breath testing. The instruments are located at designated agencies throughout the county.

b. External and internal parts of the breath instruments

c. Equipment used to make repairs

d. Routine maintenance procedures

i. Three month maintenance

ii. Service Checklist/Annual Maintenance ALC.42

e. Breath alcohol instrument "Service Calls" and instrument repair (Including forwarding to manufacturer and verification upon return)

f. Basic electronic and mechanical repairs

g. DUI Checkpoint and other "Special" breath instrument installations

h. Interference (How does it detect?)

i. Mouth Alcohol (How does it detect?)

B. References

1. The trainee will read extensively in all sections from the alcohol literature collection. Hard copies of journals, text books, and various reference materials are located in the laboratory's library. Electronic copies of select articles are located in PowerDMS. Any desired materials not present in the lab can be acquired upon request and approval.

2. CPDH Regulation: The laboratory's forensic alcohol program is reviewed by the CDPH and regulated by Title 17. All analysts working in the alcohol program will read and follow:

   a. California Code of Regulations, Title 17, Public Health, Division 1, State Department of Health Services, Chapter 2, Laboratories, Articles 1-7

   b. A written exam covering required topics as stated in Title 17 will be completed successfully prior to the alcohol impairment mock court.

3. The following are suggested readings and reference materials for the breath alcohol training program:

   a. AW Jones, Physiological Aspects of Breath Alcohol Measurement, National Laboratory of Forensic Science, Alcohol Drugs and Driving, Volume 6, Number 2, 1-25

   b. Saferstein, Richard, "Forensic Toxicology," Criminalistics An Introduction to Forensic Science, Prentice-Hall, Inc, Englewood Cliffs, New Jersey, USA, pp. 294-296(1995)

   c. Caplan, Yale H., "The Determination of Alcohol in Blood and Breath," Forensic Science Handbook, R. Saferstein, editor, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, USA, pp. 605-623(1982)

   d. Medicolegal Aspects of Alcohol Determination in Biological Specimens, James C. Garriott, editor, Lawyers and Judges Publishing Co., Tucson, AZ, (1993)

   e. James G. Wigmore, Wigmore on Alcohol: Courtroom Alcohol Toxicology for the Medicolegal Professional, Irwin Law, Toronto, Ontario, Canada, 2011

   f. Blood Alcohol Technical Unit Manual: Literature References

   g. Binder 1 "Blood and Urine Articles"

   h. Binder 2 " Breath Section"

   i. Binder 3 " Impairment Sections"

   j. Binder 4 "General and Coroner"

   k. Equipment and Draeger Function Settings

   l. Maintenance Test

m. Multi-level check

n. Installation of Breath Instrument Technician Procedures

o. DUI Checkpoint Procedures

p. Breath Alcohol Technical Unit Manual

i. General Requirements and Procedures for Periodic Determination of Accuracy

ii. Analysis of Reference Solutions

iii. Gaseous Ethanol Breath Standards (EBS)

4. The following are mandatory readings and reference materials for lab procedures and general alcohol impairment:

a. California Code of Regulations, Title 17, Public Health, Division 1, State Department of Health Services, Chapter 2, Laboratories, Articles 1-7

b. The laboratory's Blood Alcohol Technical Unit Manual

c. Breath Alcohol Technical Unit Manual

d. ALCO.211 in PowerDMS is a list of required references for alcohol impairment (highlighted titles are mandatory).

e. Medicolegal Aspects of Alcohol Determination in Biological Specimens, James C. Garriott, editor, Lawyers and Judges Publishing Co., Tucson, AZ, (1993).

i. Chapters 1-7 with reference pages of note: 90, 94, 98, 100, 105-106

C. Study Questions/Practical Exercises

1. Attend breath instrument Operator Training

2. Practical Exercises for Maintenance of Instruments

a. Performing manual accuracy checks

b. Changing reference solutions

c. Checking function settings

d. Placing an instrument in service

e. Removing an instrument from service

f. Restocking supplies including replacing printer ribbon and paper, if necessary

g. Performing sample tests, diagnostics, and time, date, and location changes

h. Equipment and Function Settings

i. Maintenance test

j. Multi-Level check

k. Breath Alcohol Instrument Installation Technician Procedure

l. DUI checkpoint procedures

3. Practical Exercises for Preparation of Reference Solutions
    a. Prepare a reference solution and record in the reference solution Preparation Log
    b. Determine the concentration of the solution by DCGC/FID
    c. Record the results
4. Study Questions
    a. Breath Alcohol Analysis
        i. What safeguards are employed by the breath instrument to ensure a reliable result?
        ii. Can the instrument detect other volatile compounds?
        iii. Does the instrument detect acetone?
        iv. If an individual blows 0.08%, 0.08% BrAC. What would their blood alcohol concentration be?
        v. What correlation ratio is the INTOX-DMT set at? What is being correlated?
        vi. Is there a scientifically accepted range for blood/breath correlation ratios?
        vii. Is there a difference in the concentration of alcohol between arterial and venous blood during absorption? During elimination?
    b. Breath Results
        i. Describe the procedure that an operator should follow to obtain a proper breath test.
        ii. What is mouth alcohol? How does the instrument detect mouth alcohol? What other precautions do we have to ensure that the breath result is not affected by mouth alcohol?
        iii. Explain what the instrument prints on the card associated with the breath test.
        iv. If the results are 0.08%, 0.10%, could the subject be as low as 0.07% and as high as 0.11%?
        v. Are the breath hose and sample chamber at room temperature? Why are they heated?

D. Assessment

1. The trainer will observe the trainee perform the functions identified above and approve when they can independently perform the tasks. This approval should be documented on the Breath Alcohol Tasks Checklist. The trainer will review the trainee's
    a. DCGC/FID results
    b. Reference Solution Preparation Log

2. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions/Practical Exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.

2. Complete applicable sections of the Authorization Checklist ALC.35.

V. Module 4: Data Handling

A. Objectives/Topics of Study

1. Periodic determinations of accuracy
2. Maintenance tests
3. General service and repair
4. Functional settings
5. General laboratory paperwork organization and filing

B. References

1. Breath Alcohol Technical Unit Manual
    a. General Requirements and Procedure for Periodic Determinations of Accuracy
    b. Analysis of reference solutions
    c. Gaseous Ethanol Breath Standards (EBS)
    d. Breath Testing Sites
    e. Maintenance Test
    f. Equipment and breath alcohol instrument function settings
    g. Database Procedures: Retrieving Data and Appending Tables
    h. DUI Checkpoint Procedures
    i. Installation of Intoximeter, Inc., INTOX DMT Technical Procedures
    j. Breath test records

C. Study Questions/Practical Exercises

1. The trainee will observe an experienced analyst during routine use of data handling for
    a. communications
    b. back-ups
    c. preparing reports for discoveries

d. review monthly INTOX DMT Logs for invoicing

2. Does the laboratory maintain a electronic record of these accuracy tests as a routine part of regular business procedures?

3. Does the laboratory have a procedure to handle apparent instrument malfunctions?

4. Does the laboratory keep records indicating call outs for apparent instrument malfunctions and subsequent repair of the instrument?

5. What is the path that any data takes starting with a breath alcohol test and ending with a discovery report in court?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions/Practical Exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.

2. Complete applicable sections of the Authorization Checklist ALC.35

VI. Module 5: Database/Report and Notes

A. Objectives/Topics of Study:

1. How breath alcohol records are stored by the Crime Lab

2. Maintenance Logs

3. Accuracy Logs

4. Subject Logs

5. Operator Training

6. How to generate breath alcohol discovery records

7. How to generate breath alcohol records for court or 115's

B. References

1. Breath Alcohol Unit Manual

2. BRA.03

3. BRA.13

C. Study Questions/Practical Exercises

1. How are weekly PDOA's downloaded and reviewed?

2. What are acceptable results for a PDOA?

3. How is a Basic Breath Discovery requested? When requested properly, how is a Basic Breath Discovery prepared?

4. What can be included in an extensive breath alcohol discovery?
5. Can an Intoximeters, Inc. Technician Training Manual or a Drager Instructor Training and Maintenance Manual be provided by the lab in a discovery? Why or Why not?
6. What is documented in the Maintenance Log for any given breath instrument? By whom?
7. What is an SDT? What is its purpose? Where can we find procedures to complete an SDT (be specific)?
8. What should be done by the Alcohol Unit before implementing a new version of software on a breath alcohol instrument?
9. What must happen when a discovery is prepared by an analyst before it gets sent to any attorney?
10. What steps should be taken when completing a discovery request from the SO Records Office? Private Attorney? DA's Office?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions/Practical Exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist ALC.35

VII. Module 6: Legal/Ethics

A. Objectives/Topics of Study

1. Theory of operation of breath instruments
2. Practical operations of breath instruments
3. Instrument repairs
4. Record keeping
5. Operator training physiological considerations of breath testing
6. Effects of alcohol on the human body
7. Interpretation of blood/breath alcohol levels
8. Impairment of driving ability
9. Physiological action of alcohol
10. Pharmacology and toxicology of alcohol Laboratory methods of alcohol analysis
11. Instruments and procedures for breath alcohol analysis

12. Interpretation of results of alcohol analysis
13. Court decisions regarding chemical tests of alcohol to determine alcohol influence
14. Interferent
15. Medical issues
16. Alcohol impairment related to driving
17. Mathematical calculations of:
    a. approximate alcohol levels
    b. number of drinks consumed
18. Title 17 (sections related to alcohol testing)
19. The Laboratory's Breath Alcohol Technical Unit Manual and Blood Alcohol Technical Unit Manual

B. References

1. laboratory Forensic Services Library
2. Laboratory forensic Services Breath Alcohol Unit
3. California Criminalistics Institute Library
4. California State University Sacramento
5. Professional organizations and contacts

C. Study Questions/Practical Exercises

1. Courses
    a. Forensic Alcohol Supervisor Course - California Department of Justice, Bureau of Forensic Services (if offered)
    b. "The Robert F. Borkenstein Course on Alcohol and Highway Safety: Testing, Research, and Litigation" - University of Indiana, Bloomington, Indiana
    c. Courtroom Presentation of Evidence - California Criminalistics Institute
2. Observation of drinking studies
3. View subjects under the influence of alcohol:
    a. Ride-alongs with law enforcement
    b. Attend DUI checkpoints
4. The trainee will be given the opportunity to practice before testifying. Possible practice situations include:
    a. participating as a witness in a mock trial arranged by the trainer
    b. answering questions on controversial court issues
    c. presenting relevant information to a non-technical audience
5. Study Questions

a. What is the breath:blood correlation ratio used for breath alcohol analysis? Why was is it important that it be set to that value?

b. What happens to a subject's breath alcohol level if they have a higher or lower correlation ratio? Explain.

c. If a subject refuses to give a breath alcohol result, and the agency obtains a forced blood draw, is the BAC compromised? Are there any concerns?

d. If the instrument fails a breath test due to Interference, and 5 min later, then gives a subsequent valid breath test? Are there any concerns?

e. If the instrument fails a breath test due to Mouth Alcohol, and 5 min later, then gives a subsequent valid breath test? Are there any concerns?

f. If the instrument fails a breath test due to No 0.020% agreement, and 5 min later, then gives a subsequent valid breath test? Are there any concerns?

g. If the PDOA after a subject breath test fails, is the subject breath test result in question? Why or why not?

h. If the maintenance check fails to trigger a mouth alcohol sensor during a maintenance check, are subject breath test results obtained prior to the maintenance test in question? Why or why not?

i. If a subject is viewed drinking while driving and pulled over at a DUI checkpoint, is there any concern about the breath alcohol test results for this subject if the test is done 5 min later? Why or why not?

j. What are the units of the breath test instrument results? How does it differ from a blood alcohol test result?

k. What is the level at which significant impairment occurs for MOST individuals? For ALL individuals? (Cite any sources)

l. If a person is in the elimination phase of their blood alcohol curve, how do their blood alcohol results compare to their breath alcohol results if they are taken at the same time? (Cite any sources)

m. How do FST's correlate to driving performance and driving impairment?

n. If someone performs well (little to no standardized clues noted) on the sFST's are they not too impaired to drive a motor vehicle?

o. If the DDA asks what a particular hospital blood alcohol level indicates, what concerns should you make them aware of when answering questions?

p. If PAS breath alcohol results are the only test results provided in court, what concerns should you make them aware of when answering questions?

q. If a subject has knee problems, how may that affect your opinion about their performance on FST's?

r. If a subject has a brain injury/condition, how may that affect your opinion about their performance on FST's?

s. How can you calculate the number of drinks in any individual if you know their BAC?

t. What is the average amount of alcohol in a drink? What is a standard drink?

u. Why is an Interference error message more common in higher BrAC readings?

v. What is the conforming products list and why is it important in breath alcohol testing?

w. What is an expert witness and how does it differ from any other type of witness in court?

x. What is important for a expert witness to do when testifying in court?

y. What role does the California Dept of Public Health have in alcohol testing?

z. List 5 different requirements for breath alcohol testing in Title 17?

D. Assessments

1. The trainee will observe and experienced analyst testify in breath alcohol trials. It is also recommended that the trainee observe:

a. analysts testify in blood or urine alcohol trials

b. defense expert testimony

2. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

3. Trainee readiness to testify will be assessed by the trainer with input from the unit supervisor and/or the person responsible for forensic alcohol analysis (as specified on the CDPH license). The approval should be documented on the Breath Alcohol Tasks Checklist.

a. The analyst must meet title 17 requirements before testifying

b. A written, "closed book" test will be administered covering requirements of Title 17 before authorization for impairment testimony will be granted.

4. Testimony evaluation

a. When the analyst begins to testify, the unit supervisor or designee should accompany him/her to court to observe and evaluate the testimony.

E. Documentation

1. Answers to the Study Questions/Practical Exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.

2. Complete applicable sections of the Authorization Checklist ALC.35

VIII. Module 8: Traceability

A. Objectives/Topics of Study

1. NTRM (NIST Traceable Reference Material)

2. Ethanol Breath Standards (EBS) dry gas

3. Simulator Reference Solutions

4. Instrument Calibration Certificate
5. Instrument calibration adjustment

B. References

1. Quality Assurance in Breath-Alcohol Analysis
2. Reporting Blood and Breath Alcohol Results Statistical Aspects

C. Study Questions/Practical Exercises

1. Is there an uncertainty associated with a breath alcohol result? Why/why not?
2. Are reference solutions used for the breath alcohol program traceable? If so, which ones?
3. What is a COA and what information is included in a COA?
4. Why should NIST traceable solutions be used to make adjustments on the breath alcohol instrument?
5. Is a solution prepared by our Lab's Method NIST traceable?

D. Assessment

1. Trainer, or designee, will review and assess the answers provided by the trainee for the study questions and practical exercises. Written feedback will be provided to the trainee.

E. Documentation

1. Answers to the Study Questions/Practical Exercises must be submitted to the Trainer, or designee, for review. Include this document in the analyst's training binder.
2. Complete applicable sections of the Authorization Checklist ALC.35

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Breath Alcohol Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** BRA.18 - Instrument Software and Validation
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Instrument Software and Validation	

I. Policy: New instrument software must be validated or verified before use in casework or field testing for breath alcohol instruments.

A. Any new method, procedure, or adjustment to a current procedure must be tested in our laboratory to ensure that the method or procedure works as intended. The verification or validation shall be as extensive as necessary to adequately determine its fitness for purpose. The laboratory shall record the results and document the procedure. Approval of the method for use in casework is documentation that the method is fit for the intended use. See FSD.27.

B. A Validation/Verification plan will be generated, if necessary, then forwarded to the QA Coordinator for approval FSDF.20. Once approved, a Quality Action Validation/Verification request, or equivalent, can be generated and given to the Manager/Supervisor. Upon completion of the validation/verificaiton it will be forwarded to the Quality Assurance Coordinator for review.

C. See the Division Manual policy for more information on validation/verificaitons FSD.15, QA.18, FSDF.20 , and FSDF.12.

D. Software Revisions

1. The Intoximeters, Inc. Intox-DMT Dual Sensor breath alcohol instrument has software that runs the instrument and controls how the instrument interacts with the user based on its capabilities and settings. This instrument software may be revised to make changes to any of its functions that can improve the breath alcohol program.

2. When computers or automated equipment are used for the acquisition, processing, recording, reporting, storage, or retrieval of test data, the laboratory shall ensure that **laboratory configured** software is suitably validated and documented as being adequate and fit for use, as applicable.

3. When the software is revised by the laboratory, Intoximeters, Inc. performs the necessary changes to the software and provides the laboratory with a new revision number for the newly edited software. Evaluation software, where revisions are actively being made, will end in a number (43408-A10). The number may change depending on the number of revisions made during the evaluation. Software version 43408-A13 means there were thirteen revisions made from the original software version. Any software version ending in a letter (43408-B) means it has been evaluated, finalized, and is ready for use on the Intox-DMT.

4. Software revisions and the changes made in each revision will be documented by the alcohol unit.

5. Any validation or verification of the instrument software will be documented. The instruments with new software will not be used in the field until the documentation through the Quality Action Validation/Verification Request process is completed and documented by the Alcohol Unit and approved by the Quality Assurance Unit.

    a. Validation or verification may be done on "evaluation" software issued by Intoximeters, Inc. Once validation or verification is completed and approved, the final version of software will not have any additional revisions, except to update the unique identifier.

E. Guidelines for Performance Verification

1. The purpose of performance verification is to ensure that any new software, will work in our laboratory with our personnel and instrumentation.

2. A Verification plan will be submitted to the QA Coordinator for approval prior to beginning a verification. FSDF.20

3. Performance verification should consist of demonstrating that the software and instrumentation it runs on is able to process and yield the expected results. Prior to implementation of validated software, the reliability of the procedure shall be documented in-house against any documented performance characteristics of that procedure. Records of performance verification shall be documented (FSDF.12) and maintained in LIMS.

4. Qualified personnel criteria for a Performance Verification:

    a. For an instrument verification, an analyst who is competent in the unit can complete a performance verification.

    b. An analyst who is competency tested or in training can acquire data to be evaluated for the performance verification.

    c. For new technology (such as instrumentation), an analyst who is competent in the unit can complete a performance verification.

F. Guidelines for Method Validation

1. The purpose of method validation is to demonstrate that the method is suitable for the intended use and is reproducible by our laboratory's personnel with the use of our instrumentation.

2. A Validation plan will be submitted to the QA Coordinator for approval prior to beginning the validation. (FSDF.20) Plans may be updated as development proceeds, but must be resubmitted to QA for approval.

3. Method validation is required on new methods, methodology, or procedures. Validation is confirmation that the requirements for a specific intended use are fulfilled by examination of objective evidence.

4. Methods developed by the laboratory for its own use will be a planned activity and assigned to qualified personnel.

    a. Qualified personnel criteria for a Method Validation:

a. For a method validation, an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

b. An analyst who is competency tested or in training (with supervisor/manager approval) can acquire data to be evaluated by a competent analyst for a method validation.

c. For new technology (such as instrumentation), an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

G. Equipment

1. Equipment that is new to the laboratory shall be properly evaluated to ensure its reliability. The evaluation will be as extensive as necessary to meet the needs of the alcohol unit.

2. Before being placed into service, equipment shall be calibrated or checked to establish that it meets the laboratory's specification requirements. It shall be checked or calibrated before use in casework.

3. If the type of equipment already exists within the laboratory and additional equipment of the same type is obtained, a check of the equipment may be satisfactory to ensure its reliability. This check shall ensure that the equipment is operating properly. This will be evaluated by the Supervisor/Manager.

4. If the equipment is a new methodology or the operation is significantly different from equipment already in the laboratory, validation, training and an associated competency may be necessary. This will be evaluated by the Supervisor/Manager.

5. See BRA.16 for information on equipment**.**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/26/2019	**NUMBER:** BIO.1.BIO.01 - Case Acceptance and Prioritization
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**ANAB:**	
CHAPTER: Biology	**SUBJECT:** Case Acceptance and Prioritization	

I. **The goal of the Biology unit is to meet the needs of our customers in a timely manner and at the same time produce high quality work.**

II. **Case Submission Guidelines**

1. All requests will be evaluated for appropriateness based on the capabilities of the Biology Unit. The Biology Unit reserves the right to determine if the service requested will or can be provided. The client agency will be consulted when the scope of the requested work cannot be met or needs to be changed.

2. When multiple clients are requesting services in the same case, the client responsible for the fees should be resolved, prior to commencing work.

3. Rush cases may be accepted after the reason for rush status is provided. Approval will be based on availability of laboratory resources, the type of case, and the reason for the rush request.

4. A completed laboratory request form is required for all requests for service.

5. The following information is needed for all cases:

   A. Evidence being submitted
   B. Where or who it was collected from
   C. How is it related to the case
   D. Type of service being requested (screening/DNA)

6. A police report or detailed synopsis is required for all Biology Unit examination requests. It helps evaluate what evidence offers the greatest potential for being probative, whether the evidence is eligible for CODIS, and from where the evidence was collected. The report also can convey timelines that may affect the quality or likelihood of results. For example, the time elapsed between the incident and the collection of evidence or whether a victim had consenting intercourse within last 72 hours.

7. DNA reference samples from victims, suspects, and consenting partners should be submitted at the time DNA testing is requested.

8. If the agency does not provide a police report or case synopsis, the necessary evidence, or the required reference samples, the case may be placed on hold until the missing items are received. Alternatively, the request may be returned to the agency.

9. For cases where charges are filed, permission must be obtained from the DA's office prior to consuming evidence.

10. Consideration should be taken to determine if the evidence may be amenable for testing by another unit. For example, an item with both smooth and textured surfaces may be suitable for latent print processing as well as DNA testing.

III. **Case Prioritization**

1. The Biology Unit strives to balance the needs of multiple agencies and the allocation of resources equitably. If the demand for services outpaces the availability of laboratory resources, the Biology unit will triage and prioritize case assignments. The prioritization is influenced by factors, such as seriousness of the crime, investigative need, and timelines.

2. The following list details how requests for biology examination will be prioritized. Those requests falling under Type 1 will be given top priority while request types 2 through 4 will be given priority accordingly.

   A. **Type 1:** Cases where there is an immediate Public Safety concern and there is a need to identify the perpetrator.

   B. **Type 2:** Cases where the investigator needs the assistance of CODIS to identify the perpetrator of a serous crime and no other probative evidence exists in order to arrest the suspect.

C. **Type 3:** District Attorney requires results in for filing charges, prosecution, or for a set trial date.

D. **Type 4:** Routine cases without any urgent investigation or court need will be worked in the order in which they were received.

IV. **Case Type Submission Guidelines**

1. The number of items accepted per examination request is based on the case type. A submission is defined as a package (i.e. bag, box, envelope). An item is defined as the contents within the submission. A submission may be comprised of one piece of evidence (i.e. one piece of clothing, swabbing of blood from a single area, or one weapon) or multiple items packaged together. Typically, the number of items in the package is considered to be the number of items submitted (i.e. pants, shirt and shoes), if all items are being examined.

2. For all case types, known DNA reference standards do not count against the number of items submitted.

3. If more items are submitted than the lab typically processes per request type, the evidence may be split into several requests. The Supervisor may discuss with the customer which item will be worked in each request.

4. The Supervisor is responsible for triaging and prioritizing requests. Other individuals within the unit may help in triaging and ensuring the laboratory has all information/evidence necessary to conduct the work. The number of items submitted per case should be adhered to; however, it is acknowledged that there will be cases that warrant an exception to the rule.

5. **Homicides:**

   A. The initial request for examination may be limited to 5 items. The investigating agency may have a conference with a Supervisor to discuss the case.

   B. If no probative results are found with the first set of items tested, a second request with five more items can be tested.

6. **Sexual Assaults:**

   A. The request for examination may be limited to 3 items. A sexual assault kit is considered one item. Typically, the first request should include the sexual assault kit.

   B. If the SAEK kit does not provide probative results, other items such as clothing or bedding may be examined in a subsequent request.

   C. The Biology Unit uses a Y-screening method to streamline the sampling and processing of sexual assault cases involving at least one female and at least one male individual (Refer to BIO.2.DNA.02). Cases which involve male-on-male sexual assault, or assaults with female perpetrators are not well characterized by this method. Alternatively, Sexual Assault Evidence Kits may be screened for biological fluids (Refer to BIO.1.BIO.04 and BIO.1.BIO.05).

   D. If a body fluid is identified or male DNA is detected, DNA testing will be conducted and any generated profiles will be entered into CODIS within 120 days of receipt by the Laboratory.

   E. The sexual assault paperwork associated with qualifying sexual assaults will be reviewed for the following information:

      1. The type of penetration that occurred (e.g., vaginal, rectal, oral, digital, etc.)
      2. Whether ejaculation occurred
      3. Whether a condom was used
      4. Other activities (e.g., patient licked, kissed, bitten, etc.)
      5. Number of offenders
      6. If the victim was mentally impaired or may be under the influence of drugs and alcohol
      7. Whether unprotected consensual sex is documented within 72 hours of alleged assault

   F. **Processing of Sexual Assault Evidence Kits using Y-screening**

      1. All evidentiary swabs contained in the sexual assault kit will typically be sampled and differentially extracted regardless of the type of alleged activity

         1. The non-sperm fraction may be taken forward for amplification without the sperm fraction if Y-screening indicates the majority of the male DNA is in the non-sperm fraction. However, if the sperm fraction is selected for DNA testing the non-sperm fraction will also be selected.

   G. *SAEKs with an adult victim and a single assailant:*

1. If conducting body fluid identification, examine the swabs as necessary given the case history until probative evidence is found or those items have all been tested. If available information indicates that an assault does not involve certain areas on the victim's body, examination is not required on the specified swabs.

2. For male DNA screening, if male DNA is detected in multiple samples only 1 or 2 samples where a sufficient amount of male DNA is detected need to be taken forward for amplification.

H. *SAEKs with an adult victim and multiple assailants and who may be mentally impaired or may be under the influence of drugs and alcohol:*

1. If conducting body fluid identification, examine all collected swabs in the kit.

2. For male DNA screening, all samples where a sufficient amount of male DNA is detected are to be taken forward for amplification.

I. *SAEKs involving juvenile victims:*

1. If conducting body fluid identification, examine all collected swabs in the kit until either probative evidence is found or reasonable test options have been exhausted.

2. For male DNA screening, only 1 or 2 samples where a sufficient amount of male DNA is detected need to be taken forward for amplification.

J. Examinations of the swabs contained in SAEKs collected greater than 72 hours may be conducted on a case by case basis depending on the case circumstances.

7. **Persons Crimes (Robbery, Assault, etc):**

A. The initial request for examination may be limited to 3 items. Items typically submitted are bloodstains from the scene or on clothing, items left by the perpetrator (cigarette butt, item of clothing, or a weapon), and touch DNA swabs.

8. **Burglary/Property Crimes:**

A. The initial request for examination may be limited to 2 items.

B. The best type of evidence in these cases are bloodstains from the scene, or items left by the perpetrator (cigarette butt, an item of clothing).

C. If touch DNA testing is requested, every possible effort must be made to collect elimination standards from individuals who have routine contact with the item before a profile from the of item will be entered into CODIS.

9. **Weapons Possession Cases:**

A. Profiles generated from weapons possession cases are typically not allowed in CODIS. Reference samples from subject's in theses types of cases should be submitted to the Laboratory for comparison to any generated profiles.

10. **Criminal Parentage Cases:**

A. Submissions must include a reference standard from the mother/alleged mother, father/alleged father, and the the child or products of conception.

B. Products of conception should be frozen if the aborted fetus cannot be submitted to the laboratory within 1 week of collection. Due to the difficulty of recognizing fetal remains <8 weeks gestation, it is preferred that the products of conception be separated by medical personnel prior to being submitted to the laboratory.

C. Cases with partial submissions will not be assigned, unless dictated by case circumstances (such as the mother is deceased or maternity is in question and the father is unknown).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:**09/25/2018	**NUMBER:** BIO.1.BIO.02 - Visual, Instrumental and Microscopic Examinations
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Biology	**SUBJECT:** Visual, Instrumental and Microscopic Examinations	

I. **Examinations:** A visual examination is the most basic means of detecting potential biological evidence. Visual examinations need to be conducted prior to presumptive testing. A visual examination of the evidence should be conducted with the naked eye using natural light, bright light, and/or oblique lighting. Specialized lighting techniques, such as an alternate light source or an infra-red camera, may better resolve the contrast or definition of a stain, thus allowing for better detection of biological stains.

II. **Normal Room Light Examinations**

A. The quality of room-light illumination, both in intensity and color, is the single largest factor in locating biological stains without supplemental techniques. Lighting can be provided by small handheld lights or larger stand lights to illuminate an entire piece of evidence or scene. Direct lighting refers to lighting with no reflection. Light is shone straight onto an item or surface to provide illumination. Oblique lighting is a technique in which light is applied at an angle. Oblique lighting can provide contrast and shadowing effects which can be helpful with detecting hairs and fibers or hard-to-see stains on surfaces.

B. Biological stains may be visualized based on color or discoloration, or by textural differences with respect to the surface or background material, often referred to as the substrate.

III. **Alternate Light Source (ALS) Examinations**

A. Many biological stains, such as semen, saliva, and urine may fluoresce, or appear bright, when viewed with an ALS in a darkened room. However, a number of other materials also fluoresce, such as food and drink stains, laundry and cleaning products, and many other substances. Additionally, not all semen or saliva stains will fluoresce with an ALS. Blood will not fluoresce when viewed with an ALS; rather, it will appear dark.

B. **Equipment/Materials:**

1. 415nm and 450nm Handheld alternative light sources
2. Safety goggles (orange, red, yellow)
3. Dark room.

C. **Discussion:**

1. The biological fluorescence is always at a longer wavelength (less energy) than the incoming incident light, and is usually in the visible spectrum. The differentiation between the stain and the background material is highly dependent on the interaction of the biological substance and the substrate with the light source. The examiner is should explore using both the 415nm and 450nm wavelengths of incident light using appropriate goggle (barrier) filtration to determine the optimum differentiation needed for the evidence. A good starting parameter is 450 nm (blue) light with orange or yellow goggles.

2. The auto-fluorescence of the background material can be maintained while looking for biological stains that are quenching the fluorescence. The stains will appear as darkened areas instead of fluorescent. The location of suspected biological stains can be marked with ink or arrows for further testing. See presumptive testing protocols for blood, semen, and saliva.

D. **References:**

1. Milutin Stoilovic, “Detection of Semen and Blood Stains Using Polilight as a Light Source”, Forensic Science International, 51 (1991) 289-296.
2. Hilton J. Kobus, D.Phil., Edmund Silenieks, Jordana Scharnberg, B.Sc., “Improving the Effectiveness of fluorescence for the Detection of Semen Stains on Fabrics”, Journal of Forensic Science, July 02, Vol. 47, No. 4.
3. Michael J. Auvdel, M.Sc., “Comparison of Laser and Ultraviolet Techniques Used in the Detection of Body Secretions”, Journal of Forensic Sciences, JFSCA, Vol. 32, No. 2, March 1987, pp. 326-345.
4. ROFIN Polilight-Flare Plus 2, User Guide

IV. **Alternate Light Source (ALS) Examination using the Leeds Spectral Vision**

A. Similar to what is described above, the Leeds Spectral Vision camera and light system can be used to simultaneously screen items for biological fluids and photographically document the findings. The location of suspected biological stains can be marked with ink or arrows for further testing.

B. **Equipment/Materials:**

1. Leeds Spectral Vision system
2. Safety goggles (orange, red, yellow)
3. Dark room.

C. **Procedure:**

1. Turn on the camera system and the computer; double-click the Leeds Vision icon on the computer desktop to start the software. You will hear the camera and light components begin to self-calibrate.

2. Position the camera head over the evidence you wish to examine. White light with a clear filter is the starting point for the system.

3. Focus the camera on your item by zooming in completely, focusing, and then zooming out. The diopters can be increased or decreased based on the working distance of the camera to the evidence (note: focusing the camera needs only to be performed once for each light source at any given working distance. For example, if the working distance is increased or decreased by moving the camera arms, focusing will need to be readjusted. Also, the focus will need to be readjusted when switching light sources.

4. Overall photographs of the image using white light can be captured by clicking the "capture" button on the screen.

5. To switch to an ALS starting point, "Blue light/Orange Filter" can be chosen from the presets menu. This changes the light source to blue light at 455nm and an orange filer at 550nm (refocus the lens once the light source has been changed). The brightness, gain, and aperture can all be changed to get a more clear image (note: it is recommended to "screen" with a high gain for the speed of the camera. However, this introduces digital noise into the image. Reduce the gain before capturing a photograph).

6. Different lights and barrier filters can be chosen from the "Light/Filters" options on the right side of the screen to optimize imaging.

7. Stains can be zoomed in on and captured using the "capture" button. Additionally, images can be compared side-by-side by using the "tools" menu.

8. Save images as a .lsi file for opening in the Leeds Vision software, or export the images in another format (i.e. jpeg).

D. **References:**

1. Leeds Forensic Systems Instruction Manual. Revision 12/2013
2. Leeds Vision Software Guide. Version 3.0. 2/2014
3. Leeds Forensic Systems Imagining Guide for the LSV. Revision 2/2014

V. **Stereo Microscopy**

A. The magnification provided by a stereomicroscope can provide an additional level of detail to an observation that may be beyond what the eye of the examiner can readily detect. This tool is useful when attempting to locate biological material or trace evidence that would not be seen with normal eyesight alone.

B. The stereomicroscope may be used at varying magnifications (typically between 5X and 30X magnification) as well as with various means of lighting (episcopic ring light for uniform lighting, or oblique lighting using adjustable light guides.) The stereomicroscope allows for 3-dimensional, fully rectified viewing of the object.

C. Suspected stains may be photographed using a digital camera attached through the phototube extension. Documenting the stereomicroscopic examination with notes and pictures can become very important for evidence, such as hair roots, small bloodstains, and other biologicals where consumption of the item is needed for analysis.

D. **Equipment/Materials:**

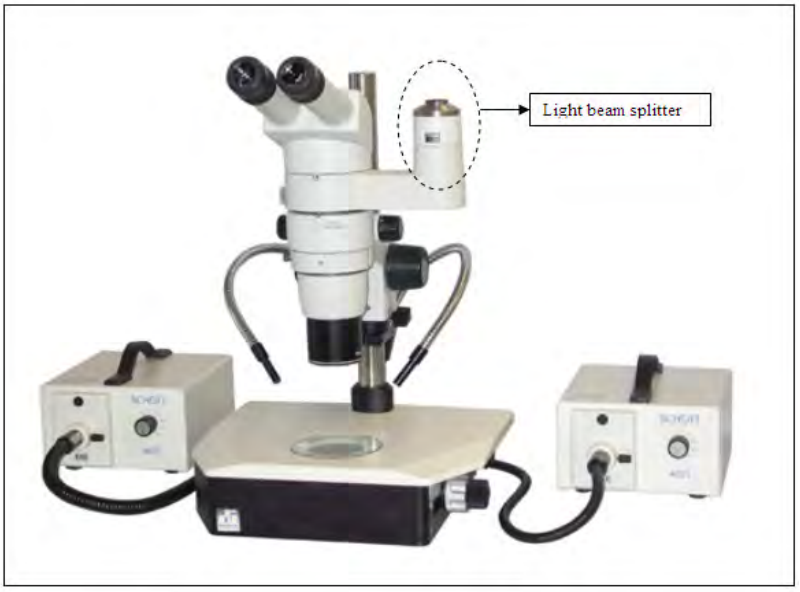
1. Stereo Microscope (Nikon SMZ or similar) or light microscope (Olympus BX41 or similar)
2. Light Source SLR (Single Lens Reflex)
3. SLR Digital Camera and SLR Adaptor

E. **Procedure:**

1. Attach the SLR adapter to the light beam splitter (found to the side or behind the oculars).

2. Attach an SLR camera to the adapter.
3. Adjust the focus of the microscope so that the image is in focus.
4. Slide the light beam splitter rod into the "camera" setting (if applicable).
5. Make necessary adjustments on the camera and take a picture.

F.



Nikon SMZ800



Olympus BX41

G. **References:**

1. Peter R. De Forest, D. Crim., "Foundations of Forensic Microscopy", Forensic Science Handbook, Saferstein, Chapter 9, pp. 433-435.
2. Nikon Stereoscopic Zoom Microscope, SMZ1000/800 Instruction Manual, INSBIO.01
3. Leica MZ8 Instruction Manual
4. Olympus BX41 or similar Instruction Manual

VI. Infra-red Examination using the Leeds Spectral Vision

A. This technique relies on the concept of an object, when illuminated by a light source, either reflecting and/or absorbing infra-red light. Some objects or materials may not reflect infrared light, but instead absorb (or "quench") the infrared light, causing it to appear dark gray or black in the image. Because the human eye does not detect wavelengths of light in the infra-red spectrum, a camera is used to capture the infra-red light reflected from an object. The reflectance and/or absorbance can be captured through a camera and monitored in real time on a computer monitor display.

B. Blood absorbs infra-red light. This technique is helpful in detecting the presence of blood on dark objects, such as on dark clothing when the dark background material reflects the infra-red light.

C. **Equipment/Materials**

1. Leeds Spectral Vision system
2. Safety goggles (orange, red, yellow)

D. **Procedure:**

1. Turn on the camera system and the computer; double-click the Leeds Vision icon on the computer desktop to start the software. You will hear the camera and light components begin to self-calibrate.

2. Position the camera head over the evidence you wish to examine. White light with a clear filter is the starting point for the system.

3. Focus the camera on your item by zooming in completely, focusing, and then zooming out. The diopters can be increased or decreased based on the working distance of the camera to the evidence (note: focusing the camera needs only to be performed once for each light source at any given working distance. For example, if the working distance is increased or decreased by moving the camera arms, focusing will need to be readjusted. Also, the focus will need to be readjusted when switching light sources.

4. Overall photographs of the image using white light can be captured by clicking the "capture" button on the screen.

5. To switch to the IR camera, "IR" can be chosen from the presets menu. This changes the light source to IR light at 850nm and a filter at 830nm (remember to refocus the lens once the light source has been changed). The brightness, gain, and aperture can all be changed to get a more clear image (note: it is recommended to "screen" with a high gain for the speed of the camera. However, this introduces digital noise into the image. Reduce the gain before capturing a photograph).

6. Additionally, sometimes the violet light at 400nm and the clear filter can be used to capture potential bloodstains. When using the violet light, make sure to wear the clear safety goggles.

7. Stains can be zoomed in on and captured using the "capture" button. Additionally, images can be compared side-by-side by using the "tools" menu.

8. Save images as a .lsi file for opening in the Leeds Vision software, or export the images in another format (i.e. jpeg).

E. **Discussion**

1. Not all dark fabrics will be amenable for the IR camera. Dark fabrics that appear white or gray with the IR camera will allow bloodstains to appear dark. In these instances, the bloodstains are absorbing the IR light. The fabric that appears dark or black with the IR camera is absorbing the IR light and will not lend itself for distinguishing the presence of a bloodstain.

2. The IR technique is not intended to replace a visual examination for blood under normal or other lighting techniques. The IR technique is amenable when searching for bloodstains on dark surfaces, however it is not adequate when searching for small bloodstains. The IR techniques should not be used in place of a stereomicroscope examination when searching for small bloodstains. Searching for small bloodstains, such as bloodspatter, needs to be conducted by a visual examination and a stereomicroscope.

VII. **Speckfinder**

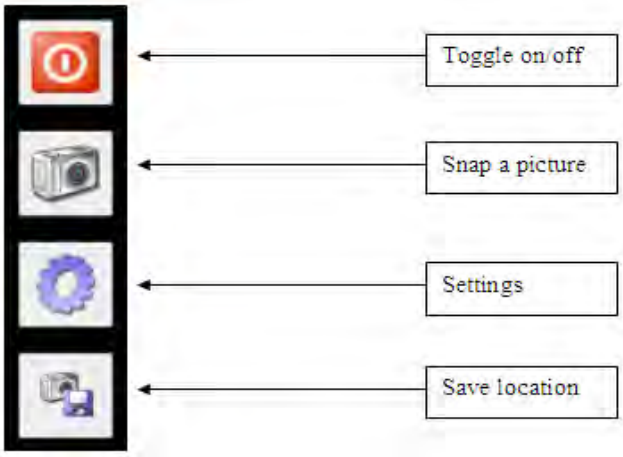
A. The Speckfinder is a visual imaging system that uses high definition magnification to see precise details of objects and can save and process images for documentation. The Speckfinder completely integrates the technologies of high quality optics, digital cameras, LED lighting, glass displays, personal computing electronics, and mechanics, to produce a workstation-friendly computer video microscope. Images collected from the Speckfinder can be stored in multiple digital formats, networked, and software enhanced, as needed.

B. **Equipment:**

1. Dazor SpeckFINDER model HD-V2-SB1-LRS1

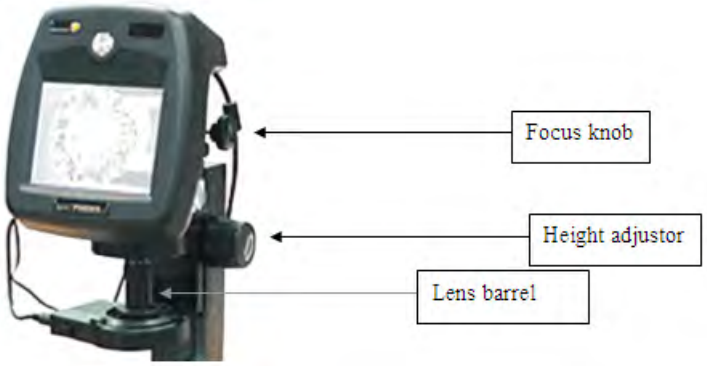
C. **Procedure:**

1. Set the object up on the speckFinderHD.
2. Turn on the speckFinderHD by pressing the circular button above the screen.
3. Log-in using user name and password.
4. Open the "Operator VIEWER" program. Once the program is open, full screen live view of the camera will be seen on the screen along with 4 buttons:

5. 

6. Focus the image, adjust base light and ring light, and adjust the zoom and aperture (on the barrel of the lens) for the desired picture. The ring light can be electronically adjusted using "RingLight Control" program.
7. Select a destination folder using the "save location" button. Once the desired picture is on the live view screen, click the "snap a picture" button.
8. Transfer the images via the USB ports located on the back of the unit.
9. Shut down the computer and hold the power button until the shutdown sequence is completed.

10. 



D. **Reference:**

1. speckFINDER HD Digital Computer Microscope User Manual version 3.0, 12/08

VIII. **Microscopy and Cytological Staining of Biological Material**

A. Microscopy is commonly used for biological examinations to help characterize cells such as epithelial cells, spermatozoa, and other materials such as hair or starch particles that are commonly encountered with sexual assault cases. Characterization of cells is often assisted with a cytological dye staining of the cellular material. Common microscopy methods used in biology include brightfield - generally used in conjunction with cytological staining methods, phase/contrast, and polarized light microscopy.

B. ***Cytological Staining for Glycogenated Cells***

1. Vaginal secretions may be indicative of sexual activity or the result of normal discharge. Glycogenated epithelial cells are cells specific to vaginal secretions. Glycogenated cells contain glycogen, the principle storage form of glucose (sugar). The

presumptive test "Lugols" can test for glycogenated epithelial cells from vaginal fluid secretions.

2. **Materials:**

   a. Lugol's 10X Iodine Stock Solution (see reagent prep BIO.5.QAQCF.11)
   b. Microscope slides and cover slips and mounting medium
   c. Microscope (Bright field, Phase Contrast)

3. **Procedure:**

   a. Dilute Iodine Stock Solution 1:20 with deionized water. (Discard after use)

   b. Prepare a cellular smear using approximately 3 µl of cellular extract on a microscope slide (see Recovery of Protein/Cellular Material an Integrated Method for DNA Analysis, BIO.1.BIO.09)

   c. Dry the cellular smear and heat fix on a 56° C heat block.

   d. Apply sufficient working Iodine solution to allow coverage of the cellular material when a cover slip is applied.

   e. Apply a coverslip.

   f. Examine resulting cytological stain under bright field conditions at 200X.

4. **Interpretation:**

   a. Glycogen-positive nucleated squamous epithelial cells: Abundant (e.g. greater than 10% of cell counts) glycogen-positive, nucleated epithelial cells are indicative of cellular material of vaginal origin. The Iodine solution stains glycogen within the cytoplasm of cells a chocolate brown color, with the cell nucleus diagnosed either in bright field, or accentuated in phase-contrast.

C. ***Differential Cytological Stain for Spermatozoa and Epithelial Cells***

1. Cellular material can be easily viewed under phase contrast without cytological staining. Though staining can be used with phase contrast, it typically is utilized when visualizing cellular material under bright-field microscopy.

2. **Materials:**

   a. Christmas tree stain (Serological Research Institute, R540)
   b. Solution A (Kernechtrot Solution, nuclear fast red)
   c. Solution B (Picroindigo carmine)
   d. Ethanol and deionized water
   e. Microscope slides and coverslips and mounting medium
   f. Microscope (Bright field, Phase Contrast)

3. **Procedure:**

   a. Use a dry-mount slide prepared by a Sexual Assault Nurse Examiner, or prepare a cellular smear on a microscope slide using approximately 3 µl of cellular extract (see Sampling and Protein/Cellular Material Recovery, BIO.1.BIO.09)

   b. If preparing from a cellular extract, dry the cellular smear and heat fix on a 56° C heat block.

   c. Apply sufficient nuclear fast red (Solution A) to fully cover the cellular smear and allow to sit for 5 to 10 minutes.

   d. Rinse Solution A from the slide with a gentle stream of deionized water. (Optional: dry the slide using a stream of warm air from a hair dryer.)

   e. Apply sufficient picroindigo carmine (Solution B) to fully cover the cellular smear and allow to sit for up to 1 minute.

   f. Rinse Solution B from the slide with a gentle stream of ethanol. Dry the slide.

   g. Cover the cellular material with a coverslip with either Permount or Cytoseal fixative, minimizing bubbles.

   h. Microscopically examine the stained smear using bright field (200 to 400X) and, optionally, using phase-contrast microscopy.

4. **Interpretation:**

a. Differentially stained cells (Christmas tree Stain) - Bright field: Nuclear material stains red, while cellular cytoplasm stains green to blue in color. Anucleated epithelial cells will stain primarily green in color, and will not have a red-stained nucleus. Nucleated epithelial cells will stain green to blue for the cytoplasm, and will have a red stained nucleus. Spermatozoa will have a red-stained body, with a lightly shaded acromere. The midpiece and tail, if present, will be darkly stained.

b. Differentially stained cells (Christmas tree Stain) - Phase Contrast: Cells will have a three-dimensional "raised" appearance, and the nucleus of epithelial cells will stand out as a cell organelle. Spermatozoa will appear as a two-toned oval body, with the acromere appearing dark, while the base of the cell will appear bright.

D. ***Starch Particles - Polarizing Light Microscopy***

1. Some condoms contain starch as a lubricant; however finding starch does not necessary mean that a condom is the source of the starch. Some hygiene, laundry products, and food preparations also contain starch. Low levels of starch can naturally occur in the environment as well.

2. **Materials:** Microscope under dark field with polarized filters

3. **Procedure:**

   a. After Christmas-tree staining and under bright field conditions, starch particles appear as unstained, clear, and amorphous particles.

   b. Under dark field (cross polar conditions) the starch particles will appear as bright particles with a distinctive "Maltese Cross" through the center axis.

   c. If stained with Lugol's iodine solution, the starch will stain intensely blue when viewed under bright field conditions.

E. ***Removing Biological Material from Mounted/Fixed Slides***

1. Sometimes cellular material, desired for DNA typing, is fixed onto a glass slide. The following is a guideline for collecting or removing the material from a fixed slide.

2. **Equipment:**

   a. Xylene
   b. Dropper
   c. Forceps
   d. Petri Dish

3. **Procedure:**

   a. Examine the mounted slide to locate the desired biological material.

   b. If the sample is a hair root, use a scribe and cut a square into the slide cover around the root area. Be sure to cut an area large enough to include a portion of the hair shaft, as a control, and enough room to pull the hair out.

   c. Using forceps, remove the cut glass and discard into sharps container.

   d. Place slide into petri dish and working under a hood or in a well ventilated area. Add one to two drops of Xylene into the exposed square.

   e. Allow mounting medium to disolve. Using forceps, grasp the hair shaft above the root and gently begin to remove the hair. If the mounting medium has not dissolved, add another drop of Xylene, let dissolve, and remove. Repeat as necessary.

   f. Once removed, cut the hair root and an equal portion of the shaft immediately above the root and place into separate tubes. Follow hair extraction protocol described in BIO.2.DNA.02.

   g. If the desired sample is cellular material fixed onto the slide, then submerge the entire slide in Xylene. Allow the mounting medium to dissolve. Check periodically for the cover slip loosening from the slide.

   h. When the mounting medium has dissolved, remove the slide from the Xylene and gently wipe away any residual Xylene and mounting medium. Slowly pry the cover slip from the slide. Add additional drops of Xylene if needed to remove the cover slip.

   i. With the cover slip removed, add a drop of Xylene onto the fixed cellular material. Wait approximately 1 minute to further dissolve any residual mounting medium in the area of interest.

j. Using a single sterile swab, vigorously swab the cellular material until completely removed from the slide.

k. The cellular material can then be extracted for DNA following the protocol described in BIO.2.DNA.02.

l. OPTIONAL: To ensure all mounting solution is dissolved on the swab, add 400 ul of Xylene into the 1.5 ml extraction tube with the swab head. Wait approximately 1/2-1 hour. Remove the substrate and place in a spin basket. Centrifuge at maximum speed for approximately 5 minutes. Remove all but 50 ul of the supernatant and discard, or transfer to another tube. Place the substrate back into the tube and begin with the DNA extraction protocol.

F. **References**

1. Peter R. De Forest, D. Crim., "Foundations of Forensic Microscopy", Forensic Science Handbook, Saferstein, Chapter 9, pp. 433-435.
2. E. Kafarowski, A.M. Lyon and M.M. Sloan, "The Retention and Transfer of Spermatozoa in Clothing by Machine Washing", Can. Soc. Forens. J. Vol. 29. No 1 (1996) pp. 7-11.
3. R.M. Jobin and M. De Gouffe, "The Persistence of Seminal Constituents on Panties After Laundering. Significance to Investigation of Sexual Assault", Can. Soc. Forens. J. Vol 36. No 1 (2003) pp. 1-10.
4. Willott, GM., et al., "The Detection of Spermatozoa in the Mouth," Forensic Science Society 1986; 26: 125-128.
5. Willott, GM., et al., "Spermatozoa - Their Persistance After Sexual Intercourse," Forensic Science International, 19 (1982) 135-154.
6. Enos, W.F., et al., "Spermatozoa in the Anal Canal and Rectum and in the Oral Cavity of Female Rape Victims," J. Forensic Sci., July 1977: 231-233.
7. Thomas, F. and Van Hecke, W. "The Demonstration of Recent Sexual Intercourse in the Male by the Lugol Method," Medicine, Science, and the Law, vol. 3, no. 3, pp. 169-171.
8. Randall, B., and Riis, R., "Penile Glycogenated Epithelial Cells as an Indicator of Recent Vaginal Intercourse," American Journal of Clinical Pathology, vol. 84, no. 4, 1985, pp. 524
9. Randall, B., "Glycogenated Squamous Epithelial Cells as a Marker of Foreign Body Penetration in Sexual Assault," Journal of Forensic Sciences, Vol. 33, No. 2, 1988, pp. 511-514.
10. Jones, E.L., et. al., "Lugol's Test Reexamined Again: Buccal Cells." J. Forensic Sci., Jan. 2004, Vol. 49 No. 1, pp. 64-65.
11. Hausmann, R., at el., "The value of the Lugol's Iodine Staining Technique for the Identification of Vaginal Epithelial Cells," Int J Leg Med (1994) 106:298-301.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 1/19/17	**NUMBER:** BIO.1.BIO.03 - Bloodstain Evidence and Testing
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano, Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Biology	**SUBJECT:** Bloodstain Evidence and Testing	

Blood is a mixture of liquid and solids. Serum is the yellow liquid portion in blood that contains the proteins for clotting, such as fibrin. The solid portion of blood is made up of red blood cells, white blood cells and platelets. Red blood cells deliver the oxygen to the rest of the body and carbon dioxide to the lungs. Red blood cells were used for prior serological forensic testing, such as ABO and enzyme typing. Red blood cells do not contain DNA. White blood cells (WBC), which function as part of the body's immune system, contain DNA. Because WBCs contain DNA, they are the most important part of the blood for DNA analysis. The quantity of WBCs in a drop of blood, however, is far less than the number of red blood cells.

BLOODSTAIN EVIDENCE

Blood can be found at crime scenes particularly when the crime involves some type of bodily injury. There are times when the presence of blood can signal that a crime has been committed even in the absence of a body. Blood typically is easily visible and can be located due to its characteristic color. Conversely, when blood has been cleaned up, or has aged or degraded, it may be unrecognizable. Light sources, such as an infra-red camera can be useful to detect blood on dark surfaces. Refer to BIO.1.BIO.02 for visual examination with light sources.

Presumptive tests are used on visible suspected bloodstains, as well as, on visually faint or latent stains where blood is suspected to be present. Presumptive tests are considered "presumptive for the presence of blood" due to their potential for cross-reaction with other biological and chemical substances. A variety of catalytic (presumptive) tests are available. The catalytic test chosen to be used may be dependent on factors such as; stability of stock reagents, ease of preparation, chemical safety, sensitivity and specificity. The catalytic tests (Hemastix, ortho-tolidine, leucomalechite green, and phenolphthalein) each utilize the same chemical pathway. All but the Hemastix test are a two-step chemical process. The two-step process guards against false positives that can occur with oxidizing substances, therefore the two-step catalytic tests are more specific for blood than Hemastix.

An immuno-chromatographic test for human hemoglobin (such as the ABAcard Hematrace Test, see below) is a presumptive test for human blood. This test, when paired with a catalytic test for blood, provides not only strong evidence for the presence of blood but strong evidence for the presence of "human" blood because few non-biological substances, if any, will provide both a positive catalytic test and a positive test for human hemoglobin.

Factors that can affect blood screening tests are age, temperature and possibly the substrate material upon which the blood is deposited on.

1. Age: When blood is fresh, it appears red to the human eye, but over time it will darken and become brown. As the color of the blood changes with age, so does its chemical composition. Hemoglobin will change to methemoglobin when exposed to air over a long period of time and the blood becomes insoluble over time. These visual and chemical changes will affect the test results, such as causing potential false negatives.
2. Temperature: Cold temperatures preserve blood longer allowing for presumptive tests to be conducted at a later time. Conversely, heat accelerates the chemical changes. Blood will degrade quickly when exposed to humid climates (moist and warm conditions) potentially affecting a presumptive test result. Humidity as well as direct sunlight causes degradation of the DNA.
3. Substrate Material: Blood can be deposited on non-absorbent surfaces which make the blood readily available for testing or on absorbent surfaces which pull the blood into its matrices, such as on fabric, wood and concrete. The absorbancy of these materials will have an affect on the method of collection and potentially the presumptive testing. Bloodstains that have been washed and/or bleached pose another problem to presumptive testing results and should be considered when conducting the test.

ORTHO-TOLIDINE (O-TOL)

Materials

1. Ethanol, distilled water, 3% hydrogen peroxide, o-tolidine working solution, swabs or filter paper, blood standard

Procedure

1. Blank: Add one drop of ethanol (optional) to a clean swab or piece of filter paper. Add one drop of o-tolidine working solution and follow with one drop of 3% hydrogen peroxide. No immediate color formation should occur. If one does, repeat the test replacing just one of the solutions each time until no color forms. Discard the contaminated solution. A blank should be run prior to each testing session or when a solution has been replaced.
2. Known Blood Standard: Transfer a small portion of the known blood onto a piece of filter paper or swab (may be slightly moistened with distilled water, if needed). Add one drop of ethanol (optional) followed by a drop of o-tolidine working solution and a drop of 3% hydrogen peroxide onto the filter paper or swab. The immediate formation of a blue color should result. This should be done for each testing session to ensure the reagents are working properly.
3. Test: Transfer a small portion of the suspected bloodstain onto a piece of filter paper or onto a swab that has been slightly moistened with distilled water. Pipet one drop of ethanol (optional) onto the swab or filter paper, one drop of the o-tolidine working solution followed by one drop of 3% hydrogen peroxide. The immediate formation of a blue color indicates the presence of blood.
4. Repeat the procedure from a visually unstained area of the substrate, if possible.
5. For older, less soluble stains, test directly by removing a small portion of the stained (and unstained) substrate material and add one drop (or a smaller volume, as appropriate) of the o-tolidine working solution followed by the same volume of 3% hydrogen peroxide. The immediate formation of a blue color indicates the presence of blood.

Interpretation

1. The rapid appearance of a blue color, typically < 5 seconds, indicates the presence of blood.
2. A known bloodstain and reagent blank must be tested each session the o-tolidine reagents are used to demonstrate the reagents are working properly.
3. Catalytic blood tests are very sensitive, but not specific. The positive color test alone should not be interpreted as indisputable proof of the presence of blood.
4. The major sources of false positives are chemical oxidants and vegetable peroxidases.
5. A color reaction which occurs after the addition of the o-tolidine solution, but before the addition of 3% hydrogen peroxide, indicates a non-specific reaction caused by a chemical oxidant.

HEMA TRACE CHARACTERIZATION OF HUMAN HEMOGLOBIN

Materials

1. ABAcard HemaTrace test devices, extraction vials with elution buffer, sterile water, and human blood standard.

Procedure

If conducting: Direct Test Sample Method:

1. Fresh bloodstained materials are typically soluble, thus soaking the suspected bloodstain in 200 to 600 µl of the test kit buffer for at least 1 - 5 minutes should be sufficient. The volume of buffer is dependent on the concentration of the stain. Final buffer extract should be light pink to straw color. Further diluting may be necessary for concentrated stains to avoid the "High Dose Hook" affect. Add 150 µl of the stain extract to the test kit cartridge, see procedure below.
2. Aged bloodstained materials or bloodstains that have been stored at room temperature for an extended period of time, may be insoluble, thus the suspected bloodstained material should be soaked in 200 to 600 µl of the test kit buffer for at least 30 minutes.
3. In some instances, an extended buffer soak alone may not be sufficient for a really insoluble stain. Soak the aged bloodstain in 100 to 150 µl of 5% ammonia for 5 minutes to an hour to extract the hemoglobin. The stain may also need to be incubated at 56 degrees. Allow the ammonia to evaporate. Add 150 µl of the test kit buffer. Add 150 µl of the stain extract to the test kit cartridge, see test protocol below.

If conducting; Recovery of Protein/Cellular Material an Integrated Method for DNA Analysis: (See also BIO.1.BIO.09)

1. Add 50 µl of protein fraction extract (stain supernatant) to at least 100 µl of water or test kit buffer for a total volume of at least 150 µl. If the supernatant is still dark red, dilute further to avoid the "High Dose Hook" effect. Add 150 µl of the extract to the test kit cartridge.
2. Note: Since the cellular material associated with the tested protein fraction may ultimately be tested for human DNA, sterile technique is required throughout this testing method.

Test Protocol

1. Remove the test device from the sealed pouch and label each device with the name or item number of the sample being tested.
2. A known human blood sample (positive control) and a water or buffer blank (reagent negative control) should be run for each sample set to ensure the kit cartidges are working properly.
3. Add 150 µl of sample extract to the sample well 'S' of the test device. A fresh pipette tip should be used for each sample.
Read the result at 10 minutes. Positive results can be seen as early as 2 minutes depending on the human hemoglobin concentration. For negative results, wait the full 10 minutes.

Interpretation

In this test procedure the sample is added to the sample well 'S' and is allowed to soak into the strip. If human hemoglobin (hHb) is present in the sample, it will react with the mobile monoclonal antihuman Hb antibody and a mobile antigen antibody complex is formed. The mobile antibody-antigen complex migrates through the absorbent device towards the test area 'T'. In the test area 'T', a polyclonal antihuman Hb antibody is immobilized. This immobilized antibody captures the above complex so that an antibody-antigen-antibody sandwich is formed. The conjugated pink dye particles concentrate in a narrow zone on the membrane. When the hHb concentration in the sample exceeds 0.05 ug/ml, the pink dye particles will form a pink colored band in the test area 'T' indicating a positive result. As an internal positive control, hHb antibody-dye conjugates cannot bind to the antibody in the test area 'T', but are captured by an immobilized anti immunoglobulin antibody present in the control area 'C' forming a complex. The captured pink dye particles will thus form a band in the control area 'C', indicating the test has worked properly.

1. **Positive result:**
    1. If there are two pink lines, one in both the test area 'T' and in the control area 'C', the test result is positive and indicates that the human hemoglobin level is at or above 0.05 ug/ml.
    2. Due to the extreme sensitivity of the test, trace levels of hemoglobin may be detected in body fluid samples other than blood (e.g. urine, semen, feces, saliva, vaginal fluid, and perspiration). Other cross reactions to non-human blood (e.g. ferret blood) have also been reported.
2. **Negative result:**
    1. If a pink line appears only in the control area 'C', the test result is negative. This may indicate that (a) No human hemoglobin is present above 0.05 ug/ml or (b) the presence of 'High Dose Hook Effect.'
    2. The 'High Dose Hook Effect' may give a false negative result in the presence of a high concentration of human hemoglobin in the sample. When a large amount of human Hb is present, some of the human Hb binds to the set of mobile antibodies and forms the antigen-antibody complex. Surplus unbound Hb migrates towards the test area 'T'. The fixed (immobilized) anti antibody in the test area 'T' is blocked by the surplus Hb. Therefore, the mobile antigen-antibody complex cannot bind with the fixed antibody located at the "T" line to form the antibody-antigen-anti-antibody complex. As a result, no pink line forms in the test area 'T' irrespective of the large amount of Hb present in the sample, giving a false negative result.
    3. In such cases where the 'High Dose Hook Effect' is suspected, dilute the sample with the kit buffer to a lighter color and retest. Generally, the bloodstain extract should be straw colored.
3. **Inconclusive result:**
    1. The control line in the control area 'C' is considered an internal control. The internal control assures that the correct test procedure was followed and indicates that the proper volume of sample was placed in the sample well and that capillary flow occurred. If there is no pink line visible in the control area 'C', the test is inconclusive. Repeat the test.
    2. Due to possible non-specific reactions that could occur, results should not be read after 10 minutes. Reactions that occur on or shortly after the 10 minute mark are considered inconclusive.
    3. The assay for human hemoglobin is sensitive enough to detect 'occult blood' in biological fluids such as semen and oral samples, therefore the lack of red coloration and a negative catalytic test in conjunction with a positive immuno-chromatographic test should be considered inconclusive for the presence of blood.

Safety

1. Safety precautions should be taken when working with blood (e.g. latex gloves, face mask, safety glasses). Eye and skin protection should be worn when working with acids and bases (NaOH).
2. O-tolidine is a possible carcinogen. Safety precautions should be taken when working with blood (e.g. latex gloves, face mask, safety glasses). Eye and skin protection should be worn when working with acids.

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BLOODSTAIN PATTERN DOCUMENTATION AND OBSERVATIONS

Documentation of bloodstain patterns and subsequent interpretations will occur more often with crime scene personnel. Documenting the location and appearance of bloodstains and their patterns may be of significance; therefore, it is recommended that staff conducting biological examinations in the Biology Unit receive training in bloodstain and bloodstain pattern documention. The biologist should be made aware of the theory behind the discipline, correct terminology, and its application in the interpretation of bloodstain patterns. An understanding

of the principles of bloodstain analysis can be helpful in recognizing stains of significance, methods of deposition, potential weapon-shapes as a result of transfer actions, and possible sequence of events.

Documentation

The primary role of the biologist in documenting bloodstains or bloodstain patterns is to properly document the appearance of stains. The location of the stain may have significance as well as the size, shape, distribution of multiple stains, target surface effects (e.g. saturation and texture), apparent voids, and apparent motion affects (e.g. feathering of transfer smears).

Stains should be documented through sketches and/or photographs and photographs should include appropriate reference scales and a means for associating the location of the stain on the evidence item. Multiple photographs may be needed to demonstrate pattern associations. For example, a garment with two apparent transfer patterns separated by a void can be recreated and documented by showing that a folding of the garment can create this transfer pattern. Other techniques can be used to visualize and document bloodstains and their patterns, such as infra-red photograghy and an Alternate Light Source (ALS), see BIO.1,BIO.2, Visual and Instrumental Examinations.

Interpretation

Interpretation of a bloodstain pattern varies from simple to complex. The forensic biologist needs to be aware of limitations to interpretation, especially since items submitted to the laboratory have been removed from the scene environment and may have been potentially altered upon removal from the scene or during storage. Actions at the scene and/or movement of the evidence prior to examination at the laboratory can alter the evidence, thus the analyst must consider these contextual affects which may limit an analyst's interpretation.

Interpretations may also be limited due to an analyst's training and experience. The analyst needs to be aware of their limits of interpretation. Interpretations and/or opinions offered need to be commensurate with the level of knowledge of the analyst, achieved through training and experience. Any conclusions offered will need to be adequately documented to evaluate the basis of the conclusion and reviewed by another analyst with equal or greater knowledge.

References

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** BIO.1.BIO.04 - Semen Stain Evidence and Testing
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, TonyNguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Biology	**SUBJECT:** Semen Stain Evidence and Testing	

I. **Semen Evidence**

A. Semen is composed of liquid and solid components. The liquid portion is the seminal fluid and does not contain DNA, however DNA can be extracted from the epithelial cells mixed with the seminal fluid. The solid portion of semen consists of spermatozoa (also known as sperm cells) that contain the DNA. Typical male ejaculate contains two to six milliliters of semen with approximately 100 to 150 million sperm cells per milliliter. Because of this, semen is an excellent source of DNA. See BIO.2.DNA.02 for DNA analysis of samples containing semen.

B. Semen stains are typically not evident from a visual examination. Light sources, such as an Alternate Light Source (ALS), can assist in detecting semen stains. See BIO.1.BIO.02 for visual examinations using light sources. Once located, presumptive and confirmatory tests are used to test for the presence of semen.

C. Two components of semen, seminal acid phosphatase enzyme (AP) the prostate-specific antigen (p30), can be tested with presumptive tests. On an individual basis, both are considered presumptive tests for the presence of semen due to other biological substances that contain low levels of AP or p30. When detected in combination, it is a strong indication for the presence of semen. The most common confirmatory test for semen is the microscopic identification sperm cells (See BIO.1.BIO.02).

II. **Acid Phosphatase Spot Test**

A. The AP Spot test is typically used when examining a large surface area such as bedding or clothing and is not used during SAEK testing

B. Materials

1. Spot wells or parafilm, disposable transfer pipette, falcon tube, SERI AP Spot Test PMR (part #R558a), sterile water, semen standard (dried whole semen stain)

2. SERI AP Spot Test Reagent: Add 0.26 grams AP Spot Test PMR to 10mL of sterile water, then mix until the AP spot test powder is dissolved.

    a. The reagent is stable for one day's use.

    b. Cover the tube with foil to protect the reagent from light.

C. **Procedure**

1. **Blank:**

    a. Test the solution by adding one or two drops of SERI AP spot to a spot plate or parafilm.

    b. No color reaction should be observed in the negative control.

2. **Known Semen Standard:** Test the solutions with a dried whole semen standard swatch.

    a. Apply one or two drops of SERI AP to the semen standard in a spot well or on a piece of parafilm. A positive test is the rapid development of a purple coloration. Monitor for color change for no more than 1 minute.

3. **Test:** Remove a small cutting of the material to be tested (e.g., swab or fabric) and place in a spot well or parafilm.

    a. Add one to two drops of SERI AP spot test to the spot well or parafilm. The solution should completely moisten the swab or fabric. Monitor for color change for no more than 1 minute.

4. If possible, test a substrate control (background material) by conducting the same procedure on an unstained portion of the fabric.

D. **Interpretation** Acid phosphatase is an enzyme present at elevated levels in seminal fluid, but also observed in vaginal secretions, feces, saliva, and other bodily fluids at lower levels.

1. **Negative results:** No color development or slow color development >60 seconds is considered a negative result. Color development may occur when testing vaginal secretions, therefore it is not recommended to perform the AP spot test on vaginal swabs.

2. **Positive results:** The rapid development of a purple/red coloration leaching into the solution, typically <60 seconds, is indicative of the presence of seminal fluid.

3. **Inconclusive results:** Development of color only on the fabric surface instead of color leaching into the solution is considered inconclusive for the presence of semen.

E. **Safety**

1. SERI AP Spot PMR is a possible carcinogen.

F. **References**

1. "The Acid Phosphatase Test," Methods of Forensic Science, Vol. 3, pages 267-283
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5. Biology Methods Manual, 1978 Baechtel, F. S. "The Identification and Individualization of Semen Stains," in Forensic Science Handbook, vol. 2. (Chapter 7).
6. Sensabaugh, G. "Quantitative acid phosphatase test. A statistical analysis of endogenous and post-coital acid phosphatase levels in the vagina." J. Forens. Sci. 24:246 (1979).
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III. **P30 Identification: ABACard p30 Test Strips**

A. **Materials**

1. ABAcard p30 test devices
2. SERI semen standard (20 ng per aliquoted tube) or equivalent
3. Sterile water or ABAcard Kit buffer

B. **Procedure**

1. Solubilize the evidence stain(s) in sterile water and create one to two reagent blanks corresponding to the evidence item. Follow "Protein/Cellular Material Recovery: An Integrated DNA Analysis Method", BIO.1.BIO.09, if additional screening tests or DNA testing are to be conducted on the suspected semen stain.

2. In separate tubes, add 50 µL of each solubilized protein extract to 150 µL kit buffer, making a 200 µL test solution. Note: the semen standard or evidence samples may be diluted further, if suspected to be too concentrated.

3. Positive Control: Obtain a 2 uL aliquot (10 ng/uL) of the Seri semen standard from freezer. Spin down the tube to remove any condensation on the cap. Add 375 µL of sterile water or buffer to the tube and mix to, create a ~0.05 ng/uL of semen standard.

4. Remove the appropriate number of p30 test devices and droppers from sealed pouches. Label each of the test devices with identifying information.

5. Add 200 µL of test solution to the sample well 'S' of each labeled test device. This includes each of the evidence stains being tested, at least one associated reagent blank, and 200 µL of the prepared SERI standard. (~10 ng in 200 uL).

6. Read each result at 10 minutes. Positive results can be seen as early as 1 minute depending on the p30 concentration. Wait the full 10 minutes to interpret negative results. Have another biological screener verify the p30 results and add their initials and date to the notes or a photocopy or photograph may be taken and included in the notes.

7. A substrate control (stain control) can be run to verify that the reaction is due to the stain and not due to the substrate itself.

C. **Interpretation**

1. A sample is added to the sample well 'S' and allowed to soak into the membrane. If p30 is present in the sample, it reacts with the mobile monoclonal antihuman p30 antibody and a mobile antigen-antibody complex forms. This mobile antibody-antigen complex migrates through the absorbent device towards the test area 'T' and a polyclonal antihuman p30 antibody is immobilized. This immobilized antibody captures the above complex so that an antibody-antigen-antibody sandwich is formed. The conjugated pink dye particles concentrate in a narrow zone on the membrane. When the p30 concentration exceeds 4 ng/mL the pink dye particles will form a pink colored band in the test area 'T,' indicating a positive test result. As an internal positive control, p30 antibody-dye conjugates cannot bind to the antibody in the test area 'T.' They are captured by an immobilized anti-immunoglobulin antibody present in the control area 'C,' forming a complex. The captured pink dye particles form a band in the control area 'C,' indicating that the test worked properly.

2. **Positive result:** If there is a pink line in both the test "T" and control area "C", the test result is positive and indicates that the p30 level is at or above 4 ng/mL. The presence of p30 is a strong indication of the presence of semen, however other biological fluids (including vaginal fluid) have been reported to give positive results using this testing method. Results are not read after 10 minutes since non specific reactions may occur which could result in false positives.

3. **Negative result**: If there is only one pink line in the control area 'C,' the test result is negative. This may indicate no p30 is present or the presence of 'High Dose Hook Effect.'

4. The "High Dose Hook Effect" may give a false negative result due to the presence of a high concentration of p30 in the sample. Large amounts of human p30 bind to both the antibody to form an antigen-antibody complex ,but also free p30 migrates towards the test area 'T'. The antibody in the test area 'T' is blocked by this free antigen. Therefore, the mobile antigen-antibody complex with the pink color cannot bind to the antibody. As a result, no pink line forms in the test area 'T,' giving a false negative result. In such cases where the "High Dose Hook Effect" is suspected, the sample may be re-tested using a 10 to 10,000 fold dilution.

5. The control line in the control area 'C' is considered an internal control. The internal control assures that the correct test procedure was followed, the proper volume of sample was placed in the sample well, and capillary flow occurred. If there is no pink line visible in the control area 'C,' repeat the test.

D. **Safety**

1. Latex gloves are to be worn at all times when handling semen evidence.

E. **References**

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IV. **Microscopic Examination of Spermatozoa**

A. **Materials:**
1. Christmas tree stain (Serological Research Institute, R540)
2. Solution A (Kernechtrot Solution, nuclear fast red)
3. Solution B (Picroindigo carmine)
4. Ethanol and deionized water

5. Microscope slides and coverslips and mounting medium
6. Microscope (Bright field, Phase Contrast)

B. **Procedure:**

1. Use a dry-mount slide prepared by a Sexual Assault Nurse Examiner, or prepare a cellular smear on a microscope slide using approximately 3 µl of cellular extract (see Sampling and Protein/Cellular Material Recovery, BIO.1.BIO.09)

2. If preparing from a cellular extract, dry the cellular smear and heat fix on a 56° C heat block.

3. Apply sufficient nuclear fast red (Solution A) to fully cover the cellular smear and allow to sit for 5 to 10 minutes.

4. Rinse Solution A from the slide with a gentle stream of deionized water. (Optional: dry the slide using a stream of warm air from a hair dryer.)

5. Apply sufficient picroindigo carmine (Solution B) to fully cover the cellular smear and allow to sit for up to 1 minute.

6. Rinse Solution B from the slide with a gentle stream of ethanol. Dry the slide.

7. Cover the cellular material with a coverslip with either Permount or Cytoseal fixative, minimizing bubbles.

8. Microscopically examine the stained smear using bright field (200 to 400X) and, optionally, using phase-contrast microscopy.

C. **Interpretation:**

1. Differentially stained cells (Christmas tree Stain) - Bright field: Nuclear material stains red, while cellular cytoplasm stains green to blue in color. Anucleated epithelial cells will stain primarily green in color, and will not have a red-stained nucleus. Nucleated epithelial cells will stain green to blue for the cytoplasm, and will have a red stained nucleus. Spermatozoa will have a red-stained body, with a lightly shaded acromere. The mid-piece and tail, if present, will be darkly stained.

2. Differentially stained cells (Christmas tree Stain) - Phase Contrast: Cells will have a three-dimensional "raised" appearance, and the nucleus of epithelial cells will stand out as a cell organelle. Spermatozoa will appear as a two-toned oval body, with the acromere appearing dark, while the base of the cell will appear bright.

D. **Reading:**

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V. **Reporting Statements**

A. The following statements (or similar) should be used when reporting results and conclusions when testing for the presence of semen.

AP	P30	Sperm cell(s)	Conclusion
+	+	+	Semen was detected based on the presence of sperm cells and positive AP and p30 presumptive test results.
+	-	+	Semen was indicated based on the presence of sperm cells and a positive AP presumptive test result. However, p30 was not detected.
-	+	+	Semen was indicated based on the presence of sperm cells and a positive p30 presumptive test result. However, acid phosphatase was not detected.
NT	+	+	Semen was detected based on the presence of sperm cells and a positive p30 presumptive test result.
NT	-	+	Intimate (i.e. vag) – Semen was detected based on the presence of sperm cells, however, p30 was not detected. Other items w/ low sperm count (i.e. bedding, clothing w/ few sperm/slide) – Sperm cells were observed, however, the presence of semen was not
NT	NT	+	Intimate - Semen was detected based on the presence of sperm cells.
NT	NT	-	Semen was not detected based on the absence of sperm cells observed.
+	+	-	Seminal fluid was detected based on positive AP and p30 presumptive test results, however, sperm cells were not observed.
+	-	-	The presence of semen was indicated based on a positive AP presumptive test result; however the presence of semen could not be confirmed due to a negative p30 presumptive test result and the absence of sperm. Body fluids other than semen can result in a positive AP presumptive test result.
+	NT	NT	Semen was indicated based on a positive AP presumptive test result.
-	+	-	The presence of semen was inconclusive based on the absence of sperm cells and a negative acid phosphatase presumptive test result, but a positive p30 presumptive test result.
NT	+	-	The presence of semen was inconclusive based on the absence of sperm cells and a positive p30 presumptive test result.
NT	-	-	Semen was not detected based on the absence of sperm cells and a negative p30 presumptive test result.
-	-	-	Semen was not detected based on the absence of sperm cells and negative AP and p30 presumptive test results.
-	NT	NT	Semen was not detected based on a negative AP presumptive test result.
NT	-	possible	The presence of semen was inconclusive based on a possible sperm cell observed and a negative p30 presumptive test result.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 09/22/2017	**NUMBER:** BIO.1.BIO.05 - Saliva Stain Evidence and Testing
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Biology	**SUBJECT:** Saliva Stain Evidence and Testing	

I. **Saliva Evidence**

A. Saliva is a liquid that is secreted from the salivary glands in the human mouth. The source of DNA in saliva are the epithelial cells from inside the mouth that mixes with the saliva. Examples of evidence that would have saliva are, cigarettes, chewing gum, beverage containers, food, and bite marks.

B. Saliva is rich in salivary amylase (alpha-amylase) which is a digestive enzyme used to break-down starch. Amylase is found in other body fluids, such as blood, semen, vaginal secretions, perspiration, urine, and fecal material, but at much lower levels. It may also be detected in some non-human biological materials. Screening tests for saliva are therefore considered presumptive.

C. Saliva, like semen is typically not evident from a visual examination. Light sources, such as an Alternate Light Source (ALS) can assist in detecting a stain. See BIO.1.BIO.02 for visual examinations using light sources.

II. **Amylase Diffusion Gel Procedure**

A. **Materials**

1. 100 x 15 mm plastic petri dish
2. Heat source, such as a hot plate, microwave, or bunsen burner
3. Pasteur pipets
4. Aspirator
5. 37°C oven

B. **Reagents**

1. 0.1 M Phosphate buffer, pH 6.9
2. Agarose (e.g Sigma Type I)
3. Soluble starch
4. Lugol's 10X stock iodine solution
5. Saliva standard

C. **Gel Preparation (1.0% Agarose/ 0.1% Soluble Starch)**The following recipe is for one 100 x 15 mm plastic petri dish. Gel should be 2-3 mm thick. Adjust ingredients accordingly if a batch of plates are made.

1. To 20 ml of 0.1 M phosphate buffer, add 20 mg soluble starch and 200 mg agarose.
2. Heat the solution until boiling and thoroughly dissolve the agarose and starch.
3. Immediately pour the solution into a petri dish.
4. Cover the petri dish with a plastic lid to prevent inadvertent saliva contamination and let the gel solidify at room temperature.
5. Once the gel has solidified, punch holes in the gel using a pasteur pipet connected to an aspirator.
6. Leave at least 1.5 cm between the holes.
7. Label the holes (wells) with which sample will go into which well either on the bottom of the dish or on the lid cover.

D. **Procedure:**

1. Prepare a saliva standard dilution series (typically 1/10, 1/100, 1/200, 1/400, and 1/800.) Neat semen, blood serum, urine, or other physiological fluids may be used as a physiological reference as well.
2. Prepare question stain extract(s) according to the procedure in "Recovery of Protein/Cellular Material an Integrated Method for DNA Analysis, " BIO.1.BIO.09.
3. Pipet 10 µl from each of the saliva standard dilutions, the questioned stain extracts, and reagent blank (negative control) into its labeled well. Use a new disposable pipet tip for each sample. Be careful not to overfill the wells. Keep the plate level and be careful not to upset the extracts in the wells.
4. Cover the petri dish and place into a zip locked plastic bag or other type of moisture chamber.
5. Allow the samples to diffuse by placing the gel into a 37°C oven and incubating overnight.

6. After an overnight incubation, the gel is stained with a 1/100 dilution of stock iodine solution in water. Flood the gel with the solution until the starch gel is stained a dark blue. Iodine solution should completely cover the gel surface. Clear (unstained) circles around a sample well indicates amylase activity. The amount of amylase activity in a sample is logarithmically related to the diameter of the clear ring surrounding the well.
7. Measure the diameter of the rings to the nearest millimeter and photograph on a light box. Photograph with a scale.

E. **Interpretation**

1. Amylase hydrolyzes starch, first to oligosaccharides, then to maltose and glucose. As a sample containing amylase diffuses into the gel from the well, starch is hydrolyzed in an area proportional to the concentration of amylase present in the sample. Iodine reacts with unhydrolyzed starch to produce a deep blue color which can be differentiated from the clear circles where amylase has hydrolyzed the starch.
2. Amylase is present in saliva at high concentrations, hence its use as a presumptive test for saliva. However, amylase is present in most body fluids and tissues including semen, vaginal fluid and urine though generally at much lower levels than found in saliva. Perspiration, breast milk and feces may have high levels of amylase. Neat vaginal swabs have been reported with amylase levels up to the equivalent of a 1/100 dilution of saliva.
3. The ring diameters of the unknown samples are compared to the ring diameters of the saliva standards to give a semi-quantitative measure of the level of amylase present in the unknown samples.
    a. In general, a high level of amylase (greater than the 1/100 standard) is considered significant and is indicative of saliva.
    b. In general, a moderate level of amylase (generally between the 1/100 and 1/800 standards) suggests the possible presence of saliva. Moderate levels of amylase can be observed in saliva, as well as, in other physiological fluids, therefore, amylase detected at this level is inconclusive for the presence of saliva.
    c. In general, a very low level of amylase (generally below the 1/800 standard) to no clearing indicates that saliva was not detected based on the absence of amylase activity.
4. These interpretive guidelines are subject to many variables such as, potential concentration effects, endogenously high levels of amylase in other physiological fluids of certain individuals, or the expected endogenous levels of amylase on various substrates or items. The interpretive statement should take into account these possibilities.
5. The amylase diffusion test may be coupled with a microscopic examination for buccal epithelial cells in determining the possible presence of saliva. Buccal epithelial cells are a rich source DNA for genetic marker typing.

III. **Amylase Mapping**

A. **Materials**

1. 37° Oven
2. Heat source, such as a hot plate, microwave, or bunsen burner
3. 11 cm x 20.5 cm Gel Bond or glass plate of equal size
4. Staining tray

B. **Reagents**

1. 0.1 M Phosphate buffer, pH 6.9
2. Agarose (e.g Sigma Type I)
3. Soluble starch
4. Lugol's 10X stock iodine solution
5. Saliva standard

C. **Gel Preparation (1.0% Agarose/ 0.1% Soluble Starch)**

1. Prepare 40 milliliters per 11 cm x 20.5 cm piece of Gel Bond or a glass plate of equivalent size.
2. Add 40mg soluble starch and 400 mg agarose (e.g. Sigma Type I) to 40 ml of 0.1M phosphate buffer.
3. Heat the solution until boiling to dissolve the agarose and starch.
4. Cool the mixture to approximately 70° C, then pour the solution onto the Gel Bond or glass plate.
5. Allow the gel to solidify at room temperature in a covered container or in a protected area.

D. **Mapping:**

1. Place the Gel Bond or glass plate on top of the suspected saliva stained area with the gel face down.
2. Place a positive control on the gel in a location away from the tested area.
3. Make orientation marks on the plate and garment.
4. Let gel sit on top of the garment for 15 to 30 minutes with light weight applied to the plate.
5. Place the plate in a moisture chamber and incubate in a 37° oven for 30 to 60 minutes.

E. **Staining:**

1. Stain the gel by placing the plate in a staining tray and flooding the plate with a sufficient volume of a 1/100 dilution of stock iodine solution to stain the starch gel dark blue. An area of clearing (unstained area) indicates the presence of amylase.

F. **Sampling:**

1. Re-orient the stained gel over the evidence, which was mapped, and mark the evidence in the area which corresponds to the clearing on the gel. Take samples from the item near the center of the outlined area.

G. **Interpretation:**

1. Amylase hydrolyzes starch, first to oligosaccharides, then to maltose and glucose. As a sample containing amylase diffuses into the gel, starch is hydrolyzed in the area. Iodine reacts with unhydrolyzed starch to produce a deep blue color which can be differentiated from an area of clearing in the gel where amylase has hydrolyzed the starch.
2. Amylase is present in saliva at high concentrations, hence its use as a presumptive test for saliva. However, amylase is present in most body fluids and tissues including semen, vaginal fluid and urine though generally at much lower levels than found in saliva. Perspiration, breast milk and feces may have high levels of amylase. Neat vaginal swabs have been reported with amylase levels up to the equivalent of a 1/100 dilution of saliva.
3. The mapping technique is used only as a screening tool and gives no information about the relative level of amylase which may be present. The mapping technique should be followed by the amylase diffusion test which is a semi-quantitative assay.

IV. RSID Saliva Cards

A. **Materials**

1. RSID Test Cassette
2. RSID Saliva Running Buffer
3. 1:10 Saliva Standard
4. pipettes and tips

B. **Procedure**

1. Prepare questioned stain protein fraction extract(s) according to the procedure in "Recovery of Protein/Cellular Material an Integrated Method for DNA Analysis, " BIO.1.BIO.09.
2. Combine 20uL of the solublized protein extract with 80 uL of RSID Saliva Running Buffer to bring the sample up to a total volume of 100uL.
3. Prepare a positive control using 20uL of the 1:10 saliva standard and 80uL of RSID Saliva Running Buffer.
4. Prepare a negative control using 20uL of a reagent blank and 80uL of RSID Saliva Running Buffer.
5. Remove the appropriate number of RSID test devices from the sealed pouches. Label each of the test devices with identifying information.
6. Add 100uL of the test sample in running buffer to the sample window.
7. At 10 minutes, score, and record results.
8. Results should be evaluated as follows:

(1) Negative Result – A visible red line at the Control (C) line indicates a negative result, showing that α-amylase has not been detected.
(2) Positive Result - Two visible red lines at the Control (C) and Test (T) lines indicate a positive result, showing that the α-amylase has been detected.
(3) Test Failure Result – No visible red line at the Control (C) line indicates a failed test.

C. **Interpretation**

1. The RSID lateral flow immunochromatographic strip test uses two mouse monoclonal antibodies specific for human salivary α-amylase. One antibody is conjugated to colloidal gold and is placed on a conjugate pad beneath the sample window, while the other antibody lines the “Test line” on a membrane attached to the conjugate pad. The “Control line” on the membrane is made up of anti-mouse IgG antibody and is used as the control for this test. A red line should form at the control position of each strip to show that the sample fluid traveled the length of the test, in addition to showing that the test components of the strip test functioned correctly. Attached to the other end of the membrane is the wick, which absorbs the tested fluid and running buffer at the completion of the test, preventing back-flow of the sample. When the test fluid is added to the sample window, the sample and running buffer diffuse through the conjugate pad, re-dissolving the gold-conjugated detection antibodies.
2. **Positive result:** If human salivary amylase is present in the sample an antigen-colloidal gold conjugated antibody complex will form. Sample and antibodies (complexed and free) are transported by bulk fluid flow to the membrane section of the strip test. The immobilized anti-α-amylase antibodies on the test line capture the amylase-antibody-gold complexes, producing a red line at the Test position.
3. The presence of human salivary α-amylase is a strong indication of the presence of saliva, however other biological fluids (including breast milk, feces, and vaginal fluid) have been reported to give positive results using this testing method. Results should not be read after 10 minutes since non specific reactions may occur which could result in false positives.
4. **Negative result**: If there is only one red line, in the control area the test result is negative. This may indicate that (a) No salivary amylase is present above the limit of detection (<1uL) **or** (b) the presence of 'High Dose Hook Effect.'

5. The **"High Dose Hook Effect"** may give a false negative result due to the presence of a high concentration of salivary amylase in the sample. Large amounts of human salivary α-amylase bind both to the antibody to form an antigen antibody complex but also free human salivary α-amylase migrates towards the test area 'T'. The antibody in the test area 'T' is blocked by this free antigen. Therefore the mobile antigen-antibody complex with the red color cannot bind to the antibody. As a result no red line will form in the test area 'T' although there is a large amount of human salivary α-amylase present in the sample giving a false negative result. In such cases where the "High Dose Hook Effect" is suspected, the sample may be re-tested using a 10 to 10,000 fold dilution.
6. **Test Failure Result:** If there is no red line visible in the control area 'C', the test is inconclusive. Repeat the test. The control line in the control area 'C' is considered an internal control. The internal control assures that the correct test procedure was followed and indicates that the proper volume of sample was placed in the sample well and that capillary flow occurred.

V. **References**

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 05/31/2019	**NUMBER:** BIO.1.BIO.09 - Protein & Cellular Material Recovery: An Integrated Method for DNA Analysis
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Biology	**SUBJECT:** Sample Selection and Protein & Cellular Material Recovery	

I. **Biological Collection Guidelines**

A. Swabs: The amount of biological material to sample is dependent on the amount of original evidence material. In general, when working with swabs, 1/2 of a swab is sampled for protein and cellular characterizations. If sufficient cellular material is estimated to be present, the sample may continue forward for DNA analysis. If the analyst determines that a 1/2 swab does not offer sufficient biological material for testing, the entire swab may be sampled.

B. Stains: Biological stains can be deposited on a variety of substrates that may be absorbant or non-absorbant surfaces. In general, biological stains deposited on absorbant surfaces can be directly cut out or swabbed and stains deposited on non-absorbant surfaces can be collected onto swabs. Blood deposited on non-absorbant surfaces can also be directly collected from the surface by carefully collecting flakes or crusts of the biological material. The best collection method is determined by the quantity and quality of the biological sample, as well as, potential quality issues with the substrate that the biological material is deposited on. In general, when collecting a biological stain a cutting approximating 0.5cm x 0.5cm is collected. If the analyst determines that a 0.5cm x 0.5cm cutting does not offer sufficient biological material for testing, then a 1cm x 1cm cutting may be sampled.

C. Substrate Controls: To monitor for potential background biological material, a sample of the background material or a swab of the substrate surface from an apparent unstained area may also be prepared to monitor for background proteins and cellular material. In instances where it is anticipated that the background will influence interpretation of the stain (e.g. when the stain is of limited quantity or concentration), it is highly recommended that an equal sized substrate control be sampled and run along with the stain sample.

D. Reagent Blanks (RB): For every sample set, one or more reagent blanks are required to monitor for potential contamination of the reagents used throughout the examination process. The reagent blanks must be treated in the same fashion as the evidence sample(s) and taken through every step as the evidence sample(s). Typically two RB(s) are set up with the set of evidence samples during the biological screening and examination process. The reagent blank(s) are retained with the sample set for potential future DNA testing.

II. **Recovery of Proteins and Cellular Material**

A. This method allows for simultaneous protein assays, microscopic examination of the cellular content, as well as, DNA analysis from the same sampled stain or swab of a stain. The process incorporates a methodical approach to separating the protein fraction from the cellular fraction of a biological sample that is intended for both presumptive tests and microscopic analyses. It also incorporates appropriate controls for subsequent DNA analysis.

B. **Procedure**

1. Cut an approximate 0.5cm X 0.5cm portion of the stain (or several small cut pieces of the stain), or 1/2 of a swab and place into a 1.5 mL or 2.0 mL microcentrifuge tube. Add approximately 300 µL of sterile water or PBS to the tube. If a whole swab or 1cm x 1cm cutting was sampled, add approximately 600 µL of sterile water or PBS to the tube. Ensure the stain material is thoroughly saturated. There may be samples in which these volumes need to be altered to accommodate larger sized samples.

2. Let the sample soak for 30 minutes to 1 hour at 4°C.

3. **To recover the solublized protein fraction**: Transfer the saturated substrate to a spin basket using a clean toothpick and place the spin basket back into the microcentrifuge tube. Centrifuge for 2-3 minutes at a high speed. Carefully pipette, the supernatent to another labeled 0.5ml tube. This is the protein fraction. Leave any cell pellet and ~50µL of supernatent at the bottom of the centrifuge tube.

4. The solublized protein fractions are not stable for extended periods of time, therefore protein testing should be conducted as soon as practicable to prevent denaturation of the proteins. The solublized protein fraction can be tested for proteins such as:
   - Human Hemoglobin: see BIO.1.BIO.03
   - P30: see BIO.1.BIO.04

- Amylase: see BIO.1.BIO.05

5. **To recover the cell fraction**: Remove the stain substrate from the spin basket and place the substrate back into the centrifuge tube containing the 50µL cell pellet. Add 500 to 600 µL of sterile water and again thoroughly saturate the stain substrate. Repeatedly, as needed, agitate the substrate with a clean toothpick and vortex to remove cellular material from the substrate. If this is done at the end of the work day, the substrate may be soaked for several hours to overnight at 4°C, if needed, prior to agitation.

6. After agitation, return the substrate back into the spin basket and centrifuge 2-3 minutes at a high speed.

7. After centrifugation, remove and discard all except for ~50µl of the supernatant being careful not to disturb the cell pellet at the bottom of the tube.

8. Re-suspend the cell pellet in the 50µl of liquid by gently vortexing.

9. Remove 3µl and place onto a microscope slide and heat dry the slide.

10. Microscopically examine the dried deposit to assess the cellular content using a microscope at 200X to 400X. See BIO.1.BIO.02 for microscopy methods and cytological staining procedures.

11. If the presence of spermatozoa and/or epithelial cells is deemed significant, estimate the quantity of cellular material in the 3µl. In general, the estimate is used to assess whether there is sufficient cellular material to continue with DNA analysis.

12. If the stained sample is deemed probative, the remaining protein fractions, cell pellet fractions, and substrates should be retained particularly if the original biological stain is limited or additional testing, such as DNA analysis will be continued from the generated samples. If any additional testing or further analysis cannot be done immediately, the fractions and substrates should be stored frozen . If the samples will continue on for DNA digestion of the cellular material, see BIO.2.DNA.02 for the method and procedure.

13. If the stained sample is deemed non-probative, or ample stain material remains for additional testing and the generated protein/cell pellets/substrates will not be used for further testing, they may be discarded as work product.

14. The disposition of all samples should be reflected in the case record, generally in the analyst case notes.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10-24-12	**NUMBER:** BIO.1.BIO.11
	RELATED ORDERS:	
APPROVED BY: Kim Willey,Dawn Romano & Debbie McKillop	**ASCLD-LAB: ISO/IEC:17025 5.8.4.6**	
CHAPTER: Biology	**SUBJECT:** Preparation of Reference Blood Standards	

Preparation of Reference Blood Standards

For purposes of preservation, the Biology Unit creates dried reference blood standards from liquid blood that has been drawn from individuals involved in a criminal case. The dried reference blood standards are maintained frozen in the Laboratory, or for older cases, maintained frozen at Sheriff's Property.

The dried reference blood samples may be used as DNA reference samples for DNA typing, should an investigative need arise. When a reference blood sample is examined as part of a case and while in the custody of the Laboratory, the reference blood is treated as evidence and will follow evidence handling requirements outlined in FSD.35, FSD.36, FSD.38 and FSD.39. **(ISO/IEC:17025 5.8.4.6)**

Access to the reference samples is provided to the Biology Unit staff for dried blood preparation assignments and /or for casework assignments. When a sample is used in casework or a need arises to split a portion of the sample for another laboratory, it will be documented in the examination records.

Equipment/Materials
20% Bleach
Evidence Tape
Butcher Paper
Coin Envelope
Cotton Swatches (5 x 5 cm)
Computer Generated Labels
Weigh Boats
Tube Protectors
Disposable Pipettes
Vacutainer Opener (optional)
Test Tube Rack (optional)

Safety
Personal Safety Equipment:
Latex Gloves
Goggles
Lab Coat
Dust Mask
(Optional: A full face shield in lieu of goggles and mask).
Note: Universal Safety Precautions against infectious materials must be followed throughout.

Prepare JusticeTrax:

1. Liquid Blood Evidence Kits are typically stored in the evidence log-in refrigerator. A photocopy of the Liquid Blood Evidence Kit serves as the Laboratory's request for service. A LIMS Assignment Notification form accompanies the request when the request has been assigned. Retrieve the Liquid Blood Kit(s) from the log-in refrigerator (if applicable) and transfer the kit into your custody by conducting an electronic transfer in JusticeTrax.
2. Verify in JusticeTrax that the request is assigned to the correct analyst. Correct (if needed) by editing the request. (Note: an analyst must be assigned to create a worklist in JusticeTrax. See "Create a Worklist in JusticeTrax" below)
3. Verify in JusticeTrax that the source of the blood is correctly listed in the "Source" window. Correct (if needed) by editing under the evidence tab: Select the "Edit" button beneath the Submissions List pane. Select the correct individual from the pull-down menu in the "Source" window. Re-select the "View" button to prevent further edits to the submission.

Create a worklist in JusticeTrax:

1. Select **Analysis > Create Worklist**
2. Select **Forensic Biology** as the Unit
3. Select the **Liquid Blood** request as the Service
4. Select **Name of Analyst** from Analyst pull-down.
5. Click **"OK"**
6. A "Create Worklist" window opens. Using a barcode reader, scan the **Barcode** of each liquid blood request from the Assignment Notification form.
7. Click "**Create Worklist**" button. A worklist listing each associated request will appear.
8. Print the worklist (the barcode of the worklist will serve to associate all requests for all stages of the work and review process.)

Prepare evidence labels in JusticeTrax:

1. Select **Administration > Crystal reports>Generate Reports**
2. Select Report Category **DNA**
3. Select **DNA Worklist Labels** and click "**Print**" and choose "**Screen**."
4. Complete the prompts:
    1. Initials and Date (e.g. "6-18-09 DCS)
    2. # of rows to skip ("0" for a new page, or the appropriate number to skip lines of labels.)
    3. Worklist barcode (Scan the worklist barcode(s).)
5. Print the worklist labels sheet on Avery 5267 labels.

Prepare coin envelopes for dried reference blood swatch(s):

1. Place one of the worklist labels on the top front of a coin envelope. Verify the label has the following information: Lab Number, Submission #, Name of Individual's blood, Agency and Agency Case Number.
2. **Add** the appropriate **sub-item number** to the coin envelope.
3. **Initial and date** the label.
4. Place a **pre-printed barcode label** on the bottom of the envelope for registration in JusticeTrax (see Itemization procedure below).

Itemize in JusticeTrax each new dried reference blood swatch(s).

1. Right-click on the Liquid Blood request, select "**Edit Findings**"
2. Right-click on the Submission Number, select "**Itemize Evidence**"
3. In the **"Description" field** in the New Evidence Submission window, **enter the description of the new dried reference sample**: "Envelope: dried reference whole blood from [Name of Source]".
4. Change **"Bar Code**" Field to **"0"**
5. Verify that the **"Inherit"** field reflects the proper submission number and description of the Liquid Blood Evidence Kit.
6. In the **"From"** field, **Scan** the analyst's barcode and enter PIN for a secure transfer. **Do this even if the "From" field is already populated with the Analyst, otherwise it will not be a secure transfer**.
7. In the adjacent "**Via**" pull-down menu, Select "**Split Chain of Custody**"
8. *In the **"TO"** field, select **"Escobar Freezer-Evidence Room 3"**. A pop-up message will say the container (original liquid blood submission) will not be changed. **Click "OK".** This will split the dried reference blood swatch and chain of custody from the liquid blood submission.

   *Note: If the procedure will be started but completed the next day (i.e. the blood needs time to dry overnight), transfer the dried blood swatch to the Analyst Workspace instead of to the "**Escobar Freezer-Evidence Room 3**". The next day, transfer the dried reference blood "**From**" the analyst's workspace "**TO**" the analyst, "**Then To**" the Escobar Freezer-Evidence Room 3.
9. Click on the **Barcode icon button**, select "**Register**". Scan the pre-printed barcode(s) label on the coin envelope(s).
10. Click "**Apply**"

Procedure

1. Wipe work counter with 20% bleach and then cover with butcher paper.
2. Perform steps 2-10 to completion before moving onto the next sample to reduce the risk of sample mix-up. Select a Liquid Blood Evidence Kit. Verify that the information on the envelope matches the information on the Assignment Notification form. (If wrong on the Assignment Notification then its wrong in JusticeTrax and needs to be corrected).
3. Open the envelope. Do not cut over existing evidence tape, if possible.
4. Place one of the four generated labels (see above) onto the blood tube and one onto a cotton swatch cloth. Initial the labels. Place the swatch into a plastic weigh boat. Cross check all identifying information to ensure that the proper blood sample label is placed on the appropriate blood swatch cloth.
5. Open the vacutainer either with a vacutainer opener or by hand. If using a vacutainer opener, be sure to clean the inside with 20% bleach before using.
6. Using a disposable pipet, deposit 3-4 drops of blood onto the swatch. This should cover at least half of the swatch. Close the blood tube and dispose of the pipet in a biohazard container.
7. **Using the LIMS Assignment Notification sheet as a note page, record the condition in which the evidence was received (i.e. tape sealed, dated and/or initialed seal), what type of vacutainer was present (i.e. purple top, gray top, ect), and identifying blood donor information on the tube. Record the transfer of the liquid blood sample onto the swatch. Record the disposition of the liquid blood and dried blood swatch.**
8. Set the weigh boat and blood swatch aside to dry.
9. Close the blood tube and place back into its protective sleeve. Place the assembly back into the Liquid Blood Evidence Envelope. Seal envelope with evidence tape. Initial and date the seal.
10. When the blood swatch is dry, remove the sample from the weigh boat and place with attached label into the prepared coin envelope (see above) using tweezers. Be sure to wipe the tweezers with 20% bleach and then again with deionized water before moving on to the next sample.
11. Seal the coin envelope with evidence tape. Initial and date the seal.
12. Dispose of the weigh boats and butcher paper in a biohazard container and wipe the work area with 20% bleach.
13. Place coin envelopes into the Laboratory freezer.
14. Return the Liquid Blood Evidence Kit to submitting agency.

Reporting:

1. Prior to generating a report in JusticeTrax, open the Lab number and verify that all evidence is in the correct location.
2. A "Record of Notification Report" limited to the following sections; Evidence Receipt date and Evidence Description List, Purpose, and Disposition of the liquid blood and dried blood samples will be written.
3. **An example "Purpose" statement is**:

   "To preserve a reference blood sample from [name of blood donor], a portion of the liquid blood contained within the Liquid Blood Evidence Kit was transferred to create a dried blood sample. The dried blood sample may be used as a DNA reference for [name of donor] should an investigative need arise.

   An example "Disposition" statement is:
   "The dried blood sample will be maintained in the Laboratory's reference blood collection. The Liquid Blood Evidence Kit will be returned to the agency."

   Alternatively, if the liquid blood is from a **Blood Alcohol/Drug Kit**, change report verbiage to reflect the liquid blood is from a Blood Alcohol/Drug Kit. Additionally, indicate in the **disposition** that the kit will be **dispositioned to the Drug, Alcohol, and Toxicology section** of the laboratory.

   Verify the information contained in the report is accurate and turn in for an administrative review.

Dried Reference Sample Splits

1. When it is necessary to split a dried reference sample, the request is documented in the case record. Prior to splitting the sample, verify there is sufficient sample before preparing a sub-sample. The split is documented in JusticeTrax, see QA.09 Division Itemization Procedure for guidance. For samples to be mailed or couriered see FSD.35 for guidance.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 03/28/2017	**NUMBER:** BIO.1.BIO.12.01 - Abbreviation List
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Biology	**SUBJECT:** Abbreviation List	

I. The Biology Manual lists common use abbreviations in the Biology Unit.

Biology Unit Specific Abbreviations List

(may include some "common" abbreviations)

Abbreviation/Symbol	Meaning
-A or INA	Minus "A" (incomplete nucleotide addition)
AR or Adm Rev	Administrative Review
ALS	Alternative Light Source
Amp Neg	Amplification Negative Control
Amp Pos	Amplification Positive Control
AP	Acid Phosphatase test for apparent semen
c̄ or cont.	Contains/containing
CT	Cycle Threshold
BAD	Blood Alcohol Drug Kit
b/c	Because
Blk	Black
BMA	Black Male Adult
Brn.	brown
BSEK	Buccal Swab Evidence Kit
b/t or b/n or btwn	Between
CB	Cardboard Box
CID	Case number, Initials, and Date
CP	Cell Pellet
conc.	Concentration
cont'd	Continued
Env	Envelope
ec / e cells	Epithelial Cell
Exam'd	Examined
Ext.	Exterior
FECK	Fingernail Evidence Collection Kit
fl. or fluor.	Fluorescence
Fzr. or Frzr.	freezer
GTVT	Gray Top Vacuum Tube
Hum	Human
HMA	Hispanic Male adult
IFO	In front of
Int.	Interior
Inc.	Inconclusive
Incl.	Includes
IPC	Internal Positive Control

LBEK or TSLBEK	Liquid Blood Evidence Kit or tape sealed.....
Lft or L.	Left
Lt.	light
Liq.	liquid
ME	Manila Envelope
Mcon	microcon
Micro	microscopic
N/A or NA	Not Applicable
NEC or nuc e cell	Nucleated epithelial cells
Neg or a circle "N"	Negative
Neg Cntrl	Negative Control
ND	Not detected
Non-NEC	Non-nucleated epithelial cells
NR	No result
NS	Non- sperm fraction
NT	Not Tested
NTC	Non-Template Control (qPCR)
Obs	Observed
OL or OLA	Off ladder allele
O-tol or OT	O-tolidine test for apparent blood
P/B or PB	Paper Bag
PC	Partial Clearing
PF	Protein Fraction
phpf	Per High Powered Field
pics	Pictures
PHR	Peak Height Ratio
POE	Point of Entry
POI	Person of Interest
Pos or a circle "+"	Positive
Pos. Cntrl.	Positive Control
poss.	Possible
prep'd	Prepared
PS	Possible saliva
PTVT	Purple Top Vacuum Tube
PX	Per patient history
Quant.	quantity or quantification
QC	Quality control
RB-# (ie. RB-1)	Reagent Blank with associated number
RBR	Reagent Blank for Reference
Ref.	Reference Standard
Refr.	Refrigerator
RBEK or TSRBEK	Reference blood Evidence Kit, Tape sealed.....
RFU	Relative Fluorescence Unit
RRB	Reference Reagent Blank
R. or Rt.	Right
rxn	Reaction
SAEK	Sexual Assault Examination Kit
SART	Sexual Assault Response Team
SB	Substrate Control
SHX	Sample Per Patient History
SP	Sperm fraction

Std.	Standard
Stereo or stereomicro	Stereomicroscope
Strm.	Storeroom
Sub. #	Submission number
(S) or sus	Suspect
TB	Toluidine Blue
TR or Tech rev	Technical Review
TS	Tape sealed
TSBPB or TSPB	Tape sealed brown paper bag or tape sealed plastic bag
TSCE	Tape sealed coin envelope
TSE or TSME	Tape sealed envelope or tape sealed manila envelope
TSGB	Tape sealed gun box
tr.	trace
undet.	undetermined
(V) or V or vic.	Victim
WB	Water blank
WBC	White blood cell
wht.	white
WL+	Woods Lamp positive
WMA/J	White male adult/juvenile
w/n or wnl	Within or Within normal limits

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 05/19/17	**NUMBER:** BIO.1.BIO.12 - Evidence and Known Reference Standard Collection Kits
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Biology	**SUBJECT:** Evidence and Known Reference Standard Collection Kits	

The laboratory provides several kits for the collection of evidence and reference standards. The following is the list of kits provided and used by the laboratory with a short description detailing the access and release of the kits to outside agencies.

DNA Reference: Blood Evidence Kit (RBEK)

RBEKs are provide to the Coroner's office to be used specifically for the collection of DNA reference samples from deceased individuals whose death is related to a criminal investigation.

Instructions on how to collect the blood sample is included with the kit.

The law enforcement agency associated with the criminal case is responsible for taking custody of the kit from the Coroner at the time of autopsy. If the autopsy is attended by laboratory staff for crime scene processing purposes, lab staff may also take custody of the RBEK.

The reference blood is used by the laboratory when a DNA sample from the deceased is needed.

The Reference Blood Evidence Kit (RBEKs) is custom ordered from TRITECH FORENSICS and arrives pre-assembled. Each kit contains the required components, as specified by the Laboratory.

The kits are to be stored at room temperature before and after use.

Liquid Blood Evidence Kit

Liquid blood Evidence kits are no longer provided to outside agencies for the collection of known reference blood samples.

The liquid blood kit kit has been replaced by either the "Reference Blood Evidence Kit" for deceased individuals or the "DNA Reference/Oral Swab Kit" for living individuals.

Oral Swab DNA Reference Kit

Oral swab kits (also known as Buccal swab kits) are provided to law enforcement agencies upon request and are used to collect DNA reference samples from living individuals, such as victims, suspects, or third party persons for elimination purposes.

Instructions on how to collect the oral swab is included with the kit.

An oral swab is easy and non-invasive and should be the primary method of collecting known DNA reference standards from living individuals.

The law enforcement agency is responsible for obtaining these reference samples. The samples are used by the Laboratory when a DNA sample from the individual is needed for DNA analysis.

This kit should not be used to collect biological evidence at crime scenes and is not intended to be used in place of the CA Department of Justice DNA databank sample.

The kit is custom ordered from TRITECH FORENSICS and arrives pre-assembled. Each kit contains the required components, as specified by the Laboratory.

The kits are to be stored at room temperature before use and should be stored frozen after use.

Fingernail Evidence Kit

The Laboratory provides fingernail evidence collection kits to the Coroner's office specifically for the collection of physical and biological evidence on deceased individual associated with criminal cases.

Fingernail and toenail clippings may be collected for potential foreign DNA, trace evidence, or may be collected as a DNA reference standard for the deceased individual when the body is in a severe state of decomposition.

When the individual's nails are insufficient for clipping, the fingertips and/or hands may be swabbed instead, when applicable. Swabs are not included in the kit.

Instructions on the collection of the samples is included with the kit.

The law enforcement agency is responsible for obtaining the fingernail samples. If the autopsy is attended by laboratory staff for crime scene processing purposes, lab staff may also collect and take custody of the fingernail evidence.

The fingernail kit is custom ordered by the laboratory from TRITECH FORENSICS and comes to the laboratory pre-assembled.

The kits are stored at room temperature before use and should be stored frozen after use.

Sexual Assault Evidence Kit

Sexual assault kits are provided for the purpose of collecting biological evidence associated with the body of a sexual assault victim. These kits are supplied **ONLY** to the Sexual Assault Regional Training (SART) Coordinator or representative.

The laboratory provides paper bags to the SART Coordinator or representative for the collection of clothing. The paper bags are prepared in-house with adhesive labels that are custom-ordered. The labels are ordered from graphics@pw.cccounty.us .

A Sexual Assault kit may be provided to the Coroner's office to be used on the deceased, in cases where sexual assault is suspected. However, this should only be done when Autopsy Sexual Assault Kits are unavailable.

The law enforcement agency associated with the criminal case is responsible for taking custody of the kit from the hospital and preserving the kit until submitted to the laboratory for examination.

The Sexual Assault Evidence Kit is custom ordered from TRITECH FORENSICS and comes to the laboratory pre-assembled. The kit components are the result of a collaboration between the laboratory and the Contra Costa County's SART Coordinator.

The kits are stored at the laboratory and/or at the Contra Costa Regional Medical Center. The kits should be stored at room temperature prior to use and should be stored frozen after use.

FTA cards are provided to the SART at the Contra Costa Regional Medical Center in conjunction with the Sexual Assault Kits but separately. These are used in place of an oral reference sample when an oral swab cannot be collected.

Autopsy Sexual Assault Kit

The sexual assault kits used during an autopsy are prepared in-house. The kit contains the following components or equivalent:

1- Pubic combing/brush (TRITECH FORENSICS)
1- Pubic lifter (TRITECH FORENSICS)
3- Small envelopes each containing 1 slide & slide holder for oral, rectal, and vaginal smears, with labels
3- Envelopes: 1-vaginal w/ 4 swabs; 1-rectal w/ two swabs; 1-oral with 2 swabs
Labels (Avery 5960 & 5267 & 5162). Label templates under Serology/Kits/Autopsy SAEK labels
Evidence tape
Chain of custody label

Suspect Sexual Assault Evidence Kit

Suspect sexual assault kits are provided to the Sheriff's Office jail, and to other law enforcement agencies, upon request. The kits are to be used to aid in the recovery of physical evidence from the body of a sexual assault suspect. The kit should be used to collect potential evidence within 24 hours of the offense or when there is information that evidence may still be on the suspect past the 24 hour time frame.

For digital penetration cases, 1 or 2 swabs should be used to swab the fingers from each hand. Place the samples from each hand in a separate, labeled envelope. **Do not** collect a separate swabbing from each finger.

If a male suspect has been taken into custody within 24 hours of the incident and/or has not showered or bathed, a penile swab should be collected.

The suspect’s underwear should also be collected and may provide a source of the victim’s DNA.

Instructions on the collection of the samples is included in the kit.

The law enforcement agency associated with the criminal case is responsible for taking custody of the kit.

This kit is custom ordered by the laboratory from TRITECH FORENSICS and comes to the laboratory pre-assembled.

The kits are stored at room temperature prior to use and should be stored frozen after use.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 10/04/2013	**NUMBER:** BIO.1.BIO.13
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER:	**SUBJECT:** Hair Collection and Examination	

Introduction
Hairs and fibers can be significant in making associations between persons and/or a crime scene. On a case by case basis, the potential significance of any trace evidence should be considered by the examiner. Case circumstances and/or the nature of the case may guide the examiner in determining the value or need for the collection of any trace material.

Role and Goal
The role of any examiner in the Biology Unit is to recognize and collect trace evidence of potential value. It is not the examiner's role to identify the trace material. However the examiner should be able to make general observations and document those observations for the purpose of distinguishing hairs from fibers, when possible. Basic training on gross characteristics, such as color, length, and morphology of hairs and fibers will be provided to the examiner. The examiner will be trained to use the stereomicroscope and compound microscope to assist in determining general and/or specific characteristics about the trace material. If the trace evidence is determined to possess associative value, the trace material will be preserved for a qualified trace examiner, if required.

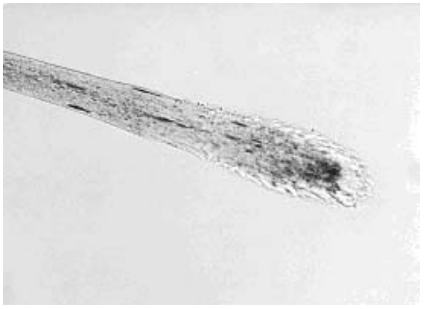
When the trace material has been determined to be a hair, the role of the examiner is to make general observations and document the observations for purposes of distinguishing the hair as likely originating from an animal or human, where possible. Human head hair and pubic hairs, where the root is intact, generally will possess enough microscopic features to evaluate whether the hair is likely human and whether it is adequate for DNA analysis. The main goal of the examiner in the Biology Unit is to determine if the hair is amenable for nuclear DNA typing. Human hairs from body parts other then from the head and pubic area, where the root may or may not be present, are typically not well suited for DNA analysis.

DNA Suitability
Hair is a filament growth from the skin. Hair grows from a follicle embedded in the skin and consists of the shaft and the root. The hair shaft extends out of the skin with the root embedded in skin. Hair grows in three stages; anagen, catagen, and telogen. Anagen is the active growing phase, catagen is the intermediate phase when hair has stopped growing, and telogen is the resting phase when hair is naturally shed. At any stage of hair growth, the hair has the potential to have cellular material/tissue from the follicle attached to the root, however anagen hairs have a higher chance of possessing cellular material because the hair is still actively growing and mostly still embedded in the hair follicle.

<u>Hairs Suitable for Nuclear DNA Analysis:</u>

Because nuclear DNA is degraded during the hair's keratinization process, the nuclear DNA material is typically found only in the root material of anagen and catagen hairs, specifically in the sheath material and in the bulb cells. These hairs can often be identified by an evenly pigmented bulb. DNA may also be found in telogen hairs with follicular tags. This is viewed as a clump of cellular material attached to the root and most often observed with coarse hairs such as pubic and beard hairs.

1. Anagen: The growing phase of a hair where the pigment (color) is typically continuous to the root. **There can be a thin clear/transparent root sheath at the root end which is a rich source of nuclear DNA**. The presence of the sheath can indicate the hair was forcibly removed. Forcibly removed does not equate to a struggle. Other facts of the case may support how the hair was removed. The shape of the hair root is typically bulbous and under polarized light, the cuticle is bright (due to keratin) but the root area is dark due to lack of keratinization.
2. Catagen: An intermediate/transitional phase where the pigment is reduced above the root bulb and there is a reduction in the root sheath. **There may be a follicular tag adhering to the root and the root is more club shaped.**
3. ***Telogen: A resting phase where there in **no root sheath, possibly no medulla, and no pigmentation above the root bulb. The root bulb is hardened, club shaped, and** the root area is birefringent under polarized light. The root can have follicular tags, more common from coarse hair regions, such as pubic and facial hair. Note: telogen does not always mean shed. A shed hair can be forced out and may be accompanied by a translucent germinal nipple. The germinal nipple is typically not suitable for nuclear DNA testing however the hair is suitable for mtDNA testing.

Microscopic view of two hair roots. The hair at left has a layer of translucent tissue surrounding the root, indicating it was forcibly removed from the person's head. The hair root at the right does not have this tissue layer, indicating it probably shed naturally from the head. The root with tissue on it is more likely to yield DNA results than the other one.

Hairs Suitable for mtDNA Analysis:

1. Hairs that do not possess detectable amounts of nuclear DNA (telogen hairs and fragments). The mitochondrial DNA is contained in the shaft and in the telogen bulb.
2. The path traveled by the mitochondrial cell originates in the bulb and ultimately ends in the keratinized hair shaft. There are multiple copies of the mtDNA in each mitochondrion and hundreds of mitochondria in each cell = thousands of copies of mtDNA.
   Note: the inheritance of mitochondrial DNA is strictly maternal.

Examination

Materials
Microscope slides
Coverslips
Forceps
Trace collecting materials: Post-its, glassine paper, tape lifts or other collection device
Water or mounting medium
Microscope (Bright Field, Polarizing) and Stereomicroscope (transmitted and reflected)

Procedure

1. The trace evidence may be collected by either individually picking the material off or by using an adhesive tape lift method. In circumstances where the removal of the trace material could lead to damage or loss of the material, the material may be left in place. If using the pick method, use forceps and be careful not to pinch, crush or stretch the hair when retrieving it. If using the tape method (fingerprint tape, cellophane or clear adhesive), pat over the item. Take care not to miss any areas or overload the tape. Post-it type notes can also be used for small areas or for holding the trace material that has been picked off.
2. Examine the trace material under a stereomicroscope under transmitted and reflected light. Hairs and fibers may be mounted to a microscope slide or to the sticky side of a tape lift. Place the strand underneath the scope and adjust the magnification and focus. Document your observations: color of hair/fiber under both types of light (transmitted and reflected). The color can appear different under each light.
3. To differentiate between a hair and a fiber, it may be necessary to also view the unknown strand under a microscope (Bright Field and or Polarized). Place the strand on a microscope slide, add a drop of water, and cover with a cover slip. To determine if the strand is a hair, look for hair characteristics (discussed below) and document your observations. Note: the various components of hair have different refractive indexes, thus the ability to observe hair characteristics such as scale pattern and medulla will be affected by the mounting medium.
4. To determine if the hair is suitable for nuclear DNA testing, examine the root end of the hair, if present. Look for any clear/transparent sheath material adhering, or any follicular tag or other cellular material adhering to the root end. Hairs with germinal nipples typically do not possess sufficient nuclear DNA.
5. Observe the hair shaft for adhering biological material, such as blood, semen or other trace material. The adhering material may be collected if it has evidentiary value or discarded. The adhering material on the shaft can be swabbed off or the hair can be soaked and gently washed in a minimal amount of water to either collect or remove the adhering material.
6. Placing the hair on the sticky area of a post-it can help keep the hair in place while cutting the hair. Using a scapel, cut the root and/or sheath material (approximately 0.5cm) and carefully tranfer to a 1.5mL or 2.0mL tube. Cut an equal and adjacent portion of the hair shaft and place into a separate 1.5mL or 2.0mL tube as the hair substrate control. Due to static electricity, use caution when transferring the hair fragment to the tube. A drop of water can be placed on the hair or in the tube when transferring to reduce the static electricity. Verify the presence of the hair(s) in the tube(s).
7. For DNA extraction of the hair sample, follow the procedure under Cellular Digestion of Biological Material BIO.2.DNA.02.

Hair Chemistry, Structure, and Terminology

1. Chemistry: Hair is made of keratin protein (high in cystine and cysteine amino acids), sebum (lipids), water (can be in the medulla), melanin (a pigment made of long chain polymer) and trace mineral deposits which can be dietary dependent.
2. Structure:
    1. Cuticle: outer layer of overlapping scales -like stacked cups (patterns differ considerably from species to species.)
    2. Cortex: interior region and major source of the mechanical strength of the hair. The location of pigmentation that gives rise to hair color.
    3. Medulla: the core of the hair shaft composed of large cells of varying shape.
3. Terminology:
    1. Distal end (tip)
    2. Medial region (intermediate region between root and tip)
    3. Proximal end (near the root)

Fiber, Animal and Human Hair Characteristics

Human vs. Animal vs. Fiber

Characteristics	Human	Animal	Fiber
Pigmentation (colors)	colorless/gray, blonde, golden brown, red, auburn, brown, gray brown, black, artificial coloration, and effects of hair treatments	Color banding (change in color pigments along shaft)	Wide range of natural and artificial colors
Structure (Form/shape)	Straight, wavy, curly, wooly-kinky (flat and wavy but does not cross over itself), peppercorn. Diameter of cortex, medulla, and cross-sectional shape.	Guard hairs Wool hairs	Shape dependent on the type of fiber (cotton, nylon, rayon, ect.)
Cuticle	Consistent scale pattern unless damaged	Multiple scale patterns dependent on the animal	No scales
Medulla	Translucent, opaque, absent, fragmental, interrupted, continuous. Width of medulla (commonly absent in fine hairs).	Medulla > 1/3 of shaft diameter Patterned medulla Pigmentation in medulla or close to it	No medulla

Shaft variations	Buckling, Convoluting, Shouldering, Undulation Splitting		Dependent on the fiber
Root	Shape, absent, broken, cut, putrid, growth phase	Varying root shape, typically tapered root end	No root
Tip	Tapered, Frayed, Split, Rounded, Cut, Broken	Tapered distal tips	

Definitions:
Buckling: an abrupt change in direction along the shaft with or without slight twist
Convoluting: a rotation or twist of the shaft, may loop or twine upon itself.
Shouldering: changes in cross section of hairs
Undulations: variations in diameter of the shaft (a wavy form)
Splitting: longitudinal separations along the shaft

General Characteristics of Human Hair from Different Body Parts

1. Head: shaft normally constant, cut/blunt distal end, can have longer lengths .
2. Pubic: buckling, twisting, undulations, flatter (trough). Root typically has a type of flag (fatty root) and usually naturally tapered tip. Common to have frayed tips.
3. Limb: fine diameter, small root, can have frayed areas due to friction.
4. Beard: variations in color, medulla, coarse, diameter (buckling, shouldering)
5. Eyelash/eyebrow: taper down at root end, small rounded roots and tip tapers abruptly.
6. Axillary (underarm): looks like pubic, less buckling and finer diameter. Coarseness due to androgen levels. Root has fatty tissue even though telogen (similar to pubic). Tips tend to be worn, blunt, drawn out and lack pigment.

Gross Racial Characteristics

Due to much variation and cross-over between races, these are to be considered general racial characteristics.

1. Caucasian: Moderate shaft diameter with minimal variation. Sparse to moderate pigmentation with even distribution, thin cuticles, and oval cross-sectional shape.
2. Negroid: Fine to moderate shaft diameter with considerable variation. Densely distributed pigment in clumps (shaft may be opaque), shaft with prominent twist and curl, and flattened cross-sectional shape.
3. Mongoloid: Course shaft diameter with little or no variation. Densely distributed pigment arranged in clumps or in patches, thick cuticle, prominent medulla (broad and continuous), round cross-sectional shape.

Effects of Hair Treatments

1. Chemical (bleaching): damaged cuticles (ragged appearance), medulla can be filled with bubbles (H_2O_2) or oil.
2. Dyes:
    1. Vegetable dye (Henna): -distinct yellow-reddish color in cortex, fills in medulla.
    2. Metallic (Greason formula): particles of lead sulfide caught in cuticle scales-just makes gray hair darker.
    3. Permanent (oxidation): dye in cortex and entire hair. Foggy or glassy look. Demarcation lines. Some scale damage.
    4. Semi permanent: colors cuticle and partially in cortex, less damage to cuticle, many colors. Strange colors with transmitted light (pinkish).
3. Burned : keratin turns red and expanded bubbles can be observed in the shaft

DNA Background

1. Hair embryology

    1. At 9 to 12 weeks gestation, a discrete group of ectodermal skin cells gather and begin a downward growth to form the beginnings of the hair follicle called a hair peg. At the same time a second group of cells gathering below the ectoderm are forming the dermal papilla in the mesoderm. The hair peg grows downward into a bulbous mass of cells and encloses the dermal papilla, thus completing the formation of a follicle.

    2. The dermal papilla is the driving force behind the hair growth. The dermal papilla directs cell division of the ectodermal matrix bulb cells (root bulb). The matrix bulb cells are what feed the growing hair shaft. The dermal papilla does not contribute cells to the shaft. A plucked hair with follicular material adhering to it is usually of ectodermal origin, however there may be mesodermal tissue present if a complete bulb is present.

    3. The formation of the hair follicle is a clonal selection of cells from the ectoderm and each hair follicle is independent of the other. An individual hair which may have undergone a mutational event can exhibit a genetic variation independent of other hairs or other cells in the body. Thus, a single locus variation from a reference sample should not be viewed as an elimination.

2. Heteroplasmy

    1. Heteroplasmy is a heterogeneous pool of mtDNA molecules in the cytoplasm of the cell, in other words, a mixture of multiple (usually two mtDNA sequence types in a single individual.)

    2. The rate of turnover of the matrix cells is greater than that of any normal tissue with the possible exception of bone marrow. In contrast, melanocytes in the hair bulb divide slowly. The cortical cells carry their own mitochondria and pick up melanocyte mitochondria from the bulb as the cortical cell migrates to the shaft. Cortical cells in the shaft thus could carry at least two populations of mitochondria. Melanocytes continue to contribute mitochondria to the shaft during the anagen phase while once the cortical cells differentiate they cease mitotic divisions (thus no new daughter cells).

    3. Thus, a single hair shaft can have varying ratios of heteroplasmy along the length of the shaft or from another hair originating from the same follicle.

    4. The heteroplasmy can be detected when the minor component is 10 to 20% of the overall mixture, otherwise goes undetected.

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3. Petraco et.al.: "The Morphology and evidential Significance of Human Hair Roots" J. For. Sci. (1988) Vol. 33, No. 1

4. Linch et.al.: "Evaluation of the Human Hair Root for DNA typing Subsequent to Microscopic Comparison" J. For. Sci. (1998) Vol. 43, No. 2.

5. Linch et.al.: "Human Hair Histogenesis for the Mitochondrial DNA Forensic Scientist" J. For. Sci. (2001) Vol. 46, No. 4.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 6/30/14	**NUMBER:** BIO.1.BIO.14
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Biology Manual	**SUBJECT:** Fetal, and Human Remains/Missing Persons	

Fetal Remains

The Biology Unit conducts DNA analysis on fetal remains (also referred to as products of conception) for criminal paternity cases.

Materials
Forceps
Petri dish
Scapel or razor blade
Ruler
Digital Camera
Stereo microscope
0.9% saline solution
2.0 mL tubes or 15ml Falcon tubes

0.9% Saline Solution
0.9g NaCl in 100ml sterile distilled water (refrigerate)

Storage
Fetal remains should be stored refrigerated and submitted to the laboratory immediately for examination. If the specimen cannot be submitted in a timely manner, the submitting agency should be advised to store the specimen frozen to prevent bacterial growth and decomposition of the biological material.

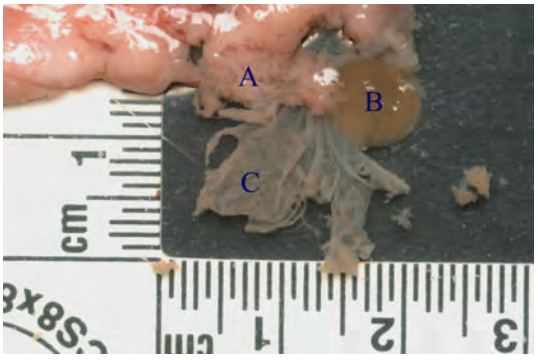
Refrigerated fetal remains should be examined within 1 week of collection. The specimen must be stored frozen if examination is not possible with the 1 week time frame.

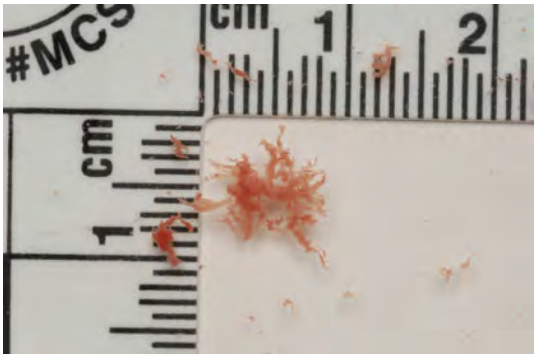
Refrigeration beyond 1 week subjects the fetal remains to decomposition which compromises the quality and quantity of the DNA. The freeze-thaw cycle for a frozen specimen can result in cell lysis, causing commingling of the fetal and maternal DNA. In both cases, it can make the distinction between the fetus and mother's DNA more challenging, particularly when the fetus is <10 weeks old.

Age of fetus
Many submissions to the laboratory are from abortuses ≤ 8 weeks old which is considered the embryonic period. The abortion procedure typically obliterates the embryo, however extra-embryonic tissue can be recovered and typed in lieu of the embryo itself. Extra-embryonic tissues include the embryonic membrane/sac (amnion), the chorionic membrane/sac (chorion), the chorionic plate, villi, and the umbilical cord.

When possible, request medical personnel performing the procedure to separate the fetal tissue from the maternal tissue in abortuses <10 weeks old. Even for fetus 10 weeks or older, where fetal structures may be more easily identifiable, request medical personnel, when possible, to collect the fetus separately from the maternal material.

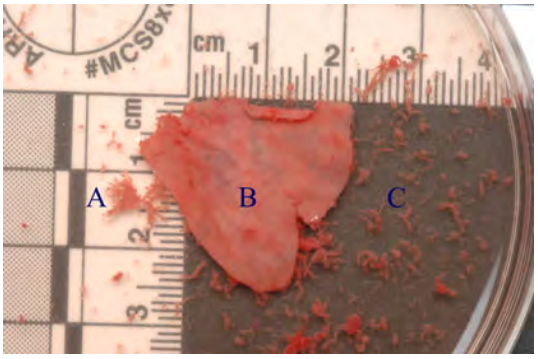
Extra-Embryonic Structures (Figures from Reference #1)





Tissue from late embryonic-period abortion
(A) Villous chorion (B) Yolk sac (C) Amnion

Chorionic villi from early fetal-period abortion



Tissue from early fetal-period abortion
(A) Chorionic villi (B) Fetus-side of chorionic membrane
(C) Detached chorionic villi floating in saline solution.

Procedure

1. If the fetal remains are received frozen, thaw in the refrigerator and/or at room temperature when ready for examination. Thawing time in the refrigerator may take several hours and possibly overnight, thus plan accordingly. If thawing at room temperature, monitor frequently to minimize the amount of time the tissue is left at room temperature conditions.
2. The form or condition in which the abortion product is received can be varied due to the different abortion techniques used. Unless the fetal material has been previously segregated by medical personnel, the fetal and maternal material will be commingled.
3. Place the aborted tissue or portions of the tissue into a petri dish filled with **cold** saline solution. The saline serves as a liquid medium to wash away extraneous fluids/materials and helps in the segregation of fetal tissue from the maternal tissue. If the fetus is less than 12 weeks old, a stereomicroscope may be needed to help identify the fetal tissue.
4. Separate the suspected fetal tissue from the maternal tissue by transferring the fetal tissue to another petri dish containing **cold** saline solution. Segregate as much of the identified and suspected fetal tissue as possible into the container.
5. Photograph the suspected fetal tissue in the petri dish with a scale, if desired. This may be done through the stereo microscope, speckfinder, or directly from the camera, depending on the magnification needed for documentation. See BIO.1.BIO.02 for visual, instrumental, and microscopic examinations.
6. When the segregation process is completed, sample a portion (approximately 2-3mm) of the suspected or identified fetal tissue and place into a 2.0 mL tube. Several samples may be needed when the examiner is uncertain and/or the fetal material cannot be readily identified due to the age of the fetus.
7. Samples selected for further DNA analysis will follow the Cellular Digestion of Biological Material procedure, BIO.2.DNA.02. Overnight digestion and additional Pro K is recommended to ensure complete digestion of the tissue samples. Once digested the samples may follow any available extraction method.
8. Once the sample selection process is completed, remove the segregated fetal material from the saline and transfer the tissue to a 2.0 mL tube or a 15 mL Falcon tube. Do the same with the maternal material or return the maternal material back to the original specimen container. Retain the fetal material in its segregated state in case additional testing is needed. Store all samples frozen. **NOTE: The fetal and maternal material should not be stored frozen in saline solution or any other type of preservative.**

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1. "Isolation and Individualization of Conceptus and Maternal Tissues from Abortions and Placentas for Parentage Testing Cases of Rape and Abandoned Newborns", Donald J. Johnson, M.S.; Learden K. Mathies, M.S.; Katherine A. Roberts, Ph.D.; and Beatrice Croft Yorker, J.D., R.N., M.S., F.A.A.N., Journal of Forensic Science, November 2010, Vol. 55, No. 6
2. "Chorionic Villus Sampling Prior to Pregnancy Termination, a Tool for Forensic Paternity Testing", Ayeleth Reshef, M.Sc.; Paul Brauner, M.Sc.; Moshe Shpitzen, M.Sc.; Nira Gallili, M.Sc.; Assa Marback, Ph.D.; Uzi Motro, Ph.D.; Esther Shmueli, B.Sc.; and Vardiela Meiner, M.D., Journal of Forensic Science, 1999; Vol.44, No. 5

Human Remains/Missing Persons

The Biology Unit may conduct examinations to assist in identifying human remains or missing persons. To identify the remains through DNA analysis, the DNA from the remains needs to be either compared to a known DNA reference sample from the victim or compared to family members of the victim. Secondary DNA reference samples, known to be from the victim, such as personal items (hairbrush, toothbrush, lipstick, etc) or medical specimens can be used, if available, to be compared to the human remains. When using a secondary reference, it is very important to establish that the personal item being used was only used by the victim or rarely used by someone else. Family reference samples may be needed to confirm that the personal item is from the missing person.

DNA profiles developed from human remains can be entered into CODIS and searched against family members of the missing person or can be compared directly against close family members. The closer the family relationship to the victim, the more likely a match can be made. The following is a list of family reference samples that could assist in identifying human remains, in order of preference:

1. Both parents or a known identical twin
2. One parent, spouse and children
3. Children and spouse
4. One parent and sibling
5. Siblings (two or more)

Human remains that are too badly decomposed will require the examiner to test alternate types of tissue, such as teeth, bones and nails to assist in identifying the individual.

Teeth
Teeth may be collected at a crime scene or removed from human remains. The quality of the teeth will be dependent on the environmental conditions of which the teeth were exposed.

Teeth are the hardest tissue in the human body and can even withstand fire. Teeth are divided into three sections; crown, neck, and root. The crown is the outer portion of the tooth above the gum. The neck is the portion within the gum line and the root is the portion below the gum. Teeth are composed of four distinct tissues: enamel (hard outer covering), dentin (inner layer below the enamel), cementum (hard covering over the root that attaches to the jaw), and pulp (located in the center of the tooth). The pulp contains blood vessels and nerves that supply the tooth, thus the pulp contains the DNA used for identification purposes.

Procedure

1. Gently wash the tooth in water to remove any material that may be adhering to the exterior of the tooth. If not already cracked open, crush the tooth to expose the pulp. Soaking the cracked open tooth in sterile water or saline may hydrate the pulp to help further identify the pulp portion of the tooth.
2. Place the pulp or cracked open tooth directly into a 2.0 mL tube for further DNA analysis. Follow the Cellular Digestion of Biological Material procedure, BIO.2.DNA.02 . Spin down insoluble/undigested material prior to extraction.

References

1. "Effect of Environmental Factors on PCR-DNA Analysis from Dental Pulp", A. Alvarez Garcia, I. Munoz, C. Pestoni, M.V. Laren, M.S. Rodriguez-Calvo, A. Carracedo, International Journal of Legal Medicine, 1996; Vol. 109

Bone
Bones typically will be collected at the scene of a grave site of human remains or from a decomposed body, where other reference samples are not likely to be viable for DNA testing. The quality and quantity of DNA from the bone will be dependent on the environmental conditions of which the bone was exposed. The Department of Justice's Missing Persons Program may be consulted and may be utilized for DNA typing.

Bone is a type of hard living connective tissue. Bone is composed of a collagen, phosphate, magnesium, and calcium arrangement. Bone marrow is contained in the medullar cavities and is the portion of bone that can be used for DNA analysis. A rib or long bone is a preferred source for DNA analysis.

Procedure

1. Shave, crush or saw the bone using the best tool for the task. The tools, such as a saw blade or shaving device will be used on a one-time use basis when the tool cannot be thoroughly cleaned for repeated use. Order replacement blades or shaving devices as needed.
2. Place bone fragments directly into a 2.0mL tube for further DNA analysis. Follow the Cellular Digestion of Biological Material procedure, BIO.2.DNA.02 . Spin down insoluble/undigested material prior to extraction.

References

1. "High Efficiency DNA Extraction from Bone by Total Demineralization", Odile M. Loreille, Toni M. Diegoli, Jodi A. Irwin, Michael d. Coble, Thomas J. Parsons, Forensic Science International: Genetics 1; 2007
2. "Typing of Deoxyribonucleic Acid (DNA) Extracted from Compact Bone from Human Remains", M.N. Hochmeister, B. Budowle, U.V. Borer, U. Eggmann, C.T. Comey, R. Dirnhofer, Journal of Forensic Science, 1991; Vol. 36

Fingernails
Fingernails and toenails can contain trace evidence associated with the crime scene or possess biological material transferred from another individual. The trace evidence may be deposited as a result of casual contact with another person, or more so when an individual's hands or feet have made prolonged or aggressive contact with another individual. Hands that have entered an orifice will have an even greater chance of having transferred biological material.

Limitations and Challenges:

1. In general, the biggest factor to contend with is that the majority of biological material recovered from an individual's nails will be from the person from whom the sample was taken.
2. The level of biological material/DNA deposited may vary across each nail, thereby presenting a challenge in determining which nail and/or how many nails to select for subsequent analysis.
3. Fingernails are collected in various ways (e.g. clipping, scraping and swabbing) adding additional variation to the quantity and quality of trace evidence collected.

General Guidelines:

1. Case circumstances and the type of evidence will influence the selection and processing of the nails. The following are general guidelines for examining and processing fingernails and may be altered depending on the needs of the examination.
2. Inventory and document the condition of the nails (e.g. number of fingernails and any obvious debris, trace material, or suspected biological fluids, such as blood.)
3. Using a stereo microscope, visually inspect the scrapings, swab, or clipping for any adhering trace or biological material.

Using Fingernails for Evidentiary Purposes

Clippings

1. Examine the distal edge of the nails. If suspected biological material is observed, use forceps or a swab to collect, if possible, and place into a tube and process separately from the remaining nail(s). Remove any trace material prior to further testing the nails. If not possible to remove or swab, place entire nail clipping into a tube and follow procedure below.
2. If no obvious foreign material is observed, swab or place one or more of the nail clippings (depending on case circumstances and analyst discretion) into a tube(s) and follow procedure below.
3. Clippings from the right and left hand should be analyzed separately.

Procedure:

1. To remove possible foreign material on the nail clippings, submerge clippings in sterile water and allow to soak 5-10 minutes at 4°C (refrigerator or ice bath).
2. Alternatively, place the nail(s) in digest buffer and briefly digest (without the addition of DTT) the potential foreign cellular material adhering to the nail(s).
3. Occasionally vortex and pulse spin the tube to agitate and loosen foreign material that may be adhering.
4. After soaking or digesting, remove undigested nail(s), place in a spin basket and centrifuge 1-2 minutes to collect any residual foreign cellular material from the nails.
5. Save the remaining undigested nail for further digestion, if necessary. See "Using Fingernails as a Known Reference Material" below.
6. Proceed with DNA extraction on the removed trace material and/or the undigested nail, as needed. See Cellular Digestion of Biological Material BIO.2.DNA.02 .

Scraping Procedure:

1. Visually inspect the loose scrapings and the scraping mechanism using a stereo microscope for obvious biological material, such as blood. If observed, collect separately from the remaining scrapings debris.
2. Otherwise, collect any observed scrapings and debris adhering to the scraper onto a swab and add any loose scrapings directly into the tube.
3. Alternatively, a portion of the scraper stick containing the observed debris may be added directly into the tube and removed after cellular digest.
4. Scrapings from the right and left hand should be collected and analyzed separately.
5. Proceed with DNA extraction.

Interpretation
DNA alone will not answer the question regarding how or why DNA from another individual is present on the victim or suspect's hands. Other known investigative factors, such as scratch marks or digital penetration may aid in the association between the trace material and the crime.

Using Fingernails As a Known Reference Material

Fingernails and toenails can be a source of DNA to assist in identifying an individual, whether the nail is left at the scene of a crime or from unidentified human remains.

Procedure

1. Visually inspect the nail(s) for trace evidence, if needed. This may require a stereo microscope for better magnification. If trace is present, collect for preservation. See "Using Fingernails for Evidentiary Purposes" above.
2. Clean nail with sterile distilled water to remove any adhering material (considered not to be of evidentiary value).
3. Cut the nail into several small pieces and place directly into a 2.0 mL tube. More than one nail may be needed to produce sufficient quantity and quality of DNA to produce a profile.

4. The nail can then be digested for DNA following the "reference" protocol under Cellular Digestion of Biological Material procedure, BIO.2.DNA.02.

References

1. "DNA Typing of Debris from Fingernails", P. Weigand, T. Bajanowski, and B. Brinkmann, International Journal of Legal Medicine, 1993; vol 106.
2. "The Prevalence of Mixed DNA Profiles in Fingernail Samples Taken from Individuals in the General Population", O. Cook, L. Dixon, Forensic Science International: Genetics 1, 2007.
3. "Genetic ID of Decomposed Cadavers Using Nails as DNA Source", M. Allouche, M. Hamdoum, P. Mangin, V. Castella, Forensic Science International: Genetics 3, 2008

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 08/25/2016	**NUMBER:** BIO.1.BIO.16 - Biology Discovery Requests
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Biology	**SUBJECT:** Biology Discovery Requests	

I. The Biology Unit adheres to the Division's Discovery Request Policy, FSD.45 . Additional laboratory procedures pertaining to discovery requests are found in the Clerical Manual, CLER.CRIM.11 .

A request will be considered a discovery request any time the request is for documents and records beyond the laboratory report. A LIMS request is generated for all discovery requests.

DISCOVERY REQUEST GUIDELINES

A. Discovery requests must be in some form of writing and must be received from or routed through the District Attorney's Office. If a discovery request is received directly from the Public Defender's Office or from a private attorney, advise the requestor to submit their request to the District Attorney's Office.

B. If staff receive a discovery request directly, the request needs to be routed to clerical staff or to the Supervisor to open a request in LIMS. A copy of the discovery request will be imaged in LIMS. Staff will coordinate with clerical staff and/or the Supervisor for the preparation of appropriate discovery materials.

C. Discovery requests are to be completed in a timely manner, when possible. Up to **5 business days** may be necessary to complete a Basic and Standard Discovery. A minimum of **10 business days** may be needed to complete an Extensive Discovery Request. Additional time may be required when the requested materials are extensive in nature and depending on the availability of laboratory personnel to gather the requested materials.

D. Extensive discoveries will be evaluated for scope, relevance, and reasonableness of the request. Additional discussions with the requester may be needed. If a request or portion of the discovery request cannot be met, the DA will be informed verbally or it will be conveyed in the written discovery report.

E. The technical portions of a discovery request typically will be completed by the analyst who authored the report. If the analyst is not available or is no longer employed by the laboratory, a Supervisor or designee may be assigned the discovery request. Clerical typically will prepare the non-technical portions of a discovery, such as copies of reports, notes and chains of custody.

F. Staff DNA Profiles will not to be released as part of a discovery request. When a contamination event occurs that involves a staff member's DNA, the incident is documented as part of the note packet, as well as its impact on reporting the results.

G. If a case involves a CODIS hit, the relevant CODIS information and records pertaining to the CODIS Hit are released as part of the note packet. Any DNA records retained within the Local CODIS database, other than those pertaining to the immediate case, cannot be released for discovery. The laboratory is required to abide by State and Federal Law regarding the release of DNA records from CODIS.

H. A discovery may include a request for resumes from the examiner and reviewers of the report. A Statement of Qualifications or a curriculum vitae (CV) from the author of the report will be provided. Technical and administrative reviewers are not considered co-authors to a report. The reviewers additionally are not considered co-authors of the examinations or the case notes, therefore a Statement of Qualifications from the reviewer(s) will not routinely be provided unless the reviewer is testifying for the examiner who did the work.

CATEGORIES OF DISCOVERY

The Biology Unit typically encounters three types of discovery; Basic, Standard DNA, and Extensive DNA.

I. Basic Discovery

A Basic Discovery typically entails a request for the examiner's reports and bench notes. The request may also include a request for chains of custody and other administrative records in the case file.

An electronic Chain of Custody can only be provided for the time the evidence was in the custody of the Laboratory. If the evidence is still at the Laboratory, a hard copy of the chain of custody on the package can be provided, if necessary.

II. Standard Discovery

A Standard Discovery request typically entails those materials listed as part of a basic discovery as well as a request for electronic DNA data files associated with the generation of the DNA results.

Prior to the release of electronic run files, DNA profiles or electronic data files not associated with the requested case are to be removed, where possible.

Electronic data files (qPCR files and STR typing files) require specialized software to view the results. The laboratory is not responsible for providing this software. A Standard Discovery typically consists of the following:

A. Quantification data files (qPCR).

B. DNA data files, such as sample files, injection lists, sample sheets, project files, matrices, and parameter files.

C. Frequency tables relied upon for statistical calculations. Reference to the published scientific journals relied upon for the frequency tables is included in the case notes.

D. Photos

III. Extensive Discovery

An Extensive Discovery entails providing copies of materials that extend beyond a standard discovery. The scope of the discovery request will be evaluated for relevancy and reasonableness. Due to the potential magnitude and volume of materials associated with this type of discovery request, additional time must be allotted to gather the material. When found to be relevant and reasonable, the following requested materials may be provided:

A. Audits: Audits will be limited to the most recent and completed audit bracketing the examination dates.

B. Proficiency tests: Proficiency tests will be limited to the most recent and completed proficiency(s) bracketing the examination date(s).

C. Unexpected Results or Events: Unexpected results or events are documented as part of the case notes. Corrective Action documents specific to the associated case will only be provided upon receipt of a subpoena or Subpoena Duces Tecum. See FSD.45 for further details.

D. Technical Unit Manuals: Manual will be limited to those relevant to the tests and analysis performed. For example, the CODIS manual will not be released if a CODIS profile was not part of the examination.

E. Validation Studies: Validation studies will be limited to those applicable to the tests and analyses relied upon during the examination process. Validation documents will be limited to the Validation Summaries.

F. Equipment Manuals: Equipment manuals will be limited to those applicable to the tests and analyses performed. Manuals provided will be limited to those available to the laboratory in an electronic form. Hard copy manuals can be viewed at the laboratory.

G. Training and QA/QC Manuals: These materials will be limited to the relevant examinations conducted.

H. Logs: Reagent and equipment logs will not be provided. These materials may be viewed at the laboratory in lieu of providing copies for discovery and will be limited to those relevant to the examinations conducted.

I. Any request for materials beyond what is provided above may be viewed at the laboratory in lieu of providing hard copies or electronic copies.

IV. Discovery Procedures:

A. Open a LIMS request under the relevant laboratory number. A written request for the discovery must be submitted. The request may be in the form of an email, fax, or official discovery request letter.

B. Attach a copy of the discovery request as an image in LIMS and relate it to the new request.

C. Create a **single copy** of the requested discovery materials. The materials may be prepared in paper copy, on CD/DVD, or provided electronically via email or ARIES. The District Attorney's Office is expected to review the materials and make copies for distribution to the defense counsel.

D. Write a lab report detailing the discovery materials that were provided. The report should include 1) who requested the discovery, 2) what materials were requested and what materials were provided, and 3) how the materials were distributed (paper copy, email, CD/DVD, ARIES). A Supervisor or designee will review the report and the discovery materials prior to release.

E. Once the discovery materials and report have been administratively approved, the discovery materials may be released to the District Attorney's Office.

F. If the materials are provided via paper copy or CD, complete a Document Receipt for the recipient to sign. If the materials are provided via ARIES, the materials must be imaged under the request in LIMS and released via "I-Results". Release via "I-Result" must be after the discovery has been administratively reviewed.

G. The materials and receipt may be placed in the will-call box in the clerical area for pick-up. The signed Document Receipt is retained in the case file as an administrative record.

H. Place the administratively reviewed report with a copy of the discovery request letter in the report bin located in the clerical office to be filed.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/4/2019	**NUMBER:** BIO.2.DNA.02 - Cellular Digestion of Biological Material
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Cellular Digestion of Biological Material	

I. Digestion protocols for the release of DNA from biological specimens or from evidence containing biological material.

A. **Materials**:

1. Steam sterilized polypropylene plastic tubes (1.5 or 2.0 mL).
Qiagen Investigator Lyse & Spin Basket Kit
Single channel pipettes (10µL, 20 µL, 200 µL, 1000 µL).
Pipette tips, barrier filtered.
Spin baskets
Stain Extraction Buffer (BIO.5.QAQCF.23), aliquoted for single use or a batch in 15 mL tubes.
Proteinase K (20 mg/µL), (BIO.5.QAQCF.21), aliquoted for single use or a batch in 0.5 mL tubes.
Dithiotheritol (DTT), 4M, (BIO.5.QAQCF.22), aliquoted for single use or a batch in 0.5 mL tubes.
Tween 80 (BIO.5.QAQCF.27), aliquoted for single use or a batch in 15 mL tubes.
DNase I (BIO.5.QAQCF.28), aliquoted for single use or a batch in 0.5 mL tubes.
EDTA (BIO.5.QAQCF.37), aliquoted for single use or a batch in 1.5 mL tubes.
$CaCl_2$ + $MgCl_2$ (BIO.5.QAQC.41), aliquoted for single use or a batch in 1.5 mL tubes.
Carrier RNA, stock 10 µg/µl (BIO.5.QAQCF.35)
Christmas Tree stain (BIO.1.BIO.10)

B. **Digestion of biological material**

1. Specimens in need of protein and cellular recovery for screening characterization prior to DNA analysis need to follow the procedure "Protein & Cellular Material Recovery: An Integrated Method for DNA analysis". See BIO.1.BIO.09 or for automated recovery on the Versa 1100 see section "Recovery of Proteins and Cellular Material Protocol" below.

2. Specimens which have previously undergone protein and cellular recovery will be in the form of a cell pellet, in approximately 50 µL of sterile water. At least one reagent blank (RB) will accompany each case's set of evidence to monitor for potential contamination and quality issues throughout the analysis process. The DNA analyst may create their own reagent blank by adding 50uL of the sterile water lot used for protein and cellular recovery to a reagent blank or use an RB that was created during biological screening. More than one reagent blank may accompany the sample set at the analyst's discretion.

3. Specimens intended to be directly digested, without prior protein and/or cellular recovery, will be placed directly into a 2.0 mL dolphin nose tube or alternatively into a Qiagen Investigator Lyse & Spin Basket Kit tube. At least one reagent blank (RB) is required to be digested with each set of evidence samples per case.

    a. If using the Qiagen Investigator Lyse & Spin Basket Kit, add the specimen directly into the spin basket. **NOTE: The Qiagen Investigator Lyse & Spin Basket Kit can not be used for differential digestions.**

4. Samples anticipated to possess low or limited DNA quantities, such as touch DNA samples should be handled, digested, and extracted separately in time or space than samples containing high quantities of DNA.

5. Samples known to have originated from the suspect, such as a penile swab must be handled, digested, and extracted separately in time or space then the samples originating from the victim, such as a vaginal swab.

6. Reference samples will be handled, digested, and extracted separately in time or space than the evidence samples and require a reference reagent blank (RBR) to accompany the reference extraction set. A single RBR is sufficient for any reference set.

7. At minimum, all reagent blanks are to be carried through the extraction process. At least one reagent blank per evidence sample set and one RBR per reference sample set is required to accompany the samples through the amplification process. Having additional extracted reagent blanks available allows additional amplifications to be conducted, if needed, using either current or future technologies.

8. A quality control sample (QC specimen) may be included with the digest of the evidence sample set at the analyst's discretion. The QC sample will be processed, at minimum, up to the quantification stage to monitor the digestion & extraction process, particularly for low quantity or low quality DNA specimens. A QC sample may

be processed through every step of the DNA analysis process. See Quality Control Sample procedure, BIO.5.QAQC.22 for additional information.

C. **Combining Samples**

1. Unless there is a reasonable expectation of samples originating from a common source, such as duplicate vaginal swabs, known reference samples (blood, bone, teeth, etc.), or same touch DNA item (for example, multiple swabs collected from the same steering wheel) samples/stains from different locations on a given evidence item should not be combined.

2. Occasionally a sample may not fit into a single 2.0mL tube. These samples may be digested in separate tubes and combined prior to or after DNA extraction. Reagent blanks must contain the same volume of reagents as the combined samples.

D. **Procedure:** Note: The below listed volumes may need to be altered to accommodate the size of the sample.

1. If extracting using the "Trace Protocol" of the EZ-1 Robot, see BIO.2.DNA.04, and add:

   a. 200µL stain extraction buffer (SEB) or Tween 80
   10µL Pro K (20mg/mL)

2. If extracting using the "Large Volume" protocol of the EZ-1 Robot, see BIO.2.DNA.04, and add:

   a. 400-500µL stain extraction buffer (SEB) or Tween 80
   10µL Pro K (20mg/mL)

3. For samples such as hair, teeth, bone, fetal tissue, and nails, add 10µL of 4M DTT.

4. For samples digested using the Qiagen Investigator Lyse & Spin Basket Kit the reagents are added directly into the spin basket portion of the tube.

5. Digest samples for a minimum of 2 hours to overnight, at approximately 56°C.

6. After removing samples from the heat block, spin down the tubes briefly to remove condensation from the lids. Using a toothpick or other device, agitate and tease the substrate material to loosen cells from the substrate material.

   a. If using dolphin nose tubes: Remove and place the specimen substrate into a spin basket and place the spin basket back into the 2.0 mL tube. Spin the sample tube in a centrifuge for 2-5 minutes at ~12,000 x g. The spin basket can then be discarded and the substrate can either be retained or discarded.

   b. If using the Qiagen Investigator Lyse & Spin Basket Kit tubes: Spin the tubes in a centrifuge for 2-5 minutes at ~12,000 x g. Upon centrifugation the holes in the bottom of the spin basket open up and allow the sample lysate to pass through. The spin basket can then be discarded and the substrate can either be retained or discarded.

   c. Indigestible or insoluble material remaining after digest, such as those from bone and teeth, should be centrifuged to pellet the material. Transfer the liquid digest to a new tube.

7. Continue to the EZ1 extraction procedure.

E. **Differential Digestion of Biological Material**

1. Prior to digesting samples containing both sperm and nucleated epithelial cells, the ratio of the non-sperm to sperm cells needs to be assessed. The cell content ratio is used to determine the digestion time needed to lyse the non-sperm cells, and is also used to determine the number of sperm cell washes to maximize the separation of the sperm DNA from non-sperm DNA.

   The cell content ratio may have been previously conducted during the process of biological screening or during the protein & cellular recovery process. See BIO.1.BIO.09. If the ratio has been evaluated, the samples can continue directly to the differential digest procedure.

   If the cell content ratio has not been assessed, prepare a cell pellet from the specimen sample, pipette 3µL of the pre-digested cell pellet onto a microscope slide, stain with Christmas Tree stain and assess the cell ratio. See BIO.1.BIO.02 for the staining procedure.

2. There are two methods that can be used for the differential digestion of samples containing sperm and non-sperm cells.

F. **Differential Digestion Procedure:**

To maximize sperm cell recovery prior to digestion, recombine the specimen substrate with the cell pellet into the 2.0mL tube. Use a toothpick or other device to aggressively agitate and tease the substrate material in order to loosen sperm cells from the substrate material.

1. Add:

   a. 400µL stain extraction buffer (SEB)
   10µL Pro K (20mg/mL)

2. **Non-Sperm Cell Digest:** Incubate the specimen sample(s) ~ 1 - 2 hours (depending on the epithelial cell concentration) at approximately 56°C. Samples with low quantities of nucleated epithelial cells should be digested at the shorter time interval (i.e 1 hour) in order to limit the amount of potential sperm cell DNA carry-over from sperm lysis into the non-sperm fraction.

3. After digestion, spin down the tubes briefly to remove condensation from the lid. Remove and place the substrate into a spin basket and place the spin basket back into the 2.0 mL tube. Centrifuge the samples for 2-5 minutes to pellet the sperm cells.

4. Remove the spin basket & substrate. The spin basket can then be discarded and the substrate can either be retained or discarded. While being careful not to disturb the sperm pellet, remove all except for ~ 50µL of the digested non-sperm cell DNA fraction and transfer to a new tube. Label the new tube as the "non-sperm fraction". The non-sperm fraction can be set aside or can continue to digest along with the sperm fraction digestion (see below).

5. Add 1 mL of sterile water to the sperm cell pellet. Re-suspend the cell pellet in the water by gently vortexing. Centrifuge for 3-5 minutes at ~12,000 x g. Being careful not to disturb the sperm pellet, remove and discard all except for ~50µL of the supernatant.

   a. Repeat sperm pellet wash step 3 - 5 times leaving ~50µL each time. The number of wash steps needed can be varied at the analyst's discretion and may depend on the original cell content ratio, fragility of the cells (i.e., due to age of stain) or other environmental factors.

   b. After the final wash, re-suspend the sperm pellet in the ~50µL final wash solution. Transfer 3µL of the sperm pellet suspension to a microscope slide, dry, and stain with Christmas Tree stain.

   c. Evaluate the cell content of the post-digest slide. The cell pellet should not have any identifiable nucleated epithelial cells. If undigested nucleated epithelial cells are present, repeat the non-sperm digestion procedure and digest for another 20 to 30 minutes. Repeat the sperm pellet wash steps above and reassess. Repeat, until all nucleated cells have been digested.

6. **Sperm Cell Digest:** Digest the sperm pellet by adding the following:

   Add:

   a. 400µL stain extraction buffer (SEB)
   10µL Pro K (20mg/mL)
   5-10µL of 4M DTT

   b. Digest the sperm fraction(s) at 56°C for a minimum of 3-4 hours, and preferably overnight. At the analyst's discretion, a fresh 10µL aliquot of Proteinase K may be added to the samples prior to the overnight incubation. The separate non-sperm fractions may be additionally digested overnight with the sperm fractions.

7. Continue to the EZ1 extraction procedure.

G. **Selective Degradation Differential Digestion Procedure**

1. **Non-Sperm Cell Digestion**

   a. To maximize sperm cell recovery, recombine the specimen substrate with the cell pellet into the 2.0mL tube prior to digestion. Use a toothpick or other device to aggressively agitate and tease the substrate material to loosen cells from the substrate material.

      i. Add:

      510µL Tween 80 Buffer
      10µL Pro K (20mg/mL)

   b. Incubate the sample(s) ~ 30 minutes at approximately 56°C.

c. Spin down the tube briefly to remove condensation from the lid. Using a toothpick or other device, agitate and tease the substrate material to loosen sperm cells from the substrate material. Remove and place the specimen substrate into a spin basket and place the spin basket back into the 2.0 mL tube. Spin sample tube in a centrifuge for 2-5 minutes at ~12,000 x g to pellet the sperm cells.

d. Being careful not to disturb the sperm pellet, remove all except for ~ 50µL of the digested non-sperm cell DNA fraction and transfer to a new tube. The non-sperm fraction can be set aside for the extraction procedure. The substrate material may be retained or discarded.

e. Additional "washes" with Tween 80 may be conducted to further clean the sperm pellet. With each wash, add 400µL of Tween 80 to the cell pellet and briefly vortex, spin down, and discard all but ~50µL of the supernatant each time. Repeat as needed and retain the final cell pellet in 50 µL.

2. **Post-digest Cell Content Determination**

a. Gently resuspend the sperm pellet in the 50 uL and transfer 3µL of the sperm pellet suspension to a microscope slide, heat fix, and stain with Christmas Tree stain. A post-digest slide must be made, but evaluating it is optional.

i. If nucleated epithelial cells are present, repeat the non-sperm digestion procedure and digest for another 20 to 30 minutes. Repeat until all nucleated cells have been digested.

ii. If the sperm cell pellet is clear of nucleated epithelial cells, estimate the sperm cell concentration in the 3µL examined. Retain the post-digest slide if probative biological material is present.

3. **Non-sperm DNA degradation with DNase**

a. To the **resuspended** sperm pellet, add:

i. 290µL Tween 80 buffer
25uL CaCl2/MgCl2 solution
15uL DNase I

b. Degrade the non-sperm DNA in the sperm fraction for ~15 minutes at 56°C. **DO NOT VORTEX SAMPLES**. **This may cause loss in DNase activity.**

c. Inactivate the DNase by adding 20uL EDTA. Vortex samples and let samples incubate at room temperature for ~10 minutes.

4. **Sperm Cell Digestion**

a. Lyse the sperm cells by adding the following to the sperm fraction (SP):

i. 10uL of ProK
10uL of DTT

b. Incubate for a minimum of 15 minutes or overnight at 56°C.

5. Continue to the EZ1 extraction procedure.

6. To accentuate the DNA recovery of low level DNA samples, 1 µg of carrier RNA (cRNA) may be added to the samples after digest, but prior to the extraction process. Refer to the extraction procedure BIO.2.DNA.04 for further information regarding the use of cRNA for low level DNA samples.

H. **Differential Digestion using Selective Degradation on the Versa 1100**

1. **Consumables**
SlicPrep Plate (base plate, spin basket insert, and u-shaped collar)
2.0 mL EZ1 flat bottom tubes
Sterile wooden sticks
96-well plate covers
Microscope slides
50uL non-conductive filtered pipette tips
1000uL conductive filtered pipette tips

2. **Reagents**
Tween Buffer (2% Tween 80, 20mM Tris HCl, 1mM EDTA)
Proteinase K (20mg/mL)
Dithiothreitol (1M)
DNase I (1 U/uL in 40% glycerol, brought to volume with DEPC-treated water)
$CaCl_2$ and $MgCl_2$ solution (5mM and 90mM, respectively)

EDTA (0.5M)
Sterile Deionized Water

3. The automated selective degradation differential digestion procedure is performed on the Versa 1100 using SlicPrep plates. Manual intervention will be required to centrifuge the SlicPrep plate, remove sample tubes and microscope slides from the instrument, and replace empty sample tubes onto the instrument. Nine-hour delays are programmed into the assay on the Versa to pause the procedure and allow the analyst to perform these manual steps.

4. There are two main protocols in the instrument software, one for the recovery of proteins and cellular material, and another for the differential digestion. The differential digestion protocol has twelve versions of it to reflect the options of running one to twelve columns of samples.

5. The SlicPrep plate is a 2.2mL 96 deep well plate that includes a 96-well spin basket insert, base plate, and a U-shaped collar. Samples are placed inside the wells of the spin basket insert. At the bottom of each well are seven 1mm holes that allow liquid to flow in and out of the insert during incubation. The U-shaped collar is used to create a 1cm gap between the insert and the base plate for centrifugation steps.

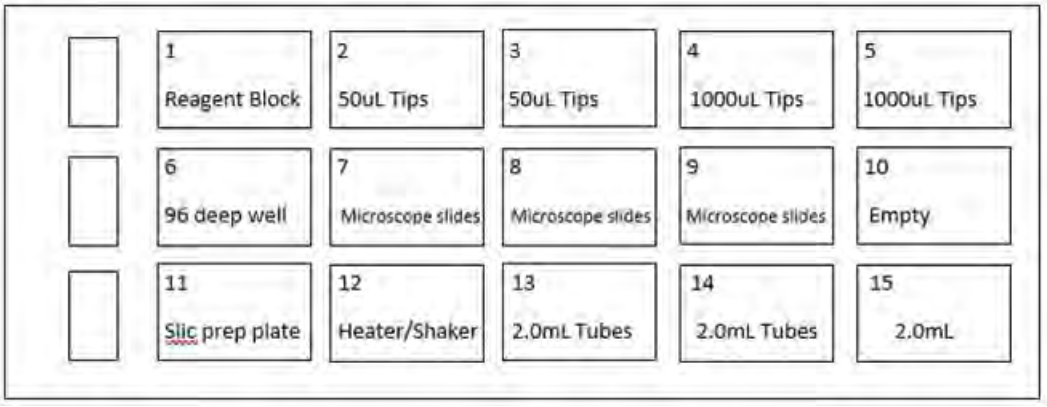
6. The spin basket insert should be placed in the correct orientation each time it is placed into the base plate. Two lines can be drawn across the surface of the spin basket to ensure proper orientation.

7. The DNase used in this protocol is contained in individual tubes without the divalent cation activators (Mg2+ and Ca2+) and is therefore inactive. Activated DNase will only be present inside of the SlicPrep plate. No liquid waste containing activated DNase will be generated in this protocol. All pipette tips are one time use only and are discarded in a waste container.

8. **Procedure**

   a. Launch the Versaware software on the desktop.

   b. Turn on the Versa by turning the red circular button on the bottom left corner clockwise.



Versa Deck Layout

9. **Reagent Drop Priming**

   a. The reagent drop is a system that dispenses reagents through a needle controlled by a valve for accurate volume dispensing. The needle is connected to thin tubing which is connected to a reagent bottle residing outside of the instrument.

   b. The reagent drop must be primed before each run to remove air from the sterile water tubing and water from the Tween 80 tubing.

      i. The Tween 80 tubing is stored filled with sterile water to prevent crystals from forming in the tubing. Ensure that the tubing is placed into the Tween 80 bottle (reagent bottle 2), select the Assay "**Priming with Tween**" and place a 96 deep well plate in position 11 on the Versa.

      ii. Prime the tubing for the sterile water used in the recovery of proteins and cellular material protocol to ensure air bubbles aren't present in the tubing. Run the"**Recovery of Proteins and Cellular Material**" program, highlight several wells in the software to dispense into (a sufficient amount to ensure all air bubbles are removed) and place a 96 deep well plate in position 11. Click "**save**", then press the green "**play**" button.

10. **Recovery of Proteins and Cellular Material Protocol**

    a. For each sample, cut the substrate into small pieces and place into a well of the SlicPrep plate spin basket resting in the base plate. For swabs, take half to a whole swab and cut into 4-5 smaller pieces. Carefully

place each piece into the designated location on the SlicPrep plate according to the **Differential Digestion Sample Sheet** in the DNA Worksheets workbook.

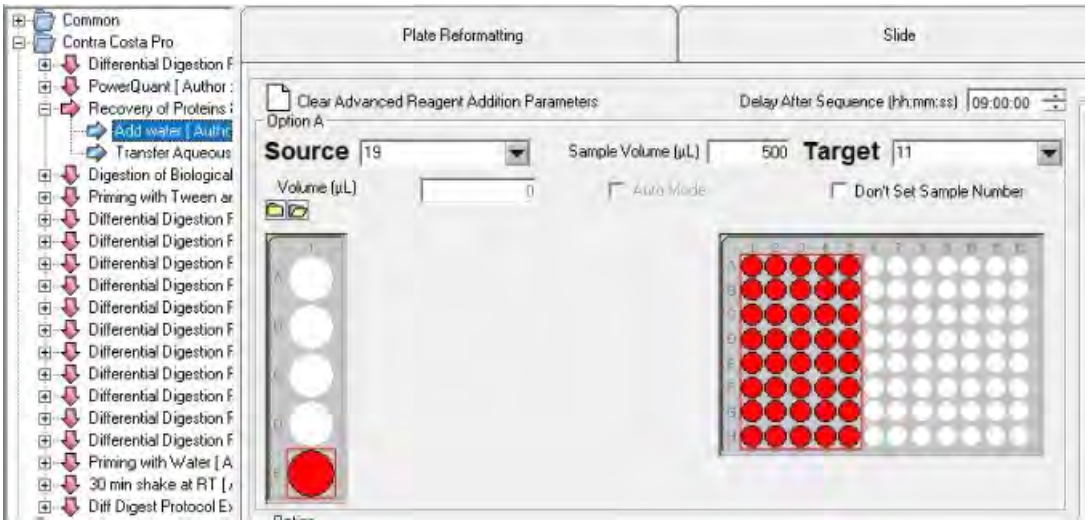
b. Each column will only contain samples from one case. The plate should contain at least one reagent blank per case.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Lab #1 Item #1	Lab #2 Item #1	Lab #3 Item #1	Lab #4 Item #1	Lab #5 Item #1	Lab #6 Item #1	Lab #7 Item #1	Lab #8 Item #1	Lab #9 Item #1	Lab #10 Item #1	Lab #11 Item #1	Lab #12 Item #1
B	Lab #1 Item #2	Lab #2 Item #2	Lab #3 Item #2	Lab #4 Item #2	Lab #5 Item #2	Lab #6 Item #2	Lab #7 Item #2	Lab #8 Item #2	Lab #9 Item #2	Lab #10 Item #2	Lab #11 Item #2	Lab #12 Item #2
C	Lab #1 Item #3	Lab #2 Item #3	Lab #3 Item #3	Lab #4 Item #3	Lab #5 Item #3	Lab #6 Item #3	Lab #7 Item #3	Lab #8 Item #3	Lab #9 Item #3	Lab #10 Item #3	Lab #11 Item #3	Lab #12 Item #3
D	Lab #1 Item #4	Lab #2 Item #4	Lab #3 Item #4	Lab #4 Item #4	Lab #5 Item #4	Lab #6 Item #4	Lab #7 Item #4	Lab #8 Item #4	Lab #9 Item #4	Lab #10 Item #4	Lab #11 Item #4	Lab #12 Item #4
E	Lab #1 Item #5	Lab #2 Item #5	Lab #3 Item #5	Lab #4 Item #5	Lab #5 Item #5	Lab #6 Item #5	Lab #7 Item #5	Lab #8 Item #5	Lab #9 Item #5	Lab #10 Item #5	Lab #11 Item #5	Lab #12 Item #5
F	Lab #1 Item #6	Lab #2 Item #6	Lab #3 Item #6	Lab #4 Item #6	Lab #5 Item #6	Lab #6 Item #6	Lab #7 Item #6	Lab #8 Item #6	Lab #9 Item #6	Lab #10 Item #6	Lab #11 Item #6	Lab #12 Item #6
G	Lab #1 Item #7	Lab #2 Item #7	Lab #3 Item #7	Lab #4 Item #7	Lab #5 Item #7	Lab #6 Item #7	Lab #7 Item #7	Lab #8 Item #7	Lab #9 Item #7	Lab #10 Item #7	Lab #11 Item #7	Lab #12 Item #7
H	Lab #1 Item #8	Lab #2 Item #8	Lab #3 Item #8	Lab #4 Item #8	Lab #5 Item #8	Lab #6 Item #8	Lab #7 Item #8	Lab #8 Item #8	Lab #9 Item #8	Lab #10 Item #8	Lab #11 Item #8	Lab #12 Item #8

SlicPrep Plate Setup

c. Place the SlicPrep plate (without the U-shaped collar) in position 11 on the Versa deck.

d. Run the "**Recovery of Proteins and Cellular Material**" Protocol on the Versa by highlighting the procedure at the red arrow. Select the wells that contain samples in the Versa software, click "**save**", then press the green "**play**" button. The reagent drop pin will dispense 500uL of sterile water into each well.



e. Remove the SlicPrep plate, cover it, then incubate at 4°C 30 minutes to overnight. Make sure the samples are completely submerged in the water.

f. After removing the plate from the 4°C incubation, agitate each sample manually with a sterile wooden stick and place the septa back on the plate.

g. Insert the U-shaped collar between the spin basket insert and the base plate.

h. Centrifuge for 6 minutes at 1,000 x g.

i. Remove the U-shaped collar and the spin basket of the SlicPrep plate. Carefully place the spin basket into a sterile holder (empty tip box).

j. Place the base plate in position 6 of the Versa deck. Place the appropriate number of labeled 2.0 mL EZ1 flat bottom tubes into the holders on deck 13, 14, and 15 of the Versa deck, as needed. Be sure to remove the tube caps.

1.

Lab #1 Item #1	Lab #1 Item #2	Lab #2 Item #1	Lab #2 Item #2	Lab #3 Item #1	Lab #3 Item #2	Lab #4 Item #1	Lab #4 Item #2
Lab #1 Item #3	Lab #1 Item #4	Lab #2 Item #3	Lab #2 Item #4	Lab #3 Item #3	Lab #3 Item #4	Lab #4 Item #3	Lab #4 Item #4
Lab #1 Item #5	Lab #1 Item #6	Lab #2 Item #5	Lab #2 Item #6	Lab #3 Item #5	Lab #3 Item #6	Lab #4 Item #5	Lab #4 Item #6
Lab #1 Item #7	Lab #1 Item #8	Lab #2 Item #7	Lab #2 Item #8	Lab #3 Item #7	Lab #3 Item #8	Lab #4 Item #7	Lab #4 Item #8

Deck Position 13

Lab #5 Item #1	Lab #5 Item #2	Lab #6 Item #1	Lab #6 Item #2	Lab #7 Item #1	Lab #7 Item #2	Lab #8 Item #1	Lab #8 Item #2
Lab #5 Item #3	Lab #5 Item #4	Lab #6 Item #3	Lab #6 Item #4	Lab #7 Item #3	Lab #7 Item #4	Lab #8 Item #3	Lab #8 Item #4
Lab #5 Item #5	Lab #5 Item #6	Lab #6 Item #5	Lab #6 Item #6	Lab #7 Item #5	Lab #7 Item #6	Lab #8 Item #5	Lab #8 Item #6
Lab #5 Item #7	Lab #5 Item #8	Lab #6 Item #7	Lab #6 Item #8	Lab #7 Item #7	Lab #7 Item #8	Lab #8 Item #7	Lab #8 Item #8

Deck Position 14

Lab #9 Item #1	Lab #9 Item #2	Lab #10 Item #1	Lab #10 Item #2	Lab #11 Item #1	Lab #11 Item #2	Lab #12 Item #1	Lab #12 Item #2
Lab #9 Item #3	Lab #9 Item #4	Lab #10 Item #3	Lab #10 Item #4	Lab #11 Item #3	Lab #11 Item #4	Lab #12 Item #3	Lab #12 Item #4
Lab #9 Item #5	Lab #9 Item #6	Lab #10 Item #5	Lab #10 Item #6	Lab #11 Item #5	Lab #11 Item #6	Lab #12 Item #5	Lab #12 Item #6
Lab #9 Item #7	Lab #9 Item #8	Lab #10 Item #7	Lab #10 Item #8	Lab #11 Item #7	Lab #11 Item #8	Lab #12 Item #7	Lab #12 Item #8

Deck Position 15

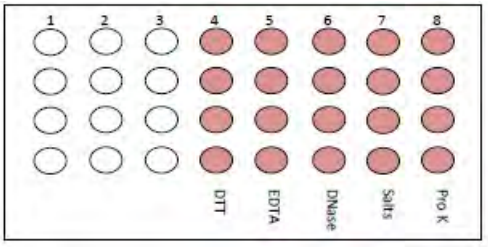
11. **Differential Digestion Protocol**

a. Run the "**Differential Digestion**" Protocol by highlighting the procedure at the red arrow (select the procedure that has the correct number of columns based on the number of samples being processed), then press the green "**play**" button.

b. The instrument will transfer the aqueous extract from the base plate to the empty sample tubes and pause for 9 hours.

c. Remove the tubes of aqueous extract. Cap each tube and store at 4°C. These samples can be used for p30 or RSID saliva testing (see BIO.1.BIO.4 or BIO.1.BIO.5).

d. Vortex the proteinase K reagent tubes and load them into column 8 of the reagent block on position 1 of the Versa deck. All 4 tubes are necessary for 4-channel pipetting.



e. Place the spin basket insert containing the sample substrates back into the SlicPrep plate (without the collar or plate septa), making sure the drawn lines align properly for the correct orientation. Place the plate in position 11 of the Versa deck.

f. Click the "**stop now**" button to stop the 9-hour pause and resume the protocol.

g. The instrument will add 510uL of Tween buffer and 10uL of proteinase K to each well.

h. The SlicPrep plate will then be transferred by the instrument to the heating block and incubated at 56°C for 30 minutes with shaking. The instrument will then move the plate back to position 11 and pause for 9 hours.

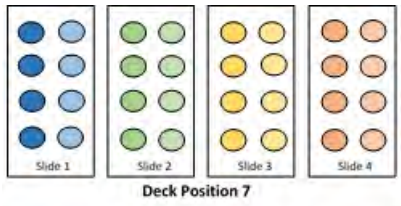
i. During the 9-hour pause: Remove the SlicPrep plate and agitate each sample using its own sterile toothpick or sterile stick. After agitation, carefully remove and discard the toothpick/stick and add the plate cover back to the plate.

j. Insert the U-shaped collar between the spin basket insert and the base plate.

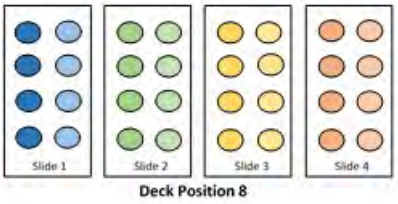
k. Centrifuge for 6 minutes at 1,000 x g.

l. Place the appropriate number of labeled 2.0 mL EZ1 flat bottom tubes into the holders on deck 13, 14, and 15 of the Versa deck, as needed, for the non-sperm fraction. Be sure to remove the tube caps.

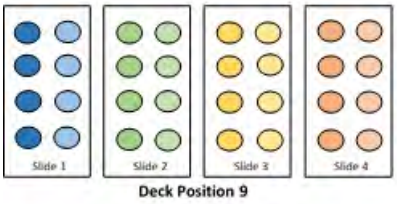
m. Place the appropriate number of slides onto positions 7, 8, and 9 of the Versa deck, as needed. Be sure to label the slides.



Deck Position 7



Deck Position 8



Deck Position 9

n. Remove the U-shaped collar and the spin basket of the SlicPrep plate. Carefully place the spin basket into a sterile holder (empty tip box).

o. Place the base plate in position 6 of the Versa deck. Click the "**stop now**" button to stop the 9-hour pause and resume the protocol. The instrument will transfer the epithelial cell fraction from the base plate to the empty sample tubes. The instrument will then resuspend the pellet in the remaining 50uL liquid and transfer 3uL of each resuspended sample from the SlicPrep base plate to the post-digestion microscope slides. The instrument will now pause for 9 hours.

p. During the 9-hour pause: Remove the microscope slides and the tubes containing the non-sperm fraction. Cap each tube and store at 4°C. The slides can be processed now or at a later time. Refer to BIO.1BIO.04 and BIO.1.BIO.02 for post-digest cell content determination procedures.

q. Place the appropriate number of labeled 2.0 mL EZ1 flat bottom tubes into the holders on deck 13, 14, and 15 of the Versa deck, as needed, for the sperm fraction. Be sure to remove the tube caps.

r. Remove the proteinase K reagent tubes from the reagent block and vortex. Load the reagent tubes back onto column 8 of the reagent block in position 1 of the Versa deck.

s. Load the $CaCl_2$ and $MgCl_2$ salt solution (column 7), DNase (column 6), EDTA (column 5), and DTT (column 4) reagent tubes onto the reagent block in position 1 of the Versa deck. DO NOT VORTEX THE DNASE REAGENT TUBES!

t. Click the "**stop now**" button to stop the 9-hour pause and resume the protocol.

u. The instrument will add 290uL Tween80 buffer, 25uL $CaCl_2$/$MgCl_2$ salt solution, and 15uL DNase to the samples and incubate at 56°C for 15 minutes to destroy any remaining epithelial cell DNA.

v. Following the incubation period, the instrument will inactivate the DNase by adding 20uL EDTA to the samples in the SlicPrep plate and incubating for 10 minutes at room temperature to allow the EDTA to chelate all of the Ca2+ and Mg2+ divalent cations.

w. Sperm lysis will begin with the addition of 10uL proteinase K and 10uL DTT to the samples followed by incubation at 56°C for 15 minutes. The sperm fraction will then be transferred to the sample tubes. The instrument has now completed the protocol.

x. Remove the tubes containing the sperm fraction and proceed to DNA extraction of the epithelial cell and sperm fractions using the EZ-1 large volume protocol or store at 4°C to extract at a later time. Refer to

BIO.2.DNA.04 for robotic extraction protocol using the Qiagen EZ-1.

12. **Post-Run Priming**

a. Prior to turning off the instrument at the end of the run, remove the tubing from the Tween80 and place it in sterile deionized water in reagent position 1. The Tween 80 might plug up the tubing if not flushed out after every run and filled with water.

b. This can be done by selecting the Assay "**Post Priming with Water**" and placing a 96 deep well plate in position 11 on the Versa.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/06/2017	**NUMBER:** BIO.2.DNA.04 - Robotic Extraction Using Qiagen EZ-1 Robot
	RELATED ORDERS:	
APPROVED BY: D. Romano, T. Nguyen & D. McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Robotic Extraction Using Qiagen EZ-1 Robots	

I. Procedure for the purification, isolation, and concentration of DNA using a silica-coated magnetic bead technique.

A. **Materials**:

1. Steam sterilized dolphin nose microcentrifuge tubes (1.5 or 2.0 mL, and 0.5 mL) or
   Qiagen Lyse and Spin tubes
   Single channel pipettes
   Pipette tips, barrier filtered
   TE-4
   Qiagen EZ-1 Robot or EZ1 Advanced XL Robot
   Qiagen Investigator Kit Components:

   a. Extraction cartridges. **(Caution: extraction cartridges contain chaotropic salts that are incompatible with bleach).**
   Plastic 2.0 mL screw-cap, conical bottom tubes for cellular digests.
   Plastic 1.5 mL screw-cap tubes for DNA recovery.
   Reaction pipette / pipette holder.
   1 ug Carrier RNA

B. **Protocol**:

1. Fill out the extraction use/run log.
2. Pulse spin the cellular digest tube to ensure all digest fluids and condensation are collected to the bottom of the digestion tube.
3. For samples digested and contained in 2.0 mL dophin nose tubes, transfer the digest fluid to a labeled EZ-1 robot sample tube (conical-bottom) and close the caps. Label a corresponding set of EZ-1 robot elution tubes. If samples are in a lyse and spin tube they do not need to be transferred to an EZ1 sample tube, however ensure the basket and substrate have been removed.
4. For samples predicted to have very low recovery of DNA, 1 µg of carrier RNA may be added to the digest sample to accentuate the recovery of DNA. See cRNA preparation below:

   Prepare a 1:10 dilution of the reconstituted stock of cRNA. Add 1µL to the digested sample, prior to extraction. Refer to BIO.5.QAQCF.35 for the preparation of cRNA stock.

5. **Preparing the EZ-1 Instrument:**

   a. Make sure the DNA Investigator controller card is located in the card slot of the instrument before the instrument has been turned on. (Do not insert the card once the instrument has been switched on.)

   b. Switch on the instrument by pressing the power switch in the back. The main menu will display the startup dialogue, prompting the choice of either "**Start**", "**1-Tools**", or "**2-Tests**."

   c. Select "**1-Tools**", then "**3**" to clean the pierce unit. Wait until the piercing unit moves forward and down before opening the door. Wipe the piercing unit with a kimwipe moistened with 70% ehtanol and then a kimwipe moistened with distilled water. Press "**ESC**" to return the piercing unit to its original position. If the O-rings of the tip adapters are dirty, clean with a kimwipe moistened with water (DO NOT USE ETHANOL on the 0-rings). Check the bottom tray and if dusty or precipitants are present, wipe the tray with deionized water or ethanol. To return to the main menu, press escape key twice.

   d. Press the "**START**" key to display the protocol menu. The Investigator card allows for four different protocols:

      i. Trace protocol (for use with digests of 200 µL volume).

      ii. Trace, Tip Dance protocol (for use when the substrate is still present).

      iii. Normalization (for normalized recovery of DNA quantity).

      iv. Large volume (for use with digests of up to 500 µL).

   e. Select either the **Trace Protocol** or the **Large Volume Protocol** depending on the volume of cellular digest. Trace-tip dance and normalization programs are not currently used.

   f. Select "**TE**" for the elution solution.

   g. Select "**50µL**" for the elution volume.

   h. The instrument will display messages to assist the user in setting up the tray and tip/tube rack.

   i. Follow the menu prompts to move through the set up menu.

   Loading the Cartridge Tray Holder:

   j. Remove the cartridge tray holder and tip/tube rack from the instrument.

   k. Load the DNA Investigator Kit Cartridges into the slots of the tray. Prior to loading the cartridges into the tray:

   Gently invert the Investigator Cartridges to mix the reagents and then tap the cartridges to bring the reagents to the bottom of the wells.

Ensure there is no precipitate observed in the buffer (well #1 of the investigator cartridge). If there is a precipitate present, dissolve by mild agitation at room temperature.

l. Prior to returning the loaded tray holder to the instrument, ensure each cartridge is seated properly in each slot. Return the tray holder to the instrument and make sure that the heat block well of each cartridge is seated correctly in the worktable.

Loading the Tube & Tip Rack Holder:

m. Return the tube/tip rack holder back into the instrument to begin loading the sample and elution tubes, tips, and tip holders as illustrated below:

Back of Instrument

	Column 1 Reagent Cartridge	**Column 2 Reagent Cartridge**	**Column 3 Reagent Cartridge**	**Column 4 Reagent Cartridge**	**Column 5 Reagent Cartridge**	**Column 6 Reagent Cartridge**
Row 4 (Sample Tubes)						
Row 3 (Empty)						
Row 2 (Pipette tip & holder)						
Row 1 (Elution Tubes)						

Front of Instrument

n. Each column represents the set-up for each sample. Elution tubes (either microcentrifuge tubes or Qiagen EZ1 provided tubes) are loaded in row 1; Pipette tips and holders are loaded in row 2; row 3 is left empty; the EZ-1 sample tubes containing cellular digests are loaded in row 4. If continuing on to quantification set up by the Nimbus robot the elution tubes need to be 1.5 mL microcentrifuge tubes.

o. Load the correct number of tip holders into the tube/tip rack. Without touching the ends of the pipette tips, insert a pipette tip into each holder; Row #2 of the rack.

p. Starting from the left, load the sample digest, in a predetermined order, into row 4. Load the paired elution tubes in the same predetermined order into row 1. Working left to right, uncap the sample and its paired elution tube one paired set at a time. Place the caps onto a clean tissue in the same order as the tubes in the rack. Confirm that the position of each sample and elution tube is in the correct order as predetermined or preferred by the analyst. The analyst may use an extraction worksheet as a guide, if desired.

q. Verify all samples and sample tubes are in their proper order and in their proper position in the tray. Verify the tip holder is in its proper place and that there is a pipette tip in each holder. Once verified close the instrument door.

r. Press "**START**" on the keyboard of the Robot. Visually monitor the Robot until the pipette tips have been picked up from the tip holder. If the instrument fails to pick up or fully seat a pipette tip, stop the run immediately. Troubleshoot the problem and re-start.

s. The extraction protocol takes approximately 20 minutes to complete. When the extraction is completed, the instrument LCD displays "**FINISHED**". If it is necessary to extract another set of samples, press "**ESC**" to return to the "**Protocols**" menu. If you are finished extracting, press "**STOP**" twice to return to the home position.

t. Open the instrument door and starting from left to right, place a cap on the elution tubes and remove. Transfer the extracted DNA samples to labeled 0.5 mL tubes, if desired. Record the volume recovered. The DNA extracts are now ready for DNA quantification.

u. If concentrating DNA extracts prior to quantification, refer to BIO.2.DNA.07 for further information and instruction on concentrating the DNA extracts anticipated to have low DNA recovery.

v. Store extracts refrigerated or frozen for long term storage

w. The EZ1 robot can then be turned off

6. **Preparing the EZ-1 Advanced XL Instrument:**

a. Make sure the EZ1 Advanced XL DNA Investigator Flip-Cap controller card is located in the card slot located on the front of the instrument before the instrument is turned on. (Do not insert the card once the instrument has been switched on.)

b. Switch on the instrument by pressing the power switch in the back. The main menu will display the startup menu, prompting the choice of either "**Start**", "**1-UV**", "**2-Man**", "**3-Test**", or "**4-Setup**".

c. Press "**2-Man**" to select the manual function, then press "**3**" to clean the pierce unit, then press "**START**". Wait until the piercing unit moves forward and down before opening the door. Wipe the piercing unit with a kimwipe moistened with 70% ethanol, then wipe with a kimwipe moistened with distilled water. Close the EZ1 Advanced XL door and press "**ENT**" to return the piercing unit to its original position. If the O-rings of the tip adapters are dirty, clean with a kimwipe moistened with water. Check the bottom tray and if dusty or precipitants are present, wipe the tray with deionized water or ethanol. To return to the main menu, press "**ESC**".

d. Press the "**START**" key to display the protocol menu.

e. A message will be displayed asking if you would like to create a Report File. Press "**ESC**" to select No.

f. The Investigator card allows for four different protocols:

i. Trace protocol (for use with digests of 200 µL volume).

ii. Trace, Tip Dance protocol (for use when the substrate is still present).

iii. Normalization (for normalized recovery of DNA quantity).

iv. Large volume (for use with digests of up to 500 µL).

g. Select either the **Trace Protocol** or the **Large Volume Protocol** depending on the volume of cellular digest. Trace-tip dance and normalization programs are not currently used.

h. Select "**TE**" for the elution solution.

i. Select "**50µL**" or "**40µL**" for the elution volume.

j. The instrument will display messages to assist the user in setting up the tray and tip/tube rack.

k. Follow the menu prompts to move through the set up menu.

l. The software will ask: "Do you want to create a Report File?" Press "**ESC**" to select No.

Loading the Cartridge Tray Holder:

m. Remove the cartridge tray holder and tip/tube rack from the instrument.

n. Load the DNA Investigator Kit Cartridges into the slots of the tray. Prior to loading the cartridges into the tray:

a. Gently invert the Investigator Cartridges to mix the reagents and then tap the cartridges to bring the reagents to the bottom of the wells.

b. Ensure there is no precipitate observed in the buffer (well #1 of the investigator cartridge). If there is a precipitate present, dissolve by mild agitation at room temperature.

o. Prior to returning the loaded tray holder to the instrument, ensure each cartridge is seated properly in each slot. Return the tray holder to the instrument and make sure that the heat block well of each cartridge is seated correctly in the worktable.

Loading the Tube & Tip Rack Holder:

p. Return the tube/tip rack holder back into the instrument. Note there is a notch along the right side of the tray and corresponds with a peg inside the instrument to ensure proper orientation of the tray. Begin loading the sample and elution tubes, tips, and tip holders as illustrated below:

Back of Instrument

	Reagent Cartridge 1	Reagent Cartridge 2	Reagent Cartridge 3	Reagent Cartridge 4	Reagent Cartridge 5	Reagent Cartridge 6	Reagent Cartridge 7	Reagent Cartridge 8	Reagent Cartridge 9	Reagent Cartridge 10	Reagent Cartridge 11	Reagent Cartridge 12	Reagent Cartridge 13	Reagent Cartridge 14
Row 3 (Sample Tubes)														
Row 2 (Tips and Holders)														
Row 1 (Elution Tubes)														

Front of Instrument

a. Each column represents the set-up per individual sample. Elution tubes (either microcentrifuge tubes or Qiagen EZ1 provided tubes) ; Pipette tips and holders are loaded in row 2; the EZ-1 sample tubes or Lyse and Spin tubes which contain the cellular digests are loaded in row 3. Note: The lyse and spin tube cap must be securely tucked into the designated slot located between row 2 and row 3. If continuing on to quantification set up by the Nimbus robot the elution tubes need to be 1.5 mL microcentrifuge tubes.

b. Load the correct number of tip holders into the tube/tip rack. Without touching the ends of the pipette tips, insert a pipette tip into each holder; Row 2 of the rack.

c. Working left to right across the tray, load un-capped sample digest tubes in the order predetermined by the analyst, into row 3. Load the paired un-capped elution tubes in the same predetermined order into row 1. Place the caps onto a clean tissue in the same order as the tubes in the rack. Confirm that the position of each sample and elution tube is in the correct order as predetermined or preferred by the analyst. The analyst may use an extraction worksheet as a guide, if desired.

d. Verify all tubes are in their proper position in the tray. Verify the tip holder is in its proper place and that there is a pipette tip in each holder. Once verified close the instrument door.

e. Press "**START**" to start the protocol run.

f. The extraction protocol takes approximately 16 minutes to complete. When the extraction is completed, the instrument LCD displays "**PROTOCOL FINISHED**". Press "**ENT**" to select **NEXT.**

g. Open the instrument door and starting from left to right, place the correct corresponding labeled cap on each elution tube and remove. Transfer the extracted DNA samples to labeled 0.5 mL tubes, if desired. Record the volume recovered. The DNA extracts are now ready for DNA quantification.

h. A message will be displayed asking if you would like to perform a UV Run. Press "**ENT**" for YES or "**ESC**" for NO. If you choose to perform a UV run, you will be prompted to add a decontamination time between 20 and 60 minutes. If you choose not to perform a UV run, press "**ESC**" to return to the main menu. The EZ1 XL can then be shut off.

I. If concentrating DNA extracts prior to quantification, refer to BIO.2.DNA.07 for further information and instruction on concentrating the DNA extracts anticipated to have low DNA recovery.

J. Store extracts refrigerated or frozen for long term storage

C. **Clean up and Disposal**

1. Dispose of used reagent cartridges and sample tubes in a chemical waste container. **Do not add or mix with materials containing bleach to the container.**

2. Wipe down surfaces of the tray and tip rack with deionized water or ethanol.

3. Clean piercing unit.

D. **Combining Extracts**:

1. When there is reasonable expectation of samples originating from a common source, such as duplicate vaginal swabs or known reference samples (blood, bone, teeth, etc.) separate extracts may be combined to increase the amount of DNA template for amplification.

2. Separate extracts from different locations on a given evidence item should not be combined.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/26/2019	**NUMBER:** BIO.2.DNA.06 - Human DNA Quantitation
	RELATED ORDERS:	
APPROVED BY Dawn Romano, Tony Nguyen & Pamela Hofsass	**ANAB:** **DNA Quality Assurance Standards:**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Quantification of Human DNA	

I. Protocol for Quantification of Human DNA using PowerQuant

A. Materials

Promega PowerQuant System
Applied Biosytems 7500 Real-Time PCR System
Applied Biosystems HID Real-Time PCR Analysis Software v. 1.2
Single channel pipettes: 2µL, 10µL, 20µL, 100µL, 200µL, 1000µL and/or repeat pipettor
Pipette tips, barrier filtered
96-Well Optical Reaction Plates, P/N 4306737
Optical Adhesive Film, P/N 4311971
Strip caps
MicroAmp Splash Free Support Base, P/N 4312063
Microcentrifuge tubes

B. Introduction

1. The PowerQuant System is a five-dye, four-target hydrolysis probe-based qPCR multiplex that amplifies multicopy targets to quantify the total human and male DNA present in a sample. The system also amplifies an additional multicopy target to assess the degree of degradation and an internal PCR control (IPC) to detect inhibitors in an amplification reaction. The following procedure was adapted from the PowerQuant System Technical Manual published by Promega for use of the PowerQuant System with the Applied Biosystems 7500 Real-Time PCR System and HID Real-Time PCR Analysis Software Version 1.2.

II. Protocol PowerQuant System

A. Contents of the PowerQuant System:

1. *PowerQuant 20X Primer/Probe/IPC Mix:* Includes all primers and probes, Internal PCR Control and a passive reference dye.
    a. **Primers and probe for the autosomal DNA target:** The primers and FAM dye-labeled probe are used to amplify an 84-base pair amplicon.
    b. **Primers and probes for the Y-Chromosomal target:** The primers and CAL Fluor Gold 540 dye-labeled probes are used to amplify two multicopy loci (81bp and 136bp amplicons).
    c. **Primers and probe for the degradation target:** Quasar 670 dye-labeled probe detects the presence of a longer amplicon (294bp) derived from a different region of the same locus as the autosomal target. Due to its greater length, the degradation amplicon is more susceptible to degradation and the presence of inhibitors. The ratio of DNA concentrations determined with the autosomal and degradation targets ([Auto]/[D] ratio) can be used to evaluate the degree of degradation.
    d. **Primers, probe and template for the Internal PCR Control:** The TMR dye-labeled probe of the PowerQuantSystem detects the Internal PCR Control. The primers produce an amplified product that is 435bp. Amplification performance of the IPC is used to detect inhibitors in the sample. This is the longest target in the PowerQuant System, making the IPC more susceptible to inhibitors than the other targets in the multiplex.
    e. **Passive reference dye:** The CXR dye is used as a passive reference. The CXR dye is included in each amplification reaction. Data from the other dye channels are normalized to this signal.
2. *PowerQuant 2X Master Mix*
3. *PowerQuant Male gDNA Standard:* Consists of pooled human male DNA supplied at 50 ng/µL. Serial dilutions of this DNA standard are amplified in the same plate as the unknown samples, and the results are used to

generate a standard curve for the autosomal, Y, and degradation targets.

4. *PowerQuant Dilution Buffer:* This is supplied as the diluent for serial dilutions of the PowerQuant Male gDNA Standard to create the standard curve.

5. *Amplification Grade Water*

B. **Storage Conditions:** Store the PowerQuant System at -30°C to -10°C in a nonfrost-free freezer. Store the Male gDNA Standard overnight at ~4°C prior to the first use and do not refreeze. For short-term storage (less than 1 week), store the other components at 2-10°C. Minimize the number of freeze-thaw cycles. The 20X Primer/Probe/IPC is light sensitive and must be stored protected from the light.

C. **Preparation of Human DNA Standards:** Preparation of Human DNA Standards: perform serial 25-fold dilutions of the PowerQuant Male gDNA Standard, then amplify these dilutions to create a four-point standard curve in duplicate to determine the concentration of autosomal, Y, and degradation targets in unknown DNA samples. Precise serial dilutions of the Male gDNA Standard is essential to accurately quantify unknown DNA samples. Proper care must be taken to mix and pipet each DNA standard dilution.

1. Store the PowerQuant Male gDNA standard overnight at ~4°C prior to first use. If necessary, thaw the PowerQuant Dilution Buffer completely.

   a. Note: After the initial thaw, store the Male gDNA Standard and Dilution Buffer at 4°C.

2. While working in the PCR PrepStation hood, vortex the Male gDNA Standard at least three times at high speed for ~10 seconds each time.

3. Label three microcentrifuge tubes with the following concentrations: 2 ng/µL, 0.08 ng/µL and 0.0032 ng/µL. Additionally, label each tube with the date and the initials of the preparation.

4. Prepare fresh serial dilutions of the Male gDNA Standard as indicated in Table 1. Vortex each dilution for ~10 seconds prior to removing an aliquot for the next dilution. Dispose pipette tips between dilutions.

Table 1. Serial Dilution of the PowerQuant Male gDNA Standard (25-fold dilution)

DNA Concentration (ng/µL)	Volume of PowerQuant™ Male gDNA Standard	Volume of PowerQuant Dilution Buffer
50	Undiluted PowerQuant Male gDNA Standard	---
2	2 µL of undiluted PowerQuant Male gDNA Standard	48 µL
0.08	2 µL of 2 ng/µL dilution	48 µL
0.0032	2 µL of 0.08 ng/µL dilution	48 µL

5. These serially diluted DNA standards are valid for 1 week when stored at 4°C.

D. **Worksheet and Reaction Setup**

1. Setup can be performed manually, with the Nimbus liquid handling robot, or a combination of both.

2. Reserve a sequential qPCR run number on the specific instrument Quant worksheet log located in the Biology Unit's network folder: G:/SupSvcsBur/Serology/2 Logs & Shared Run Wkshts/Logs YYYY.

3. The Excel workbook **DNA Worksheets** may be used to create a record of the PowerQuant 96-Well setup. A record of the setup must be included in the case's note packet. Note: If batching samples with multiple analysts, the analyst performing the quantification plate setup must add their handwritten initials to the worksheet printout.

4. Enter sample names to be quantified to the **Quant List** sheet; this in turn auto-populates the **PowerQuant Template** sheet. In the **PowerQuant Template** sheet, enter an appropriate number of samples under the **Master Mix Preparation** cell to allow the sheet to calculate the amount of water, master mix, and primer mix needed for the run. Incorporate an additional 2-5 samples into the calculations to account for volume lost during pipetting.

5. If using the **DNA Worksheets** workbook, select the tab labeled **PQ Export**. This sheet is auto-populated from the samples entered on the Quant List and PowerQuant Template sheets. Save this worksheet as a tab-delimited text (.txt) on the network drive using the quant naming convention, so that it can be accessed in the PCR room during 7500 setup. Re-open the .txt file on the network drive in Excel and **re-save it.** Note: The re-save step is necessary; the file will fail to import without the additional re-save step. Alternatively, sample names can be manually added to the 7500 HID software. See below for instructions on manually adding samples.

6. If the Master Mix recipe was not calculated previously during PowerQuant Template sheet setup, use Table 2 to calculate the volume of each component required to prepare reaction mix for the desired number of reactions while accounting for potential volume loss from pipetting.

Table 2. Preparation of Reaction Mix for DNA Quantification using the PowerQuant System

PowerQuant Component	Volume Per Reaction
Water, Amplification Grade	7 µL
PowerQuant 2X Master Mix	10 µL
PowerQuant 20X Primer/Probe/IPC Mix	1 µL
Final volume	**18 µL**

7. Ensure the 2X Master Mix, 20X Primer/Probe/IPC Mix, and Amplification Grade Water, are thawed completely to room temperature.
8. Vortex the 2X Master Mix and 20X Primer/Probe/IPC Mix for at least 10 seconds to mix. Note: Do not centrifuge after mixing as this may cause the primers and probes to concentrate at the bottom of the tube.
9. Prepare the reaction mix in a microcentrifuge tube.
10. Vortex the reaction mix for ~10 seconds. **Do not centrifuge after mixing.**
11. Add 18 µL of reaction mix to the each assigned well of a 96-well reaction plate.
12. Ensure that master mix was dispensed into all wells that will contain samples.
13. Add 2.0 µL of each DNA standard, an amplification negative (NTC sample comprised of amplification grade water), and each DNA extract to the designated wells. DNA Standards are run in duplicate; evidence samples can be run in single reactions. Dispose of the sample pipette tip after each 2.0 µL addition; never re-use a pipette tip. More than one set of DNA standards may be run on a single plate.
14. After all samples have been added to the corresponding wells, cover the plate with strip caps or optical adhesive film and ensure that each well is sealed.
15. Place the sealed 96-well reaction plate into appropriate bucket centrifuge and centrifuge at 500 RCF for ~1 minute to ensure all reagents collect at the bottom of the wells.
16. Place the plate into the ABI 7500 instrument and ensure that the orientation of the plate is correct. Row A should be towards the back of the instrument with the notch on the 96-well plate oriented in the upper-right corner.

E. **Configure Run Setup in Real-Time PCR System and HID Real-Time PCR Analysis Software**

1. Turn on the computer associated with the 7500 Real-Time PCR System.
2. Turn on the 7500 Real-Time PCR System.
3. Open the HID Real-Time PCR Analysis Software Version 1.2.
4. Select User name **Guest** and select the **OK** button.
5. On the Home screen, select the button for **Custom Assays**.
6. From the **File** menu or menu bar, select **Open.** In the resulting dialog window, open the **PowerQuant Template** experiments folder, then select **PowerQuant Template.edt**, and **Open**.
    a. Importing sample information into the HID software:
        i. From the **File** menu, select **Import**. In the resulting dialog window, click **Browse** and navigate through to locate and ***select the exported .txt file*** that was previously saved; and click **Start Import**. This populates the **PowerQuant Template.edt** document with sample names. A pop-up asks to **Confirm Import Plate Setup**; select **Yes**.
    b. To manually add samples:
        i. Select **Plate Setup** from the setup menu in the left panel, and then navigate to the ***Define Targets and Samples*** tab.
        ii. Select **Add New Sample**, and enter the sample name in the provided section.
        iii. Repeat for all samples.
        iv. When all sample names have been entered, navigate to the ***Assign Targets and Samples*** tab. Highlight a well or multiple wells for duplicate samples, and then tick the ***Assign*** box adjacent to the corresponding sample name in the **Assign sample(s) to the selected wells** section. This assigns the sample a well location on the reaction plate.
        v. Repeat until all samples are assigned.

vi. If a sample was assigned to the incorrect well, select the well and uncheck the box for the sample under **Assign sample(s) to the selected wells**; then proceed to assign the well to the correct sample name.

7. Save the **.edt** template as a **.eds** file by selecting **Save As** from the File menu at the top of the screen. Save the run in the **Experiments** folder on the 7500 computer. Name the file with the appropriate sequential qPCR run file name. This typically is a sequential run number with a nomenclature of: "Prun [instrument] [2-digit year]-[run#] [analyst initials] [date]".

8. Select **Plate Setup** from the setup menu in the left panel, and navigate to the ***Define Targets and Samples*** tab.

9. Inspect the information under **Define Targets** to ensure that all specimen information is correctly entered, including sample name and targets.

Table 3. Specifying Targets

Target Name	Reporter	Quencher
Autosomal	PQ_FAM	NFQ-MGB
Degradation	PQ_Q670	NFQ-MGB
IPC	PQ_TMR	NFQ-MGB
Y	PQ_CFG540	NFQ-MGB

a. Select the ***Assign Targets and Samples*** tab and check that **ROX** is selected as the passive reference on the lower left window.

b. Select **Run Method** from the setup menu in the left panel and ensure that the Thermal Cycling program information is correct. Ensure the program is set to the following parameters:

i. Holding Stage: 98°C for 2 minutes

ii. Cycling Stage: 39 cycles; Step 1 to 98° C for 15 seconds and Step 2 to 62° C for 35 seconds

c. Ensure that the "Data Collection On" icon is active for Step 2 of the Cycling Stage.

10. Press the **Start Run** button. Run time is approximately 1 hour.

F. **qPCR Data Analysis**

1. Evaluating Standard Curves Using the HID Real-Time PCR Analysis Software

a. Select **Analysis** in the left panel and highlight all wells to be analyzed in the ***View Plate Layout*** tab. Unused wells may be omitted or deselect all targets.

b. Press the green **Analyze** button and **Save**.

c. To display standard curves, select **Standard Curve** from the Analysis menu in the left panel. Display the standard curves for targets by selecting from the **Target** drop-down menu.

d. The 7500 HID Real-Time PCR Analysis Software performs a linear regression to the standard dilution series data and calculates the equation for the line of best fit (the standard curve).

e. The equation is in the form of $y = mx + b$, where x = log concentration and $y = C_T$.

i. The R^2 value is a measure of the fit of the data points to the regressed line.

ii. The slope (m in the equation) is an indication of the PCR efficiency. A slope of -3.3 indicates 100% PCR efficiency (i.e., the number of copies of amplification product is doubled at each cycle).

iii. The Y-intercept (b in the equation) is defined as the y value (C_T) when x (log concentration) equals 0. Therefore, b corresponds to the C_T value for a sample with a concentration of 1ng/µL (log10(1) = 0).

iv. In general, the standard curve for each target (autosomal, Y, and degradation) has an acceptable average slope (m) in the range of **–3.1 to –3.6** and an acceptable R^2 value **>0.980.**

f. **Troubleshooting**: If the slope and/or the R^2 values vary greatly from expectation, assess the data points of the calibration curve. If necessary, one data point may be removed from the standard curve, should the slope or R^2 fall outside the acceptable range.

g. To eliminate data points from the calibration curve, first determine the standard well with the problematic data. In the View Plate Layout window, select the well of interest, right click, select **Omit**, highlight all

wells, and then reanalyze. Verify that the problematic data point has been removed in the ***Standard Curve*** tab window. Do not forget to **Save** the reanalyzed data.

h. If a standard is removed from the curve, note it on the printed PowerQuant Template sheet that is maintained with the examiner's case notes.

i. If the slope and/or the R^2 values for the human assay remain outside the range established above after removal of a standard point, the run may need to be repeated. To avoid this, more than one set of DNA standards may be added to a plate.

j. Although the PowerQuant Kit is capable of determining human, male DNA, and degradation in a sample, determining the quantity of DNA in an unknown sample for purposes of amplification is typically based on the human assay. The male assay typically offers a means of determining the presence or absence of male DNA for screening purposes and for determining ratios of male DNA to human DNA in unknown DNA mixture samples. Should the slope and/or the R^2 values of the male and degradation curve fall outside acceptable ranges, the human quantification values may still be used to estimate the amount of human DNA present.

k. If the Y-Intercept varies greatly from expectation, assess the slope, R^2, and data points along the calibration curve. Under ideal amplification conditions, a C_T value of approximately 25-26 is the ideal Y-intercept for the human standard curve; 25.5-26.5 for the male standard curve; and 26-27 for the large autosomal (degradation) standard curve. The Y-Intercept represents the C_T value at the log concentration of 1 or 1ng. The Y-Intercept value may differ due to variations that are inherent with the assay. When the Y-Intercept (C_T value) values are substantially greater than or less than the ideal values, the examiner should evaluate the values of the calibration curve and assess the potential problem. The plate may need to be repeated to ensure a more accurate quantification estimation, particularly when other parameters of the standard curve are not met. The examiner may also choose to adjust the quantification results to account/compensate for the potential over- or underestimation that results from a substantial shift in the Y-Intercept.

l. Verify that the Amplification Negative Control shows no demonstrable DNA signal. If signal is present in only one NTC, data from the run may still be used. If there is a signal present in both NTCs, the reaction plate must be re-run. Consult with the DNA Technical Leader or Supervisor for ways to troubleshoot the issue.

2. **Exporting Analyzed Data from the HID Real-Time PCR Analysis Software**

a. Highlight all wells with data to export in the plate map.

b. Select the tab to **View Well Table**; click **Group By** to view the drop-down menu; and select **Well Position (Column)**.

c. Select **Export** from the toolbar.

d. In the Export Properties tab of the Export Data window, select the following :

i. Choose **Results** in the Select data to export section.

ii. Choose **One File** from the Select one file or separate files drop-down menu.

iii. Specify an appropriate export file name (e.g., BYY-NNN Results).

iv. Choose **.xls** as the File Type.

v. Use the Browse button to select a file location (e.g., on the network drive or flash drive).

vi. Select **Start Export**.

3. **Exporting Results to the DNA Worksheets**

a. Open the exported project .xls file in Excel. Copy all the data starting from cell A8 including the headers and paste it into cell A1 of the **PQ Results** sheet of the corresponding DNA Worksheets workbook. The data is summarized across each column, including [Human], [Y], Male: Total, Female: Male, [Degradation], [Human]/[Degradation], and IPC values.

4. **Internal PCR Control.** The IPC can be used to evaluate overall performance of a PowerQuant amplification reaction or detect PCR inhibitors in the DNA sample.

a. If a sample yields no detectable amplification for the autosomal, Y, and degradation targets, but has an IPC amplification curve that crossed the amplification threshold without an IPC shift greater than 2 cycles, then this signifies there was insufficient DNA template in the sample for an amplification reaction.

b. If a sample has an IPC Shift value greater than 2 cycles or is undetermined, regardless of detectable amplification for the autosomal, Y and degradation quantification targets, then this indicates that a PCR inhibitor may be present in the amplification reaction. The **PQ Results** table shows the average C_T value of the standards and the highest C_T of any sample.

5. **[Auto]/[Y] Ratio:** This ratio can be used to evaluate whether a sample includes a male/female DNA mixture. The [Auto]/[Y] calculations from the DNA Worksheets workbook can be interpreted as follows:

   a. If a sample has no value for the [Auto]/[Y] ratio, then no male DNA was detected.

   b. If a sample has an [Auto]/[Y] ratio less than 2.0, then the sample may contain male DNA only or low levels of female DNA.

   c. If a sample has an [Auto]/[Y] ratio greater than or equal to 2.0, then the sample contains a possible mixture of male and female DNA.

6. **[Auto]/[D] Ratio:** This ratio can be used to evaluate whether a DNA sample is degraded. The [Auto]/[D] calculations from the DNA Worksheets workbook may be interpreted as follows:

   a. If a sample has an [Auto]/[D] ratio less than 6.0, then the DNA in the sample is likely not degraded, regardless of the value in the IPC Shift column.

   b. If a sample has an [Auto]/[D] ratio greater than or equal to 6.0 then the DNA in the sample is likely degraded but the sample does not contain PCR inhibitors. Samples with an "undetermined" [Auto]/[D] ratio are severely degraded.

   c. If a sample has an [Auto]/[D] ratio greater than 6.0 and an IPC Shift value greater than 2 cycles, then this sample likely contains PCR inhibitors and may or may not contain degraded DNA.

G. **Requirements for Quantification and Amplification:**

1. Quantification of reagent blanks (RB) is not required. However, at least one RB is typically quantified with the evidence sample set. If more than one RB is quantified, the RB demonstrating the greatest signal must be carried forward to amplification. If none of the samples in the quantified evidence set move forward for amplification, at least one RB must be have been quantified or one RB must be amplified (if that RB skipped quantification).

2. When a sample does not forward to amplification, the justification for terminating analysis at quantification must be documented. Samples may not move forward to amplification for various reasons, such as:

   a. Low quantity of Human DNA or Male DNA detected in the sample

      i. Any sample may be stopped after quantification if it contain less than ~16pg of total DNA or male DNA.

      ii. Samples anticipated to contain the DNA from more than one donor may be stopped after quantification if the samples contain less than ~100pg of total DNA (e.g., touch DNA samples).

      iii. The analyst can decide to move samples forward to the amplification step, even if those samples contain a quantity of DNA less than the suggested thresholds.

   b. There is another potentially probative sample representing the same item that exhibits better quantity and/or quality for amplification.

   c. When male DNA is detected in the presence of a high quantity of Human DNA ([Auto]/[Y] ratio >50. The sample may be better suited for male-specific (Y-STR) testing.

   d. Poor quality (inhibited) or compromised DNA (severely degraded) is indicated and other methods could be employed to improve the quality. The sample may be better suited and preserved for another technology, such as Minifiler.

   e. Requested work was cancelled.

3. Y**-Screening Reporting Statements**: The following statements, or similar, are to be used when Y-screening is performed and samples are stopped after quantification.

   a. *Samples with male DNA > 16 pg and AUTO/Y < 50, however no autosomal STR analysis performed*: "Male DNA was detected in the following sample; however, this item was not selected for further testing at this time."

   b. *Samples with male DNA < 16 pg*: "Due to an insufficient amount of male DNA, this item was not selected for further testing at this time."

   c. *Samples with male DNA > 16 pg and AUTO/Y > 50:* "Due to an insufficient amount of male DNA compared to the amount of total human DNA, this item was not selected for further testing at this time.

This sample may be better suited for Y-STR testing"

d. *No male DNA detected*: "Male DNA was not detected in the following sample. This sample was not processed further."

III. References

A. PowerQuant System Technical Manual (TMD047 3/15)

B. HID Real-Time PCR Analysis Software Version 1.2 User Guide (P/N MAN0009819 Rev. C.0)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 03/25/2019	**NUMBER:** BIO.2.DNA.07 - Protocols for Preparing Extracts for PCR Amplification
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Protocols for Preparing Extracts for PCR Amplification	

I. **Materials:**

1. DNA extracts
2. DNA free 2.0 mL microcentrifuge tubes
3. Pipettes (10 µl, 20 µl, 100 µl, 200 µl, 1000 µl)
4. Pipette tips, barrier filtered
5. Concentration device (e.g. Microcon) / centrifuge
6. Evaporative centrifuge
7. TE-4 buffer
8. Sterile water

II. **Protocols:** Preparing samples for amplification may be as simple as diluting a DNA extract in order to adjust for total DNA mass and volume input, or it may involve reducing the volume of DNA extract to concentrate DNA to a desired quantity required for amplification. The protocols discussed below may be used individually or in combination to achieve the most desirable balance of conditions to accomplish quality amplification. For any technique or combination of techniques, the paired reagent (extraction) blank from the sample set must be treated in the same fashion as the evidence sample set. For example it must contain the same reagent components, and if concentrated, it must be concentrated to the same level as the evidence sample in the set with the greatest concentrated volume.

1. Dilution of samples:

a. Each PCR amplification protocol requires a set total volume. The protocol sets a range of total input DNA as the template to achieve optimal PCR product. Samples that possess DNA concentrations exceeding the optimal input for PCR amplification need to be diluted.

b. **Procedure:** Using a portion of the DNA extract, adjust the concentration using TE^{-4} to meet the target input. This can be accomplished similar to the following example:

1. Required template volume input: 15 µl
2. Optimal total DNA template: 1.0 ng
3. Starting Sample Concentration: 10 ng/µl
4. Required optimal PCR input concentration: 1.0 ng / 15 µl = 0.0667 ng/µl
5. Formula to adjust Starting Concentration to Optimal Concentration:

Starting Sample Concentration / Optimal Concentration = Dilution Factor

$$\frac{10\ ng/\mu l}{0.0667\ ng/\mu l} = 150$$

Therefore, dilute an aliquot of the starting extract 150 fold (1:150 DNA extract: TE-4 and 15uL will be used for amplification)

2. Concentration of samples:

a. Samples that have volume greater than the required input volume but a concentration less than the optimal template concentration can be concentrated.

b. The amount of concentration can be calculated similar to the following example:

1. Required template volume input: 15 µl
2. Optimal total DNA template: 1.0 ng
3. Starting Sample Concentration: 0.05 ng/µl

4. Formula to adjust Starting Concentration to Optimal Concentration:

1ng/0.05 ng/uL = 20 uL of extract concentrated to 15uL

c. **Evaporative Centrifuge**

Procedure:

1. Turn on the evaporative centrifuge.

2. Select the samples requiring concentration and their corresponding reagent (extraction) blank(s). Transfer the desired amount of extract from each sample to separate amplification tubes. (Note: the paired reagent (extraction) blank must be concentrated to the same concentration volume as the sample with the highest concentrated volume in the sample set.) Place tubes (uncapped) into the centrifuge in an orientation to ensure that the weight is balanced throughout the rotor.

3. Close the centrifuge lid and make sure switch "D" is set to "High."

4. Flip switch "A" from "Off" to "Manual."

5. Optional: Set the timer to allow for appropriate spin time (on average 1.5ul per minute is the evaporative rate).

6. When finished, flip switch "A" from "Manual" to "Off."

7. Remove tubes and measure volumes.

8. Evaluate the volume of extracts. If volume is still substantially higher than desired, repeat evaporative steps; if the volume has been reduced to less than the desired volume, replenish volume using TE^{-4}. If the sample has evaporated to dryness, reconstitute with the desired volume of TE-4 and heat the sample for 10 minutes at 56°C to dissolve DNA that may have precipitated onto the tube walls.

d. **Concentration devices** (such as a Microcon concentrator): Samples that need buffer exchange in addition to concentration should be concentrated through a concentration device. (Note: some DNA can be expected to be lost through this transfer device, so the analyst should use their best judgment in assessing the potential benefit of concentration versus the loss of DNA template).

Procedure:

1. Fill a labeled concentration device with a sufficient volume of TE^{-4} so that the sum of the DNA extract plus the TE^{-4} totals a volume of 500 µl. (Note: a paired reagent (extraction) blank must be treated similarly and concentrated to the same level as the evidence sample in the set with the greatest volume being concentrated.) For low level DNA samples, 1 ug of carrier RNA may be added to the concentration device prior to the addition of the extract: Add 1uL of reconstituted stock carrier RNA to 1 mL sterile water. Add 100 uL of the cRNA dilution to the microcon filter to pre-soak the filter prior to the addition of the extract.

2. Spin the concentration device down to dryness, typically 10-18 minutes at 14,000 RPM.

3. Add TE^{-4} to the membrane. The volume added is dependent on the volume needed for subsequent quantification and amplification(s).

4. Invert the concentration device chamber into a collection cup or tube and collect the concentrated DNA by spinning the concentration device at 4,000 RPM for typically 3-5 minutes.

5. If the volume is less than the required input volume for the PCR procedure the analyst may add TE^{-4} directly to the sample retentate to bring the volume up to the desired amount. (Note: At least 17 µl is needed for subsequent quantification and amplification.) Alternatively, TE-4 can be re-added to the membrane of the concentration device, inverted and spun down again to collect the volume and any residual DNA potentially remaining on the membrane.

3. Overcoming inhibition:

Many inhibitors of the Taq polymerase have been identified. Inhibitors routinely encountered in forensic casework include heme, clothing dyes, tannic acid, and humic acid. General pre-amplification schemes that have been used successfully to reduce inhibition are as follows:

a. Robotic Extraction Method:

The Qiagen Investigator kit/EZ-1 robot is an effective extraction method at removing inhibitors. The EZ-1 robot uses multiple washes while the DNA absorbs onto silica beads.

b. Dilution Method:

Reducing the inhibitor by diluting the sample is another effective technique, when sufficient DNA template is present. This process works for a range of approximately 5-10 fold dilutions of the DNA extract. Several amplifications may need to be attempted to bracket the proper balance of DNA template while reducing the inhibitor.

c. Freeze-thaw method:

When visible inhibitors (such as fabric dye) have co-extracted with the sample, the freeze-thaw method can be used to help overcome the inhibitor or reduce the amount of inhibitor. Many inhibitors can be partially precipitated within the DNA extract due to the solubility and density differences of the DNA relative to the inhibitor, particularly at low temperatures.

Procedure:

1. Freeze the DNA extract.

2. Remove the extract from the freezer and immediately centrifuge the tube at high speed 2-3 minutes.

3. Refreeze the extract without disturbing the pellet.

4. Repeat 2-4 more times. The freeze-thaw method will pellet/concentrate the inhibitor/dye to the bottom of the microcentrifuge tube due to the inhibitor's higher density.

5. Without disturbing the dye pellet, pipette/transfer the top portion of the extract to a new tube.

6. Retain the original tube containing the concentrated/ pelleted inhibitor.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 1/12/19	**NUMBER:** BIO.2.DNA.08 - Amplification of Human DNA
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** **DNA Quality Assurance Standards**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Amplification of Human DNA	

I. Amplification of Evidence Samples Using the PowerPlex® Fusion 6C System.

A. Introduction

1. The PowerPlex® Fusion 6C System is a 27-locus multiplex for human identification applications including forensic analysis, relationship testing and research use. This six-color system allows co-amplification and fluorescent detection of the 20 autosomal loci in the expanded CODIS core loci (CSF1PO, FGA, TH01, TPOX, vWA, D1S1656, D2S1338, D2S441, D3S1358, D5S818, D7S820, D8S1179, D10S1248, D12S391, D13S317, D16S539, D18S51, D19S433, D21S11 and D22S1045) as well as Amelogenin and DYS391 for gender determination. The Penta D, Penta E, and SE33 loci are also included to increase discrimination and allow searching of databases that include profiles with these loci. Finally, two rapidly mutating Y-STR loci, DYS570 and DYS576, are included in the multiplex. This extended panel of STR markers is intended to satisfy both CODIS and ESS recommendations.
2. The PowerPlex® Fusion 6C System is compatible with the Applied Biosystems® 3500 and 3500xL Genetic Analyzers with Data Collection Software and the DC 6-Dye Module v1 License (Life Technologies).

B. Materials

1. Applied Biosystems ProFlex Thermal Cycler
   Steam sterilized, thin-walled 0.2mL amplification tubes and 2.0mL polypropylene tubes
   96-well plates
   Strip caps
   Adhesive film
   Single Channel pipettes (2µL, 10µL, 20µL, 100µL, 200µL and 1000µL)
   Pipette tips, barrier filtered
   TE^{-4} buffer
   Microcentrifuge
   Vortex
   1.2mm Manual Punch
   Promega Swab Solution kit containing:
   - SwabSolution Reagent
   - 5X AmpSolution Reagent

   Promega PowerPlex Fusion 6C System, consisting of:
   - Pre-amplification Components
     - PowerPlex® Fusion 6C 5X Master Mix
     - PowerPlex® Fusion 6C 5X Primer Pair Mix
     - 2800M Control DNA 10ng/µL
     - Water, Amplification Grade
   - Post-amplification Components
     - PowerPlex® Fusion 6C Allelic Ladder Mix
     - WEN Internal Lane Standard 500

2. Storage Conditions: Upon receipt, store all components at –30°C to –10°C in a nonfrost-free freezer. **Make sure that the 2800M Control DNA is stored at 2–10°C for at least 24 hours before use.** After the first thaw, store the PowerPlex® Fusion 6C System components at 2–10°C, where they are stable for 6 months. **Do not refreeze**. **The PowerPlex® Fusion 6C 5X Primer Pair Mix, PowerPlex® Fusion 6C Allelic Ladder Mix and WEN Internal Lane Standard 500 (WEN ILS 500) are light-sensitive and must be stored in the dark. When in use, limit exposure to light.**

C. Controls and Samples

1. **Reagent Blank Controls:** At least one extraction (reagent) blank (RB) associated with the evidence extraction set must be amplified. The RB must be amplified under the same conditions as the evidence set (using the same amplification kit /primer set and using the same model thermal cycler). The RB must be concentrated in volume similar to the most concentrated in volume evidence sample.
   a. If an evidence sample is re-amplified at a higher target DNA amount than the original amplification, then the reagent blank must also be re-amplified under the different amplification volume conditions. If the evidence sample is re-amplified under the same conditions (volume and target DNA amount), re-amplification of the reagent blank is not necessary. **QAS 9.5.3.2.**
2. **Amplification Controls:** A positive and negative amplification control must be amplified concurrently with the evidence extraction set on the same thermal cycler instrument and with the same amplification kit (primers). **QAS 9.5.2.**
   a. If re-amplification of any sample is necessary, both positive and negative amplification controls are required.
3. **DNA Samples:** Evidence samples are quantified prior to amplification, see Human DNA Quantification BIO.2.DNA.06. Prior to amplification, samples with high concentrations of DNA may need to be diluted and samples with low concentrations of DNA may need to be concentrated. Refer to BIO.2.DNA.07 "Preparing Extracts for PCR Amplification" for additional information.
   a. **DNA Target Amount:** During validation, full profiles were detected consistently at 0.1ng and above from single source samples, full profiles were also observed in "some" samples with as low as 0.0625ng of DNA. The optimal level of input DNA for each sample is **0.5 - 1.0ng** per amplification. Resolution of mixtures of two or more sources of DNA may require input levels toward the higher end, such as 1.0ng to fully detect each donor. In cases of degraded DNA, excess template DNA addition (>1.0ng) may result in a successful amplification. Also bracketing the DNA input with a series of higher amounts of DNA may result in successful amplification of different loci and combining the loci to build a composite profile.

D. Procedure for Amplification of Extracted DNA in a 25µL Reaction Volume Using the PowerPlex® Fusion 6C System

1. Reserve a sequential amplification run number from the amplification run log located on the Biology unit's network folder: G/Lab/Serology/Logs/Amp Log.
2. Turn on the ProFlex Thermal Cycler at least 15 minutes prior to running the amplification protocol.
3. Allow pre-amplification components to thaw, if frozen. Briefly spin down PowerPlex® Fusion 6C 5X Master Mix, PowerPlex® Fusion 6C 5X Primer Pair Mix, and 2800M Control DNA to bring the contents to the bottom of the tube. Gently vortex each reagent for 5 seconds before each use. (NOTE: In order to avoid creating a concentration gradient, do not centrifuge the primer and master mix after vortexing.)
4. Obtain a 96-well plate and label it with the amplification run number or place the needed number of 0.2mL PCR tubes (thin wall tubes) into a rack and label each tube with the amplification run number and tube number. The tube number must correspond with the sample order listed on the DNA amplification worksheet. Be sure to include positive (2800M Control DNA) and negative amplification control tubes.
5. Prepare the PCR amplification mix by adding the following volumes of reagents to a microcentrifuge tube (prepared in a PCR prep hood):
   a. Number of samples x **5.0µL** of PowerPlex® Fusion 6C 5X Master Mix
   b. Number of samples x **5.0µL** of PowerPlex® Fusion 5X Primer Pair Mix
6. An additional 1-2 reactions may be added to account for normal volume loss during pipetting. The DNA amplification worksheet automatically incorporates the extra reactions needed to adjust for pipette loss.
7. Vortex the PCR amplification mix for approximately 5-10 seconds. **Do not** spin down after vortexing.

8. Aliquot 10µL of PCR amplification mix into each well of a 96-well plate or PCR tube. Cap all tubes.
9. Vortex and briefly spin down the DNA extracts, if not already done so. DNA extracts at this stage have been either diluted, concentrated or are prepared in a volume necessary for amplification. Verify that the extract tubes are prepared and are in the correct order as specified in the amplification worksheet. One at a time, open the DNA extract tube and its corresponding numbered amplification tube and add up to 15µL of the DNA extract to the amplification tube. **If adding less than 15µL, the remaining volume is made up using TE^{-4} (see Note below).**
10. Visually verify the entire DNA extract volume is expelled into the PCR amplification mix reagent. Recap both tubes. Continue similarly with the remaining extracts, handling one set of tubes at a time.
11. Prepare a positive and negative amplification control.
    a. For the positive control, vortex the pre-thawed tube of 2800M Control DNA and dilute an aliquot of 2800 Control DNA (10ng/µL) to target between 0.5 ng and 1.0 ng of the positive control DNA. Dilute using TE^{-4}. For 1.0 ng, add 1.0µL of a 1:10 dilution. For 0.5 ng, add 1.0µL of a 1:20 dilution. Add 14µL of TE^{-4} to bring volume up to 15µL. Alternatively, add 15µL of a 1:150 for a 1.0 ng input or 15µL of a 1:300 for a 0.5 ng input. Prepare a fresh DNA dilution for each set of amplifications.
    b. For the negative control, add 15µL of TE^{-4} to a labeled tube or plate well containing PCR amplification mix.
12. Spin or shake down to ensure all components are at the bottom of each tube. Ensure that each amplicon has a pink/purple color and that they all contain approximately the same volume of liquid before placing them on the thermal cycler.

E. **Thermal Cycling:** Place each amplification tube into the ProFlex Thermal Cycler using the 0.2mL tube thermal cycle spacer and begin the thermal cycling process. Select "**Set-up Run**" on the center of the main screen, followed by "**Open Method**" on the next screen. Select "**Fusion 6C**" from the menu of methods to view the cycling parameters. Select "**Verify Block**" on the bottom right and finally, "**Start Run**" on the following screen. Total cycling time is approximately 1 hour.

1. Thermal Cycler Parameters: the following thermal cycling parameters are used to amplify the PowerPlex® Fusion 6C loci on ProFlex PCR Systems. The parameters are pre-set under file name "**Fusion 6C**" under "**Methods**".
2.

Cycle Description	Temperature	Time	Number of Cycle(s)
Initial Incubation	96ºC	1 minute	1
Amplification	Melt 96ºC Anneal/Extend 60ºC	5 seconds 1 minute	29
Final Extension	60ºC	10 minutes	
Final Hold	4ºC	Indefinitely	

3. At the completion of the thermal cycling process, remove the amplified samples and proceed either to fragment analysis on a capillary electrophoresis system (see Bio.2.DNA.09) or temporarily store the amplified products protected from light at approximately 4ºC. Amplified samples being stored long-term (i.e., greater than 1 week) should be stored at -20ºC.

II. Direct Amplification of Reference Samples Using the PowerPlex® Fusion 6C System

This procedure is to be used with buccal swabs and bloodstained FTA cards only, all other reference samples must be extracted, quantified, and amplified using the amplification procedure above. Infrequently, a complete profile will not be obtained using the direct amplification method. In these instances, those samples can either be re-amplified using the direct method or maybe extracted, quantified, and amplified using the amplification procedure above.

A. **PCR Setup**

1. Reserve a sequential amplification run number from the amplification run log located on the Biology unit's network folder: G/Lab/Serology/Logs/Amp Log.
2. Turn on the ProFlex Thermal Cycler at least 15 minutes prior to running the amplification protocol.
3. Allow pre-amplification components to thaw, if frozen. Briefly spin down PowerPlex® Fusion 6C 5X Master Mix, PowerPlex® Fusion 6C 5X Primer Pair Mix, 2800M Control DNA and Water, Amplification Grade to bring the contents to the bottom of the tube. If performing a direct amp from FTA cards, spin down the tube of 5X AmpSolution reagent as well. Vortex each reagent for 15 seconds before each use. Note: In order to avoid creating a concentration gradient, do not centrifuge the primer and master mix after vortexing.
4. Place the needed number of 0.2mL PCR tubes (thin wall tubes) into a rack and label each tube with the amplification run number and tube number. Be sure to include positive (2800M Control DNA) and negative amplification control tubes.

B. **Swab Preparation**

1. Swab Preprocessing
    a. Place a half or whole buccal swab head in a 2.0mL microcentrifuge tube.
    b. Add 1.0mL of SwabSolution Reagent to each tube if using a whole swab, add a volume of SwabSolution reagent between 0.5mL and 1.0mL to each tube if using 1/2 a swab.
    c. Place each tube in a heat block and incubate at 70ºC for ~30 minutes. Note: Buccal swab extracts can be stored at ~4ºC for up to 24 months.
2. Prepare the PCR amplification mix for all buccal swab samples by adding the following volumes of reagents to a microcentrifuge tube (prepared in a PCR prep hood):
    a. Number of samples x **5.5µL** of Water, Amplification Grade
    b. Number of samples x **2.5µL** of PowerPlex® Fusion 6C 5X Master Mix
    c. Number of samples x **2.5µL** of PowerPlex® Fusion 5X Primer Pair Mix

    Note: Additional reactions may need to be added to account for normal volume loss during pipetting.
3. Vortex the PCR amplification mix for 5-10 seconds. **Do not spin down after vortexing.**
4. Aliquot **10.5µL** of PCR amplification mix into each PCR tube. Cap all tubes.
5. Add **2.0µL** of the swab extract to the PCR amplification mix.
6. Prepare a positive and negative amplification control.
    a. For the positive control, add **1.0µL** of 2800 Control DNA (10ng/µL) and **1.0µL** of Amplification Grade Water to a labeled tube containing PCR amplification mix.
    b. For the negative control, add **2.0µL** of Swab Solution to a PCR tube containing PCR amplification mix.

C. **FTA Punch Preparation**

1. Ensure the puncher is free of contamination by either bleaching and thoroughly drying the puncher or performing punches on a blank portion or blank FTA card before using.
2. Using a manual 1.2mm puncher, take one 1.2mm punch from the bloodstain on a FTA card and directly eject it into a labeled 0.2mL PCR tube.
3. Prepare the PCR amplification mix for all Punch samples by adding the following volumes of reagents to a microcentrifuge tube (prepared in a PCR prep hood):
    a. Number of samples x **5.0µL** of Water, Amplification Grade
    b. Number of samples x **2.5µL** of PowerPlex® Fusion 6C 5X Master Mix
    c. Number of samples x **2.5µL** of PowerPlex® Fusion 6C 5X Primer Pair Mix
    d. Number of samples x **2.5µL** of 5X AmpSolution Reagent

    Note: Additional reactions may need to be added to account for normal volume loss during pipetting.
4. Vortex the PCR amplification mix for 5-10 seconds. Do not spin down after vortexing.
5. Aliquot **12.5µL** of PCR amplification mix into each PCR tube while being mindful of the punch already in the tube.

6. Prepare a positive and negative amplification control.
    1. For the positive control, add **1.0µL** of 2800 Control DNA (10ng/µL) to a labeled tube containing PCR amplification mix.
    2. For the negative control, just add the amplification reagents to a PCR tube.

D. **If preparing a direct amplification for both swabs and FTA punches, prepare one positive control using the swab preparation and two negative amplification controls, one for each of the preparations.**

E. **Thermal Cycling:** Briefly shake or spin down the tubes to bring the contents to the bottom. Ensure that each amplicon has a pink/purple color and that they all contain approximately the same volume of liquid before placing them on the thermal cycler. Place all prepared amplification sample tubes into the ProFlex Thermal Cycler using the 0.2mL tube thermal cycle spacer and begin the thermal cycling process. Select "**Set-up Run**" on the center of the main screen, followed by "**Open Method**" on the next screen. Select "**Fusion 6C Direct Amp**" from the menu of methods to view the cycling parameters. Select "**Verify Block**" on the bottom right and finally, "Start Run" on the following screen. Total cycling time is approximately 50 minutes.

1. Thermal Cycler Parameters: The following thermal cycling parameters are used for the direct amplification of the PowerPlex® Fusion 6C loci on ProFlex PCR Systems. The parameters are pre-set under file name "**Fusion 6C Direct Amp**" under "**Methods**".

3.

Cycle Description	Temperature	Time	Number of Cycle(s)
Initial Incubation	**96ºC**	**1 minute**	**1**
Amplification	**Melt 96ºC** **Anneal/Extend 60ºC**	**5 seconds** **1 minute**	**25**
Final Extension	**60ºC**	**10 minutes**	
Final Hold	**4ºC**	**Indefinitely**	

At the completion of the thermal cycling process, remove the amplified samples and proceed either to fragment analysis on a capillary electrophoresis system (see Bio.2.DNA.09) or store temporarily store the tubes protected from light at approximately 4ºC. Amplified samples being stored long-term (greater than 1 week) should be stored at -20ºC.

IV. References

A. PowerPlex® Fusion 6C System Technical Manual (TMD045 Rev. 10/15)

B. ProFlex™ PCR System User Guide Installation, Use, and Maintenance User Guide (P/N MAN0007697 Rev. A.0)

V. Amplification of Extracted DNA Samples Using the PowerPlex® Y23 System.

A. Introduction

1. The PowerPlex® Y23 System allows co-amplification and four-color fluorescent detection of 23 loci, including DYS576, DYS389I, DYS448, DYS389II, DYS19, DYS391, DYS481, DYS549, DYS533, DYS438, DYS437, DYS570, DYS635, DYS390, DYS439, DYS392, DYS643, DYS393, DYS458, DYS385a/b, DYS456 and Y-GATA-H4.

B. Materials

1. Applied Biosystems ProFlex Thermal Cycler
   96-well plates
   Strip caps
   Microcentrifuge tubes/screw cap tubes
   Single Channel pipettes (2µL, 10µL, 20µL, 100µL, 200µL and 1000µL)
   Pipette tips, barrier filtered
   TE-4 buffer
   Microcentrifuge
   Bucket centrifuge
   Vortex

2. Promega PowerPlex Y23 System, consisting of:
   Pre-amplification Components
   PowerPlex® Y23 5X Master Mix
   PowerPlex® Y23 10X Primer Pair Mix
   2800M Control DNA 10ng/µL
   Water, Amplification Grade
   Post-amplification Components
   PowerPlex® Y23 Allelic Ladder Mix
   WEN Internal Lane Standard 500 Y23

3. Storage Conditions: Upon receipt, store all components, except the 2800M Control DNA at –30°C to –10°C in a nonfrost-free freezer. Store the 2800M Control DNA at 2–10°C. Make sure that the 2800M Control DNA is stored at 2–10°C for at least 24 hours before use. After the first thaw, store the PowerPlex® Y23 System components at 2–10°C, where they are stable for 1 year. Do not refreeze. **The PowerPlex® Y23 5X Primer Pair Mix, PowerPlex® Y23 Allelic Ladder Mix and WEN Internal Lane Standard 500 (WEN ILS 500 Y23) are light-sensitive and must be stored in the dark. When in use, limit exposure to light.**

C. Controls and Samples

1. **Reagent Blank Controls:** At least one extraction (reagent) blank (RB) associated with the evidence extraction set must be amplified. The RB must be amplified under the same conditions as the evidence set (using the same amplification kit /primer set and using the same model thermal cycler). The RB must be concentrated in volume similar to the most concentrated in volume evidence sample.
    a. If an evidence sample is re-amplified at a higher target DNA amount than the original amplification, then the reagent blank must also be re-amplified under the different amplification volume conditions. If the evidence sample is re-amplified under the same conditions (volume and target DNA amount), re-amplification of the reagent blank is not necessary. **QAS 9.5.3.2**

2. **Amplification Controls:** A positive and negative amplification control must be amplified concurrently with the evidence extraction set on the same thermal cycler instrument and with the same amplification kit (primers). **QAS 9.5.2.**

3. **DNA Samples:** Evidence samples are quantified prior to amplification, see Human DNA Quantification BIO.2.DNA.06. Prior to amplification, samples with high concentrations of DNA may need to be diluted and samples with low concentrations of DNA may need to be concentrated. Refer to BIO.2.DNA.07 "Preparing Extracts for PCR Amplification" for additional information.

D. **DNA Target Amount:** During validation, full profiles were detected consistently at 0.125ng and above from single source samples, full profiles were also observed in "some" samples with as low as 0.064ng of DNA. The optimal level of input DNA is 0.125ng - 0.25ng per amplification for single source samples and 0.250ng - 0.5ng for samples anticipated to be mixtures of male DNA. In cases of degraded DNA or samples that have an excessive amount of female DNA that may inhibit results, excess template DNA addition (>0.250ng) may result in a successful amplification.

E. PowerPlex® Y23 System Sample Preparation

1. Reserve a sequential amplification run number from the amplification run log located on the Biology unit's network folder.

2. Turn on the ProFlex Thermal Cycler at least 15 minutes prior to running the amplification protocol.

3. Allow pre-amplification components to thaw, if frozen. Briefly spin down PowerPlex® Y23 5X Master Mix, PowerPlex® Y23 10X Primer Pair Mix, 2800M Control DNA and Water, Amplification Grade to bring the contents to the bottom of the tube. Gently vortex each reagent for approximately 15 seconds before each use. (NOTE: In order to avoid creating a concentration gradient, do not centrifuge the primer and master mix after vortexing.)

4. Samples will be amplified in a 96-well plate. The amplification run number should be written on the side of the plate. Be sure to include positive (2800M Control DNA) and negative amplification controls.

5. Prepare the PCR amplification mix by adding the following volumes of reagents to a microcentrifuge or screw cap tube (prepared in a PCR prep hood):
    a. Number of samples x 5.0µL of PowerPlex® Y23 5X Master Mix

b. Number of samples x 2.5µL of PowerPlex® Y23 10X Primer Pair Mix

c. Number of samples x 2.5µL of Water, Amplification Grade

6. An additional 1-2 reactions may be added to account for normal volume loss during pipetting. The DNA amplification worksheet automatically incorporates the extra reactions needed to adjust for pipette loss.

7. Vortex the PCR amplification mix for approximately 5-10 seconds. Do not spin down after vortexing.

8. Aliquot 10µL of PCR amplification mix into each plate well.

9. Vortex and briefly spin down the DNA extracts, if not already done so. DNA extracts at this stage have been either diluted, concentrated or are prepared in a volume necessary for amplification. Verify that the extract tubes are prepared and are in the correct order as specified in the amplification worksheet. One at a time, open the DNA extract tube and locate the corresponding well on the plate. Add up to 15µL of the DNA extract to the appropriate well. If adding less than 15µL, the remaining volume is made up using water, amplification grade for a total of 25µL.

10. Visually verify the entire DNA extract volume is expelled into the PCR amplification mix reagent. Recap both tubes. Continue similarly with the remaining extracts, handling one set of tubes at a time.

11. Prepare a positive and negative amplification control.

a. For the positive control, vortex the pre-thawed tube of 2800M Control DNA and dilute an aliquot of 2800 Control DNA (10ng/µL) to target 0.200 ng of the positive control DNA. Dilute using the Amplification Grade Water. Add 15µL of a 1:750 dilution for a 0.200 ng input. Prepare a fresh DNA dilution for each set of amplifications.

b. For the negative control, add 15µL of Amplification Grade Water.

12. Cover the plate. Optional: Briefly centrifuge the plate to bring contents to the bottom of the wells and remove any air bubbles. Ensure that each amplicon has a pink/purple color and that they all contain approximately the same volume of liquid before placing them on the thermal cycler.

F. **Thermal Cycling:** Place the 96 well plate into the ProFlex Thermal Cycler and begin the thermal cycling process. Select "**Set-up Run**" on the center of the main screen, followed by "**Open Method**" on the next screen. Select "**Promega Y23**" from the menu of methods to view the cycling parameters. Select "**Verify Block**" on the bottom right and finally, "**Start Run**" on the following screen. Total cycling time is approximately 1 hour 26 minutes.

1. Thermal Cycler Parameters: The following thermal cycling parameters are used to amplify the PowerPlex® Y23 kit on ProFlex PCR Systems. The parameters are pre-set under file name "**Promega Y23**" under "**Methods**".

Cycle Description	Temperature	Time	Number of Cycle(s)
Initial Incubation	96°C	2 minutes	1
Amplification	Melt 94°C	10 seconds	30
	Anneal 61°C	1 minute	
	Extension 72C	30 seconds	
Final Extension	60°C	20 minutes	
Final Hold	4°C	Indefinitely	

2. At the completion of the thermal cycling process, remove the amplified samples and proceed either to fragment analysis on a capillary electrophoresis system (see Bio.2.DNA.09) or temporaril

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/22/2019	**NUMBER:** BIO.2.DNA.09 - Capillary Electrophoresis
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**ANAB:** **DNA Quality Assurance Standards**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Capillary Electrophoresis	

I. Capillary Electrophoresis Protocol Using the AB 3500 Genetic Analyzer

A. Materials

1. Applied Biosystems 3500 Genetic Analyzer
   Dell computer with 3500 Series Data Collection Software 3, ver. 3.1 or ver. 4.0
   3500 Capillary Array (8 cap. 36cm uncoated, P/N 4404683)
   Anode Buffer Container, 3500 Series (P/N 4393927)
   Cathode Buffer Container, 3500 Series (P/N 4408256)
   POP-4 Polymer for 3500/3500XL Genetic Analyzers (P/N 4393710, 4393715)
   Ultra-pure, deionized (Hi-Di) formamide (P/N 4440753)
   Conditioning Reagent, 3500 Series (P/N 4393718)
   Promega WEN Internal Lane Standard 500
   Promega PowerPlex Fusion 6C Allelic Ladder Mix
   Promega PowerPlex 6C Matrix Standard
   Promega WEN Internal Lane Standard 500 Y23
   Promega PowerPlex Y23 Allelic Ladder Mix
   Promega PowerPlex 5C Matrix Standard
   96-well reaction plates with septa
   96-well plate retainer assembly
   Cathode buffer container septa
   Microcentrifuge
   Bucket centrifuge
   Eppendorf ThermoStat C
   Electronic Ice block
   Pipettes with barrier filtered tips

II. Preparing the PCR-STR Product for Analysis on the AB 3500

Preparing amplified samples for analysis on the AB 3500 capillary electrophoresis (CE) unit involves diluting a portion of the PCR product in a mixture of Hi-Di formamide and WEN Internal Lane Standard (ILS) 500 or 500 Y23, followed by additional steps to keep the PCR product denatured.

A. Reserve a sequential CE run number from the CE run log located on the Biology unit's network folder: G/SupSvcsBur/LAB/Serology/Logs & Shared Run Wkshts.

B. Before preparing a plate for analysis, fill out the 3500 Worksheet tab of the Excel DNA Worksheet. Print a copy of the worksheet to assist with sample setup and as a record in the PCR room run binder. Samples can either be manually typed into the software's plate setup or imported electronically from a tab delimited document created from the 3500 Worksheet. **Note**: When batching samples with multiple analysts, the individual that performs the plate setup must initial the worksheet by hand.

C. Turn on the electronic ice block and ThermoStat C. Press the 95°C preset button on the Thermostat C and allow it to come to temperature.

D. Remove a previously aliquoted tube of Hi-Di formamide from the freezer to thaw. **Note**: Multiple freeze-thaw cycles or long-term storage at 4°C may cause breakdown of formamide. Use PPE when handling formamide; formamide is a teratogen and irritant.

E. Allow post-amplification components to thaw if frozen. If setting up samples amplified using Fusion 6C briefly spin down tubes of WEN ILS 500 and PowerPlex Fusion 6C Allelic Ladder Mix. If setting up samples amplified using Y23 briefly spin down tubes of WEN ILS 500 Y23 and PowerPlex Y23 Allelic Ladder Mix. Vortex each reagent for ~5-10 seconds before each use. **Do not centrifuge after vortexing** so as to avoid creating a concentration gradient. Also, minimize post-amplification components' exposure to light.

F. Prepare a master mix by combining the necessary amount of Hi-Di formamide and WEN ILS 500 or WEN ILS 500 Y23 in a microcentrifuge or screw cap tube in the following proportion:

1. Number of samples x **9.5 µL** Hi-Di formamide
2. Number of samples x **0.5 µL** WEN ILS 500 or WEN ILS 500 Y23

Note: Include additional volume for allelic ladders and WEN ILS 500 or WEN ILS 500 Y23 blank samples and any volume loss during pipetting.

G. Vortex mixture for 5-10 seconds.

H. Label a 96-well plate with the appropriate run number.

I. Aliquot 10 µL of the master mix into each well that will contain either a PCR product, an allelic ladder, or a WEN ILS 500 or WEN ILS 500 Y23 blank. The capillary array injects from all 8 wells simultaneously, therefore, a sample or formamide blank **must** be present in all wells of a column in a plate. Do not allow capillaries to inject from dry wells; doing so will damage the capillary array.

J. Add 1.0 µL of PCR product or allelic ladder to the appropriate wells of the 96-well plate containing the master mix. When possible, load multiple allelic ladders in each run. The required frequency of allelic ladders is one for every 3 injections (24 samples) with a suggested minimum of two ladders per run. Vary the placement of ladders in order to utilize different capillaries of the array.

K. Cover the plate with a septa mat.

L. Briefly centrifuge the plate to remove any air bubbles and to ensure that the contents are all collected at the bottom of the wells.

M. Place the sample plate on the ThermoStat C to heat-denature at 95ºC for three minutes.

N. Snap-cool the sample plate on the electronic ice block for three minutes. To prevent arcing issues, remove any moisture from the bottom of the plate with a lint-free lab wipe.

O. Place the sample plate into the plate base, then cover with the plate retainer. The cover should snap into place on both sides. Verify that the holes of the plate retainer and the septa are aligned.

P. The sample plate is now ready for analysis on the AB 3500 Genetic Analyzer.

III. Preparing the AB 3500 Genetic Analyzer System:

A. Instrument Set-up:

1. Turn on the computer and allow it to boot up completely.
2. Depress the power button on the front panel to turn on the instrument. Wait for the status indicator light on the instrument to turn solid green.
3. In the Windows login screen, select the "**INSTR-ADMIN**" icon (username: SUM-3500-1\Administrator) and type "**INSTR-ADMIN**" for the password.
4. Wait for the 3500 Server Monitor icon in the Windows notification area to completely launch, as indicated by a green check mark.
5. Double click on the **3500** icon on the desktop to launch the 3500 Series Data Collection Software. In the User Name field, type "**Administrator**" and in the Password field, type "**Administrator1**."
6. The Dashboard screen will launch.
7. On the right side of the ***Dashboard*** screen, click the "**Refresh**" button. Check if the consumable status is acceptable and for any maintenance notifications. Replenish consumables and perform maintenance tasks as necessary. As a maintenance task is completed, click the check mark to mark it as done. Actions are recorded in the Notifications Log.
8. Click "**Start Pre-Heat**" to begin pre-heating the oven and detection cell. The Oven Temperature and Detection Cell Temperature will turn green when at the proper temperature.
9. Visually check if there is sufficient buffer at or above the fill line.
10. Verify that the pump block and channels are free of bubbles. Run the **Remove Bubbles Wizard** from the ***Maintenance*** tab if needed.
11. Press the "**Tray**" button on the instrument to recall the autosampler to the front for loading. Pull down on the clip (on the left side if loading in position A, or right side if loading in position B) and place the sample plate and

retainer in the autosampler with the retainer label facing outward toward the instrument door. Release the clip when the plate assembly is seated properly in place.

12. Close the instrument door to home the autosampler and to re-initialize the instrument.

B. **Data Collection Plate Setup**

1. Import Plate Setup

   a. The plate sample setup can be created and imported from the 3500 Sample Worksheet. Ensure that the CE Run field of the 3500 sheet is properly filled out and save the 3500 Export sheet as a .txt (text tab delimited) file. Save the file on an accessible network drive or on a flash drive.

   b. From the ***Dashboard*** screen of the 3500 Data Collection software, click the **Create New Plate** button.

   c. In the following ***Define Plate Properties*** screen, click the **Assign Plate Contents** button near the bottom of the screen.

   d. Select the **Import** option on the top menu bar.

   e. Locate the file to be imported and click **Open**.

   f. Click **OK** when the plate setup has been successfully imported.

   g. Save the plate using the standard CE naming convention, DYY-XXX AA MM-DD-YY, where XXX is the sequential run number and AA is the operator's initials.

2. Manual Plate Setup

   a. From the ***Dashboard*** screen, click the **Create New Plate** button.

   b. In the ***Define Plate Properties*** screen, type in a name for the plate using the standard CE naming convention, DYY-XXX AA MM-DD-YY, where XXX is the sequential run number and AA is the operator's initials.

   c. For "**Plate Type**," select "**HID**" from the drop-down menu.

   d. Click the **Assign Plate Contents** button near the bottom of the screen.

   e. Proceed to populate the plate with sample names to match that of the corresponding prepared sample plate.

   f. In the bottom right of the screen, click to expand the **Customize Sample Info** pane.

   g. Highlight wells of interest in the plate view, and select its corresponding "**Sample Type**" from the drop-down menu in the **Customize Sample Info** pane. All wells are defaulted to "**Sample**," but at least one well must be designated as an "**Allelic Ladder**." Other sample type options include "**Positive Control**," "**Negative Control**," and "**HiDi**," but are not necessary in order to proceed with analysis.

      Note: The plate can alternatively be populated in a tabular fashion by selecting the Table View tab adjacent to the Plate View tab at the top left of the plate layout.

   h. If running samples amplified using Fusion 6C: In the "***Assays"*** window to the bottom left of the plate layout, click **Add from Library** and select "**HID 36_POP4_Promega_J6**" if using 3500D or "**HID_POP4_Promega_J6_13sInj**" if using 3500E. This assay will have HID 36_POP4_1_Promega_J6 selected as the protocol and WEN_ILS_500 selected as the QC protocol.

Settings of HID36_POP4_1_promega_J6 Protocol	
Application Type	HID
Capillary Length	36cm
Ploymer	POP-4
Dye Set	Promega J6
Run Module	HID36_POP4
Injection Time	3500D: 15 seconds; 3500E: 13 seconds
Injection Voltage	1.2kV
Run Voltage	13kV
Run Time	1500 seconds

Settings for QC Protocol WEN ILS 500	
Analysis Range	Full
Sizing Range	Partial start: 60, Stop: 500
Size Calling Method	Local Southern
PAT Blue	80rfu
PAT Green	80rfu
PAT Yellow	110rfu
PAT Red	110rfu
PAT Purple	80rfu
PAT Orange	80rfu

i. If running samples amplified using Y23: In the "***Assays"*** window to the bottom left of the plate layout, click **Add from Library** and select "**HID 36_POP4_Promega_G5**" on 3550D. This assay will have HID 36_POP4_1_Promega_G5 selected as the protocol and WEN_ILS_500_Y23 selected as the QC protocol.

Settings for HID36_POP4_1_Promega_G5Protocol	
Application Type	HID
Capillary Length	36cm
Polymer	POP-4
Dye Set	Promega G5
Run Module	HID36_POP4
Injection Time	15 seconds
Injection Voltage	1.2kV
Run Voltage	15kV
Run Time	1500 seconds

Settings for the QC Protocol Y23 WEN ILS 500	
Analysis Range	Full
Sizing Range	Partial start: 60, Stop: 500
Size Calling Method	Local Southern
PAT Blue	140 RFU
PAT Green	140 RFU
PAT Yellow	210 RFU
PAT Red	140 RFU
PAT Orange	140 RFU

j. In the "**File Name Conventions**" window just below the center of the plate layout, click "**Add from Library**" and select "**CCC STR**."

k. In the "**Results Group**" window to the bottom right of the plate layout, click **Add from Library** and select "**Run**."

l. Highlight wells of interest from the plate layout. Enable the checkbox adjacent to the chosen assay, file name convention, and results group to apply the selections to the samples.

m. Navigate to the **Save Plate** icon in the menu bar above the plate layout to save the changes to the plate.

3. Use a Plate Template

a. From the ***Dashboard*** screen, click the **Create New Plate** button.

b. Proceed to type a name for the plate using the CE naming convention, DYY-XXX AA MM-DD-YY, where XXX is the sequential run number and AA is the operator's initials.

c. Click on the **New Plate** option from the menu bar and then select **Create New Plate from Template**.

d. Select **Promega PowerPlex Fusion 6C Plate Template** or **Promega PowerPlex Y23 Plate Template**, and then click **Open**.

e. Click the **Assign Plate Contents** button on the bottom of the screen.

f. Proceed to populate the plate with sample names corresponding to the prepared plate.

g. Highlight the populated wells and enable the checkboxes for the following:

i. "**HID 36_POP4_Promega_J6**" as the Assay for Fusion 6C or **"HID 36_POP4_Promega_G5"** for Y23.

ii. "**CCC STR**" for **File Name Conventions**

iii. "**Run**" for **Results Group**

h. Navigate to the **Save Plate** icon in the menu bar to save the changes to the plate.

C. **Link and Run a Plate**

1. Click the **Link Plate for Run** button on the bottom of the screen to proceed to the **Load Plates for Run** screen. Select **OK.**

   Note: Ensure that the plate is linked to the corresponding position on the software. Click the **Switch Plates** icon in the center to designate the plate to the other position as necessary.

2. Leave the **Run Name** to the default setting which is the date and time of the run.

3. On the bottom of the screen, click the **Start Run** button to proceed directly to running the plate in the defaulted plate column order with one injection for each column. Alternatively, click the **Create Injection List** button to go to the **Preview Run Screen** to specify the order of injections, add any duplicate runs or to delete injections. To modify the injection list, highlight the injection of interest from the list, and use any of the options from the menu bar above to create the desired injection order. Options include **Move Up in List**, **Move Down in List**, **Delete**, and **Duplicate**. When the injection list is finalized, click the **Start Run** button. **Note**: Navigating away from the Preview Run screen to edit plate details will clear the current injection list. Verify that the plate contents are accurate before creating an injection list.

4. The **Monitor Run** screen is displayed after clicking **Start Run**. The plate view shows the current injection highlighted in green. Each injection runs for approximately 40 minutes and the status bar shows an estimated run time. The menu bar at the top of the **Monitor Run** screen displays options to edit the injection order, re-inject, delete, pause, resume, and abort the run.

   Note: Re-injections must be inputted before the run completes.

5. When an injection is finished running, it is flagged with a check mark icon  in the "**Injection**" and "**Analysis**" columns of the injection list. The software can detect if the sequence or sample quality falls below the user-specified quality thresholds set in the protocol and displays a flag in the "**Flags**" column in those instances. If no samples are listed in this column, the samples have passed quality checks. If a flag is displayed, proceed to expand the "**Flag**" pane at the bottom right of the screen. The table will show a more specific flag identifying sample wells that may need further review.

   a.  Sample quality is in suspect range and should be reviewed

   b.  Indicative of offscale peaks and/or suspect sample quality

D. **Review HID Analysis Results**

1. Access the View Fragment/HID Results screen from either the Monitor Run screen by clicking **Review Results** or the Dashboard by clicking **View Run Results**.

2. While an instrument run is in progress, the samples table lists results for completed injections in the current run in the View Fragment/HID Results Screen.

3. Select one or more samples in the sample table to display the data in the plot view and sizing table view.

   a. Review Sample Quality: In the sample view, click the **Table Settings** button. Pay special attention to the following columns and flags:

      i. Offscale: A yellow indicator  is present when at least one data point in the analysis range has saturated the CCD camera.

      ii. Broad Peak: A yellow indicator  is present when at least one peak exceeds the broad peak threshold.

      iii. Sizing Quality: A red indicator  is present when the sizing quality fails and the yellow indicator  is present when sizing quality is suspect.

   b. Click a flag in the samples table, or select samples in the samples table to display the associated data in the Plot View and Sizing Table View.

E. **Methods for Dealing with Saturated Data (Fusion samples only)**

A. There are two methods approved for reducing the effects of saturated data: a decreased 7 second injection or diluting the amplicon in a 1:10 or 1:20 water dilution.

A. When performing a 7 second injection, the "**7s_Inj_HID 36_POP4_Promega_J6**" assay must be selected and applied.

B. If diluting the amplicon is preferred, prepare a 1:10 or 1:20 amplicon to water dilution and use 1.0 uL for sample setup on the 3500.

i. Clearly label the sample as a dilution or 7 second injection on the CE run sheet and electropherogram.

F. **Changing the Capillary Array**

1. The manufacturer suggests replacing a capillary array around 160 injections. (This is a conservative value and is left to operator discretion for capillary replacement.)

2. To install a new capillary, click the ***Maintenance*** tab on the menu bar of the Collection Software. Navigate to the Wizards menu from the left navigation pane. Select the Install Capillary Array button and follow the prompts to remove the old array and install the new array. When the Install Capillary Array Wizard is complete, proceed to **Spatial Calibration**.

G. **Spatial Calibration**

1. A spatial calibration is performed to establish a relationship between the signal emitted by each capillary and the position where the signal falls on and is detected by the CCD camera.

2. A Spatial Calibration is performed when:

a. A capillary array is installed or replaced.

b. The capillary array is temporarily removed from the detection block.

c. The detector door is opened or the detection cell is moved.

d. The instrument is moved.

e. A service engineer performs an optical service procedure, such as realigning or replacing the laser or CCD camera.

3. **Creating a Spatial Calibration File**

a. Access the Spatial Calibration screen through the **Maintenance** tab, and then select **Spatial Calibration** from the navigation pane.

b. In the "Options" box, select the **Fill** button to fill the array with polymer before commencing the calibration. Select **No Fill** if the array already contains fresh polymer.

c. Check the box for **Perform QC Checks** to have the software check each capillary against the specified range for spacing and signal intensity. An error message will pop up during the calibration if any of the calculations do not meet a threshold condition.

d. Click **Start Calibration.**

4. **Guidelines for a passing Spatial Run:**

a. Similar peak heights

b. A cross-hatch at the top of each peak with no misplaced crosses

c. Single sharp peaks for each capillary; small shoulders are allowed

d. The spacing difference between adjacent positions should be between 13 to 16 pixels in both the left spacing and right spacing columns.

5. If the calibration passes, click **Accept**.

6. If the calibration fails, select **Reject** and repeat the calibration. Refer to AB 3500/3500XL Genetic Analyzer User Guide for additional troubleshooting help.

H. **Replenishing/Replacing Polymer**

1. POP-4 polymer for use on 3500 Series instruments comes in a ready-to-use pouch and is stable for 14 days after installation.

2. Each pouch is rated for the stated amount of injections on the pouch. Usage is tracked by the 3500 Data Collection Software and can be easily found on the Dashboard display. Each polymer pouch includes additional volume to accommodate for volumes used during installation, running wizards, and during routine operation.

Excessive use of wizards reduces the number of remaining samples and injections based on how many times certain wizards are run.

3. If the POP-4 pouch on the instrument is expired or there is insufficient polymer to complete the run, remove a POP-4 pouch from 4ºC storage, and allow it to warm to room temperature.

    a. To change just the POP-4 pouch, click the **Replenish Polymer** Wizard button and follow the on-screen prompts.

    b. To wash the pump and channels and change the POP-4, navigate to the **Wizards** menu under the ***Maintenance*** tab and select **Wash Pump and Channels**. Follow the on-screen prompts to install a conditioning reagent pouch and then the POP-4 pouch. This wizard takes approximately 40 minutes to complete.

4. A pouch of POP-4 can be removed from the 3500 for storage. If removed, place a pouch cap (PN 4462785) onto the pouch, rinse the connection valve with deionized water, and then place a pouch of conditioning reagent on the connector to prevent desiccation of any residual polymer.

I. **Replenishing/Replacing Buffers**

1. The Anode and Cathode Buffer Containers (ABC and CBC) contain 1X running buffer to support all electrophoresis applications. The buffers are stable for 240 injections or 14 days after installation on the instrument.

2. Replace the ABC or CBC on the instrument if it is expired, past 14 days, or when buffer levels are below their fill line.

    a. Remove the buffer containers from 4ºC storage and allow them to equilibrate to room temperature.

    b. The Anode Buffer Container has a built in overflow chamber to maintain constant fluid height. Check that the plastic seal is still intact, and invert and tilt the container until the buffer is displaced to the larger reservoir. Carefully peel the plastic seal from the top.

        i. Open the instrument door and turn the container so that the RFID label faces into the instrument. Position the ABC below the pump with the anode in the larger reservoir of the container, then slide it up and back towards the instrument until it's fixed in place.

        ii. Close the instrument door to reinitialize the system.

    c. The Cathode Buffer Container has two sides. One side contains the cathode running buffer and the other side holds the rinse fluid for the capillary. Check that the plastic seal has not been compromised before gently tilting the container back and forth to evenly distribute the buffer across the top of the baffles. Slowly peel off the plastic seal and wipe off any buffer or condensation around the container using separate lint-free lab wipes for each side.

        i. Cover the container with the appropriate septa for each side. Ensure that it is properly aligned with the holes and it is firmly seated in place.

        ii. Press the "**Tray**" button and allow the autosampler tray to stop in the loading position before opening the instrument door.

        iii. While using the thumb to hold up the front of the container and the forefinger to pinch the semi-circular notch on the back of the container, lower it into position on the tray. When installed correctly, the front tabs will click into place and the RFID tag faces right.

        iv. Close the instrument door to home the autosampler and reinitialize the instrument.

    d. Click the **Refresh** button on the **Dashboard** to update consumable information.

J. **Spectral Calibration**

1. A separate Spectral Calibration is performed when:

    a. A new dye set is used on the instrument.

    b. The polymer type is changed or the capillary array is changed.

    c. The laser or CCD camera has been realigned or replaced.

    d. The instrument has been moved.

    e. There is a noticeable decrease in spectral separation (pull-up/pull-down) in the raw or analyzed data.

    f. A service engineer performs an optical service procedure, such as realigning or replacing the laser or CCD camera.

2. Fusion 6C: The PowerPlex 6C Matrix Standard consists of DNA fragments labeled with six fluorescent dyes (FL-6C, JOE-6C, TMR-6C, CXR-6C, TOM-6C and WEN) in one tube. The spectral calibration is performed using the J6 dye set. Once generated, the spectral calibration file is applied during sample detection to calculate the spectral overlap and separate the raw fluorescent signals into individual color signals. Spectral standards are run in all eight capillaries.

3. Y23: The PowerPlex 5C Matrix Standard consists of DNA fragments labeled with five fluorescent dyes (fluorescein, JOE, TMR-ET, CXR-ET, and WEN) in one tube. The spectral calibration is performed using the G5 dye set. Once generated, the spectral calibration file is applied during sample detection to calculate the spectral overlap and separate the raw fluorescent signals into individual color signals. Spectral standards are run in all eight capillaries.

4. **Storage Conditions**: Upon receipt, store all components of the Matrix standard at –30°C to –10°C in a nonfrost-free freezer. After the first use, store the Matrix Standard components at 2–10°C. The PowerPlex® Matrix Standard is light-sensitive. Dilute the 5C or 6C Matrix Mix in the Matrix Dilution Buffer in the provided amber tube.

5. **Preparing the Spectral Calibration Chemistry**

    a. Remove the tube of 5C or 6C Matrix Mix, one tube of Matrix Dilution Buffer, and a tube of Hi-Di formamide from the freezer. Allow the reagents to equilibrate to room temperature.

    b. Vortex the Matrix Mix for ~10-15 seconds. Add 10 µL of the Matrix Mix to the tube of Matrix Dilution Buffer. Vortex the mixture for ~10-15 seconds. Label the tube with the date of dilution. This can be stored for up to 1 week at 2-10°C.

    c. Add 10 µL of the diluted 5C or 6C Matrix mixture into a tube of 500 µL of Hi-Di formamide. Vortex for ~10-15 seconds.

    d. Add 15 µL of the matrix/Hi-Di formamide mixture into all 8 wells of an entire column of a 96-well plate. Ensure the specific column is noted and selected in the spectral calibration menu later.

    e. Cover the wells with septa mat and centrifuge briefly to remove any bubbles. **Do not heat-denature.**

    f. Place the sample plate into the plate base and cover with the plate retainer.

    g. Load the plate onto the 3500 autosampler tray.

6. **Performing and Running the Spectral Calibration**

    a. Pre-heat the 3500 oven to 60ºC in the **Dashboard** of the Data Collection Software. Do not start the spectral calibration run until the oven is preheated to 60ºC.

    b. Navigate to the ***Maintenance*** tab and select **Spectral Calibration** from the left navigation pane. Under the ***Calibration Run*** tab, select "**Matrix**" under the "**Chemistry Standard**" drop-down menu and "**Promega J6**" for Fusion 6C or "**Promega G5**" for Y23 under the "**Dye Set**"drop-down menu. Specify the column that the matrix was loaded into here.

    c. Enable the checkbox for "**Allow Borrowing**."

    d. Click **Start Run** to begin the calibration.

7. **Evaluating the Spectral**

    a. The calibration is set up to run up to 3 injections. If all eight capillaries do not meet the Quality Value and Condition Number criteria limits in the first injection, the system moves onto a second injection. If the second injection fails, there is a third injection. If borrowing is enabled, information from a failed capillary is replaced with an adjacent passing capillary with the higher Quality Value. Only one adjacent capillary borrowing event is allowed.

    b. Passing capillaries are displayed in green and failing capillaries are displayed in red. Borrowed capillaries are displayed in yellow with an arrow indicating where borrowed results originated. Click a capillary in the table to view its spectral and raw data.

    c. If the data for all capillaries meet the criteria, click the **Accept Results** button. See the AB 3500/3500xL Genetic Analyzer User Guide for the ranges the software uses to determine if a capillary passes or fails.

    d. If any capillary data does not meet the criteria, click **Reject Results** and refer to AB 3500/3500xL Genetic Analyzer User Guide for troubleshooting help.

IV. References:

A. PowerPlex® Fusion 6C System Technical Manual (TMD045 Rev. 10/15)

B. PowerPlex® 6C Matrix Standard Technical Manual (TMD046 Rev 10/15)

C. PowerPlex® Y23 System Technical Manual (TMD035 Rev. 4/17)

D. PowerPlex® 5C Matrix Standard Technical Manual (TMD049 10/15)

E. Applied Biosystems 3500/3500xL Genetic Analyzer 3500 Series Software 2 (P/N 4476988 Rev. A 05/12)

F. Anode Buffer Container for 3500/3500xL Genetic Analyzers (P/N 4408241 Rev. E)

G. Cathode Buffer Container for 3500/3500xL Genetic Analyzers (P/N 4408256 Rev. E)

H. Applied Biosystems 3500/3500xL Genetic Analyzer User Guide (P/N 4401661 Rev. C 06/2010)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 04/24/2019	**NUMBER:** BIO.2.DNA.10.01 - Genemapper ID-X Analysis and Interpretation Guidelines: PowerPlex Y23
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER:	**SUBJECT:** Genemapper ID-X Analysis and Interpretation Guidelines: PowerPlex Y23	

I. Procedure for the use of GeneMapper ID-X software to analyze PowerPlex Y23 Data

A. Materials:

1. GeneMapper ID-X v 1.5 software

B. Analyzing Data Files using GeneMapper ID-X v 1.5 Software

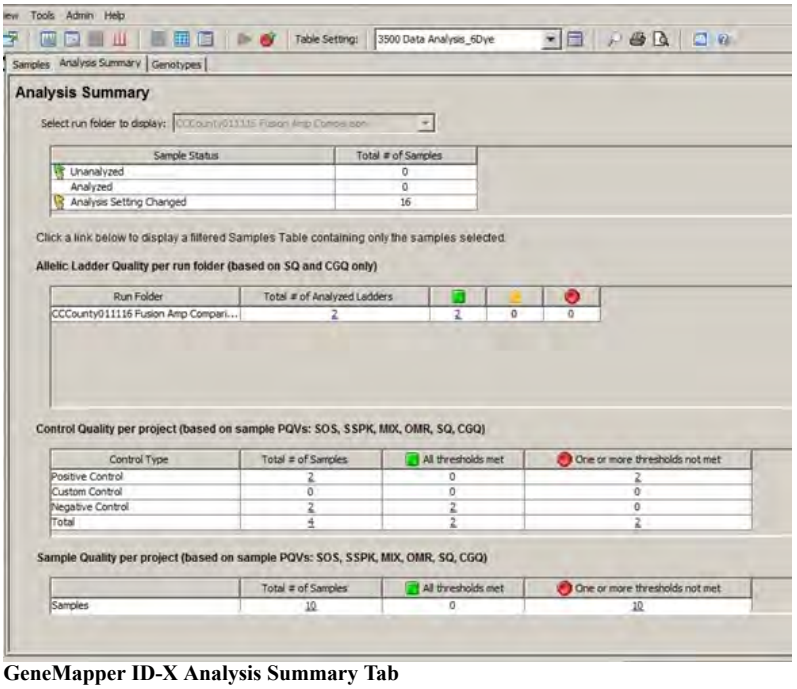
1. GeneMapper-IDX (GMIDX) software is used to size DNA fragments and assign genotypes using one or more allelic ladder(s) and an internal lane standard.
2. The data collection files must be retained on the 3500 computer until archived in the following location: C: /AppliedBiosystems/Runs/ {Unique Run Folder}.
3. Open GeneMapper ID-X and log into the software. The username is gmidx followed by your initials, then enter the password. NOTE: The computer with the Full Installation must be on to access GeneMapper ID-X from a computer with a Client Installation.
4. Create a new project by selecting **Add Samples to Project** under the **Edit** menu, or click  .
5. In the **Files** tab of the **Add Samples to Project** window, locate the correct sample files and click **Add to List**. The run folder(s) should appear in the column on the right under **Samples to Add**. When done adding samples files, click **Add** on the bottom right of the window.
6. **View Raw Data and Sample Information:** Click on the run folder on the left and expand the file to view the list of sample files within the folder. To view the sample info, click on a sample file. To view the raw data, click on a sample file and then click the **Raw Data** tab on the right. Check the raw data of each sample file to make sure the samples ran correctly on the genetic analyzer, including resolution, spikes, and baseline. To view the electrophoresis, power, and temperature (EPT) data, click on the **EPT Data** tab. When finished viewing, return to the main window by clicking on the run folder or the project icon.
7. Begin the analysis in the Project window using the "**CCC Fusion**" Table Settings within the Samples tab of GeneMapperID-X. Remove sample files that are not needed by selecting **Delete from Project** under the **Edit** menu. Note: this move cannot be undone. Make sure that all "**Sample Types**" are set correctly. Allelic ladders should be set to **Allelic Ladder**, 2800M control should be set to **Positive Control,** and the negative control and reagent blanks should be set to **Negative Control**. All others should be assigned as a **Sample**.
8. **In the Project Window, apply analysis settings:**
   a. Under the **Analysis Method** column, select "**PowerPlex Y23**".
   b. Click the **Analysis Method** column header to select the column. Under the **Edit** menu, select **Fill Down** (or use keyboard shortcut "Ctrl+D").
   c. Under the **Panel** column, select "**PowerPlexY23_IDX_v2.0**". Click the **Panel** column header to select the column. Under the **Edit** menu, select **Fill Down** (or use keyboard shortcut "Ctrl+D").
   d. Under the **Size Standard** column, select "**WEN_ILS_500_IDX**". Click the **Size Standard** column header to select the column. Under the **Edit** menu, select **Fill Down** (or use keyboard shortcut "Ctrl+D").
9. Click the **Analyze button**  . When prompted, name and save the project using the convention: **GMX XX-XXXXX-X_AAA**, where X refers to the Laboratory Case Number and AAA refers to the analyst's initials. Save the GMX project to the Security Group. The software will begin data analysis.

C. Viewing Data

1. When analysis is completed, the software identifies any conditions that may prevent analysis or cause unexpected results. It sets a flag for the **Analysis Requirements Not Met** (ARNM) **Process Quality Value** (PQV) and displays the **Analysis Requirements Summary** (ARS) if a sample in the project does not meet one or more analysis requirement(s).
2. There are three tabs available from the main screen after samples are analyzed. They are as follows: **Samples, Analysis Summary and Genotypes.**

D. The Analysis Summary tab:

1. Provides a summary of the analysis status for all or a subset of samples in a project.
2. Displays an overview of allelic ladder, control, and sample quality.
3. Visually separates passing samples from samples that do not meet one or more quality thresholds.
4. Allelic ladders, control samples, and samples where all thresholds are met will be listed in the "**All thresholds met**" column. Samples that have not met all quality thresholds will be listed in the "**One or more thresholds not met**" column.



GeneMapper ID-X Analysis Summary Tab

5. The samples can be displayed in each of these columns by clicking on the blue hyperlinked number within the column.
6. The hyperlink will open up a **filtered samples** tab. Each sample in the table will have sample-level **Process Quality Value (PQV) flags** as shown below:



Acronym	Full Name	Description
SOS	Sample Off-Scale	Indicates if any flourescence signal within the analysis renage exceeds the detection threshold of the instrument
SQ	Sizing Quality	Evaluates the similarity between the fragment pattern for the size standard dye specified in the size standard definition and the actual distrubution of size standard peaks in the sample.
SSPK	Spike	Indicates if spikes are detected within or between two defined marker size ranges.
MIX	Possible Mixed Source	Indicates a potential mixed-source sample
OMR	Outside Marker Range	Inidcates if labeled peaks are detected between two marker size ranges defined in the panel.
CGQ	Composite Genotyping Quality	Indicates overall sample/allelic ladder quality. Considers the individual marker GQ values

7. Select a sample from the filtered samples table, then click (Display Plots). The plot for the selected sample will open in a Samples Plot window.
8. Select **Data Interpretation_5Dye** from the Plot Settings drop-down list.
9. Click (No Table) in the Samples plot toolbar only view the electropherograms.
10. Click to display the electropherogram, marker-level PQV flags and the **Quality Value Details** (QVD) pane.

E.



1. Each marker header will be either green, yellow or red. A yellow or red marker header indicates that the marker has a **marker-level Process Quality Value (PQV)** flag. At the bottom left of the sample plot is a table of the marker-level Process Quality Value flags, as shown below. The details of the specific marker-level PQV flags will be displayed to the bottom right of the sample plot for the specific marker selected.

Sample Name	Marker	Allele 1	Allele 2	OS	BIN	PHR	SPK	BD	CC	OVL	GQ
pos ctrl no sim	AMEL	OL	X								
pos ctrl no sim	D3S1358	17	18								
pos ctrl no sim	D1S1656	12	13								
pos ctrl no sim	D2S441	10	14								
pos ctrl no sim	Penta D	12	13								
pos ctrl no sim	CSF1PO	12				NA					
pos ctrl no sim	D2S1338	22	25								
pos ctrl no sim	D18S51	16	18								
pos ctrl no sim	D10S1248	13	15								
pos ctrl no sim	D13S317	9	11								

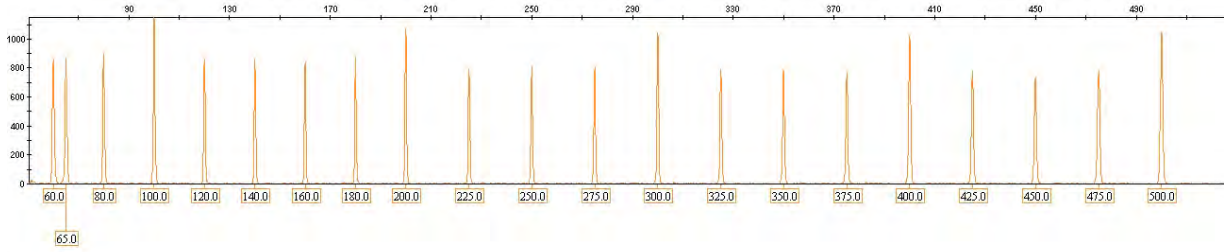
F.

Marker-Level Quality Assessments		
Acronym	**Full Name**	**Description**
OS	Off-Scale	Indicates if any flourescence signal within the marker exceeds the detection threshold of the instrument
BIN	Out of Bin Allele	Indicates if labeled peaks do not fall inside bins. These peaks are labeled with OL
PHR	Peak Height Ratio	Indicates if the peak height ratio between the lowest and highest peak is less than the Min Peak Height Ratio defined in the analysis method
MPH	Max Peak Height	Indicates if any peak heights within the marker size range exceed the Max Peak Height value set in the analysis method
LPH	Low Peak Height	Indicates if any peak heights within the marker size range are below the homozygous and heterzygous min peak heights
AN	Allele Number	Indicates if the software detects no alleles, more than the Max expected alleles, or no X allele detected in amelogenin
BD	Broad Peak	Indicates if the width of any peak exceeds the max peak width as defined in the analysis method
CC	Control Concordance	Indicates if a positive, custom, or negative control produces the expected profile
SPK	Marker Spike	Indicates if spikes are detected within a marker size range
OVL	Overlapping Alleles	Indicates if a labeled peak falls within the size ranges of two neighboring markers

G. **Examining the Sizing Quality (SQ) Results**

1. A yellow or red flag under SQ indicates that the sizing quality is below the passing range specified in the analysis method. To view the size standard for the sample, select the sample in the Samples table and click  .

2. In the Size Match Editor check that all the size standard peaks are present and labeled correctly. They should be called above the analytical threshold and have good morphology. The following are the sizes of the internal lane standard fragments: 60, 65, 80, 100, 120, 140, 160, 180, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475 and 500 bases. The fragments should be assigned as shown below.



H. **Reviewing Allelic Ladders**

1. GeneMapper ID-X has a built in allelic ladder quality assessment, which:
   a. Evaluates allelic ladders before proceeding to sample analysis.
   b. Flags run folders without at least one passing allelic ladder.
   c. Automatically excludes low-quality ladders from analysis and continues analysis with passing ladders.
2. To check the allelic ladders, select the **Analysis Summary** tab in the Project window. Check any low-quality ladders by clicking the link under the column for the flagged allelic ladder samples.
3. Select the ladder sample in the filtered samples table and click (Display Plots). The plot for the selected allelic ladder sample will open in a Samples plot.
4. Select **Data Interpretation_5Dye** from the Plot Settings drop-down list.
5. To investigate why a particular marker failed the allelic ladder quality assessment, click the red or yellow marker header on the plot to display the quality assessment data in the Quality Value Details (QVD) section at the bottom right of the screen.
6. Assess passing allelic ladders and select at least one to use to analyze the samples within the project.
7. After selecting the ladder to use for the project, the other ladders may be deleted from the project, or the Sample Type may be re-assigned as a "**Sample**". Deleting the ladders cannot be undone.
8. The samples will need to be re-analyzed. Click the **green arrow** in the toolbar to re-analyze the samples using the selected ladder.
9. NOTE: Sample migration differences over the course of an entire run may result in differences between a particular sample relative to the allelic ladder selected for data analysis in GeneMapper ID-X. Such differences can result in off-ladder allele (OL) designations during GeneMapper ID-X analysis. This situation can be alleviated by averaging allelic ladder sizes for the analysis of the sample(s). This is automatically done in GeneMapper ID-X if the sample type "**allelic ladder**" is chosen for more than one allelic ladder. This situation may also be alleviated by choosing an allelic ladder for the analysis of the sample(s) that ran closer in time to the sample(s) in question and analyzed as a separate project.

I. **Reviewing Control Samples**

1. Select the **Analysis Summary** tab in the Project window.
2. Manually review the control data by clicking the blue hyperlinks within each column. If a control has met all thresholds and the resulting profile was obtained with no anomalies detected, it will be under the "**All thresholds met**" column.
3. If any samples are flagged under the "**One or more thresholds not met**" column, investigate the quality of that sample by clicking the hyperlink within that column.
4. **Positive Amplification Control**
   a. Positive Amplification Control: The positive amplification control (2800M for the PowerPlex Y23 kit) monitors the success of the amplification process. One positive amplification control is required with each amplification assay.
   b. Evaluation of the positive amplification control requires that all expected alleles be adequately amplified (alleles at DYS385 greater than the stochastic threshold of 1100 RFU) and correctly typed at all loci.
   c. If the positive amplification control does not exhibit expected results, the analyst should first assess whether a procedural problem exists. If an error is found, the analyst must take the necessary steps to correct the procedural error and re-evaluate the sample set.
   d. If no procedural error is found, or if the analyst's corrective measures do not produce expected results in the positive controls, the DNA Technical Leader will be notified of the quality issue, and the DNA Technical Lead will have the discretion to decide if the results will be reported. The Unit Supervisor and DNA Technical Lead will review the corrective action and have the discretion to determine the appropriate course of action. Refer to the Corrective Action Policy BIO.5.QAQC.14.
   e. The analyst will document the issue in the case notes. A Level II Quality Incident Report (QIR) form or Corrective Action may be used to document the issue. When the results cannot be reported, it will also be conveyed in the lab report with a brief description of the reason.
5. **Negative Controls:**
   a. Two negative controls are required with the amplification of each sample set: a reagent blank and a negative amplification control. Negative controls are designed to test for the unintentional introduction of DNA during the DNA process.
   b. Reagent Blank: A reagent blank is a sample containing all the reagents used in the extraction and amplification process, but contains no DNA. The purpose of the reagent blank is to monitor for any possible reagent contamination that might occur at any point in the process, between samples being processed, or from previously amplified product.
   c. Negative Amplification Control: The purpose of the negative amplification control is to monitor the success of the amplification by amplifying a sample with no added DNA. This negative control monitors for DNA contamination in the amplification reagents and PCR set-up environment.

d. The laboratory's tolerance level for contamination is one allele above the analytical threshold. If the reagent blank and negative control should yield a single peak above the analytic threshold, the associated sample data is considered acceptable for reporting purposes. If either of the negative controls exhibit more than one DNA peaks above the analytical threshold, the analyst must attempt to identify the cause and document this in the case file. The analyst should evaluate and document whether the contamination is due to a sample switch, sample-to-sample carry-over, from the analyst's own DNA, or due to factors beyond the analyst's control, such as contaminated manufacturer consumables and/or reagents. Note that if there was actual contamination present in the negative amplification control, one would also expect contamination to be detected in the reagent blank. If the amplification kit reagents are found to be contaminated, the samples should be amplified with a new lot, if possible.

e. Identifying the cause of the contamination may require DNA processes to be repeated in order to pin-point where the contamination occurred and to correct the issue, if possible. The analyst may analyze below the standard analytical threshold or enhance the detection of the DNA in the control (increased injection time, more PCR cycles) to aid in troubleshooting the source of the contamination, but this data will not be reported.

f. If a DNA process cannot be repeated because one or more of the associated samples have been consumed, the DNA Technical Leader may permit the reporting of results provided that:

i. The second reagent blank in the sample set (if relevant) demonstrates that the laboratory's reagents are not contaminated, and

ii. The DNA types detected in the negative control are not observed in the sample or

iii. The typing results in the negative control are significantly lower RFU (at trace levels) than the sample.

g. All instances of failed negative controls will be documented in the case notes. When the failed negative control results in the results not being able to be reported, it must also documented in the lab report with a brief description of the reason.

J. **Examining and Evaluating Sample Files**

1. Select the **Analysis Summary** tab in the Project window.

2. Manually review the samples by clicking the blue hyperlinks under each column. If a sample has met all thresholds, it will appear under the "**All thresholds met**" column.

3. If any samples are flagged under the "**One or more thresholds not met**" column, investigate the quality of that sample by clicking the hyperlink within that column.

4. The filtered samples table displays the selected samples. Note the and sample-level PQVs for these samples.

K. **Designation of Alleles and Artifacts**

1. After data has been processed, an analyst examines the peaks that have been called, and based on experience they may or may not edit the calls made by the GeneMapper ID-X software. Decisions to edit a software-designated peak come from an understanding of biological and instrumental artifacts. Any edits will be documented in an analyst's case notes.

2. **Locus Designation**

a. Each Y-STR locus has a set of alleles that span a range of base pair sizes, each with a minimum and maximum base pair size.

b. Alleles are assigned to a locus by virtue of their size and the locus-specific primer attached to the amplicon.

c. Occasionally an allele may be detected outside of the designated range of expected alleles for a given marker. The allele may fall within a bin or be called "OL" and may be detected in the upper or lower range of an adjacent locus.

d. A yellow or red PQV flag will be present in the marker-specific PQV box for **OVL** (overlapping alleles). This indicates that a labeled peak falls within the size ranges of two neighboring markers. An attempt should be made to determine which marker the allele should fall into, but sometimes this is not possible. If the proper locus assignment of the allele cannot be determined, the locus or loci may be designated as inconclusive. Alternatively, the sample may be amplified with a different STR kit to help resolve the true locus of the allele. Any yellow or red marker-level flag in the **OVL** box will automatically trigger a flag in the sample-level **OMR** (out of marker range) box.

e. If an allele falls above the largest allele or below the smallest allele of an allelic ladder or virtual bin of a locus, the allele will be designated as either greater than (>) or less than (<) the respective ladder allele (e.g., 8,>15). When this designation is used, the relative size of the allele should be estimated in order to compare among samples. However, extrapolating an allele designation beyond one repeat unit from the ladder should be avoided.

f. Occasionally, deletion of a portion of the Y-chromosome or a primer-binding site mutation can result in the failure to detect one or more Y-STR loci.

3. **Allele Designation**

a. Allele designations are assigned to sample peaks by comparison of their base pair size to those obtained from the known alleles in the allelic ladder. Numerical allele designations have been assigned in accordance to the recommendations of the International Society of Forensic Genetics (formerly the DNA Commission of the International Society of Forensic Haemogenetics). The GeneMapper-IDX software uses bins, which are specific regions in the electrophoretic space that define the expected sizes for each known allele from a Y-STR locus.

b. Typically single source Y-STR profiles have one allele at each locus, with the exception of multi-copy loci (in the Y23 kit DYS385 a/b is multi-copy). However, it is possible to have more than one allele at any Y-STR locus. For multi-copy loci, both alleles are reported in order of smallest to largest.

c. The majority of duplications (~83%) result in alleles that differ in size by 1 repeat unit, while ~17% of duplications involve 2, 3, 4 and partial repeat unit differences. The proximity of certain loci on the Y-chromosome allows for the simultaneous duplication of alleles at multiple loci. Tri-alleles have also been reported at DYS385 a/b and DYS635.

d. Rare alleles may be encountered in casework that are not represented in the allelic ladder. The GeneMapper-IDX software can accurately label alleles including those not present in the allelic ladder, such as microvariant alleles containing incomplete repeats

that fall within a virtual bin. Other alleles not present in the ladder or that fall outside of a bin may be designated "OL" (off-ladder) by the Genemapper software. When this occurs, the allele designation must be manually calculated. See "f" below.

e. Alleles containing an incomplete repeat motif and also falling within the span of the ladder alleles, are represented by the following convention: the number of complete repeats, followed by a period, and then the number of base pairs within the incomplete repeat. For example, an allele with 18 repeats plus 2 base pairs is designated 18.2.

f. To designate an off-ladder allele such as a microvariant that falls outside an allelic ladder bin or virtual bin, calculate the size difference between two allelic ladder alleles that bracket the OL allele. Divide the difference by the number of basepairs between those ladder alleles. Each increment approximately represents the base pair size for each increment. Add the number of increments to the smaller ladder allele to establish a size range that includes the size of the unknown microvariant. Estimate the base pair size range for the increment(s) by calculating the +/- 0.5 base pair range for the increment(s) and compare the values to the microvariant. Alternatively, the Butler method may be used.

g. Allelic ladders and virtual bins contain many incomplete repeats for each marker, but some of the more uncommon micro-variants are not and will be labeled OL by the Genemapper ID-X software. A yellow or red PQV flag will be present in the marker-specific PQV box for **BIN** if labeled peaks do not fall inside a virtual bin for a given marker. Inject these microvariants at least twice to demonstrate reproducibility of sizing for the variant.

4. **Labeling an OL as an Allele**

a. To label an OL as an allele, click on the peak label, then right click, and select **Rename Allele Label** followed by **Custom Allele Label**.

b. In the resulting dialog box, enter the allele call and click **OK**.

c. In the Reason(s) For Change dialog box, enter the reason for the change (e.g., microvariant), and then click **OK**.

d. Select the marker row with the edit and right click on the box for its GQ PQV.

5. Allele designations for samples intended for CODIS entry must conform to the Combined DNA Index System (CODIS) recommendations.

L. **Evaluation of Artifacts and Non-allelic Peaks:**

1. Artifacts can rise above the analytical threshold in any locus, so it is necessary to identify any potential non-allelic peaks prior to interpretation and comparison of the DNA data. Non-allelic peaks may be the result of the PCR process (amplification driven) or a result of the electrophoresis process (electrophoretic). Non-allelic peaks detected above the analytical threshold will be evaluated and every attempt will be made to identify the type of artifact. The verification of the artifact will be noted in the case file.

2. **Stutter:** A normal amplification artifact seen as a small peak at a number of repeat units more (e.g., N+4, N+2) or less (e.g., N-2, N-4, N-8) than the primary peak, and is generally a reproducible artifact.

a. Stutter tends to follow several trends. Alleles with long stretches of the same repeat generally increase the amount of stutter, therefore larger alleles within a locus tend to show greater stutter. Interruptions in the homologous sequence tend to decrease the amount of stutter, hence microvariants with partial repeat structures tend to show less stutter.

b. Peaks in a stutter position exceeding these values may indicate the presence of a low level contributor, such as in a mixture. However, a true allele may co-locate in a stutter position and may not be detected as a true allele unless it exceeds the stutter threshold value for that locus. These peaks should be considered as possible true allelic peaks if the potential stutter peak height is consistent with or greater than the peak heights observed for the minor contributor (after stutter contribution in the peak has been taken into consideration).

Locus	Repeat Size	-2 Repeats	-1 Repeat		+1 Repeat	
DYS576	4	1.9%	18.4%		6.5%	
DYS389 I	4		10.4%			
DYS448	6		4.4%			
DYS389 II	4	1.3%	15.7%		6.6%	
DYS19	4		-4bp 13.7%	-2bp 15.5%	+2bp 5.0%	+4bp 6.7%
DYS391	4	0.8%	12.4%		3.9%	
DYS481	3	8.7%	37.8%		5.5%	
DYS549	4	0.8%	14.3%		4.8%	
DYS533	4	0.8%	12.0%		3.6%	
DYS438	5		5.2%			
DYS437	4		8.5%			
DYS570	4	2.9%	15.9%		3.6%	
DYS635	4	3.4%	18.7%		7.3%	
DYS390	4	0.7%	13.4%		2.0%	
DYS439	4		11.0%		7.2%	
DYS392	3		17.1%		11.6%	
DYS643	5		5.5%			
DYS393	4	2.4%	15.1%		5.4%	
DYS458	4	3.6%	17.1%		2.7%	
DYS385	4	3.3%	20.1%		5.7%	
DYS456	4	1.4%	16.3%		5.8%	
YGATAH4	4		12.3%		2.6%	

c. A stutter threshold of 15.8% will be applied for forward stutter - two repeats (n+8) at DYS385.

3. **Off-scale data:** Analyzed peak heights above the optimal range (>30,000 RFU) may be "off-scale" in the raw data, meaning that the CCD camera may be saturated. As a result, the analyzed peak may be assigned a lower value due to smoothing and baselining functions. This can

allow the relative percent stutter for an off-scale peak to appear inordinately high and cause baseline noise to be called above the analytical threshold. If the stutter peak is greater than the established cut-off and the analyzed primary peak is nearing saturation and/or has been labeled with an off-scale flag, the analyst should interpret the results with caution. Mixture samples with off-scale data should not be used when determining minor contributors to a mixture. The amplified product may be diluted and re-injected to help resolve this issue.

4. **Shoulder**: Shoulder peaks are peaks approximately 1-4 base pair (bp) smaller or larger than main alleles. Shoulder peaks can be recognized by their shape; they do not have the shape of an actual peak, rather they are continuous with the primary peak. As a result of poor resolution, a stutter peak may be elevated if it falls within the raised shoulder of a tailing peak. This can lead to an accentuated stutter peak height with ratios above the established cut-off. A loss in resolution defined by broad peaks could also suggest the capillary needs to be replaced.

5. **Pull-up:** The forming of a false peak in a certain dye caused by over-saturation of a true peak in another dye when its fluorescence nears CCD camera saturation. As a result, this phenomenon termed "pull-up" results in small artifact peaks that appear in other colors under the true peak. Pull-up follows a regular order among the dye colors and is detected as a small peak with the same sizing as the over saturated peak.

    a. Spectral overlap between dyes is normally corrected by the spectral calibration. Pull-up results when the spectral calibration cannot correct this spectral overlap due to oversaturation of the CCD camera by greater-than-optimal amounts of fluorescence. To distinguish pull-up peaks: the base pair size should be the same or very close in size to the true peak and the pull-up peak. If a pull-up peak is above the minimum peak height detection threshold, it will be sized at the same size (or close to the same size) as the true peak. Pull-up can occur as a result of the following:

        i. Application of a sub-optimal spectral calibration can cause pull-up. If necessary, a new spectral calibration may need to be run.

        ii. Amplification using excessive input DNA can lead to off-scale peaks (see above). The spectral calibration may not perform properly with off-scale data. The amplified product can be diluted and re-injected to help resolve this issue.

6. **Artifacts Arising from Room Temperature Fluctuations:** Significant room temperature changes during the course of an entire run may cause sample migration differences that result in significant sizing variations between the peaks of the allelic ladder and the samples. Sample peaks differing by more than 0.5 bp from bins may result in off-ladder allele designations during GeneMapper ID-X analysis. This may be alleviated by analyzing with a different injection of the allelic ladder that more closely represents the migration of the sample(s). Multiple allelic ladders are typically injected throughout the course of a run in order to compensate for the difference in sample migration. If necessary, the sample(s) and the allelic ladder may be re-injected until a match in migration is found.

7. **Dye Blobs or Dye Artifacts:** Dye blobs are non-allelic peaks thought to be caused by fluorescent dye molecules that have detached from the primer. Dye blobs can exist in all of the fluorescent dye colors. They are typically distinguishable from allelic peaks in an electropherogram by their broad irregular shaped morphology. Dye blobs are typically reproducible between injections, but may be resolved with different reagents/chemistry. Once determined to be an artifact, edit it as such, or apply a higher analysis threshold to remove the artifact.

8. **Spikes**: Spikes can be the result of electrical fluctuations during the electrophoresis process, due to the presence of crystal formations in the polymer (POP-4), or due to air bubbles traveling past the laser detector window. Spikes are generally narrow peaks that occur at various heights and are typically represented in multiple dye channels. If the peak has been determined to be an artifact, it can be edited as such, or a higher analysis parameter can be applied to the data to remove the artifact. Spikes are typically not reproducible and re-injecting the sample should resolve the suspected spike artifact.

    a. GeneMapper ID-X may automatically label a spike artifact as "**spike**" with a pink border on the electropherogram. To confirm the spike:

        i. Select **Peak Raw Data** from the drop-down menu.

        ii. Review the raw data and peak morphology to confirm that the selected peak is a spike.

9. **Elevated Baseline fluctuation:** Fluorescent background noise is an artifact of the electrophoresis process. Normal variation in the baseline can be seen at very low relative fluorescent levels. Background fluorescence is generally below the analytical threshold, however, occasional raised baselines or baseline noise labeled above the analytical threshold can be observed. If the peak has been determined to be an artifact, edit it as such, or apply a higher analysis parameter to correct for the elevated background noise. Raised baselines are typically not reproducible between injections, thus the sample should be re-injected to assist in interpreting the data. Elevated baselines may be indicative of an improperly functioning spectral. The analyst may choose to run a new spectral calibration or dilute and re-inject the sample to help resolve this issue.

10. **Poor Injections:** The genetic analyzer applies a voltage to the DNA sample to draw it into the capillary. The efficacy of the injection can be affected by the levels of salt in a sample. Salt ions compete with DNA molecules, causing less DNA from a sample to be preferentially injected into the capillary. As a result, different injections of the same sample can vary in signal intensities. Poor capillary and electrode alignment as well as bubbles in the sample tube or pump block can also cause poor injections. Capillaries must not be allowed to dry out. Polymer crystals forming around the capillary opening can form a physical obstruction resulting in poor or no current. A failing capillary may also display symptoms of a poor injection, such as broad peaks.

11. Several DNA-Dependent artifacts and DNA-Independent artifact peaks may be observed with the PowerPlex Y23 System. They are listed in the table below.

12.

DNA-Dependent Artifacts Observed with the PowerPlex Y23 System	
Dye	**Artifact**
Fluorescein	DYS448 n-9 to n-15
	DYS19 n-2; n+2
JOE	163 bases
	187 bases
	253 bases
	272 bases
TMR	159 bases
	428 bases
	441 bases
	201 bases
CXR	201 bases
DNA-Independent Artifacts Observed with PowerPlex Y23	
Fluorescein	61-65 bases
	58-63 bases
	136-144 bases
JOE	136-144 bases

13. **Editing Artifacts**

a. To label a peak as an artifact, click on the peak label, then right click and select **Rename Allele Label** and the **Custom Artifact Label.** Complete the custom artifact label dialog box using the appropriate abbreviation from the table below, click **OK.**

i. In the Reason(s) For Change dialog box, enter a reason for the edit, using the abbreviations below then click **OK.** The reason typed into this box will appear on the electropherogram. The marker header will turn grey.

ii.

Acceptable Abbreviations for Editing Artifacts	
Abbreviation	**Definition**
BL	Noisy Baseline
PU	Pull-Up
OL	Off Ladder
OMR	Outside Marker Range
OS	Off Scale/Saturation
NR	Data Not Reported
NT	Not Tested
INA	Incomplete Nucleotide Addition
N +/- #	Stutter
SPK	Spike
DB	Dye Blob
SD	Shoulder
EB	Elevated Baseline
ART	Artifact

M. **Data for Notes**

1. Duplicate sample files can be deleted from the GeneMapper ID-X project but all collection files are maintained electronically in the run folder. Printouts of the GeneMapper ID-X electropherograms for all samples being reported as well as corresponding substrate controls (if applicable) are to be included in the case packet. Printouts of the amplification positive and negative controls, QC sample, reagent blanks, allelic ladders and WEN ILS standards are not necessary for the case packet. These will be reviewed electronically during technical review.

2. Multiple amplification and/or injections: All raw data files are kept in the run folder including data not used for analysis or interpretation. In the event that a sample has undergone multiple amplifications or injections, the analyst will use the result with the most genetic information for comparison and statistical calculations. The sample used for interpretation must be printed out for the case file. Creation of a composite profile will not be done.

N. **Saving the Project**

1. The GeneMapper ID-X project must be saved prior to exporting. To save the project, select **File>Save Project As** and use the naming convention mentioned previously. If the project is closed prior to saving, GeneMapper ID-X will automatically prompt with, “Do you want to save changes?”Click "**Yes.**"

O. **Exporting the Project**

1. After analysis is complete, export the project by opening **Tools>GeneMapper Manager**, select the project to export and click the Export button. Export the project to its corresponding case folder within the appropriate Run Folder on the laboratory's internal network drive. This is typically done after technical review.

P. **Creating the Data Summary Table**

1. Refer to the instructions contained in the Excel workbook, "Y23 Summary."

Q. **Documenting Results on the Summary Data Sheet**

1. The Summary Data Sheet will contain, at a minimum, the analyzed DNA results from all references and evidence samples. These results will be interpreted, and from the interpretation, a conclusion will be drawn, when applicable.

2. One sample row will contain the raw data. Another sample row should be created when the analyst is able to interpret a major or minor contributor's profile.

3. An asterisk (*) indicates that DYS385 contains an allele below the stochastic threshold of **1100 RFU**. Alleles below the stochastic threshold (1100 RFU), but above the analytical threshold (140 RFU for the red dye) will be considered stochastic and an asterisk will be placed with the allele on the data summary sheet. Alleles that are slightly over the stochastic threshold could have drop out, therefore, caution is needed for those alleles nearing the stochastic threshold. If DYS385 contains a single allele below the stochastic threshold, the locus will not be included in the statistical analysis.

4. Other symbols may be used on the Summary Data Sheet. If one is used, it should include a brief annotation defining it.

5. An analyst may be unable to determine if a peak is an allele or an artifact (e.g., electronic noise, dye blob, spike, stutter, pull-up). The analyst may label this peak a "possible allele" and document it on the Summary Data Sheet as "poss" followed by the allele designation. An explanation in the case notes must be given that describes why the allele is inconclusive.

II. Interpretation of Y-STR Data

A. Introduction

1. The interpretation of results is a matter of professional judgment and expertise. Not every situation can be covered by a pre-set rule nor is it reasonable to expect competent analysts to always be in full agreement with the interpretation of every case. However, it is the goal of the laboratory to develop criteria, based on validation studies, users' manuals, literature references, and casework experience to provide a framework for objective interpretation of results that all analysts can follow. As technology progresses and the laboratory's experience evolves with it, these interpretation guidelines will continue to evolve.

2. The purpose of these guidelines is to establish an outline to ensure interpretations are made as objectively and consistently as possible from analyst to analyst and to ensure reported conclusions are scientifically supported by the analytical data.

3. The Biology Unit's Interpretation Guidelines are patterned after the SWGDAM Interpretation Guidelines for Y-Chromosome STR Testing (2014).

B. Thresholds used for Data Analysis and Interpretation

1. **Analytical Threshold (AT):** The minimum height requirement at and above which peaks can be reliably distinguished from background noise. Based on validation data, the minimum peak height threshold is **140 RFU for the blue, green, orange, and red dyes and 210 for the yellow dye.** While peaks can be observed below the analytical threshold and may indicate the presence of a true allele, peaks below these levels will not be registered as alleles for reporting purposes.

2. **Stochastic Threshold:** The stochastic threshold (ST) is the peak height above which it is reasonable to assume that dropout of a sister allele of a heterozygote pair has not occurred.

   a. The stochastic threshold is not applicable to single copy Y-STR loci and therefore will only be used in the interpretation of alleles detected at DYS385. Based on validation data, the stochastic threshold is **1100 RFU**.

   b. Low template amplifications may result in drop-out of a duplicated allele at a Y-STR locus that is typically single-copy. While duplications have been observed in single-copy Y-STR loci, they are rare. In view of this, a reasonable profile frequency estimate will generally be obtained by searching the database using the observed allele. Accounting for an undetected second allele would not result in a practical difference in probability.

3. **Peak Height Ratios**

   a. Peak height ratios (PHR) are calculated by dividing the peak height (in RFUs) of the lower RFU allele by the peak height of the higher RFU allele, and then multiplying by 100 to express the PHR as a percentage.

   b. If two alleles are detected at locus DYS385, the peak height ratio between the two alleles should be ≥60% for samples 4000 RFU and higher and ≥30% for peaks between 1100 RFU and 3999 RFU. However, lower peak height ratio imbalance may be observed in samples with low template amount, degraded DNA or in the presence of PCR inhibitors.

   c. Peak height ratio's will also be used to determine major versus minor alleles in a Y-STR mixture. See mixture interpretation section below.

4. **Steps of Y-STR Data Interpretation**

   a. The interpretation of DNA data is considered a combination of qualitative and quantitative assessment. An analyst should note all analysis and interpretation observations within the case notes. This can be done on the electropherogram, a mixture worksheet, or a separate note page. Mixture deconvolutions require documentation of all assumptions used, including but not limited to the assumed number of contributors, any known contributors, and assumptions regarding those contributors, where applicable. This documentation must be included in the report.

   b. Interpretation of the evidence samples must be performed prior to any comparison to known haplotypes.

   c. **Step 1: Characterize the quality of the amplification**

      i. **Inhibition** is when a substance is present in the DNA sample that affects the amplification reaction. An excessive amount of female DNA (Female to Male ratio >2000:1) in a sample may inhibit Y-STR amplification. An increased amount of male DNA template may result in successful amplification.

      ii. **Degradation** is when the DNA molecule has been broken into small pieces due to environmental insult or other factors. This results in a gradual loss of signal affecting the high molecular weight loci first and is often observed as a downward ski slope pattern. Degraded DNA can result in partial DNA profiles or no DNA results because the DNA fragments could not be amplified.

      iii. **Differential Degradation** is where contributors to a DNA mixture possess different degrees of degradation. This is of particular importance with mixture interpretation where different contributions to a DNA mixture may have different levels of degradation; this could have a significant impact on interpreting mixture ratios across the profile depending on the severity of the disproportionate degradation.

      iv. When evaluating any DNA data, it is dependent on the observations of the quality and quantity of the data.

         1. **Quantity:** Evaluate whether the data in the sample is detected at low or at optimal RFU levels. The overall quantity of DNA in the sample will have an effect on the overall allele height intensities.

2. **Quality:** Evaluate those loci for which quality issues are suspected and where drop out of alleles due to degradation, inhibition, or stochastic affects is possible.

v. When evaluating the overall quality and quantity of the sample, the analyst should consider whether the DNA data across all typeable loci is detected at a level where the number of contributors can be confidently assumed and whether there is data at a sufficient number of loci to clearly assess the number of contributors.

vi. Should the DNA quality/quantity objectively limit determining or assuming the number of contributors in the sample, the DNA results will be deemed insufficient for further interpretation and no conclusions will be offered.

vii. If the quality of the data allows the number of contributors to be determined or assumed, proceed to step 2. In some instances when the number of contributors can be assumed, but the sample contains loci affected by unresolved quality issues, those loci may not be considered for interpretation and comparison.

d. **Step 2: Determining whether the sample is single source or a mixture**

i. All DNA data falls into two categories: single source or mixture. To assess the number of contributors, all alleles above the analytical threshold will be used. Peaks below the analytical threshold may be observed and may aid in determining if a sample is single source or a mixture.

ii. Single Source Profiles

1. When DNA data represented in a full profile contains no more than one allele at the single copy loci and no more than two alleles at the multi-copy locus, it is highly probable the DNA results are attributable to a single contributor. Exceptions to the one (or two) allele maximum per locus rule have been documented, as persons with duplications, or primer binding site variations.

2. Any sample that exhibits less than a complete profile is considered a partial profile. Partial profiles can result from degraded or inhibited samples or samples originating from low quantity. A partial profile contains less genetic information for assessing the potential number of contributors in the sample; therefore, caution is needed when determining whether the observed DNA originated from a single contributor. Partial profiles, while expressing less genetic information than a full profile, may still provide useful information for purposes of inclusion and exclusion.

3. The minimum number of loci for inclusion/exclusions is 15 loci.

4. In single source profiles with an allele below the stochastic threshold (1100 RFU) at DYS385 the possibility of allelic dropout must be considered and this locus considered partial.

iii. Mixture Profiles:

1. Evaluating the number of contributors in a mixture entails considering the number of alleles at all loci, the peak height ratio of alleles at DYS385, and the presence of peaks in stutter positions that are significantly higher than the stutter threshold. Generally a sample is considered to be a mixture of more than one individual if two or more alleles are present at two or more single-copy loci, and/or peak height ratios fall outside of the expected ranges at the multi-copy locus.

e. **Step 3: Determine the minimum number of contributors in a mixture**

i. The minimum number of contributors can typically be estimated based on the single-copy locus with the greatest number of alleles. A mixture of two males is expected to contain no more than two alleles per locus (up to four alleles at DYS385). A mixture of three males is expected to contain no more than three alleles per locus (up to six alleles at DYS385).

ii. Barring mutation, all males within a paternal bloodline will have the same Y-STR profile and therefore the actual number of males in a mixture will not be able to be determined when relatives may be contained within a mixture.

f. **Step 4: Consider and factually describe known information from which reasonable inferences can be assumed about the sample.**

i. **Intimate Samples**: An intimate sample is any sample where there is a reasonable expectation that an individual's DNA would be present. These include samples that originate directly from an individual's body (such as fingernails, hair, body orifice or body swabs), as well as clothing belonging to/removed from an individual. An analyst can make the assumption that an individual's DNA may be present on their intimate sample. This assumption must be stated in the case notes.

ii. Once the assumed person is determined to be present in the mixture, the individual’s contribution to the mixture can be accounted for and used to deduce the profile of the remaining contributor in the mixture.

g. **Step 5: Characterize the DNA contribution ratio of each contributor in the mixture, if possible.**

i. Mixtures of Two Contributors

1. A ratio of the major contributor to the minor contributor should be calculated for the loci where allele sharing between contributors is not occurring. A minimum mixture ratio of 3:1 should be seen between contributors to determine if the profile contains a single major contributor (distinguishable mixture).

2. Major peaks should be at a minimum of 1100 RFUs to be considered for the interpretation of a major contributor.

3. When stutter may be significantly contributing to the height of a potential minor allele, the maximum expected stutter percentage can be subtracted out of the height of the peak before calculating the mixture ratio.

4. Application of Peak Height Ratios to determine major contributor:

1. *Single-copy loci:*

1. The peak height ratio must be ≤45% between the major and minor allele, when two alleles are present and the major contributor is greater than 4000 RFU, and ≤30% between the major and minor allele when the major allele is less than 4000 RFU.

2. *Multi-copy loci*

1. For four alleles and 3 alleles (2 large, 1 small): The two larger peaks must be at least 1100 RFU and the peak height ratio must be ≤ 45% between the major and minor alleles and > 70% between the two major contributor alleles.
2. For three alleles (1 large, 2 small): The larger allele must be at least 2200 RFU and the combined height of the two smaller alleles must be ≤ 45% of the height of the larger allele.
3. For two alleles: The greatest imbalance observed during validation was the height of one allele being 32% of the height of the second allele from the same contributor. Therefore, if the height of the the smaller allele is no greater than 30% of the height of the larger allele, and the larger allele is greater than or equal to 1100 RFU, the larger allele may be attributed to the major contributor. If both peaks are greater than or equal to 1100 RFU and have a peak height ratio > 70%, then both peaks can be attributed to the major contributor.
4. For a single allele: If only one allele is present and it is at least than 1100 RFU, this allele can be attributed to the major contributor.

3. A mixture profile must have a minimum of 15 loci demonstrating a major contributor to be classified as having a major single source contributor. If not, the mixture will be considered indistinguishable.
4. Minor contributors: It may be difficult to discern minor alleles from stutter and should be interpreted with caution.
    1. No inclusions will be rendered for the minor contributor to a mixture unless deconvolution of the mixture shows an interpretable minor profile (alleles distinguishable from the major contributor) at 15 loci.
    2. For minor alleles in stutter positions, the stutter threshold value will be subtracted from the peak. If the peak is still above the analytical threshold after this subtraction the peak in the stutter position may be considered a minor contributor.

ii. Two Person Mixtures with indistinguishable contributors:

1. In some mixed samples, major or minor contributors may not be able to be deduced due to similar contributions of DNA. These Y-STR mixtures may be used for exclusionary purposes when allelic dropout is not likely.

iii. Mixtures of Three or More Contributors

1. Y-STR mixtures that have a minimum of three or more contributors will not be interpreted. These profiles will be deemed uninterpretable/inconclusive due to the complexity of the data and no inclusions/exclusions will be made or statistical calculations generated.

h. **Step 7: Comparison with Known Samples and Conclusions:**

i. The following conclusions are used to address comparisons between casework questioned samples and reference samples:

ii. **Exclusion (elimination):** A known reference sample will be reported as "excluded" when a sample has one or more non-matching alleles when compared to the reference haplotype.

iii. **Inclusion (match):** A known reference sample will be reported as "included" when the questioned sample haplotype matches across all interpreted loci when compared to the reference haplotype. At least 15 loci must be eligible for statistical calculations to state an inclusion.

iv. **Inconclusive:** A conclusion of "inconclusive" is reported in situations when a sample may contain a partial haplotype (less than 15 interpretable loci), for example, as a result of allelic dropout, stochastic effects, degradation, or a low amount of template DNA, when the number of contributors cannot be determined, or when the mixture is too complex (more than two males).

v. **No results**: A conclusion of "no result" is reported when no amplified DNA has been detected above the analytical threshold at any locus.

i. **Step 8: Statistical Analysis**

i. Once a questioned sample is compared to a known reference and an inclusion is made, a frequency estimation of the haplotype must be determined. All inclusions of a probative nature will have a statistical interpretation provided. Statistical calculations are not required to support the inclusion of an individual on his or her own intimate sample.

ii. Statistical calculations shall be performed on single source profiles and deduced major/minor contributors with a minimum of 15 loci.

iii. All Y-STR loci analyzed in the Y23 kit are physically linked on the Y-chromosome, therefore the entire Y-chromosome haplotype must be treated as a single locus. Haplotype frequencies are estimated using the counting method.

iv. The counting method involves searching a given haplotype against a population database to determine the number of times the haplotype is observed in that database. The frequency of the haplotype in the database is then estimated by dividing the count by the number of haplotypes searched.

v. A Y-STR haplotype frequency estimation is calculated from the observed haplotype frequency estimate by attaching a 95% confidence interval to capture the effect of database size.

vi. Haplotype Frequency (p) =x/N where x is the number of times the haplotype is observed in a database containing N number of haplotypes.

1. If the haplotype has not been previously observed in the database, the formula for calculating the upper 95% confidence limit is: $1-(0.05)^{1/n}$ where n is the database size.
2. If the haplotype is observed in the database, the formula used for calculating the 95% confidence limit is that of an exact confidence interval, using the formula as described by Clopper and Pearson.

vii. The laboratory will use the YHRD database (http://YHRD.org) or DOJ's Y-Mix Filter 4.2 to determine haplotype frequencies.

viii. Entry of the haplotype profile into the database must be performed per the user directions provided on the YHRD Database website or in the Y-Mix Filter workbook, whichever is used. Both statistical tools calculate the haplotype frequency and profile probability estimates using the 95% confidence interval.

ix. The search must include all populations and results will be reported for Caucasians, African Americans, Hispanics, and Asians.

x. The result for the search will be printed out for the case file and saved on the laboratory's internal network drive in the case folder contained within the 3500 run folder.

xi. The statistical calculations must be reported to the same number of significant figures as displayed on the results sheet.

xii. **Reduced Locus Searches**

1. Because there are more Y-STR haplotypes from Yfiler in the databases, haplotype searches should be conducted using the Y23 loci and the Yfiler loci. This typically avoids the situation where more loci yield a less discriminating frequency estimate because there are fewer database entries with the more discriminating set.

2. Regardless of the number or selection of loci searched, the most discriminating search is generally the one which gave the lowest proportion of matching haplotypes per number of profiles compared.

3. When performing reduced locus searches, any “matches” that would have been non-matches had more of the evidence profile been searched should be excluded. The comparisons should be included in the case file and the number of matching haplotypes should be adjusted accordingly. The Y-Mix Filter, which contains the US haplotypes from the YHRD database R60, is typically used to perform reduced locus searches because the database profiles can be viewed and easily reduced manually.

4. The upper 95% confidence interval must be manually calculated when a search is performed at a reduced number of loci and the number of matching haplotypes has been reduced due to non-matching alleles at the additional (non-searched) loci. The adjusted confidence interval should be calculated using the Excel formula =BETAINV(0.95,x+1,N-x); where 0.95 is the confidence interval upper bound, x is the number of matching haplotypes, and N is the total number of haplotypes compared.

C. **Reporting**

1. **Single Source Profiles**

a. **Match:** The result should be reported as: **"**The single source Y-STR/partial Y-STR profile obtained from (the evidence item description and #) matches/is consistent with the Y-STR profile from (known sample and item #)" or similar.

b. **Exclusion:** The result should be reported as: "The Y-STR profile obtained from (Name) is excluded as the source of the Y-STR profile obtained from (the evidence item description and #)" or similar.

2. **Mixtures**

a. The result should be reported as: "A Y-STR mixture of (# of contributors) males was obtained from (the evidence item description and #). The Y-STR profile for the major/minor contributor obtained from the mixture matches the profile of (Name) *or* The Y-STR profile obtained from (Name) is excluded as the source of the major/minor Y-STR profile obtained from the mixture" or similar.

3. **Mixture with intimate contributor**

a. The result should be reported as: "A Y-STR mixture of (# of contributors) males was obtained from (the evidence item description and #). (Name) is an assumed contributor due to the intimate nature of the sample. The Y-STR profile obtained for the major/minor contributor obtained from the mixture matches the profile of (Name) *or* The Y-STR profile obtained from (Name) is excluded as the source of the major/minor Y-STR profile obtained from the mixture" or similar.

4. **Indistinguishable mixture for exclusionary purposes only**

a. The result should be reported as: "An indistinguishable mixture of two contributors/at least two contributors was obtained from (the evidence item description and #). (Name) appears to be excluded as a contributor to the mixture. However, due to the nature of the data, the results for this Y-STR mixture are unsuitable for inclusions" or similar.

5. **Inconclusive**

a. The result should be reported as: "A Y-STR mixture of at least (# of contributors) males was obtained from (the evidence item description and #). The Y-STR profile is inconclusive due to the complexity of the data/low level/number of contributors" or similar.

6. **No Result**

a. The result should be reported as "No Y-STR DNA results were obtained" or similar.

7. **Statistical Statements**

a. May be reported as: Therefore, (name) and any male paternal relatives are included as potential DNA donors to this sample. Using the YHRD Database, this Y-STR profile has been observed:

i. X in n African American males
X in n Caucasian males
X in n Hispanic males
X in n Asian males

ii. Applying the 95% upper confidence interval results in approximately:

1 in every __ African American males
1 in every __ Caucasian males
1 in every __ Hispanic males
1 in every __ Asian males

iii. Where X is the number of times the profile was seen in the database and n is the number of profiles in the database

III. References:

A. SWGDAM Interpretation Guidelines for Y-Chromosome STR Typing (2014)

B. Promega PowerPlex Y23 System Technical Manual (4/17)

C. Clopper, C. and Pearson, E. The use of confidence or fiducial limits illustrated in the case of binomial, Biometrika (1934) 26:404-413.

D. U.S. Y-STR Database

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/12/2019	**NUMBER:** BIO.2.DNA.10 - GeneMapper ID Analysis of Short Tandem Repeats
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**ANAB:** **DNA Quality Assurance Standards:**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** GeneMapper ID-X Analysis of Short Tandem Repeats	

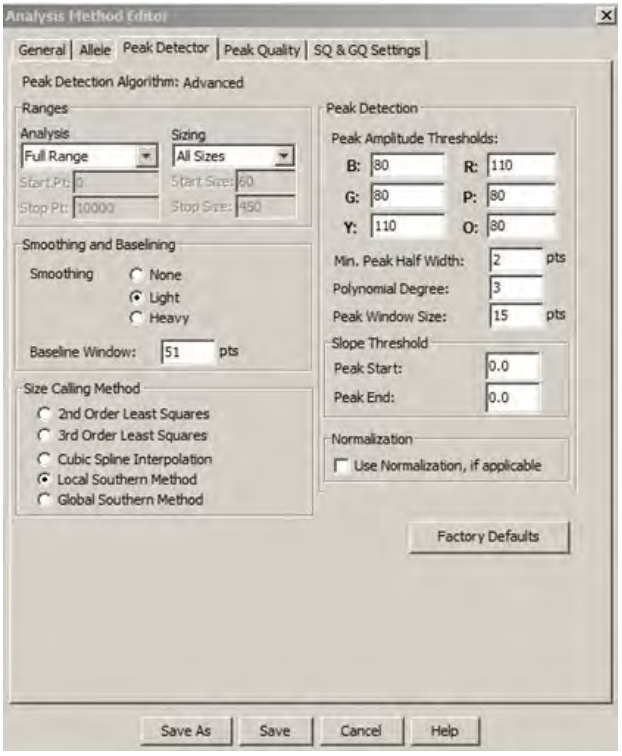
I. Procedure for the use of GeneMapper ID-X software to analyze PowerPlex Fusion 6C Data

A. Materials:

1. GeneMapper ID-X v 1.5 software

B. Analyzing Data Files using GeneMapper ID-X v 1.5 Software

1. **NOTE**: A separate GeneMapper ID-X project will be created for samples interpreted using STRmix. See BIO.2.DNA.13 section "**Creating Tables in GeneMapper ID-X v1.5 to export into STRmix v2.6**" for instructions on creating those projects.
2. GeneMapper ID-X (GMIDX) software is used to size DNA fragments and assign genotypes using one or more allelic ladder(s) and an internal lane standard.
3. The data collection files must be retained on the 3500 computer until archived in the following location: C: /AppliedBiosystems/Runs/ {Unique Run Folder}.
4. Open GeneMapper ID-X and log into the software. The username is gmidx followed by your initials, then enter the password. **NOTE**: The computer with the Full Installation must be on to access GeneMapper ID-X from a computer with a Client Installation.
5. Create a new project by selecting **Add Samples to Project** under the **Edit** menu, or click 
6. In the **Files** tab of the **Add Samples to Project** window, locate the correct sample files and click **Add to List**. The run folder(s) should appear in the column on the right under **Samples to Add**. When done adding samples files, click **Add** on the bottom right of the window.
7. **View Raw Data and Sample Information:** Click on the run folder on the left and expand the file to view the list of sample files within the folder. To view the sample info, click on a sample file. To view the raw data, click on a sample file and then click the **Raw Data** tab on the right. Check the raw data of each sample file to make sure the samples ran correctly on the genetic analyzer, including resolution, spikes, and baseline. To view the electrophoresis, power, and temperature (EPT) data, click on the **EPT Data** tab. When finished viewing, return to the main window by clicking on the run folder or the project icon.
8. Begin the analysis in the Project window using the "**CCC Fusion**" Table Settings within the Samples tab of GeneMapperID-X. Remove sample files that are not needed by selecting **Delete from Project** under the **Edit** menu. Note: this move cannot be undone. Make sure that all "**Sample Types**" are set correctly. Allelic ladders should be set to **Allelic Ladder**, 2800M control should be set to **Positive Control,** and the negative control and reagent blanks should be set to **Negative Control**. All others should be assigned as a **Sample**.
9. **In the Project Window, apply analysis settings:**
   a. Under the **Analysis Method** column, select "**PowerPlex Fusion 6C**" or **"FUSION XXXX"** based on the analysis start point being used.
   b. Click the **Analysis Method** column header to select the column. Under the **Edit** menu, select **Fill Down** (or use keyboard shortcut "Ctrl+D").



c. Different analysis methods/parameters may be used within a project. Variations can occur within a run that may require the use of different analysis start points. Samples can have varying quality issues, such as low level DNA, off-scale DNA and/or may contain artifacts. The analyst may use an RFU level that is appropriate for analysis of the data. The analysis RFU threshold selected can be any value ranging between the **analytical threshold (80/110RFU)** and the s**tochastic threshold (600 RFU),** but is typically the analytical threshold.

d. Under the **Panel** column, select "**PowerPlex_Fusion_6C_Panels_IDX_v1.1**". Click the **Panel** column header to select the column. Under the **Edit** menu, select **Fill Down** (or use keyboard shortcut "Ctrl+D").

e. Under the **Size Standard** column, select "**WEN_ILS_500_CS**". Click the **Size Standard** column header to select the column. Under the **Edit** menu, select **Fill Down** (or use keyboard shortcut "Ctrl+D").

10. Click the **Analyze button**  . When prompted, name and save the project using the convention: **GMX XX-XXXXX-X_AAA**, where X refers to the Laboratory Case Number and AAA refers to the analyst's initials. Save the GMX project to the Security Group. The software will begin data analysis.

C. **Viewing Data**

1. When analysis is completed, the software identifies any conditions that may prevent analysis or cause unexpected results. It sets a flag for the **Analysis Requirements Not Met** (ARNM) **Process Quality Value** (PQV) and displays the **Analysis Requirements Summary** (ARS) if a sample in the project does not meet one or more analysis requirement(s).

2. There are three tabs available from the main screen after samples are analyzed. They are as follows: **Samples, Analysis Summary and Genotypes.**

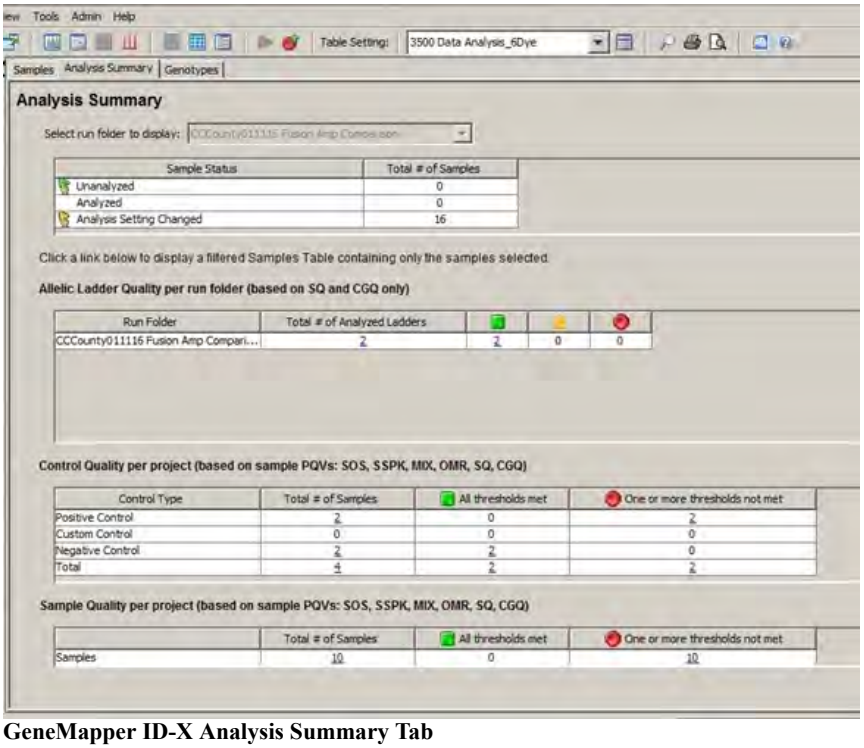
3. **The Analysis Summary tab:**

a. Provides a summary of the analysis status for all or a subset of samples in a project.

b. Displays an overview of allelic ladder, control, and sample quality.

c. Visually separates passing samples from samples that do not meet one or more quality thresholds.

d. Allelic ladders, control samples, and samples where all thresholds are met will be listed in the "**All thresholds met**" column. Samples that have not met all quality thresholds will be listed in the "**One or more thresholds not met**" column.



GeneMapper ID-X Analysis Summary Tab

e. The samples can be displayed in each of these columns by clicking on the blue hyperlinked number within the column.

f. The hyperlink will open up a **filtered samples** tab. Each sample in the table will have sample-level **Process Quality Value (PQV) flags** as shown below:



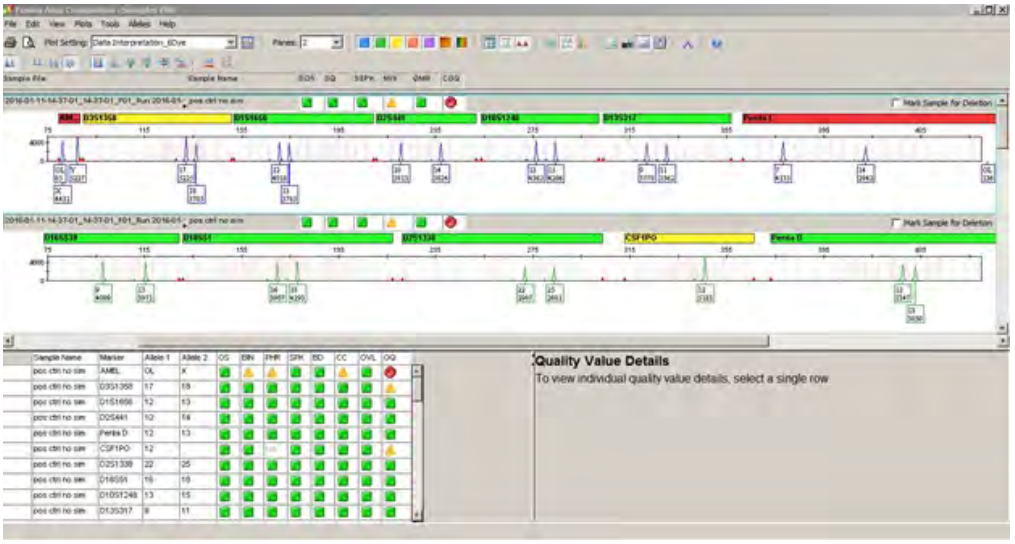
Acronym	Full Name	Description
SOS	Sample Off-Scale	Indicates if any flourescence signal within the analysis renage exceeds the detection threshold of the instrument
SQ	Sizing Quality	Evaluates the similarity between the fragment pattern for the size standard dye specified in the size standard definition and the actual distrubution of size standard peaks in the sample.
SSPK	Spike	Indicates if spikes are detected within or between two defined marker size ranges.
MIX	Possible Mixed Source	Indicates a potential mixed-source sample
OMR	Outside Marker Range	Inidcates if labeled peaks are detected between two marker size ranges defined in the panel.
CGQ	Composite Genotyping Quality	Indicates overall sample/allelic ladder quality. Considers the individual marker GQ values

4. Select a sample from the filtered samples table, then click (Display Plots). The plot for the selected sample will open in a Samples Plot window.

5. Select **Data Interpretation_6Dye** from the Plot Settings drop-down list.

6. Click (No Table) in the Samples plot toolbar only view the electropherograms.

7. Click to display the electropherogram, marker-level PQV flags and the **Quality Value Details** (QVD) pane.

8. 

9. Each marker header will be either green, yellow or red. A yellow or red marker header indicates that the marker has a **marker-level Process Quality Value (PQV)** flag. At the bottom left of the sample plot is a table of the marker-level Process Quality Value flags, as shown below. The details of the specific marker-level PQV flags will be displayed to the bottom right of the sample plot for the specific marker selected.

10.

Sample Name	Marker	Allele 1	Allele 2	OS	BIN	PHR	SPK	BD	CC	OVL	GQ
pos ctrl no sim	AMEL	OL	X								
pos ctrl no sim	D3S1358	17	18								
pos ctrl no sim	D1S1656	12	13								
pos ctrl no sim	D2S441	10	14								
pos ctrl no sim	Penta D	12	13								
pos ctrl no sim	CSF1PO	12				NA					
pos ctrl no sim	D2S1338	22	25								
pos ctrl no sim	D18S51	16	18								
pos ctrl no sim	D10S1248	13	15								
pos ctrl no sim	D13S317	9	11								

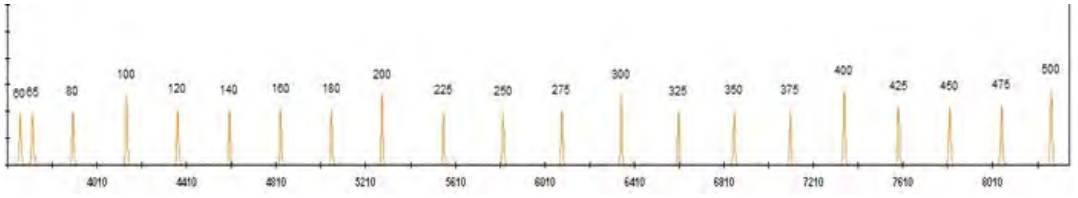
Marker-Level Quality Assessments		
Acronym	**Full Name**	**Description**
OS	Off-Scale	Indicates if any flourescence signal within the marker exceeds the detection threshold of the instrument
BIN	Out of Bin Allele	Indicates if labeled peaks do not fall inside bins. These peaks are labeled with OL
PHR	Peak Height Ratio	Indicates if the peak height ratio between the lowest and highest peak is less than the Min Peak Height Ratio defined in the analysis method
MPH	Max Peak Height	Indicates if any peak heights within the marker size range exceed the Max Peak Height value set in the analysis method
LPH	Low Peak Height	Indicates if any peak heights within the marker size range are below the homozygous and heterzygous min peak heights
AN	Allele Number	Indicates if the software detects no alleles, more than the Max expected alleles, or no X allele detected in amelogenin
BD	Broad Peak	Indicates if the width of any peak exceeds the max peak width as defined in the analysis method
CC	Control Concordance	Indicates if a positive, custom, or negative control produces the expected profile
SPK	Marker Spike	Indicates if spikes are detected within a marker size range
OVL	Overlapping Alleles	Indicates if a labeled peak falls within the size ranges of two neighboring markers

D. **Examining the Sizing Quality (SQ) Results**

1. A yellow or red flag under SQ indicates that the sizing quality is below the passing range specified in the analysis method. To view the size standard for the sample, select the sample in the Samples table and click .

2. In the Size Match Editor check that all the size standard peaks are present and labeled correctly. They should be called above the analytical threshold and have good morphology. The following are the sizes of the internal lane standard fragments: 60, 65, 80, 100, 120, 140, 160, 180, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475 and 500 bases. The fragments should be assigned as shown below.

   WEN ILS 500 Size Standard



E. **Reviewing Allelic Ladders**

1. GeneMapper ID-X has a built in allelic ladder quality assessment, which:
   a. Evaluates allelic ladders before proceeding to sample analysis.
   b. Flags run folders without at least one passing allelic ladder.
   c. Automatically excludes low-quality ladders from analysis and continues analysis with passing ladders.
2. To be considered passing, a ladder must:
   a. Have all ladder alleles specified in the panel detected.
   b. Have a peak height ratio of greater than 50% between adjacent peaks. This eliminates allelic ladders where the stutter peak is called as an allele.
   c. Have no spikes detected above 20% of the highest allele peak in the same dye color.
   d. Have a peak height ratio between the lowest and highest peak that is greater than or equal to 15%.
3. To check the allelic ladders, select the **Analysis Summary** tab in the Project window. Check any low-quality ladders by clicking the link under the column for the flagged allelic ladder samples.
4. Select the ladder sample in the filtered samples table and click (Display Plots). The plot for the selected allelic ladder sample will open in a Samples plot.
5. Select **Data Interpretation_6Dye** from the Plot Settings drop-down list.
6. To investigate why a particular marker failed the allelic ladder quality assessment, click the red or yellow marker header on the plot to display the quality assessment data in the Quality Value Details (QVD) section at the bottom right of the screen.
7. Assess passing allelic ladders and select at least one to use to analyze the samples within the project.
8. After selecting the ladder to use for the project, the other ladders may be deleted from the project, or the Sample Type may be re-assigned as a "**Sample**". Deleting the ladders cannot be undone.
9. The samples will need to be re-analyzed. Click the **green arrow** in the toolbar to re-analyze the samples using the selected ladder.
10. NOTE: Sample migration differences over the course of an entire run may result in differences between a particular sample relative to the allelic ladder selected for data analysis in GeneMapper ID-X. Such differences can result in off-ladder allele (OL) designations during GeneMapper ID-X analysis. This situation can be alleviated by averaging allelic ladder sizes for the analysis of the sample(s). This is automatically done in GeneMapper ID-X if the sample type "**allelic ladder**" is chosen for more than one allelic ladder. This situation may also be alleviated by choosing an allelic ladder for the analysis of the sample(s) that ran closer in time to the sample(s) in question and analyzed as a separate project.

F. **Reviewing Control Samples**

1. Select the **Analysis Summary** tab in the Project window.
2. Manually review the control data by clicking the blue hyperlinks within each column. If a control has met all thresholds and the resulting profile was obtained with no anomalies detected, it will be under the "**All thresholds met**" column.
3. If any samples are flagged under the "**One or more thresholds not met**" column, investigate the quality of that sample by clicking the hyperlink within that column.
4. **Positive Amplification Control and Quality Control Sample**
   a. Positive Amplification Control: The positive amplification control (2800M for the PowerPlex Fusion 6C kit) monitors the success of the amplification process. One positive amplification control is required with each amplification assay.
   b. Quality Control (QC) Sample: A QC sample is a sample, typically blood, that has been previously typed. Although a QC sample is optional, when it is included, it can monitor for each analytical process, specifically verification of the extraction process. A QC sample is typically included when samples are expected to contain low DNA template.
   c. Evaluation of the positive amplification control and QC sample requires that all expected alleles be adequately amplified (homozygous alleles greater than the stochastic threshold of 600 RFU) and correctly typed at all loci.
   d. If either the positive amplification control or QC sample do not exhibit expected results, the analyst should first assess whether a procedural problem exists. If an error is found, the analyst must take the necessary steps to correct the procedural error and re-evaluate the sample set.

e. If no procedural error is found, or if the analyst's corrective measures do not produce expected results in the positive controls, the DNA Technical Leader will be notified of the quality issue, and the DNA Technical Lead will have the discretion to decide if the results will be reported. The Unit Supervisor and DNA Technical Lead will review the corrective action and have the discretion to determine the appropriate course of action. Refer to the Corrective Action Policy BIO.5.QAQC.14.

f. The analyst will document the issue in the case notes. A Level II Quality Incident Report (QIR) form or Corrective Action may be used to document the issue. When the results cannot be reported, it will also be conveyed in the lab report with a brief description of the reason.

5. **Negative Controls:**

a. Two negative controls are required with the amplification of each sample set: a reagent blank and a negative amplification control. Negative controls are designed to test for the unintentional introduction of DNA during the DNA process.

b. Reagent Blank: A reagent blank is a sample containing all the reagents used in the extraction and amplification process, but contains no DNA. The purpose of the reagent blank is to monitor for any possible reagent contamination that might occur at any point in the process, between samples being processed, or from previously amplified product.

c. Negative Amplification Control: The purpose of the negative amplification control is to monitor the success of the amplification by amplifying a sample with no added DNA. This negative control monitors for DNA contamination in the amplification reagents and PCR set-up environment.

d. The laboratory's tolerance level for contamination is one allele above the analytical threshold. If the reagent blank and negative control should yield a single peak above the analytic threshold, the associated sample data is considered acceptable for reporting purposes. If either of the negative controls exhibit more than one DNA peaks above the analytical threshold, the analyst must attempt to identify the cause and document this in the case file. This should be done by including the electropherogram for the negative control.

e. The analyst should evaluate and document whether the contamination is due to a sample switch, sample-to-sample carry-over, from the analyst's own DNA, or due to factors beyond the analyst's control, such as contaminated manufacturer consumables and/or reagents. Note that if there was actual contamination present in the negative amplification control, one would also expect contamination to be detected in the reagent blank. If the amplification kit reagents are found to be contaminated, the samples should be amplified with a new lot, if possible.

f. Identifying the cause of the contamination may require DNA processes to be repeated in order to pin-point where the contamination occurred and to correct the issue, if possible. The analyst may analyze below the standard analytical threshold to aid in troubleshooting the source of the contamination, but this data will not be reported.

g. If a DNA process cannot be repeated because one or more of the associated samples have been consumed, the DNA Technical Leader may permit the reporting of results provided that:

i. The second reagent blank in the sample set (if relevant) demonstrates that the laboratory's reagents are not contaminated, and

ii. The DNA types detected in the negative control are not observed in the sample, or

iii. The typing results in the negative control are significantly lower RFU (at trace levels) than the sample.

viii. All instances of failed negative controls will be documented in the case notes. When the failed negative control results in the results not being able to be reported, it must also documented in the lab report with a brief description of the reason.

6. **Substrate Controls:**

a. When appropriate, a portion of the substrate adjacent to a questioned stain should be sampled to check for human material in the substrate background. The substrate should duplicate the environment of the stain and be close enough to the stain to pick up endogenous DNA contamination, but far enough to avoid undetected portions of the stain. The substrate control is not expected to be negative and should be treated in the same manner as the stain. If the stain is diluted or concentrated, the same must be done equally to the substrate.

b. When interpreting the DNA results, there must be a clear difference in the amount of DNA in the evidence sample when compared to the substrate control in order to conclude that the detected fluid or stain is responsible for the DNA results rather than the background. The taking of a substrate control becomes more deliberate and necessary when the evidence stain is small or diluted. When applying substrate control DNA results to the interpretation of a sample, the analyst should do so with caution and within the context of the associated sample. In some instances, the substrate control may ultimately be treated as a separate sample entirely.

G. **Examining and Evaluating Sample Files**

1. Select the **Analysis Summary** tab in the Project window.

2. Manually review the samples by clicking the blue hyperlinks under each column. If a sample has met all thresholds, it will appear under the "**All thresholds met**" column.

3. If any samples are flagged under the "**One or more thresholds not met**" column, investigate the quality of that sample by clicking the hyperlink within that column.

4. The filtered samples table displays the selected samples. Note the and sample-level PQVs for these samples.

H. **Designation of Alleles and Artifacts**

1. After data has been processed, an analyst examines the peaks that have been called, and based on experience they may or may not edit the calls made by the GeneMapper ID-X software. Decisions to edit a software-designated peak come from an understanding of biological or instrumental artifacts. Any edits will be documented in an analyst's case notes.

2. **Locus Designation**

a. Each STR locus has a set of alleles that span a range of base pair sizes, each with a minimum and maximum base pair size range. The span of alleles at each locus is reflective of the span of alleles in the allelic ladder. Bins are provided by the manufacturer that enable electrophoretic peaks to be designated as STR alleles for each tested locus, consisting of common alleles and known or reported “off-ladder” microvariants, in bins, virtual bins, and also outside the ladder range.

b. Alleles are assigned to a locus by virtue of their size and the locus-specific primer attached to the amplicon. Occasionally an allele may be detected outside of the designated range of expected alleles for a given marker. Evidence of this may be a locus with a tri-allele pattern adjacent to a locus with an apparent homozygous pattern. The errant allele may fall within a bin or fall outside a normal bin and likely would be detected in the upper or lower range of the adjacent locus. Determining the proper locus assignment of the allele may depend on allele intensities and the ability to make allele pairing.

c. A yellow or red PQV flag will be present in the marker-specific PQV box for **OVL** (overlapping alleles). This indicates that a labeled peak falls within the size ranges of two neighboring markers. An attempt should be made to determine which marker the allele should fall into, but sometimes this is not possible. If the proper locus assignment of the allele cannot be determined, the locus or loci may be designated as inconclusive. Alternatively, the sample may be amplified with a different STR kit to help resolve the true locus of the allele. Any yellow or red marker-level flag in the **OVL** box will automatically trigger a flag in the sample-level **OMR** (out of marker range) box.

d. If an allele falls above the largest or below the smallest allele of the allelic ladder or virtual bin at a locus, the allele will be designated as either greater than (>) or less than (<) the respective ladder allele (e.g., 8,>15). When this designation is used, the relative size of the allele should be estimated in order to compare among samples. However, extrapolating an allele designation beyond one repeat unit from the ladder should be avoided.

3. **Allele Designation**

a. Allele designations are assigned to sample peaks by comparison of their base pair size to those obtained from the known alleles in the Allelic Ladder. Numerical allele designations have been assigned in accordance to the recommendations of the International Society of Forensic Genetics (formerly the DNA Commission of the International Society of Forensic Haemogenetics). The GeneMapper ID-X software uses bins, which are specific regions in the electrophoretic space that define the expected sizes for each known allele from an STR locus.

b. Rare alleles may be encountered in casework that are not represented in the allelic ladder. The Genemapper ID-X software will accurately label alleles including those not present in the allelic ladder, such as microvariant alleles containing incomplete repeats that fall within a virtual bin. Other alleles not present in the ladder or that fall outside a bin may be designated "OL" by the Genemapper software. When this occurs, the allele designation needs to be manually calculated. See "d." below.

c. Alleles containing an incomplete repeat motif and falling within the range span of the ladder alleles, are represented by the following convention: the number of complete repeats, followed by a period, and then the number of base pairs within the incomplete repeat. For example, an allele with 18 repeats plus 2 base pairs is designated 18.2.

d. To designate an off-ladder allele such as a microvariant that falls outside an allelic ladder bin or virtual bin, use one of the following methods: 1. Calculate the size difference between two allelic ladder alleles that bracket the OL allele. Divide the difference by the number of basepairs between those ladder alleles. Each increment approximately represents the base pair size for each increment. Add or multiply the number of increments needed to the base pair size of the smallest ladder allele to establish a size range that includes the size of the unknown microvariant. Estimate the base pair size range for the increment(s) by calculating the +/- 0.5 base pair range for the increment(s) and compare the values to the microvariant. 2. The variant allele size calculation method in DNA Box 3.2 in "Advanced Topics in Forensic DNA Typing: Interpretation".

e. The allelic ladders and virtual bins contain many of the incomplete repeats for each marker, but some of the more uncommon micro-variants are not and will be labeled OL (off-ladder) by the Genemapper ID-X software. A yellow or red PQV flag will be present in the marker-specific PQV box for **BIN** if labeled peaks do not fall inside a virtual bin for a given marker. Inject these microvariants at least twice to demonstrate reproducibility of sizing for the variant.

f. **Labeling an OL as an Allele**

i. To label an OL as an allele, click on the peak label, then right click, and select **Rename Allele Label** followed by **Custom Allele Label**.

ii. In the resulting dialog box, enter the allele call and click **OK**.

iii. In the Reason(s) For Change dialog box, enter the reason for the change (e.g., microvariant), and then click **OK**.

iv. Select the marker row with the edit and right click on the box for its GQ PQV.

g. Allele designations for samples intended for CODIS entry must conform to the Combined DNA Index System (CODIS) recommendations.

4. **Evaluation of Artifacts and Non-allelic Peaks:**

a. Artifacts can rise above the analytical threshold and can be observed in any locus, thus it is necessary to identify any potential non-allelic peaks prior to interpretation and comparison of the DNA data. Non-allelic peaks may be the result of the PCR process (amplification driven) or a result of the electrophoresis process (electrophoretic). Non-allelic peaks detected above the analytical threshold will be evaluated and every attempt will be made to identify the type of artifact. The verification of the artifact will be noted in the case file.

b. Amplification artifacts:

i. **Stutter:** A normal amplification artifact seen as a small peak a certain number of repeat units more (e.g., N+4, N+2, etc.) or less (e.g., N-2, N-4, N-8, etc.) than the parent peak, and is a generally reproducible artifact which can be compensated for in analysis of data. The largest stutter peaks observed in all loci are four bases smaller than the primary peak, N-4, with lower amounts of N+4, N-8, N-2, and N+2 occurring at certain loci as well. Stutter is more prominent under extreme overamplification conditions due to excessive amounts of amplified DNA, and may lead to stutter peaks being elevated over the set thresholds.

1. Stutter tends to follow several trends. Alleles with long stretches of the same repeat generally show greater stutter, therefore larger alleles within a locus tend to show greater stutter. Interruptions in the homologous sequence tend to decrease the amount of stutter, thus microvariants with partial repeat structures tend to show less stutter.

2. Stutter peaks are evaluated by examining the ratio of the stutter peak height to the height of the appropriate adjacent allele, and is expressed as a percentage. The height of stutter peaks can vary by locus, and longer alleles within a locus generally have a higher percentage of stutter. Maximum expected percentages of stutter for the PowerPlex Fusion 6C Loci are as follows:

Stutter (reverse) one repeat				
Blue Loci	Green Loci	Yellow Loci	Red loci	Purple Loci
Amel	D16S539	TH01	D8S1179	DYS391
0.0%	13.4%	5.7%	13.0%	10.0%
D3S1358	D18S51	vWA	D12S391	FGA
13.8%	14.6%	14.4%	17.5%	14.4%
D1S1656	D2S1338	D21S11	D19S433	DYS576
15.4%	14.0%	15.0%	12.1%	12.6%
D2S441	CSF1PO	D7S820	SE33	DYS570
11.5%	15.5%	10.7%	19.0%	13.0%
D10S1248	Penta D	D5S818	D22S1045	
13.9%	4.6%	11.0%	18.7%	
D13S317		TPOX		
10.3%		6.2%		
Penta E				
8.5%				

c.

Stutter (forward) one repeat				
Blue Loci	Green Loci	Yellow Loci	Red loci	Purple Loci
Amel	D16S539	TH01	D8S1179	DYS391
0.0%	3.4%	1.5%	3.4%	2.0%
D3S1358	D18S51	vWA	D12S391	FGA
2.8%	2.8%	3.9%	2.7%	3.3%
D1S1656	D2S1338	D21S11	D19S433	DYS576
3.6%	2.2%	2.8%	2.6%	3.4%
D2S441	CSF1PO	D7S820	SE33	DYS570
4.3%	5.3%	1.8%	5.6%	2.4%
D10S1248	Penta D	D5S818	D22S1045	
1.3%	3.7%	3.0%	12.3%	
D13S317		TPOX		
2.5%		1.1%		
Penta E				
1.9%				

d.

Stutter (reverse) N-2	
Locus	% Stutter
D1S1656	3.6%
D19S433	1.4%
SE33	6.6%
FGA	1.2%

e.

Stutter (reverse) two repeats	
Locus	% Stutter
D3S1358	1.9%
D1S1656	2.6%
D10S1248	2.3%
D13S317	2.3%
D18S51	0.8%
D12S391	1.7%
SE33	1.2%
D22S1045	1.4%

i. Additionally, a stutter threshold of 2.1% is set for N+2 stutter at SE33.

ii. Peaks in a stutter position exceeding these values may indicate the presence of a low level contributor, such as in a mixture. Additionally, a true allele may co-locate at a stutter position and may not be detected as a true allele unless it exceeds the stutter threshold value for that locus. These peaks should be considered as possible true allelic peaks if the potential stutter peak height is consistent with or greater than the peak heights observed for the minor contributor (after stutter contribution in the peak has been taken into consideration).

i. **Off-scale data:** Analyzed peak heights above the optimal range may be "off-scale" in the raw data, meaning that the CCD camera may be saturated. As a result, the analyzed peak may be assigned a lower value due to smoothing and baselining functions. This can allow the relative percent stutter for an off-scale peak to appear inordinately high and cause baseline noise to be called above the analytical threshold. If the stutter peak is greater than the established cut-off and the analyzed primary peak is nearing saturation and/or has been labeled with an off-scale flag, the analyst should interpret the results with caution. Mixture samples with off-scale data should not be used when determining low level minor components. The amplified product may be diluted and re-injected to help resolve this issue.

ii. **Shoulder**: Shoulder peaks are peaks approximately 1-4 bp smaller or larger than main alleles. Shoulder peaks can be recognized by their shape; they do not have the shape of an actual peak, rather they are continuous with the main peak. As a result of poor resolution, a stutter peak may be elevated if it falls within the raised shoulder of a tailing peak. This can lead to an accentuated stutter peak height with ratios above the established cut-off. Peaks showing shoulders that are tailing due to poor resolution can be re-injected to help resolve this issue. A loss in resolution defined by broad peaks could also suggest the capillary needs to be replaced.

iii. **Non-template directed minus 'A' nucleotide addition:** This is a split peak or shoulder artifact 1 base pair less than the parent peak and is caused by the incomplete 3' extension of an additional nucleotide beyond the template amplicon by Taq polymerase. Normally this action is remedied by extending the last extension step of the thermocycling program, however, the ability of Taq to add this nucleotide to all amplicon products is dependent on the level of DNA template.

1. Amplification conditions have been set to maximize the non-template addition of a 3´ terminal nucleotide by AmpliTaq Gold DNA polymerase. Failure to attain complete terminal nucleotide addition results in "band splitting", visualized as two peaks one base pair apart. This is most often seen when an excessive amount of DNA is amplified or amplification is performed under sub-optimal PCR conditions. With the exception of microvariants, the presence of peaks differing by one base pair is suggestive of this problem. Extremely over-amplified samples should be re-amplified with less template DNA. Alternatively, for samples anticipated to have higher template DNA, a longer extension time can be added to compensate for the nucleotide "A" addition.

iv. **Pull-up:** The forming of a false peak in a certain color caused by over-saturation of a true peak in another color when its fluorescence nears CCD camera saturation. As a result, this phenomenon termed "pull-up" results in small artifact peaks that appear in other colors under the true peak. Pullup follows a regular order among the dye colors and is detected as a small peak with the same sizing as the over saturated peak.

1. Spectral overlap between the dyes is normally corrected by the spectral calibration. Pullup results when the spectral cannot correct this spectral overlap, due to the over-saturation of the CCD camera by greater-than-optimal amounts of fluorescence. To distinguish pull-up peaks: the base pair size will be the same or very close between the true peak to the pull-up artifact, and the pull-up peak is the "adjacent" color. If a pull-up peak is above the minimum peak height detection threshold, it will be sized at the same size (or close to the same size) as the true peak. Pull-up can occur as a result of the following:

2. Application of a sub-optimal spectral calibration can cause pull-up. If necessary, a new spectral calibration may need to be prepared.

3. Amplification using excess input DNA can lead to off-scale peaks (see above). The spectral calibration may not perform properly with off-scale data. The amplified product can be diluted and re-injected in order to help resolve this issue.

f. Electrophoresis artifacts:

i. In addition to amplification artifacts described above, the following anomalies can arise during electrophoresis:

1. **Artifacts Arising from Room Temperature Fluctuations:** Significant room temperature changes over the course of an entire run may cause sample migration differences that result in significant sizing variations between the peaks of the Allelic Ladder and the samples. Sample peaks differing by more than 0.5 bp from bins may result in off-ladder allele designations during GeneMapper ID-X analysis. This can be alleviated by analyzing with a different injection of the Allelic Ladder that more closely represents the migration of the sample(s). Multiple Allelic Ladders are typically injected throughout the course of a run in order to compensate for the difference in sample migration. If necessary, the sample(s) and the Allelic Ladder may be re-injected until a match in migration is found.

2. **Dye Blobs or Dye Artifacts:** Dye Blobs are non-allelic peaks thought to be caused by fluorescent dye molecules that have detached from the primer. Dye blobs can exist in all of the fluorescent dye colors. They are typically distinguishable from allelic peaks in an electropherogram by their broad irregular shaped morphology. Dye blobs are typically reproducible between injections, but may be resolved with different reagents/chemistry. Once determined to be an artifact it may be edited as such, or a higher analysis threshold can be applied to remove the artifact, when possible.

3. **Spikes**: Spikes can be the result of electrical fluctuations during the electrophoresis process, due to the presence of crystal formations in the polymer (POP-4), or air bubbles traveling past the laser detector window. Spikes are generally narrow peaks that can occur at various heights and are typically represented in multiple colors. If the peak has been determined to be an artifact, it can be edited as such, a higher analysis parameter can be applied to analyze the data in order to remove the artifact. Alternatively, spikes are typically not reproducible and can be shown to be a spike by re-injection of the sample.

1. GeneMapper ID-X may automatically label a spike artifact as "**spike**" with a pink border on the electropherogram. To confirm the spike:

1. Click on the spike artifact label to select the peak, then right click the label to open a drop-down menu containing peak edit actions.

2. To confirm the spike peak, select **Peak Raw Data** from the drop-down menu.

3. Review the raw data and peak morphology to confirm that the selected peak is a spike.

4. **Elevated Baseline fluctuation:** Fluorescent background noise is an artifact of the electrophoresis process. Normal variation in the baseline can be seen at very low relative fluorescent levels. Background fluorescence is generally below the analytical threshold, however, occasional raised baselines or baseline noise that is labeled above the analytical threshold are observed. If the peak has been determined to be an artifact, it can be edited as such, or a higher analysis parameter can be applied to correct for the elevated background noise. Raised baselines are typically not reproducible between injections, thus the sample should be re-injected to assist in interpreting the data. Elevated baselines may be indicative of an improperly functioning spectral. The analyst may choose to run a new spectral calibration or dilute and re-inject the sample to help resolve this issue.

5. **Poor Injections:** The genetic analyzer applies a voltage to the DNA sample to draw it into the capillary. The efficacy of the injection can be affected by the levels of salt in a sample. As salt levels increase in a sample, the salt ions compete with DNA molecules, causing less DNA from a sample to be preferentially injected into the capillary. As a result, different injections of the same sample can show variations in signal intensities between injections. Poor capillary and electrode alignment as well as bubbles in the sample tube or pump block can also cause poor injections. Capillaries should not be allowed to dry out. Polymer crystals forming around the capillary opening can form a physical obstruction resulting in poor or no current. A failing capillary may also display symptoms of a poor injection, such as broad peaks.

g. **Editing Artifacts**

i. To label an OL as an artifact, click on the peak label, then right click and select **Rename Allele Label** and the **Custom Artifact Label.** Complete the custom artifact label dialog box, using the appropriate abbreviation from the table below, click **OK.**

1. In the Reason(s) For Change dialog box, enter a reason for the edit, using the abbreviations below then click **OK.** The reason typed into this box will appear on the electropherogram. The marker header will turn grey.

2.

Acceptable Abbreviations for Editing Artifacts	
Abbreviation	**Definition**
BL	Noisy Baseline
PU	Pull-Up
OL	Off Ladder
OMR	Outside Marker Range
OS	Off Scale/Saturation
NR	Data Not Reported
NT	Not Tested
INA	Incomplete Nucleotide Addition
ST	Stutter
SPK	Spike
DB	Dye Blob
SD	Shoulder
EB	Elevated Baseline
ART	Artifact

I. **Data for Notes**

1. Duplicate sample files can be deleted from the GeneMapper ID-X project, but all collection files are maintained electronically in the run folder. Printouts of the GeneMapper ID-X electropherograms for all samples being reported as well as corresponding substrate controls (if applicable) are to be included as part of the case packet. Printouts of the amplification positive and negative controls, QC sample, reagent blanks, allelic ladders and WEN ILS standards are not necessary for the case packet. These will be reviewed electronically during technical review.

2. Multiple amplification and/or injections: All data is kept in the electronic run folder including data not used for analysis or interpretation. In the event that a sample has undergone multiple amplifications or injections, the analyst will use the result or combination of results with the most genetic information for comparison and statistical calculations. The sample(s) used for interpretation must be printed out for the case file. When DNA results across the different loci from multiple injections or amplifications of the same sample are assembled for a profile for interpretation and comparison, the profile is considered a **composite profile** and will be labeled as such**.**

J. **Saving the Project**

1. The GeneMapper ID-X project must be saved prior to exporting. To save the project, select **File>Save Project As** and use the naming convention mentioned previously. If the project is closed prior to saving, GMIDX will automatically prompt with, “Do you want to save changes?”. Click "**Yes**"

K. **Exporting the Project**

1. After analysis is complete, export the project by opening **Tools>GeneMapper Manager**, select the project to export and click the Export button. Export the project to its corresponding case folder in the appropriate Run Folder on the laboratory's internal network drive.

L. **Creating the Data Summary Table.**

NOTE: Summary Tables will only be created for cases where interpretation using binary methods is performed.

1. Refer to the instructions contained in the excel workbook "Fusion Summary Sheet".

M. **Documenting Results on the Summary Data Sheet**

1. The Summary Data Sheet will contain, at a minimum, the analyzed DNA results from all references and evidence samples. These results will be interpreted, and from the interpretation, a conclusion will be drawn, when applicable.

2. One sample row will contain the raw data. Another sample row should be created when the analyst is able to interpret a major or minor contributor's profile.

3. Symbols may be used on the Summary Data Sheet. The following symbols may be used:

   a. +, will be used to denote an obligate allele for CODIS searching.

   b. * or ,_ will be used for single source samples and deduced major/minor contributors to indicate a single peak below the stochastic threshold. This should be added after a single STR allele that is below 600 RFU to indicate that the sister allele at that location may have dropped out.

   c. Other symbols used on the summary sheet will be noted with a brief comment about their meaning.

4. On occasion, an analyst may be unable to differentiate a peak as an allele from an artifact (e.g., electronic noise, dye blob, spikes, stutter, pullup, etc.). The analyst may label this peak a “possible allele” and also document it on the summary data sheet as “poss” followed by the allele designation. An explanation in the case notes must be given that describes why the allele is inconclusive.

5. A separate line in the Summary Data Sheet may be filled out for any CODIS profiles. The DNA data in a CODIS profile may appear differently than the deduced profile, due to the searching algorithms of CODIS. A separate tab in the Fusion Summary

workbook, may be filled out to indicate any profile(s) that will be entered into the CODIS database. If a profile is to be entered into CODIS, the CODIS Eligibility sheet of the Fusion Summary Sheet must be filled out to include the following information:

a. A justification for why the profile is eligible to be entered into the database

b. The unique specimen name (exactly how it will be entered into CODIS)

c. The category in which it will be entered into CODIS (e.g., forensic unknown, mixture, etc.)

d. The agency and their case number

e. The offense date

f. If an elimination sample is needed and the request date

N. **Performing QC Profile Comparisons on Sample Results**

1. The profile comparison tool does the following for all samples in a project:

   a. Groups samples with 100% concordant profiles.

   b. Compares samples within the project against all other samples in the project.

   c. Compares samples in the project against lab references, custom controls and QC sample profiles stored in the Profile Manager.

2. It is important to evaluate samples and edit allele labels to ensure there are no OLs present before running the profile comparison tool because samples containing OL labeled peaks are not considered in comparisons.

3. To run the sample comparison tool, select **Tools > Profile Comparison.** The Profile Comparison tool opens to the Sample Concordance tab. This lists any samples with 100% concordance. Click the **+ sign** to expand the samples view.

4. Click on the **Lab Reference Comparison** tab. Keep the Percent Match Threshold at 90%, then click **Compare Profiles.**

5. Review the results. This will list any lab reference samples that have profiles that meet the 90% match threshold.

6. Importing Lab Reference and Custom Control Profiles

   a. Before adding lab references and custom control samples to GeneMapper ID-X, the samples must be reviewed and all artifacts/OLs must be edited.

   b. From the Table Setting drop-down list, select **Import Reference Profiles**

   c. Highlight a sample in the samples tab

   d. In the Profile ID column of the Samples tab, enter the Reference samples unique Profile ID number

   e. Select **Tools>Add Profile>Lab Reference** or T**ools>Add Profile>Custom Control**

   f. Click **Close**

   g. In the Project window, select **Tools>Profile Manager,** you can view the genotypes stored in the GeneMapper ID-X database for each lab reference and custom control sample.

II. References:

A. PowerPlex® Fusion 6C System Technical Manual (TMD045 Rev. 10/15)

B. GeneMapper ID-X Version 1.5 Getting Started Guide, Pub. No.100031701 Rev. B (2015).

C. GeneMapper® ID-X Software Version 1.5 Quick Reference Guide, Pub. No. 100031702 Rev. A

D. SWGDAM STR Interpretation Guidelines for Autosomal STR Testing (2017)

E. Butler, John. Advanced Topics in Forensic DNA Typing: Interpretation, 2015.

III. Appendix I. Fusion 6C Panel Information

IV.

PowerPlex Fusion 6C Panel Information

Panel	Dye	Start (bp)	End (bp)	2800M	Allelic Ladder Alleles
Amelogenin	Blue	80.0	89.0	X,Y	X,Y
D3S1358	Blue	90.0	151.0	17,18	9,10,11,12,13,14,15,16,17,18,19,20
D1S1656	Blue	152.0	209.5	12,13	9,10,11,12,13,14,14.3,15,15.3,16,16.3,17,17.3,18,18.3,19,19.3,20.3
D2S441	Blue	211.0	252.0	10,14	8,9,10,11,11.3,12,13,14,15,16,17
D10S1248	Blue	254.0	302.5	13,15	8,9,10,11,12,13,14,15,16,17,18,19
D13S317	Blue	304.5	357.0	9,11	5,6,7,8,9,10,11,12,13,14,15,16,17
Penta E	Blue	362.0	482.0	7,14	5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25
D16S539	Green	74.0	129.4	9,13	4,5,6,7,8,9,10,11,12,13,14,15,16
D18S51	Green	131.0	217.5	16,18	7,8,9,10,10.2,11,12,13,13.2,14,15,16,17,18,19,20,21,22,23,24,25,26,27
D2S1338	Green	221.5	304.0	22,25	10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
CSF1PO	Green	313.0	366.5	12	5,6,7,8,9,10,11,12,13,14,15,16
Penta D	Green	373.5	470.0	12,13	2.2,3.2,5,6,7,8,9,10,11,12,13,14,15,16,17
TH01	Yellow	65.0	118.0	6,9.3	3,4,5,6,7,8,9,10,11,13.3
vWA	Yellow	121.0	192.0	16, 19	10,11,12,13,14,15,16,17,18,19,20,21,22,23,24
D21S11	Yellow	197.0	266.5	29,31.2	24,24.2,25,25.2,26,27,28,28.2,29,29.2,30,30.2,31,31.2,32,32.2,33,33.2,34,34.2,35,35.2,36,37,38
D7S820	Yellow	268.0	315.5	8,11	5,6,7,8,9,10,11,12,13,14,15,16
D5S818	Yellow	317.5	380.0	12	6,7,8,9,10,11,12,13,14,15,16,17,18
TPOX	Yellow	390.0	448.0	11	4,5,6,7,8,9,10,11,12,13,14,15,16
D8S1179	Red	66.0	129.8	14,15	7,8,9,10,11,12,13,14,15,16,17,18,19
D12S391	Red	130.1	190.5	18,23	14,15,1617,17.3,18,18.3,19,20,21,22,23,24,25,26,27
D19S433	Red	192.0	255.0	13,14	5.2,6.2,8,9,10,11,12,12.2,13,13.2,14,14.2,15,15.2,16,16.2,17,17.2,18,18.2
SE33	Red	270.0	429.0	15,16	4.2,6.3,8,9,10,11,12,13,14,15,16,17,18,19,20,20.2,21,21.2,22,22.2,23,23.2,24,24.2,25.2,26.2,27.2,2 8.2,29.2,30.2,31.2,32.2,33.2,34.2,35,36,37,39
D22S1045	Red	430.0	478.0	16	7,8,9,10,11,12,13,14,15,16,17,18,19,20
DYS391	Purple	79.5	131.0	10	5,6,7,8,9,10,11,12,13,14,15,16
FGA	Purple	134.0	299.0	20,23	14,15,16,17,18,18.2,19,19.2,20,20.2,21,21.2,22,22.2,23,23.2,24,24.2,25,25.2,26,27,28,29,30,31.2, 32.2,33.2,42.2,43.2,44.2,45.2,46.2,48.2,50.2
DYS576	Purple	302.0	370.0	18	11,12,13,14,15,16,17,18,19,20,21,22,23
DYS570	Purple	380.0	464.0	17	10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25

Alleles in red will need to be designated as "< the lowest" or "> the highest CODIS ladder designation for CODIS entry

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 12/04/15	**NUMBER:** BIO.2.DNA.11.01 - STR Interpretation Guidelines: Identifiler
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** STR Interpretation Guidelines: Identifiler	

I. Analysis and Evaluation of Identifiler Data

A. Preliminary Evaluation of Data:

1. DNA Data detected by the Genetic Analyzer is routinely evaluated for the following conformances:

   a. **Resolution:** The electropherogram must have adequate resolution to provide clear separation of alleles. Resolution is inspected with each electropherogram. All peaks must display sharp, distinct beginning and ending arms. Poorly resolved peaks generally require re-injection. Loss of resolution can be linked to a single bad electrokinetic injection, in which case the sample can simply be re-injected. The loss of resolution may be linked to a failing capillary, in which case the capillary should be replaced and the samples re-injected.

   b. **Signal Intensity/ Relative Fluorescent Unit**: When excited by the laser, the fluorescent dye tags incorporated into the DNA primers emit a characteristic color of light. The amount of light emitted is quantitatively analyzed by the Genetic Analyzer's CCD detector, and this response is shown on the Y axis of the resulting electropherogram in relative fluorescent units (RFU.) The 310 Genetic Analyzer has a maximum response of 8191 RFU.

      Ideally, analyzed DNA peaks are detected in the range of 1000 to 3500 RFU. Empirical data from validation studies show this range provides the best balance of allele heights, between and within loci, with a minimum of artifacts. This signal intensity is in part related to the input level of DNA for amplification, which is optimized between 0.75ng and 1.5ng at 28 cycles. Validation data also shows reproducible and accurate results for data outside this "optimal" range, with input as low as 0.25ng resulting in responses as low as 200 RFU providing reproducible genotype results depending on the quality of the DNA.

   c. **Peak Height Imbalance:** Heterozygous peaks within a locus generally display peak height ratios (lower height divided by higher height x 100) of 60% or greater. Peak height ratios less than 60% may indicate alleles from two separate sources (i.e. mixtures), or could be the result of stochastic effects or poor amplification, or more rarely, a tri-allelic pattern, or a primer site mutation.

B. Guidelines for assessing Signal Intensities:

1. Input DNA:

   a. The optimal level of input DNA is 0.75 - 1.5 ng per amplification. Acceptable amplification has been obtained with input levels as low as 0.25 ng of total human DNA when the DNA is of good quality (non-degraded or inhibited). Resolution of mixtures of two or more sources of DNA may require slightly higher input levels, such as 1.5 to 2.0 ng to adequately detect each donor. In cases of degraded DNA, excess template addition (>2.0 ng) has resulted in successful amplification.

2. Fluorescence Intensities:

   a. **Analytical Threshold:** Based on validation data, the minimum peak height threshold is 50 RFU. While **peaks** can be observed below 50 RFU and may indicate the presence of a true allele, peaks below 50 RFU will not be registered as alleles for reporting purposes.

   b. **Stochastic Threshold/Trace level DNA:** Peaks can readily be designated as alleles in the 50 to 200 RFU range; however stochastic fluctuations are known to occur at this level (i.e. a known heterozygote can be misinterpreted as a homozygote). It is highly recommended that samples showing such low amplification be injected and analyzed in duplicate to demonstrate reproducible **allele** calls.

      i. For samples with low input levels of DNA several measures can be used to enhance detection sensitivity. Two measures an analyst can use are increased injection time and post amplification purification.

      ii. A sample may be re-injected for an increased injection time in an effort to increase peak heights above the analytical threshold. Any corresponding negative and substrate controls must also be re-

injected for the same increased injection time and must be analyzed under the same conditions as the sample.

iii. Post amplification purification may be used for low-intensity samples for which suspected alleles are observed below the analytical threshold and/or reamp/re-extraction procedures are not possible. The post amplification purification procedure must also be performed on all corresponding negative and substrate controls and must be analyzed under the same conditions as the sample.

iv. Any sample in which an increased injection time is used must also be run under the standard 5 second injection time prior to an enhanced injection time. All samples will be run under normal standard concentration conditions prior to a post-amplification run. A different stochastic threshold **will not** be applied to data that has resulted from enhanced sensitivity measures. Alleles considered stochastic based on the standard run conditions will also be considered stochastic under enhanced sensitivity conditions. For example, an allele below the 200rfu stochastic threshold (based on standard run conditions) will also be considered stochastic even if it rises above 200rfu under any enhanced sensitivity measures. Because stochastic effects are due to the disproportionate amplification of alleles under low-quantity template conditions, stochastic effects cannot be overcome by enhancing the detection level.

c. **Low Level DNA:** DNA detected between 200 RFU and 500 RFU is considered low level DNA. Based on validation studies, it is reasonable to assume that at a given locus, allelic dropout of a sister allele has not occurred when DNA is detected above the 200RFU **Stochastic Threshold**. However, occasional random peak imbalances (i.e. known paired heterozygous alleles displaying less than a 60% peak height ratio) were noted among samples across most loci at this signal intensity. This variation appeared to be amplification mediated as the imbalance was not reproducible between duplicate amplifications. The 60% peak height ratio is one parameter considered in assessing mixtures, and more importantly, in assessing paired alleles in mixtures. Additional caution should be used in assigning major and minor contributor types in mixtures at this intensity level.

d. **Optimal Level DNA**: Analyzed data values detected in the 500 to near 5000 RFU range provides adequate data for most interpretations, however peak height balance and balance between loci with minimal amplification artifacts are best displayed between 1000 and 3500 RFU.

e. **Saturated DNA Level**: Analyzed Data detected between the 5000 to ≥8100 RFU will begin to exhibit symptoms of oversaturation. Peaks displaying values greater than 8100 RFU have exceeded the dynamic range of the CCD camera. Oversaturated data can lead to one or more of the following undesirable artifacts:

i. Pull-up peaks in the nearest spectral color adjacent to the saturated color.

ii. Anomalously high stutter peaks relative to the saturated peak.

iii. Incomplete nucleotide addition termed (-A) or (INA).

f. Each of these artifacts can affect interpretation depending on the degree of over-saturation. The presence of these artifacts does not preclude interpretation of the sample, provided that the examiner can qualify the anomalous results as artifacts. (For instance, in a sample with no other indication of a mixture in which an anomalous blue peak coincides in sizing to an over-saturated green peak, the examiner would be justified in discounting the anomalous blue peak as pull-up.) Active measures the examiner may take to address artifacts caused by over-amplification include dilution of the amplified product and re-injecting, re-amplification at a lower amount of template DNA or re-injection at a lower injection time.

C. **Evaluation of Internal Size Standards and Allelic Ladders**:

1. The sizing of amplicons is conducted by comparing the unknown amplified DNA amplicons to an internal size standard consisting of DNA fragments of known size. The internal size standard is referred to as GS 500 and is a plasmid derived series of LIZ labeled DNA fragments of known size. The internal size standard is added to each amplified sample, including the allelic ladder. To size the unknown amplified amplicons, the amplicons are compared to the DNA fragments contained within an allelic ladder which has also been sized against the internal size standard. The designation of alleles is dependent on the precise sizing of each of the DNA amplicons. Using the GeneMapper analysis software, each injected sample is evaluated for the presence of the GS 500 size standard. Evaluation of the size standard requires assessment of the following:

a. Adequate peak height (generally 500 to 3000 RFU)
Appropriate peak resolution
Correct range (minimally, the 75 through 450 base pair peaks should be recorded for Identifiler.)
Presence of each declared GS 500 peak for the sample.

2. An Allelic ladder is prepared and required to be injected with each batch of injected samples within a designated ABI 310 run. **QAS 9.5.4.** When sized, using the internal size standards, the allelic ladder(s) provide the means for assigning allele designations to the amplified products in each sample. Allelic ladders are evaluated in GeneMapper to assess the following:

a. Adequate peak height (generally above 200 RFU)
Appropriate peak resolution
Absence of anomalous peaks such as spikes

b. Allelic ladders will be inspected to verify that each intended allele is present and called. The technical reviewer will also verify the Allelic ladder(s).

D. **Evaluation of the Amplification Positive Control and the Quality Control Sample:**

1. An amplification positive control is required to monitor that the amplification and typing process worked properly. Because the positive control is amplified concurrently and analyzed with the evidence set, the amplification positive control (9947A) in the Identifiler kit serves as a verification that the amplification conditions used to amplify the evidence samples performed as expected. The correct DNA profile for the 9947A must be obtained across all loci and the alleles must be adequately amplified (>200 RFU).

2. An optional positive extraction control (quality control sample) of known DNA type may be added with the extraction sample set. Because the QC sample is extracted and typed concurrently with the evidence set, it serves to monitor that the procedures worked properly from extraction through typing. The correct DNA profile of the quality control sample must be obtained across all loci and the alleles must be adequately amplified (>200 RFU).

3. If either of the positive controls do not provide the expected results, an investigation into the root cause needs to be conducted. If the cause is deemed to be due to analyst error and not a problem with the amplification process itself, the analyst should take steps to troubleshoot and correct the problem. If the root cause is due to improper performance of equipment, reagents or supplies, the DNA Technical Lead and/or Supervisor must be immediately notified to prevent further potential detrimental DNA results. In both cases, the reliability of the DNA typing results will be evaluated. If the corrective measures taken correct the problem and it can be demonstrated that the results are reliable in spite of the performance issues, the results may still be reported. The analyst will document the performance issue using a Level II Quality Incident Report form or equivalent to describe how the performance issue was corrected and how the results are considered reliable and valid.

When a result cannot be reported, it will be conveyed in the lab report with a brief description of the reason. A level III Corrective Action (see FSD.15) will document the problem, investigation, corrective measures taken, the result/resolution, cause and prevention. A copy of the Corrective Action will be placed in the case notes or reference to the Corrective Action in LIMS will be documented in the case notes. The Unit Supervisor and DNA Technical Lead will review the Corrective Action and have the discretion to determine the appropriate course of action. See Corrective Action Policy BIO.5.QAQC.14 .

E. **Evaluation of Negative Controls that Monitor for Contamination**:

Negative controls are designed to test for the unintentional introduction of exogenous DNA into the reagents or sample. Each negative control monitors for DNA contamination during different procedural steps.

1. A **reagent blank** is required for each extraction set. The reagent blank is carried through the extraction, concentration, quantification, amplification and typing process, therefore it serves to monitor for all reagents and consumables utilized, as well as the set-up environment of each process. The reagent blank should contain no detectable DNA at the most sensitive analysis conditions used to analyze the evidence set, such as at the lowest analysis threshold or the highest injection time used and at the most concentrated level.

2. An **amplification negative control** is required for each amplification set-up. The negative control monitors for DNA contamination of the PCR Kit reagents and PCR set-up environment. The negative control should contain no detected amplified DNA at the lowest analysis threshold used to analyze the associated evidence set.

3. If DNA contamination (genomic or amplified DNA) is detected in the reagent blank (RB) or negative control, an investigation into the root cause and source of the contamination needs to be conducted. If the DNA detected in the RB or negative control is due to sample process handling, such as a sample switch, sample or PCR product carry-over, or the analyst's DNA, the analyst will take steps to re-trace where the problem occurred and correct the problem. If the contamination is suspected to be due to contaminated consumables, the set-up environment, manufacturer's reagents or factors beyond the analyst's control, the analyst will attempt to identify the source and correct the problem, where possible.

4. To correct the problem and to confirm that the results are reliable for reporting, repeating one or more of the set-up steps, such as the CE set-up, re-amplifying the affected samples, and/or re-extraction of the evidence material may be required. If the corrective actions taken correct the problem and demonstrate that the results are reliable, then the results may be reported. The analyst will document the contamination event using a Level II Quality Incident Report form or equivalent to describe how it was corrected and how the results are considered reliable and valid.

If the PCR kit reagents are suspected to be contaminated, the samples should be re-amplified utilizing a new STR

kit. (Note: If the contamination in the negative control is due to the PCR Kit reagents, contamination would also be expected to be observed in the reagent blank.)

5. If the analyst cannot correct the problem because sample no longer remains to repeat the analysis, or, if at the analyst's discretion the analyst chooses not to repeat the analysis, the analyst must demonstrate that the DNA results are reliable and valid in spite of the contamination. This must be demonstrated prior to reporting the results. Results may be reported if the analyst can demonstrate that the contamination event meets any of the following:

   a. The unexpected DNA/DNA profile observed in the reagent blank/negative control is not observed in the evidence sample(s), or the unexpected DNA does not account for the genotypes/profiles observed in the associated evidence sample(s).

   b. The unexpected DNA/DNA profile is observed in RB/negative control and the evidence sample, however the detected level (quantity) of unexpected DNA in the control could not account for the detected level (quantity) of DNA in the evidence sample(s) or for the interpreted component of a DNA mixture.

   c. A second RB associated with the same evidence set demonstrates that the laboratory's reagents are not contaminated.

All contamination events will be documented in the case notes. The analyst will document the problem, investigation, corrective measures taken, the result/resolution, cause and prevention, when applicable, and justify the reasons why the results are reliable using a Level II Quality Incident Report form or equivalent. A copy of the Quality Incident Report will be placed in the case notes and in the Analytical Controls Log.

In the event the analyst cannot demonstrate the results are reliable, the results will be deemed invalid and the result(s) will not be reported. When a result cannot be reported, it will be conveyed in the lab report with a brief description of the reason. A level III Corrective Action (see FSD.15) will document the problem, investigation, corrective measures taken, the result/resolution, cause and prevention. A copy of the Corrective Action will be placed in the case notes or reference to the Corrective Action in LIMS will be documented in the case notes. The Unit Supervisor and DNA Technical Lead will review the Corrective Action and have the discretion to determine the appropriate course of action.

F. **Designation of Alleles**:

1. Peaks are distinct, reproducible, triangular projections above the baseline of the electropherogram. Analyzed peaks appear as a single color with distinct beginning and ending branches at the baseline. Peaks varying by at least 2 basepairs can readily be resolved from other peaks at the baseline. A peaks 1 basepair apart (i.e. a 9.3, 10 combination) rests on either the beginning or ending shoulder of its neighboring peak. The peak may appear as a hump or shoulder on the side of its neighboring peak because peaks 1 basepair apart cannot be individually resolved as a single peak down to the baseline.

2. Locus Assignment:

   a. Locus assignment is performed through GeneMapper software. The software defines the range of expected alleles for a given locus which is portrayed as a gray box in the electropherogram plots. Loci labeled with the same color dye tag do not have overlapping sized alleles.

3. Allele Designation:
An allele is a variation/form of DNA at a particular site on a chromosome. For purposes of determining whether a peak is an allele, the allele must meet minimum standards for analysis such as resolution and signal intensity.

   a. Whenever possible, allele designations will be based on the number of repeat sequences contained within the allele. Alleles will be assigned based on comparison to the accepted Allelic Ladder.

   b. The designation of alleles containing an incomplete repeat motif (i.e. an off-ladder allele falling within the range spanned by the ladder alleles) will be designated by the number of complete repeats, a period, and then followed by the number of base pairs in the incomplete repeat (e.g. FGA 18.2.)

   c. Uncommon micro-variants (i.e. uncommon alleles, differing by 1 to 3 base pairs from the common motif, and not present in the allelic ladder) should be injected at least twice to demonstrate reproducibility of sizing for the variant.

   d. If an allele falls above the largest or below the smallest allele of the Allelic Ladder, the allele will be designated as either greater than (>) or less than (<) the respective ladder allele and placed in braces. For example, 8,{>15}.

   e. Allele designations for CODIS entry conform to the Combined DNA Index System (CODIS) recommendations.

4. **Designation of artifacts:**
Artifacts are a phenomena observed in electropherograms that can complicate interpretation. Artifacts can be either amplification mediated or electrophoretic mediated.

a. Amplification artifacts:

i. **Stutter**: A normal amplification artifact seen as a small peak one tetranucleotide repeat unit (N-4) less that the parent peak, and is generally a very reproducible artifact which can be compensated in analysis of data. The most common stutter peaks observed in all loci are four bases smaller than the primary peak ("n-4"). Under extreme overamplification conditions, due to excessive amounts of amplified DNA, stutter peaks may be observed at N-8 and N+4 repeats. Stutter, caused by repeat slippage during amplification, tends to follow several trends. Alleles with long stretches of homologous repeats generally show greater stutter, therefore larger alleles within a locus tend to show greater stutter. Interruptions of the homologous sequence tend to decrease the amount of stutter, thus micro-variants with partial repeat structures tend to show less stutter.

ii. Stutter peaks are evaluated by examining the ratio of the stutter peak height to the height of the appropriate adjacent allele, expressed as a percentage. The height of stutter peaks can vary by locus, and longer alleles within a locus generally have a higher percentage of stutter. Maximum expected percentages of stutter for the Identifiler Loci are:

Blue Loci		**Green Loci**		**Yellow Loci**		**Red Loci**	
D8S1179	9.5%	D3S1358	14%	D19S433	14%	Amelogenin	0%
D21S11	12%	Tho1	5.5%	vWA	14%	D5S818	7%
D7S820	12%	D13S317	9%	TPOX	5%	FGA	15%
CSF1PO	9.5%	D16S539	10%	D18S51	17%		
		D2S1338	14%				

b. Peaks in a stutter position greater than these values may indicate a true allele, such as in a mixed sample. Stutter peaks can also be elevated above established thresholds due to the following:

i. Analyzed peak heights above the optimal range may be "off-scale" in the raw data, meaning that the CCD camera may be saturated. Peaks with a height of 8191 RFU are off-scale. However, the analyzed peak may be assigned a lower value due to smoothing and baselining functions. This can allow the relative percent stutter for an off-scale peak to appear inordinately high. If the stutter peak is greater than the established cut-off and the analyzed primary peak is nearing or above 5000 RFU and/or has been labeled with an off-scale flag, the analyst should interpret the results with caution. To correct, the amplified product may be diluted and re-injected to help resolve this issue.

ii. As a result of poor resolution, a stutter peak may be elevated if it falls within the raised shoulder of a tailing peak. This can lead to an accentuated stutter peak height resulting in ratios above the established cut-off. Peaks showing shoulders that are tailing due to poor resolution can be re-injected to help resolve this issue.

iii. A stutter peak falling in an area where the baseline is elevated may exhibit an accentuated peak height and thus an accentuated stutter percentage. Elevated baselines may indicate an improperly functioning matrix. Stutter peaks can also reside in the pull-up of an adjacent color allele. The analyst may choose to apply a different matrix or dilute and re-inject the sample to help resolve this issue

iv. **Non-template directed minus 'A' nucleotide addition**: This is a split peak or shoulder artifact 1 base pair less than the parent peak and is caused by the incomplete 3' extension of an additional nucleotide beyond the template amplicon by Taq polymerase. Normally this action is promoted by extending the last extension step of the thermocycling program, however the ability of Taq to add this nucleotide to all amplicon products is dependent on the level of DNA template.

Amplification conditions have been set to maximize the non-template addition of a 3′ terminal nucleotide by AmpliTaq Gold DNA polymerase. Failure to attain complete terminal nucleotide addition results in "band splitting", visualized as two peaks one base pair apart. This is most often seen when an excessive amount of DNA is amplified or amplification is performed under sub-optimal PCR conditions. Except for microvariants, the presence of peaks differing by one base pair apart is diagnostic of this problem. Extremely over-amplified samples should be re-amplified with less template DNA. Alternatively, for samples target and anticipated to have higher template DNA, a longer extension time can be added to compensate for the nucleotide "A" addition.

v. **Pullup**: The forming of a false peak in a certain color caused by over-saturation of the true peak when its fluorescence nears or is $\geq$8100 RFU. As a result, this phenomenon termed "pull-up" results

in small artifact peaks that appear in other colors under the true peak. Pullup follows a regular order among the dye colors and is detected as a small peak with the same sizing as the over saturated peak.

Spectral overlap between the dyes normally is corrected by the matrix. Pullup results when the matrix cannot correct this spectral overlap, due to the over-saturation of the CCD camera by greater-than-optimal amounts of fluorescence. To distinguish pull-up peaks: the data point (sizing) will be the same or very close between the true peak and the pull-up artifact, and the pull-up peak will be the "adjacent" color. If a pull-up peak is above the minimum peak height detection threshold, it will be sized at the same size (or close to the same size) as the true peak. Pull-up can occur as a result of the following:

1. Application of a sub-optimal matrix can cause pull-up. If necessary, matrix standards can be prepared after the analytical run and a new matrix can be created and applied.

2. Amplification using excess input DNA can lead to off-scale peaks (see above). The matrix may not perform properly with off-scale data. The amplified product can be diluted and re-injected to help resolve this issue.

c. Electropherogram artifacts:

i. In addition to amplification artifacts described above, the following anomalies can arise during electrophoresis and analysis:

1. Significant room temperature fluctuation may cause sizing variations between injections such that Allelic Ladder peaks differ by more than 0.5 bp from allele peaks in other injections. This will cause GeneMapper to assign these alleles as off-ladder alleles. Genotyping with a different Allelic Ladder injection may correct this problem. If desired, the sample(s) and the Allelic Ladder may be re-injected to confirm the typing.

2. **Non fluorescent tag derived peaks.** Occasionally non-allele based peaks are observed in electropherograms. Sometimes referred to as "blobs" or "dye artifacts", the size and broad shape of these artifacts provide a means to distinguish them from true alleles. A higher analysis parameter can be applied to analyze the data, when possible, to remove artifacts.

3. **Electronic noise.** The electropherogram may show very narrow "spikes" of various heights. These do not have a true peak shape, and often are represented in multiple colors at the same data point. Sometime a spike can be present in a single color. When the peak has been determined to be an artifact, a higher analysis parameter can be applied to analyze the data, when possible, to remove the artifact.

4. **Baseline fluctuation**: This artifact of the electropherogram response is a normal variation seen at very low relative fluorescent levels. Fluctuations are generally corrected to levels below 50 RFU, however occasional raised baselines in a single color are observed.

G. **Documenting Results**

1. The amplified DNA results will be captured in the case notes and will be listed on a Summary Data Worksheet. The Summary Data Worksheet will contain, at minimum, the analyzed DNA results from all references and evidence samples. These results will be interpreted, and from the interpretation, a conclusion will be drawn, when applicable.

2. Typically, the standard 5-second injection is used for interpretation. When an injection time other than the standard 5-second injection is used for the interpretation and for the reporting of a conclusion, the DNA results from the altered injection will be displayed on the Summary Data Worksheet. The sample name will include the altered injection time (i.e 3 sec or 10 sec) to indicate the DNA results are from an altered injection time.

3. If post-amplification purification was performed, the sample will be labeled with "post" to indicate the results are from a post-amplification purification. The Summary Data Worksheet will display both the standard 5-second injection results as well as the post-amplification results, if the post-amp results are being used for interpretation and reporting a conclusion.

4. One sample row (optional) may be displayed to capture the analyst's assessment of the data. This row is not an interpretation of the data but an assessment of the results and its qualities, such as peak heights, peak height imbalances, and stochastic range alleles:

a. The > symbol can be used to denote peak height balance (imbalances) of less than 60% either between two alleles or a set of alleles within a locus. Peak height balances between 55% and 59% may be denoted as ≥ to convey that the peak height balance is approximately 60%. This symbol typically is only useful with two-person mixtures when denoting alleles attributable to the contributors in the mixture.

b. Brackets "**[ ]**" are used to document low level alleles that are within or are nearing the stochastic threshold range. This means that there is the potential that one of the alleles from a heterozygous pair could have

dropped below the analytical threshold (below detection). Alleles that are below the stochastic threshold (200 rfu) but above the analytical threshold (50 rfu) will be placed in brackets on the data summary sheet. Alleles that are slightly over the stochastic threshold could have drop out; therefore, caution is needed for those alleles nearing the stochastic threshold. Bracketing alleles that are over but near the stochastic threshold is at the analyst's discretion.

c. On occasion, an analyst may be unable to differentiate a peak as an allele from an artifact (electronic noise, dye blob, spikes, stutter, pullup, etc). The analyst may call this peak a "possible allele" and it will be documented on the summary data sheet as "**poss**" followed by the allele designation. An explanation in the case notes will be given that describes why the allele is inconclusive. When a peak is called/labeled under enhanced run conditions, such as a 10 second injection or post-amplification purification, but the peak is **not detectable above the baseline** in the standard run condition, the peak will be reported as a possible allele. Possible alleles will not be used for interpretation purposes.

5. At least one sample row should be created when the analyst is able to interpret a major or minor contributor's profile or a deduced mixture profile.

6. A separate row, typically at the bottom of the Summary Data Sheet, will be created to indicate any profile(s) that will be entered into the CODIS database. The DNA data in a CODIS profile may appear differently than the deduced profile due to the searching algorithms of CODIS. If a profile is to be entered into CODIS, the top portion of the Summary Data Sheet must be filled out to include the following information:

   a. A justification for why the profile is eligible to be entered into the database

   b. The unique specimen name (exactly how it will be entered into CODIS)

   c. The category in which it will be entered into CODIS (forenic unknown, mixture, ect.)

   d. If the source of the profile has been identified

   e. The agency and their case number

   f. The offense date

   g. If an elimination sample is needed and when it was requested

H. **Interpretation**

1. Single Source Profiles

When the DNA data represented in a full 15 locus profile contains no more than two alleles at each locus and each allele pair within a given locus is balanced within expectations, it is highly probable the DNA results are attributable to a single contributor. Exceptions to the two allele maximum per locus are persons with a triallele genotype.

Any sample that exhibits less than a complete 15 locus profile is considered a partial profile. Partial profiles can result from degraded or inhibited samples or samples which contain a primer binding site mutation or samples originating from low quantity. A partial profile contains less genetic information for assessing the potential number of contributors in the sample, therefore additional caution is needed when determining whether the observed DNA has originated from a single contributor. Single source partial profiles, while expressing less genetic information than a full fifteen locus profile, still can provide useful information for purposes of inclusion and exclusion.

For all single source samples, full or partial, the genotypes of the individual are readily discernable at each locus. An individual may be included as a possible source of the DNA when the sample matches across all the interpreted loci to the loci observed in the reference.

   1. Typically a Random Match Probability (RMP) statistic is applied to a single source sample. (See Statistics section below)

   2. For a single source profile, where any of the loci contain a single allele and the single allele is in the stochastic range (<200 rfu), the $f = 2* p*(1- p)$ formula should be applied to calculate the genotype frequency of that allele.

2. Mixture Interpretations:

The interpretation of mixtures is complex and no single expression may clearly convey the information in a mixed sample. The assessing of mixtures involves evaluation of all the loci for the presence of more than two alleles within one or more loci, and the presence of allele pairs that show peak height imbalance. While allele pair imbalances alone could indicate a mixture, there may be other causes for peak height imbalances besides mixtures, such as stochastic effects due to low input DNA and/or amplification, and primer site mutations leading to differential amplification.

Steps to evaluating a mixture:

a. Characterize the quality of the amplification

i. Describe the objective signs of degradation and/or inhibition evident in the sample and overall quality of the sample.

1. Quantitatively describe the overall level of amplification (well, moderate or poor amplification) of the sample based on the overall allele heights or the sum of allele heights.

2. Identify those loci for which quality issues suggest that complete or partial drop out is possible due to loci with stochastic level alleles.

3. Identify those loci for which quality issues limit assessing the potential number of contributors in the mixture due to potential drop out of alleles.

4. Identify those loci that no longer are useful for elimination purposes and remove these uninformative loci from further consideration.

b. Identify that a mixture is present

In general, the presence of more than 2 alleles at multiple loci, or in combination with peak height imbalance, is an indicator that a mixture is present. (Rare tri-allelic patterns due to trisomy, unequal cross-over, gene duplication, or somatic mutation (mosaicism) can display three allele patterns at a single locus.)

i. Identify loci with more than 2 alleles (artifacts are assumed to have been addressed)

ii. Evaluate whether the intensity variation between alleles is inconsistent with single source. In general, PHR's <60% can be a indication of a mixture however this is also dependent on the quality of amplification.

c. Determine the number of contributors or the minimum number of contributors. Consider the number of alleles at any one locus and evaluate peak height imbalances between alleles.

d. Consider and factually describe known information from which reasonable inferences can be assumed about the sample.

i. Intimate Samples- the donor of the sample can be assumed to be present in the sample

ii. Proximal Evidence-an unknown DNA profile may be assumed to be potentially observed elsewhere on other closely related evidence

iii. Given the case circumstances or the location of the collected evidence, there may be a high potential for related individuals to be part of the mixture

e. Characterize the DNA contribution ratio of each contributor in the mixture, if possible.

i. Separate and identify any clear major contributor profile from any minor contributor profile(s).

ii. For samples where a 2-person mixture has been determined, consider deconvolution of contributors in the mixture (consider using Least Squares Deconvolution)

iii. When possible, use factual information to apply inference regarding the presence of at least one of the contributors in the mixture

iv. Consider the quality of the DNA results and how it affects the interpretation of ratios overall. Evaluate whether the ratios remain constant across the loci (even under degrading conditions) or is there evidence of differential degradation between the contributors.

f. Assign genotypes to the major, minor, or to the mixture component, where possible.

The extent to which a major or minor donor profile can be interpreted from a mixture is dependent on factors such as whether a supported factual assumption can be made about one or more of the contributors in the mixture (i.e. intimate or proximal contributors). The complexity of the mixture may limit or prohibit complete or even partial interpretation of the donors (i.e. indistinguishable 3 or more person mixture where no single profile can be deduced or assumed). Quality issues, such as stochastic level allele limit or prohibit complete or partial interpretation of the mixture due to the potential for missing genetic information.

i. <u>Mixtures displaying distinguishable major and/or minor contributors at all loci:</u>

In some mixtures, the relative proportions of the donors are such that the genotype of individual profiles can be easily distinguished at all loci. A sample which displays a distinct difference in signal intensities between alleles may be classified as a mixture with major and minor contributors. When

deducing the minor donor in the sample, alleles attributable to the minor donor may be masked by the major donor and must be taken into consideration when interpreting the genotypes of the minor.

In other mixtures, the genotypes may need to be "deduced" from the mixture when there is not a readily clear profile of the major or minor contributor. Deduction of the contributor's profile may be possible at all 15 loci or may only be possible at some loci resulting in a partially profile.

An allele potentially located in the same location as a stutter peak may not be detected as a true allele if the total RFU does not surpass the stutter percentage. Stutter peaks should be considered as possible allelic peaks when the stutter peaks are at heights consistent with or greater than the minor contributor peaks. Contribution of stutter to the overall peak height needs to be taken into consideration when determining potential minor contribution to the stutter peak. A 2p frequency calculation may need to be applied to the minor allele after stutter contribution has been taken into consideration if the remaining overall height of the peak at a stochastic level.

When a single genotype profile or a deduced single genotype profile of the major or minor contributor can be distinguished at each interpretable loci, the individual profile is calculated using RMP in the same way as a single-source profile.

ii. Mixtures composed of a set of selected genotypes:

In mixtures where the individual donor profiles cannot be deduced to a set of single genotypes at all loci, a "set of genotypes" may be assigned to one or more of the individual donors in the mixture. This approach assumes a single major or minor contributor and that the major or minor profile is contained within the set of alleles detected at each locus as either a distinct allele, a masked allele or within a stutter artifact. Deduction of the contributor's profiles may be possible at all 15 loci or may only be possible at some loci resulting in a partially deduced profile.

Assignment of the set of genotypes at each locus requires derivation/deconvolution or subtraction of other components/contributors in the mixture. When all possible genotypes have been deduced at each locus, the frequency of each genotype is summed and calculated using Modified RMP, Deduction of the contributor's profile may be possible at all 15 loci or may only be possible at some loci resulting in a partially deduced profile.
A "set of genotypes" can be assigned to a mixture profile when the number of contributors in the mixture or in the interpreted component of the mixture (i.e major component) can be defined and the quality of the DNA results supports that all of the DNA from the defined number of contributors can be accounted for in the mixture (i.e complete drop of any one contributor has not occurred). A complete mixture profile or a partial mixture profile may result from the interpretation and is dependent on the complexity and quality of the DNA results.

An alternate statistical approach to assessing a mixture is the Combined Probability of Inclusion or **CPI**. CPI does not rely upon distinguishing individual donors into major or minor contributors, nor does it necessarily require an assumption of the number of contributors. The CPI module calculates the frequency of "every" possible genotype combination at a given locus based on the set of alleles detected at that locus. As a result, the frequency of the set of genotypes at each locus are summed and each locus is multiplied. CPI assumes each of the donors are represented in the set of alleles detected, therefore CPI requires good amplification of each of the contributors in the mixture (i.e. no drop out). In most cases, CPI can only be used for well amplified mixture samples, typically consisting of no more than 2 to 3 donors. The following is the CPI formula:

i. $f = (p_1 + p_2 + ... + p_k)^2$ where $p_1 + p_2 + ... + p_k$ are the frequencies of the alleles detected at the locus, and k is the number of alleles. The frequencies determined for each locus may then be incorporated into the product rule.

iii. Mixtures with known contributors:

In some mixtures, one or more of the DNA donors to a sample is known or can reasonably be assumed to be present (for example, the female contribution to a vaginal swab.) The genetic profile of the unknown contributor may be deduced by subtraction or deconvolution using the known contributor's profile. If a single source profile is deduced, the frequency for the unknown profile is calculated using RMP. If a "set of genotypes" is deduced, the frequency for the unknown profile is calculated using Modified RMP.

iv. Mixture with indistinguishable contributors:
Indistinguishable mixtures where there is no clear single discernable profile are often obtained from mixtures of 3 or more contributors. Inclusions and exclusions may still be made based on the presence or absence of detected alleles. If a mixture component profile also cannot be deduced, then

a conclusion of "uninterpretable" may be offered for the contributors in the mixture.

I. **Conclusions based on Interpretation of Results:**

The following conclusions are used to address comparisons between casework questioned samples and reference samples:

a. Exclusion (Elimination): A person will be reported as being "excluded" when the sample has one or more non-matching alleles when compared to the reference source. The result should be reported as "could not be the donor of the questioned stain" or similar wording.

b. Inclusion (match): A person will be reported as "included" when the sample matches across all interpreted loci when compared to the reference source. The result should be reported as "included as a potential donor of the questioned stain" or similar wording. Inclusions will be qualified with a statistical analysis of the estimated frequency of occurrence of the questioned stain profile (see statistical analysis below.)

c. Uninterpretable/Inconclusive : A conclusion of "uninterpretatable or no conclusion" is reported in situations when the DNA results are below interpretable levels, or much of the interpretable component is at stochastic levels or with confounding complex mixtures (mixtures of 3 or more persons with much of the genetic information at stochastic levels). An inconclusive finding will be reported when the genetic information contained in the DNA results is insufficient to include or exclude the reference source as the donor of or contributor to the questioned sample.

d. No results: A conclusion of "no result" is reported when no amplified DNA has been detected above the analytical threshold at all loci.

J. **Statistics**

1. Statistical interpretations provide an objective means to assess the strength or significance of an inclusion (match). All inclusions of a probative nature will have a statistical interpretation provided. Statistical calculations are not required to support the inclusion of an individual on his or her own intimate sample. An intimate sample is any sample where there is a reasonable expectation that the individual's DNA would be present, regardless of the circumstance of the alleged crime. These include samples that originate directly from an individual's body (such as fingernails, hair, body orifice or body swabs), as well as clothing, accessories, and other personal effects documented as belonging to or removed from an individual.

2. The following formulas are adopted from The Evaluation of Forensic DNA Evidence, compiled by the Committee on DNA Forensic Science, National Research Council, and published through the national Academy Press (1996).

   a. Heterozygote frequencies will be calculated using the formula $f_{(pq)} = 2pq$. (NRC 1996 4.1b)

   b. Frequency calculations for homozygotes will be calculated using: $f_{(pp)} = p^2 + p(1-p)$ with = 0.01. (NRC 1996 4.4a) In cases of small, isolated populations (e.g., Native Americans), frequency calculations for that population will use 0.03 for .

   c. A five-event minimum allele frequency will be used for rare alleles (i.e. 5/2N.) For each individual allele, an observed allele count less than five is raised to five. This modified allele count is converted to a frequency and used for all subsequent genotype calculations.

   d. When a single allele is detected at a level (<200 RFU) where a paired allele may have been lost at a locus, the frequency of the stochastic allele in question is set at 2p. No assumption is made regarding the other allele. The 2p formula double-counts a homozygote, therefore another, more accurate representation of the genotype frequency is:

      i. $f = 2 * p * (1 - p)$

   e. In situations where more than one allele is at a level where a paired allele may have been lost, the stochastic alleles may be summed and multiplied by 2, with double counted homozygote and heterozygote combinations then subtracted. As an example, for stochastic alleles p and q:

      i. $f = 2(p + q) - (p^2) - (q^2) - (2pq)$

3. The laboratory has developed Excel worksheets to automatically calculate probabilities of inclusion using RMP (Random Match Probability), Modified RMP (selected genotypes), and CPI (Combined probability of Inclusion).

Multi-locus STR profile frequencies are calculated by multiplying the genotype frequencies for each interpretable locus, also known as the product rule. The statistical calculation conveys the significance of a match between the evidence profile and the reference source. Frequencies will generally be given for African American, Caucasian,

and Hispanic populations and will be calculated using the respective Heterozygote and Homozygote formulas described above. Frequency estimates will be reported to two significant figures. The source of the data used to calculate statistical frequencies will be cited and documented in the examiner's casework notes.

4. Biological relationships:

   a. In cases where potential biological relationships exist between possible contributors and the evidence sample, the best course of action is to directly test those involved relatives who may have deposited the biological stain. In certain circumstances these reference samples may not be available. It is possible to estimate the conditional probability that a corresponding profile exists between relatives.

   b. For non-inbred, unilineal relatives (generally non-sibling relationships) the following formulae estimate the chance probability of identical genotype:

      i. Homozygote: $P + p_i^2 + 4p_i(1 - p_i)F$ (NRC 1996 4.8a)
      Heterozygote: $P = 2p_ip_j + 2(p_i + p_j - 4p_ip_j)F$ (NRC 1996 4.8b)
      Where F is the kinship coefficient (parent and offspring = 1/4; half-siblings, uncle, nephew = 1/8; first cousins = 1/16.)

   c. For siblings (with a bilineal relationship):

      i. Homozygote: $P = (1 + 2p_i + p_i^2)/4$ (NRC 1996 4.9a)
      Heterozygote: $P = (1 + p_i + p_j + 2p_ip_j)/4$ (NRC 1996 4.9b)

5. Parentage Cases:

The laboratory uses Excel worksheets developed by DOJ to calculate Kinship Index.

   a. The statistical significance of relationship (kinship) testing (including parentage) uses the **Likelihood model** where competing hypotheses are compared. Kinship testing is performed in certain situations. These include cases where an evidentiary stain/sample is compared to a relative, and for criminal paternity cases. In these cases, the likelihood ratio model is used to calculate the kinship (paternity, maternity, sibship, parentage) index.

   b. Biological parent to child relationships may be estimated through the use of Paternity Index (PI) or Probability of Exclusion (PE) calculations. Paternity Index assesses the likelihood that a particular person is the biological parent of an individual compared to a random individual selected from the same population group. This relationship is generally reported as "it is X times more likely to observe the child's profile if the (suspect) is the biological parent of the child than observing the child's profile if the father is a randomly selected individual from the (race) population."

   c. Probability of Exclusion estimates the probability of excluding a random individual as a biological parent from a selected population given the profiles of a child's and a known parent's profile. This relationship is generally reported as "the (suspect) is not excluded as the biological parent of the child. Approximately X% of randomly selected (race) individuals would be eliminated as the biological parent." The paternity formulas listed below require three genetic profiles for comparison:

      i. Known Parent

      ii. Child

      iii. Alleged Parent

   d. Paternity Index: The likelihood of parentage is calculated according to the following ratio:

   e.

$$PI = \frac{\text{Probability of genetic observations conditional on parentage}}{\text{Probability of genetic observations conditional on non - parentage}}$$

   f. The Parentage Index can be estimated for a DNA profile according to the product rule using the following equation:

$$PI = \prod_{loci} PI_{locus}$$

where PI of locus is estimated according to the genetic relationships listed in the PI and RMNE table below.

g. Probability of Exclusion:

i. The probability of exclusion is estimated for a DNA profile according to the product rule using the following expression:

1. $PE = 1 - RMNE_{combined}$

where $RMNE_{combined}$ is the product of the individual RMNE estimates according to the genetic relationships listed in the PI and RMNE table below.

h. The following table lists the possible genotypic relationships among the three tested individuals. Given alleles A, B, C, and D with respective allele frequencies a, b, c, and d:

PI and RMNE Formulas
Single locus, no null alleles, low mutation rate, codominance

Known Parent	Child	Alleged Parent	Numerator	Denominator	PI	RMNE
BD	AB	AC	0.25	0.5a	1/2a	a(2-a)
BC	AB	AC	0.25	0.5a	1/2a	a(2-a)
BC	AB	AC	0.25	0.5a	1/2a	a(2-a)
BC	AB	AA	0.5	0.5a	1/a	a(2-a)
BB	AB	AC	0.5	a	1/2a	a(2-a)
BB	AB	AB	0.5	a	1/2a	a(2-a)
BB	AB	AA	1	a	1/a	a(2-a)
AB	AB	AC	0.25	0.5(a+b)	1/[2(a+b)]	(a+b) (2-a-b)
AB	AB	AB	0.5	0.5(a+b)	1/(a+b)	(a+b) (2-a-b)
AB	AB	AA	0.5	0.5(a+b)	1/(a+b)	(a+b) (2-a-b)
AB	AA	AC	0.25	0.5a	1/2a	a(2-a)
AB	AA	AB	0.25	0.5a	1/2a	a(2-a)
AB	AA	AA	0.5	0.5a	1/a	a(2-a)
AA	AA	AB	0.5	a	1/2a	a(2-a)
AA	AA	AA	1	a	1/a	a(2-a)

6. CODIS

a. Database Match Probability

A search against a database has more opportunities for comparing the evidence profile against multiple other profiles, therefore the chance of a coincidental match increases. The chance of a coincidental match increases even more when the profile has less discriminating potential, such as when it is a partial profile or mixture profile. The formula used to calculate the coincidental match is:

N x P

N represents the number of individuals in the database at the time the CODIS match occurred.
P represents the random match probability (RMP) calculated for the evidence profile.

An analyst will calculate and document the estimated coincidental match in their case notes. This calculation will typically be limited to case notes that support a CODIS confirmation examination. The coincidental match estimate will be reported in a laboratory report when the RMP is less than the size of the CODIS database at the time the match occurred. The purpose of reporting the coincidental match is to convey to the customer the significance of the match and its potential for a coincidental match.

When calculating and/or reporting the database coincidental match, an estimate should be reported for

each of the three major population groups (African American, Caucasian, and Hispanic). For example:

A coincidental match occurring with a person in the database is estimated to occur:

1 in XXXX databases of African Americans
1 in XXXX databases of Caucasians
1 in XXXX databases of Hispanics

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 08/29/2019	**NUMBER:** BIO.2.DNA.11 - Interpretation Guidelines: PowerPlex Fusion 6C
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Interpretation Guidelines: PowerPlex Fusion 6C	

I. Interpretation of STR Data

A. Introduction

1. The interpretation of results is a matter of professional judgment and expertise. Not every situation can be covered by a pre-set rule nor is it reasonable to expect that competent analysts will always be in full agreement in the interpretation of every case. However, it is the goal of the laboratory to develop criteria, based on validation studies, users' manuals, literature references, and casework experience to provide a framework for objective interpretation of results that all analysts can follow. As technology progresses and the laboratory's experience evolves with it, these interpretation guidelines will continue to evolve.

2. The purpose of these guidelines is to establish an outline to ensure interpretations are made as objectively and consistently as possible from analyst to analyst and to ensure reported conclusions are scientifically supported by the analytical data.

3. The Biology Unit's Interpretation Guidelines are patterned after the SWGDAM STR Interpretation Guidelines for Autosomal STR Testing (2017) and National Research Council Report II, The Evaluation of DNA Evidence, (1996).

B. Relative Fluorescent Units:

Upon PCR amplification, STR fragments are created with primers that contain a fluorescent dye tag. The fragments are separated by base size when they pass through the capillary of the CE instrument. The fragments are detected when they pass the laser, which excites the dyes resulting in an emission of light. The emission spectra is captured by the CCD (Charged Coupled Device) camera and the signal is displayed as peaks. The resultant peak heights are a measurement of the amount of fluorescence detected. Therefore, there is a quantitative relationship between the amount of DNA amplified and the resultant peak height. The peaks are graphically displayed in six dyes by plotting the amount of signal detected which is displayed on the Y axis as relative fluorescent units (RFU) versus the electrophoresis time (scan number) which is displayed on the X axis. The graphical display is termed an electropherogram.

C. Thresholds used for Data Analysis and Interpretation

1. **Analytical Threshold (AT):** The minimum height requirement at and above which peaks can be reliably distinguished from background noise. Based on validation data, the minimum peak height threshold is **80 RFU for the blue, green, purple, and orange dyes and 110 for the yellow and red dyes.** While peaks can be observed below the analytical threshold and may indicate the presence of a true allele, peaks below these levels will not be registered as alleles for reporting purposes.

2. **Stochastic Threshold:** The stochastic threshold (ST) is the peak height above which it is reasonable to assume that dropout of a sister allele of a heterozygote pair has not occurred. Based on validation data, the stochastic threshold is **600RFU**. Peaks can readily be designated as alleles below **600RFU**; however stochastic fluctuations are known to occur at this level. Depending on the interpretation being performed, peaks at/below the stochastic threshold may still be used for comparison and interpretation, but when peak heights are below 600RFU the potential for allelic drop-out of a paired peak should be considered. Note that when an allele is in a stutter position, the "stacking" of stutter with the peak can artificially inflate the peak height. Allele stacking must be considered when assessing whether a contributor's allele lies above or below the ST.

D. Levels of DNA Input

1. The optimal level of input DNA is 0.5 - 1.25 ng per amplification with a suggested target amount of 0.5 - 0.75ng for single source samples. Resolution of mixtures of two or more sources of DNA may require slightly higher input levels, such as 1.0 - 1.25 ng to adequately detect each donor. In cases of degraded DNA, excess template addition (>1.0 ng) can result in successful amplification.

2. During the validation, full single source profiles were detected consistently at 0.1 ng or above, and full single source profiles could be detected in some samples as low as 62pg.

3. *Optimal Level of DNA:* A target amount of 0.5ng for single source samples produced an average peak height of 3600 RFU during validation. Analyzed data values detected in the 600 to near 20000 RFU range provide

adequate data for most interpretations.

4. *Trace/Stochastic Level DNA*: DNA detected below 600RFU is considered low level. Based on validation studies, it is reasonable to assume that at a given locus, allelic dropout of a sister allele has not occurred when DNA is detected above the stochastic threshold of 600RFU. Dropout should be taken into consideration when interpreting profiles with alleles below the stochastic threshold. Additional caution should be used when interpreting samples at this intensity level.

5. *Saturated Level DNA:* The CCD camera on the 3500 may become saturated at 27,500 RFU. Following peak detection, such peaks in the analyzed data are assigned an artificial height value which is not representative of the true amplitude. Peak height values for off-scale peaks should be used with caution in quantitative aspects of interpretation. Trace/stochastic level contributors should not be interpreted in mixture samples at loci with saturated data.

E. **Peak Height Ratios**

1. Peak height ratios are calculated by dividing the peak height (in RFUs) of the lower RFU allele by the peak height of the higher RFU allele, and then multiplying by 100 to express the PHR as a percentage.

2. Based on validation studies, the minimum expected PHR for single-source samples, where there is no indication of a mixture and 0.5ng of template DNA is amplified, is 60%. This ratio, however, may be lower with lower amounts of DNA. Peak-height-ratio imbalance may also result from degraded DNA or the presence of PCR inhibitors. The following peak height ratios should be used when assessing data at the following allele heights in RFUs.

3.

Allele height of taller peak (RFU)	PHR
≥2500 RFU	60%
1400 - 2499 RFU	30%
600 - 1399 RFU	13%

II. Steps of STR Data Interpretation The interpretation of DNA data is considered a combination of qualitative and quantitative assessment. The primary goal of mixture interpretation shall be to determine the possible genotype combinations of the contributors. The determination of contributing genotypes will allow for inclusions or exclusions based upon those genotypes and not merely the presence or absence of alleles in a mixture. An analyst should note all analysis and interpretation within the case notes, including number of contributors, quality issues affecting the sample, assumptions used, and major/minor contributors deduced. Mathematical calculations must be shown to support the deduction of any major/minor contributors.

A. **Step 1: Characterize the quality of the amplification**

1. **Quality:** Evaluate those loci for which quality issues are suspected and where complete or partial drop out of alleles, and/or allele imbalances due to degradation, inhibition, or stochastic affects is possible.

   a. **Inhibition** is when a substance is present in the DNA sample that affects the amplification reaction. This may cause certain loci to amplify better than others regardless if they are high or low molecular weight loci.

   b. **Degradation** is when the DNA molecule has been broken into small pieces due to environmental insult or other factors. This results in a gradual loss of signal affecting the high molecular weight loci first and is often observed as a downward ski slope pattern. Degraded DNA can result in partial DNA profiles or no DNA results at all because the DNA fragments could not be amplified.

   c. **Differential Degradation** is where contributors to a DNA mixture possess different degrees of degradation. This is of particular importance with mixture interpretation where different contributions to a DNA mixture may have different levels of degradation; this could have a significant impact on interpreting mixture proportions across the profile depending on the severity of the disproportionate degradation.

2. **Quantity:** Evaluate whether the data in the sample is detected at low, or at optimal RFU levels. The overall quantity of DNA in the sample may be based on the overall allele height intensities or the sum of allele heights.

   a. **Peak height imbalance:** Peak height imbalances from known heterozygous paired alleles can randomly occur and were noted during validation to occur in samples across most loci and signal intensities. Peak height imbalances can result from stochastic effects in low amplified DNA, poor amplification, or more rarely, a tri-allelic pattern, or a primer site mutation. Peak height variation appears to be amplification mediated as imbalances were not reproducible between duplicate amplifications. Peak height ratios are one parameter considered in assessing mixtures, and more importantly, in assessing paired alleles in mixtures. Additional caution should be used in assigning major and minor contributor types in mixtures at lower intensity levels.

   b. When the DNA template copy number is low, stochastic PCR effects due to chance sampling may result in substantial imbalance between alleles. This alone is not a basis for excluding the data for interpretation or for concluding the imbalance is due to a mixture. While stochastic sampling is known to occur as input

DNA amounts decrease, it is not observed in all amplifications of small DNA quantities. Single peaks <600 RFU (the lab's stochastic threshold) will be evaluated for allelic drop out. If possible, the analyst can re-amplify or re-inject the sample to attempt to obtain reproducible amplification for comparison.

3. Objective signs of degradation and/or inhibition combined with DNA detected at low levels may impede the analyst's ability to determine the number of contributors in a sample.

   a. When evaluating the overall quality and quantity of the sample, the analyst should consider whether the DNA data across all typeable loci is detected at a level where the number of contributors can be confidently assumed and whether there is data in a sufficient number of loci to clearly assess the number of contributors.

   b. When there is a possibility of allele drop-out *and* a fixed number of contributors to a mixture cannot be reasonably assumed for the component in question this leads to uncertainty about the possibility of entire genotypes being undetected in a mixture and the entire profile or a specific component (for example, minor component) may be considered uninterpretable.

B. **Step 2: Determining whether the sample is single source or a mixture**

1. To assess if the sample is single source or a mixture, all alleles above the analytical threshold will be used. Peaks below the analytical threshold may be observed and considered in the interpretation regarding possible number of contributors.

2. Single Source Profiles

   a. When the DNA data represented in a full profile contains no more than two alleles at each locus and each allele pair within a given locus is balanced within expectations, it is highly probable the DNA results are attributable to a single contributor. Exceptions to the two allele maximum per locus rule have been documented, those are persons with a triallele genotype and peak height imbalances from primer binding site variations.

3. Partial Profiles

   a. Partial profiles can result from degraded or inhibited samples or samples originating from low quantity. A partial profile contains less genetic information for assessing the potential number of contributors in the sample; therefore, additional caution is needed when determining whether the observed DNA has originated from a single contributor. Partial profiles, while expressing less genetic information than a full profile, still can provide useful information for purposes of inclusion and exclusion.

   b. *Single-source profiles with heterozygous alleles below stochastic threshold (ST):* In single source samples, the primary concern with using alleles below ST is the possibility of allelic dropout. An apparent homozygous allele below ST may in fact be a heterozygote with dropout of the sister allele. If both sister alleles of a heterozygote are present below the ST, dropout is not a possibility and therefore the alleles may be considered a genotype. Because this relies on the assumption of a single-source sample, the assumption must be documented on the electropherogram and in the report.

4. Mixture Profiles: (See flowchart at the end of this document)

   a. Generally a sample is considered to be a mixture of more than one individual if three or more alleles are present at more than one locus, and/or peak height ratios fall outside of expected ranges, suggesting allele sharing.

C. **Step 3: Determine the number/minimum number of contributors in a mixture**

1. Evaluating the number of contributors in a mixture entails considering the number of alleles at all loci and the peak height ratio of those alleles in relation to each other.

2. Number of Alleles: The minimum number of contributors can typically be estimated based on the locus with the greatest number of alleles, such as: Up to 4 alleles at a locus = at least 2-person mixture, 4 to 6 alleles at a locus = at least 3-person mixture, More than 6 alleles at a locus = at least 4-person mixture.

3. When interpreting a mixture with multiple individuals, the possibility of additive allele sharing must be considered, where one peak may be from multiple copies of one allele from different donors. Allele sharing will be more common at less polymorphic loci and with relatives. The greater the amount of allele sharing the less likely the number of contributors can be recognized based on allele counting.

4. **Peak Height Ratios**: Samples with peak height ratios falling outside the expected values for heterozygous samples can be an indication of a mixture. Stochastic effects and preferential amplification (smaller alleles being amplified better than larger alleles) may also account for the imbalances. When several peak height imbalances are observed with several alleles at a locus that cannot pair due to their peak height ratios, there is the potential for a greater number of contributors and greater potential for allele sharing to occur. For example, a mixture that presents as a two-person mixture based on the presence of 4 alleles, can actually be greater than two individuals

when three of the alleles cannot equally pair with the fourth allele. Additionally, each of the three alleles may share a sister allele stacking in the fourth allele causing the peak height imbalance.

5. The number of contributors to a mixture may be assumed if information at all loci across the profile show no indication of an additional contributor below threshold, peak heights are above stochastic threshold (at least for the lower molecular weight loci), and there are at least five loci indicating that number of contributors (for example 5 loci with 5 or 6 loci could indicate three-person mixture).

6. The three Y-STR loci contained within the Fusion 6C kit can be used for determining the minimum number of males to a mixture. However, all males within a paternal bloodline will have the same Y-STR profiles and therefore the actual number of males in a mixture will not be able to be determined, especially when relatives may be contained within a mixture.

D. **Step 4: Consider and factually describe known information from which reasonable inferences can be assumed about the sample.**

1. *Intimate Samples:* When the donor of the sample can be assumed to be present in the sample. An intimate sample is any sample where there is a reasonable expectation that the individual's DNA would be present. These include samples that originate directly from an individual's body (such as fingernails, hair, body orifice or body swabs), as well as clothing belonging to or removed from an individual.

2. Once the assumed person is determined to be present in the mixture, the individual's contribution to the mixture can be accounted for and used to deduce the profile(s) of the remaining contributor(s) in the mixture.

3. *Proximal Evidence:* An unknown DNA profile generated from a given item may be assumed to be potentially observed elsewhere either on the same item of evidence or closely related evidence. For example, different swabs collected from the same SAEK or swabs collected from different areas of the same firearm.

4. *Familial Relationships:* Given the case circumstances or the location of the collected evidence, there may be a high potential for related individuals to be part of the mixture.

5. *Different fractions of the same sample:* When a sample is divided into different fractions, for example during a differential digestion, the profiles generated from one fraction can be assumed to be present in the other fraction and used to determine profiles in the other fraction. A statement such as "the sperm donor and the victim can account for all the alleles detected" or similar can be reported.

E. **Step 5: Mixture Interpretation: Determining the Average Mixture Proportion (Mx) and Mixture Deconvolution**

1. <u>*Two-Person Mixtures*</u>

a. Typically, mixtures showing a ratio of major to minor of 3:1 or greater (~75% major) can be clearly distinguished, until approximately a 10:1 mixture, when determining a minor profile becomes more difficult and dropout of the minor can start to occur. During validation, it was shown that mixtures of DNA from two different sources could generally be recognized as mixtures even at a ratio of 100:1. A clear major profile might not be able to be deduced from a mixture less than 3:1, but a set of genotypes attributable to the major or minor might be able to be assigned to a given contributor.

b. *Loci Demonstrating Four Alleles:* Calculate the average mixture proportion for the major contributor using all loci demonstrating four alleles. The mixture proportion for four allele loci can be calculated using the following formula:

i. Mx_{major} = Sum of the major alleles/Sum of the all alleles

c. *Loci Demonstrating Three Alleles.* Three allele loci can be used when the minor alleles can pair exclusively with each other (i.e. major allele is homozygous) or the major allele is an assumed contributor's allele.

i. Mx_{major}= The major allele/Sum of all alleles

d. Similar to above, if a known contributor can be assumed to be present in the mixture, the average mixture proportion and range can be calculated for the unknown contributor to the mixture instead of the major contributor.

2. <u>*Three or Four Person Mixtures*</u>

a. With the more extreme mixture proportions in three-person (~5:1:1 or greater) and four-person (approximately ~8:1:1:1 or greater) mixtures (>70% major), a clear major contributor profile may be able to be deduced. With less extreme mixture proportions, a clear major contributor profile may not be able to be fully deduced. In some mixtures you may be able to fully deduce a major contributor profile at some loci while you may only be able to deduce a "set of genotypes" at other loci.

b. Mixture proportions may be applied to a donor or combination of donors in mixtures with more than two contributors. It can be used to assess the proportion of major, minor, or intermediate donor(s) to the donor

pool. Mx should be calculated from all loci containing non-overlapping alleles and where all alleles are assumed to be detected for all donors.

c. **Three-person Mixtures**

i. For 6 allele loci: Mx_{major} = Two tallest alleles/Sum of all alleles

ii. For 5 allele loci where the major is a homozygote (can't pair with any other allele): Mx_{major} =Tallest allele/Sum of all alleles.

d. **Four-person Mixtures**

i. For 8 allele loci: Mx_{major} = Two tallest alleles/Sum of all alleles

ii. For 7 allele loci where the major is a homozygote (can't pair with any other allele): Mx_{major} =Tallest allele/Sum of all alleles.

e. 5 and 7 allele loci where the major is heterozygous and the remaining alleles are at a low level may be used when calculating Mx if the contribution of the trace component is deemed to be insignificant. This can be done by accounting for the possibility that the sister allele of the tallest trace allele may be present in the two tallest alleles and subtracting that from the sum of the two tallest peaks.

3. An average mixture proportion can be calculated as well as a range of acceptable mixture proportions based on the loci where all contributors' alleles are represented in the locus. Once the average Mx is calculated a range of acceptable Mx can be calculated using the average mixture proportion +/- .25. This will give a range of acceptable mixture proportions, for deducing a set of genotypes. Calculate Mx for the remaining loci and determine if they fit in the acceptable Mx range.

4. The quality of DNA results and how they affect the interpretation of proportions overall needs to be considered. Evaluate whether the proportions remain constant across the loci (even under degrading conditions) or if there is evidence of differential degradation between the contributors. Separate mixture proportions may need to be calculated from low molecular weight and high molecular weight loci. A range +/- 0.30 may also be used for samples that may show evidence of inhibition or degradation.

5. When assessing peak height proportions in a deconvolution, the peak height ratios for potential heterozygous pairs are typically performed using an assumed 100% peak height balance but can also be performed using the the highest peak imbalance seen for an allele of its height.

6. *Issues with minor contributors involving stutter*

a. Generally, when the height of a peak in the stutter position exceeds the laboratory's stutter expectation for a given locus, that peak is consistent with being of allelic origin and should be designated as an allele.

b. For a minor allele in a stutter position, stutter from a major allele may cause an artificial imbalance in the PHR calculation results of minor genotypes. This should be considered in deconvolution when deriving potential genotypes from applied minimum PHR expectations and the calculated Mx range. This can be done by using the stutter threshold to determine how much of the peak could be from stutter and subtracting that from the height of the peak.

c. A minor allele may also be potentially located in the same location as a stutter peak and may not be detected as a true allele if the total RFU does not surpass the stutter percentage. Stutter peaks should be considered as possible allelic peaks when the stutter peaks are at heights consistent with or greater than the minor contributor peaks.

F. **Step 6: Characterize the Mixture**

1. <u>Mixtures displaying distinguishable major and/or minor contributors at all loci:</u>

a. A distinguishable mixture contains a distinct contrast in signal intensities (e.g., peak heights) between the different contributors' alleles which allows for the interpretation of the major contributor and possibly the minor contributor. Discernment of the STR typing results for the major or minor contributor to a mixture may effectively constitute deduced single-source profiles, or in other instances may be limited to single genotypes at only some loci with the remaining loci yielding multiple potential genotypes for the major or minor contributor.

b. A distinguishable mixture would be one where at loci with non-overlapping alleles the two tallest peaks have PHR >60% (or 30% for peaks 2499 - 1400 RFU) with one another and the PHR between the major and minor alleles is <60%. (or 30% for peaks 2499 - 1400 RFU).

c. The average Mx_{major} for 3 and 4 person mixtures should be greater or equal to 0.65 and 0.6, respectively.

d. *Minor contributors*

i. After deconvolution, the DNA typing results attributed to a single minor contributor should also meet PHR expectations. The PHR expectations of a minor contributor may be reduced due to stochastic peak height variation and the additive effects of peak sharing (e.g., minor peak and stutter peaks). Determination of a single genotype for a minor contributor may be possible at only some loci because multiple possible genotype combinations, potential allelic dropout, and/or masking of the minor contributor's alleles by those of the major contributor or by stutter from the major contributor's alleles preclude such determination at other loci. Probabilistic genotyping may be helpful in these situations.

2. Mixtures with a major component of two contributors and one or more minor contributors

a. A set of possible genotypes can be assigned to a mixture profile when the number of contributors in the mixture or in the interpreted component of the mixture (i.e major component) can be defined and the quality of the DNA results supports that all of the DNA from the defined number of contributors can be accounted for in the mixture (i.e complete drop of any one contributor has not occurred). A complete mixture profile or a partial mixture profile may result from the interpretation and is dependent on the complexity and quality of the DNA results.

b. For a mixture to be classified as having a major component of two contributors the following must be met at the loci containing the most alleles:

i. The Average Mx for the major component must be at least 0.75

ii. None of the 4 tallest alleles should be able to pair with the shorter alleles.

iii. If there are 3 tall peaks, the shortest of the three taller peaks cannot be fully explained by being shared with the shorter peaks.

c. The interpretation of the "major mixture" may be performed regardless of the interpretation of the "minor portion" of the mixture (i.e., the "minor portion" may be uninterpretable).

3. Mixture with indistinguishable contributors:

a. In some mixed samples, major or minor contributors may not be able to be deduced due to similar contributions of DNA. If there is no significant difference, a major/minor proportion cannot be categorized quantitatively. This results in an indistinguishable mixture at some or all loci. However, an assumption as to the number of contributors can be used to limit genotype possibilities in some instances (e.g., a four allele locus in a two-person mixture is not reasonably expected to have any homozygous genotypes contributing).

b. If an assumption as to the number of contributors can be made and it can be demonstrated that all contributors are present at a locus, all possible genotype combinations for any contributor can be determined at that locus and used for inclusions/exclusions. If an assumption as to the number of contributors cannot be made, due to quality issues, such as stochastic level alleles and the potential for missing genetic information it may prohibit interpretation of the mixture.

c. A mixture is considered to be indistinguishable when at the loci containing the most alleles the criteria for determining a single major contributor or a major component of two contributors mentioned above cannot be met.

G. **Step 7: Comparison with Known Samples and Conclusions:**

1. The following conclusions are used to address comparisons between casework questioned samples and reference samples:

2. **Exclusion (Elimination):** A person will be reported as being "excluded" when the sample has one or more non-matching alleles when compared to the reference source. The result should be reported as ".... is excluded as the source of the DNA." or similar wording.

3. **Inclusion (match):** A person will be reported as "included" when the sample matches across all interpreted loci when compared to the reference source. The result should be reported as ".... likely is the source of the DNA profile" or ".... is included as a possible source of the DNA" or similar wording. Inclusions will be qualified with a statistical analysis of the estimated frequency of occurrence of the questioned stain profile (see statistical analysis below) or a qualitative statement.

4. **Uninterpretable/Inconclusive:** A conclusion of "uninterpretable" or "inconclusive" is reported in situations when much of the genetic information is at stochastic levels, or when the mixture is too complex, the number of contributors cannot be assumed, and no major/minor components can be distinguished. A determination of inconclusive may apply to one component of a mixture (i.e., minor contributor results in a mixture with an interpretable major component) or to the overall results (i.e., low-level possible mixture with peaks below the analytical threshold). No conclusion (i.e., inclusion/exclusion) can be drawn from the comparison of a reference

sample to inconclusive data. An example of such an inconclusive result is "The DNA result /mixture is not suitable for comparison due to the low level and uncertainty in the number of contributors".

5. **No results**: A conclusion of "no result" is reported when no amplified DNA has been detected above the analytical threshold at all loci. The result should be reported as "No DNA results were obtained" or similar.

H. **Step 8: Statistical Analysis**

1. Statistical interpretations provide an objective means to assess the strength or significance of an inclusion (match). All inclusions of a probative nature will have a statistical interpretation provided. Statistical calculations are not required to support the inclusion of an individual on his or her own intimate sample.

2. Random Match Probability (RMP)

   a. The RMP calculation is defined as the probability of randomly selecting an unrelated individual from a population who could be a potential source of the evidentiary DNA profile. Typically, a RMP statistic is applied to a single source sample, or a deduced single source major or minor contributor to a mixture.

   b. The following formulas are adopted from The Evaluation of Forensic DNA Evidence, compiled by the Committee on DNA Forensic Science, National Research Council, and published through the national Academy Press (1996).

   c. Heterozygote frequencies will be calculated using the formula f(pq) = 2pq. (NRC 1996 4.1b)

   d. Frequency calculations for homozygotes will be calculated using: $f(pp) = p^2 + p(1-p)\theta$ with $\theta = 0.01$. (NRC 1996 4.4a) In cases of small, isolated populations (e.g., Native Americans), frequency calculations for that population will use 0.03 for θ.

   e. A five-event minimum allele frequency will be used for rare alleles (i.e. 5/2N.) For each individual allele, an observed allele count less than five is raised to five. This modified allele count is converted to a frequency and used for all subsequent genotype calculations.

   f. When a single allele is detected at a level (<600 RFU) where a paired allele may have been lost at a locus, the frequency of the stochastic allele in question is set at 2p. No assumption is made regarding the other allele's type (all alleles are possible). The 2p formula double-counts a homozygote, therefore another, more accurate representation of the genotype frequency is:

      i. $f = 2* p*(1- p)$

   g. In situations where more than one allele is at a level where a paired allele may have been lost, the stochastic alleles may be summed and multiplied by 2, with double counted homozygote and heterozygote combinations then subtracted. As an example, for stochastic alleles p and q:

      i. $f = 2(p + q) - (p^2) - (q^2) - (2pq)$

3. Modified Random Match Probability (mRMP)

   a. The modified RMP follows the same statistical formulae and process described for the RMP, but first sums the individual frequencies for the possible “set of genotypes” at each locus prior to applying the product rule. This is used when a clear major or minor is unable to be determined and a set of genotypes for that contributor(s) is deduced.

   b. Due to the application of theta (θ) for homozygotes, avoidance of double counting of genotype frequencies should be made; however, a calculated mRMP may occasionally exceed 1.0 at a locus. In these instances, the analyst will report the value as 1.0 at that locus.

4. Combined Probability of Inclusion (CPI)

   a. The CPI calculation is defined as the probability that a randomly selected individual from a population of unrelated individuals could be a potential contributor to a given DNA mixture. CPI does not rely upon distinguishing individual donors into major or minor contributors, nor does it necessarily require an assumption of the number of contributors. The CPI module calculates the frequency of "every" possible genotype combination at a given locus based on the set of alleles detected at that locus. As a result, the frequency of the set of genotypes at each locus are summed and each locus is multiplied. CPI assumes each of the donors are fully represented in the set of alleles detected, therefore CPI requires good amplification of each of the contributors in the mixture (i.e. no drop out). In most cases, CPI can only be used for well amplified mixture samples, typically consisting of no more than 2 to 3 donors.

   b. The following is the CPI formula: $f = (p1 + p2 + ... + pk)^2$ where $p1 + p2 + ... + pk$ are the frequencies of the alleles detected at the locus, and k is the number of alleles. The frequencies determined for each locus may then be incorporated into the product rule.

I. **Reporting Statistics**

1. The laboratory has developed an Excel workbook "STRstat Fusion" to automatically calculate probabilities of inclusion using RMP (Random Match Probability), Modified RMP (selected genotypes), and CPI (Combined probability of Inclusion).
2. Population frequency estimates will generally be given for African American, Caucasian, Asian, and Hispanic populations and will be calculated using the respective Heterozygote and Homozygote formulas described above.
3. Frequency estimates will be reported to two significant figures.
4. Source bibliographic information for the database used in calculating statistical frequencies will be documented in the casework notes.
5. A profile or component from any intimate sample which is solely attributable to an "owner" is not used for statistical analysis, but is addressed in the report with a qualitative statement.
6. The Y-STR loci will not be used for statistical purposes.

J. Kinship Cases:

1. The laboratory uses the KIn CALc Excel workbook developed by Cal DOJ to calculate Kinship Index.
2. The statistical significance of relationship (kinship) testing (including parentage) uses the **Likelihood model,** where competing hypotheses are compared. Kinship testing is performed in certain situations. These include cases where an evidentiary stain/sample is compared to a relative, and for criminal paternity cases. In these cases, the likelihood ratio model is used to calculate the kinship (paternity, maternity, sibship, parentage) index.
3. Biological parent to child relationships may be estimated through the use of Paternity Index (PI) calculation. Paternity Index assesses the likelihood that a particular person is the biological parent of an individual compared to a random individual selected from the same population group. This relationship is generally reported as "it is X times more likely to observe the child's profile if the (suspect) is the biological parent of the child than observing the child's profile if the father is a randomly selected individual from the (race) population."
4. The paternity formulas listed below require three genetic profiles for comparison:
   a. Known Parent
   b. Child
   c. Alleged Parent
5. Paternity Index: The likelihood of parentage is calculated according to the following ratio:

$$PI = \frac{\text{Probability of genetic observations conditional on parentage}}{\text{Probability of genetic observations conditional on non - parentage}}$$

6. The Parentage Index can be estimated for a DNA profile according to the product rule using the following equation:
   a. $\text{PI} = \prod_{loci} PI_{locus}$
   b. Where PI of locus is estimated according to the genetic relationships listed in the PI table below.
7. The following table lists the possible genotypic relationships among the three tested individuals.
8. Given alleles A, B, C, and D with respective allele frequencies a, b, c, and d:

9.

PI Formula					
Known Parent	Child	Alledged Parent	Numerator	Denominator	PI
BD	AB	AC	0.25	0.5a	1/2a
BC	AB	AC	0.25	0.5a	1/2a
BC	AB	AD	0.25	0.5a	1/2a
BC	AB	AA	0.5	0.5a	1/2a
BB	AB	AC	0.5	a	1/2a
BB	AB	AB	0.5	a	1/2a
BB	AB	AA	1	a	1/a
AB	AB	AC	0.25	0.5(a+b)	1/[2(a+b)]
AB	AB	AB	0.5	0.5(a+b)	1/(a+b)
AB	AB	AA	0.5	0.5(a+b)	1/(a+b)
AB	AA	AC	0.25	0.5a	1/2a
AB	AA	AB	0.25	0.5a	1/2a
AB	AA	AA	0.5	0.5a	1/a
AA	AA	AB	0.5	a	1/2a
AA	AA	AA	1	a	1/a

K. CODIS

1. Database Match Probability (NP)

   a. A search against a database has more opportunities for comparing the evidence profile against multiple other profiles, therefore the chance of a database match increases. The chance of a database match increases even more when the profile has less discriminating genetic data, such as when it is a partial profile or a mixture profile. The formula used to calculate how often a DNA profile matching the forensic unknown sample profile would be found in a database of size N is:

      i. N x P

      ii. N represents the number of individuals in the database at the time the CODIS match occurred.

      iii. P represents the random match probability (RMP) calculated for the evidence profile.

   b. An analyst may calculate and document the estimated database match probability in their case notes. This calculation typically be will limited to case notes that support a CODIS confirmation examination. The coincidental match estimate will be reported in a laboratory report when the RMP is less than the size of the CODIS database at the time the match occurred. The purpose of reporting the database match probability is to convey to the customer the significance of the match and its potential for a coincidental match. This is a very conservative approach to the National Research Council's recommendation since each major population group is being multiplied by the entire number of individuals in the database.

   c. When calculating and/or reporting the database match probability, an estimate should be reported for each of the four major population groups (African American, Caucasian, Asian, and Hispanic). For example:

      i. The expected number of DNA profiles in the database that would match the evidence profile is estimated to be:

         1. 1 in XXXX databases comprised of African Americans

         2. 1 in XXXX databases comprised of Caucasians

         3. 1 in XXXX databases comprised of Hispanics

         4. 1 in XXXX databases comprised of Asians

L. Definitions:

1. *Allelic dropout:* failure to detect an allele within a sample or failure to amplify an allele during PCR.

2. *Composite profile*: a DNA profile generated by combining typing results from different loci obtained from multiple injections of the same amplified sample and/or multiple amplifications of the same DNA extract.

3. *Deconvolution*: separation of contributors to a mixed DNA profile based on quantitative peak height information and any underlying assumptions.

4. *Deduced*: inference of an unknown contributor's DNA profile after taking into consideration the contribution of a known/assumed contributor's DNA profile based on quantitative peak height information.

5. *Distinguishable Mixture*: a DNA mixture in which relative peak height ratios allow deconvolution of the profiles of major/minor contributor(s).

6. *Indistinguishable Mixture*: a DNA mixture in which relative peak height ratios are insufficient to attribute alleles to individual contributor(s).

7. *Masked allele*: an allele of the minor contributor that may not be readily distinguishable from the alleles of the major contributor or an artifact.

8. *Mixture ratio:* the relative ratio of the DNA contributions of multiple individuals to a mixed DNA typing result, as determined by the use of quantitative peak height information; may also be expressed as a percentage.

9. *Partial profile*: a DNA profile for which typing results are not obtained at all tested loci due, for example, to DNA degradation, inhibition of amplification and/or low quantity template.

10. *Stochastic effects*: the observation of intra-locus peak imbalance and/or allele drop-out resulting from random, disproportionate amplification of alleles in degraded or low-quantity template samples.

11. *Contributor*: a unique DNA profile provided to a sample from one individual. This DNA profile is presumed to adhere to the principle of cellular organization (paired autosomal alleles).

    a. Major contributor(s): an individual(s) who can account for the predominance of the DNA contributed to a sample.

    b. Minor contributor(s): an individual(s) who can account for the lesser portion of the DNA in a mixed profile.

12. *Component:* an assessed combination of genetic traits observed in a biological sample. A component may be comprised of one or more contributors. Assessment of components takes into account the expectation of cellular organization (paired autosomal alleles), knowledge about the specific sample in question (e.g. expected contribution from an intimate contributor), and variation resulting from environmental, amplification, and mixture effects.

13. Components are generally assessed based on intensity and may be referred to as:

    a. Major/Predominant

    b. Intermediate/Minor

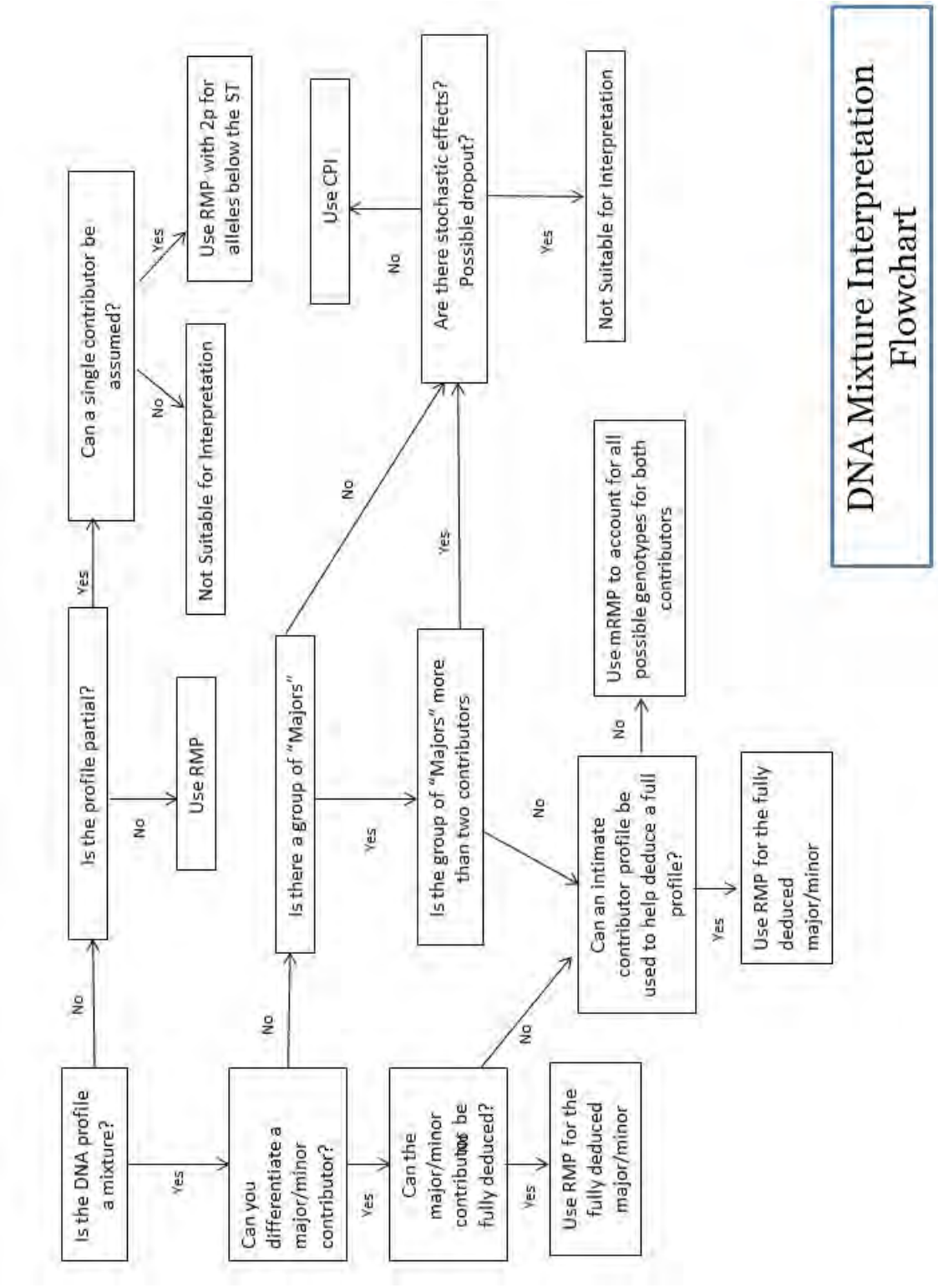
    c. Minor/Trace

III. References:

A. SWGDAM STR Interpretation Guidelines for Autosomal STR Testing (2017)

B. National Research Council Report II, The Evaluation of DNA Evidence, (1996).

IV.



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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** BIO.2.DNA.12 - Nimbus Liquid Handling Robot
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB: 6.4**	
CHAPTER: DNA Analytical Procedures	**SUBJECT:** Nimbus Liquid Handling Robots	

I. **Quality Control**

A. The following quality control measures are taken to minimize the risk of contamination:

1. Wipe down the Nimbus workstation and work area with a diluted bleach solution before starting a run. A non-bleach disinfectant such as Microside SQ, may be used for stainless steel surfaces. For either disinfectant, follow with a wipe-down with water to remove any remaining residue and then ethanol to help with drying.

2. Perform weekly maintenance when required by the Nimbus system.

   a. The **Hamilton Run Control** software will not load if the weekly maintenance has not been performed.

   b. To perform the weekly maintenance, double click the **Nimbus Maintenance** icon on the ***Desktop***. Select **Weekly** as the maintenance type and click **Run Maintenance** to continue. Perform and check off each item when prompted. Remove tip eject plate for tightness and cLLD checks. Click **Close** when weekly maintenance is complete and replace the tip eject plate prior to any Nimbus setup runs.

II. **Barcoding Procedure**

A. Double click on the "**Barcodes File.csv**" file icon on the designated barcoding computer ***Desktop***.

B. Cell A1 is labeled "Barcode"; add lab and item numbers of samples (or standards, controls, names of quantitation/amplification/normalization plates, reagents, etc.) in the subsequent rows.

NOTE: Limit the number of characters and special characters when possible. Excessive characters may make the barcode too long and unscannable for the Nimbus.

NOTE: All barcodes are case sensitive. Ensure barcodes match the case of the samples in worklists to avoid downstream issues.

C. Click the **Save** icon, then **Yes** to keep the file as CSV format, and close the document without saving (**Don't Save**) when prompted again.

D. Double click on the **Bartender** software "**CCC Barcode.btw**" icon on the ***Desktop***.

E. Once the software opens, click the **Print** button on the toolbar.

F. In the following *Print* dialogue window, click the **Select Records** button.

G. In the *Select Records* dialogue window, enable checkboxes for the samples that are to have barcodes printed. Click **OK** to return to the *Print* window.

H. Click **Print** on the *Print* window.

I. The labels then print out from the Zebra LP 2824 Plus adjacent to the computer. Trim the label and affix using the following guidelines:

1. For 2.0mL dolphin tubes, place barcodes vertically just below the front tube lip.

2. For skirted amplification plates, place barcodes horizontally on the right side, centered, near the top of the plate.

3. For deep well normalization plates, place barcodes horizontally on the right side, centered and near the top.

NOTE: Plates do not necessarily need a barcode. As long as identifying information is placed in the designated location, whether barcoded or handwritten, it may still be scanned or typed into the input fields of the Nimbus method.

J. **Close** out of the *Print* dialogue window, then **Exit** out of the **Bartender** software. Click **No** when asked to save changes.

III. **Quantification Setup**

A. **Scope/Principle/Purpose**: This procedure describes the automated setup of the Promega PowerQuant DNA quantification kit by the Hamilton Nimbus liquid handling platform. Standards, controls, and extracted samples are prepared in 2.0mL microcentrifuge tubes with unique barcodes. Source positions, destination positions, and barcodes as well as kit information are contained in an Excel-based file prepared by the user and read by the Hamilton Run Control software. This setup method provides prompts to load samples, reagents, and plates on the instrument deck and includes an option to prepare the master mix. The instrument dispenses the master mix to the reaction plate, followed by the transfer of samples, standards, and controls from barcoded tubes into designated wells as dictated by the user-prepared worklist. The quantification plate is then sealed, centrifuged, and ready for qPCR analysis.

B. **Reagents:**

1. Promega PowerQuant System

C. **Equipment and Supplies:**

1. Hamilton Microlab Nimbus Workstation
2. 2.0mL Screw Cap Tube with Cap
3. 96-Well Optical Reaction Plate
4. Optical Adhesive Film
5. Plate Centrifuge

D. **Procedure:**

1. Thaw the appropriate kit reagents if necessary.
2. Ensure all samples, standards, controls, and reagents are vortexed and barcoded or labeled.
3. Create a worklist using the DNA sample setup workbook or create a worklist manually. Worklists for quantitation plate setup must be in CSV (comma delimited, *.csv) file format and in the ***Desktop\Nimbus Worklist\Quant*** folder for the method to run.
    a. To create a worklist from the DNA workbook, select the "**Nimbus Quant WL**" tab and **Save As** with the following name and file extension: **WL.csv**. Proceed to follow the remaining instructions to clear the contents of empty cells in the "**Instructions**" tab and move it to the above specified folder.
    b. To create a worklist manually on the pre-amp Nimbus instrument computer:
        i. Open the "**WL.csv**" file located in the ***Desktop\Nimbus Worklists\Quant*** folder. Enter information for each sample per row as follows:

A	B	C	D	E	F
Enter **"Tube"** for the type of container the sample is in	Enter **Barcode** of sample tube (case sensitive)	Enter **"T"** to indicate sample is in a tube	Enter **"Amp1"** for the destination plate position on instrument deck	Enter the **destination well position on the rxnplate (e.g., A1, B1,…)**	Enter **"PQ"** to specify quant kit

        ii. Click the **Save** icon, then **Yes** to keep the file as CSV format, and close the document without saving **(Don't Save)** when prompted again.
4. This Nimbus setup method also requires a reagent worklist (**RWL.csv**) in the ***Desktop\Nimbus Worklists\Quant*** folder in order to run. This file specifies the reagents needed to prepare the master mix. Do not edit or move this file regardless of the manner of master mix preparation (see Appendix Table A).
5. Power on the Nimbus Workstation and open the **Hamilton Run Control** software from the ***Desktop***.
6. Select **File**, then **Open**, and navigate to the ***C:\Program Files (x86) \HamiltonCompany\Methods\Nimbus*** folder and select **AmpNimbus.med**.
7. After the software has connected to the Nimbus, click the **green play** icon in the toolbar to start. Follow the on-screen prompts to complete the run.
    a. Select the type of kit amplification plate setup: **Quantification**, then click **OK**.
    b. Tip check: Three *Edit Tip Count* windows appear one after another with the available 1000µL, 300µL, and 50µL tips highlighted, respectively. Verify that the tip check is accurate and click **OK**. If the check is not accurate on any screen, select or deselect those positions to reflect the actual placement of pipette tips on deck. Click **OK** to proceed.

        IMPORTANT: Make sure there are enough tips to completely process the plate and that there is sufficient space for tip waste. If tips are exhausted during the run, this will cause a critical error and the entire run must be redone (see Appendix Table B).
    c. Scan or type in the barcode of the reaction plate (using the quant log numbering convention: **B**/**C**YY-NNN, where Y is the year and N is the run number) and place it in the Amp1 position of the instrument deck. See Appendix Figure 1.
    d. Place barcoded samples/standards/controls in any of the Shift-N-Scan racks and load racks onto instrument deck, either capped or uncapped at this time. Ensure all barcodes are visible through the opening in the tube holders.
    e. The Nimbus then scans the barcoded samples in the Shift-N-Scan racks and displays all tubes that were successfully scanned in the *Barcode Handler* window. Samples from the worklist that were not scanned are listed in the "Barcodes Not Found" column. These missing sample barcodes can be scanned in manually by clicking on its corresponding location in the *Barcode Handler* screen and scanning the barcode with the handheld scanner. Alternatively, the sample name/barcode may be typed into the corresponding cell. When all worklist samples are represented, click **OK** to proceed.
    f. The quant plate setup method provides an option for preparing the master mix.

i. Select **No** to prepare the master mix manually. Place the prepared and vortexed 2mL screw cap tube of master mix at position 1 of the reagent block (see Appendix Figure 1). Click **OK** to continue.

ii. Select **Yes** to have the Nimbus prepare the master mix. Follow the onscreen prompt's to scan and place the following tubes uncapped at the specified positions on the reagent block (see Appendix Figure 2):

- an empty 2mL screw cap tube for master mix at position 1
- reaction mix at position 4; scan or type **RxnMix**
- amplification grade water at position 3; scan or type: **AmpWater**
- primer mix at position 2; scan or type: **PrmrMix**

iii. After preparing the master mix, the method prompts the user to remove and vortex/spin down the master mix. Visually check that it is of sufficient volume and appropriate color. Return the master mix uncapped to position 1 on the reagent block and click **OK** to continue.

g. The robot then proceeds to dispense the master mix. After every two columns of dispensing, the method prompts the user to spin down the master mix tube and return it to the reagent block.

h. When master mix aliquoting is finished, remove the quant plate from the instrument deck and visually inspect the volumes in each well. If any well is not uniform, rectify the issue by manually removing all liquid from that well and pipetting the correct amount of master mix (18µL for quantitation setup) back into that well. Replace the plate when ready and click **OK.**

i. If sample tubes are not already uncapped, do so now.

j. The robot then transfers extracts from sample tubes to the quant plate.

k. When finished, a completed run screen appears. Press **OK** to finish the method.

8. Remove the quant plate from the instrument deck and close the Nimbus door. Return when ready to clean up.

9. Seal the quantification plate with optical adhesive film in a PCR prep hood and proceed to spin down in a plate centrifuge to remove any bubbles. The plate is now ready to be loaded for qPCR analysis.

10. Return to the Nimbus work area, cap and store sample and reagent tubes, clean the instrument deck, exit out of the **Hamilton Run Control** software, and power off the Nimbus workstation.

11. Return to the ***Desktop\Nimbus Worklists\Quant*** folder, move a copy of "**WL.csv**" file into the ***Archive*** subfolder, and rename that copy to include the date and user initials.

IV. Normalization

A. **Scope/Principle/Purpose**: This procedure describes the automated normalization of samples by the Hamilton Nimbus liquid handling platform in 96-well deep well plates. Source positions, destination positions, extract volumes, and diluent volumes are contained in an Excel-based file prepared by the user and read by the Hamilton Run Control software. The Normalization method provides prompts to load samples and diluent on the instrument deck. The instrument transfers the required volumes of diluents and sample extracts into the designated wells of a deep well normalization plate.

B. **Reagents:**

1. TE^{-4} Buffer

C. **Equipment and Supplies:**

1. Hamilton Microlab Nimbus Workstation
2. 96-Well Deep Well Plate
3. Sealing Mat for Deep Well Plate
4. Centrifuge
5. 50mL Reagent Trough

D. **Procedure**

1. Ensure enough diluent (TE^{-4} Buffer) is present in the 50mL reagent trough and leave it uncovered for the duration of this method.
2. Ensure all samples have the correct barcode and are vortexed and centrifuged. Written or barcoded identifying information for deep well plates have the following naming convention: NormMMDDYYXX.
3. Create a normalization worklist using the DNA sample setup workbook or create a sample worklist manually. Worklists for quantitation plate setup must be in CSV (comma delimited, *.csv) file format and in the ***Desktop\Nimbus Worklist\Dilutions*** folder for the method to run.

a. Follow the workbook's "**Amp Prep**" instructions when selecting samples for amplification and the corresponding options for tube dilution or manual preparation if necessary. Take note of any colored cells that may appear.

i. Samples requiring a dilution default to normalization prep, unless tube dilution is selected. Use the **tube dilution** option when the dilution required is >1:500, which is the highest dilution the Nimbus can prepare. Barcode and retain tube dilutions for amplification plate preparation by the Nimbus.

ii. Use the **manual preparation** option for dilutions involving 10µL+ of extract and samples requiring concentration. Retain these manually prepared samples to add to the amplification plate after the Nimbus has completed its setup of the amp plate.

iii. When all normalization samples are sorted out, heed the instructions to import and save the "**Norm WL**" sheet as **WL.csv**.

iv. As instructed, edit the worklist for normalization setup and move it to the ***Desktop\Nimbus Worklists\Dilutions*** folder on the pre-amp Nimbus instrument computer.

b. To create a worklist manually on the pre-amp Nimbus computer:

i. Open the "**WL.csv**" file located in the ***Desktop\Nimbus Worklists\Dilutions*** folder. Enter information for each sample per row as follows:

A	B	C	D	E	F	G
Enter "1" to indicate Shift-N-Scan racks as the sample source location	Enter tube **Barcode** of sample (case sensitive)	Enter "T" to indicate sample extract is in a tube	Enter **"Norm1"** for the destination plate position on instrument deck	Enter the **destination deep well plate position (e.g., A1, B1,...)**	**Volume of DNA extract sample** (minimum volume the Nimbus can pipet is 2µL)	**Volume of diluent** (maximum volume the Nimbus can pipet is 1000µL)

ii. Click the **Save** icon, then **Yes** to keep the file in .CSV format and close the document without saving (**Don't Save**) when prompted again.

4. Power on the Nimbus Workstation and open the **Hamilton Run Control** software from the ***Desktop***.

5. Select **File**, then **Open**, and navigate to the ***C:\Program Files (x86) \HamiltonCompany\Methods\Nimbus*** folder and select **NormNimbus.med.**

6. After the software has connected to the Nimbus, click the **green play** icon in the toolbar to start. Follow the on-screen prompts to complete the run.

a. Tip check: Three *Edit Tip Count* windows appear one after another with the available 1000µL, 300µL, and 50µL tips highlighted, respectively. Verify that the tip check is accurate and click **OK**. If the check is not accurate on any screen, select or deselect those positions to reflect the actual placement of pipette tips on deck. Click **OK** to proceed.

IMPORTANT: Make sure there are enough tips to completely process the plate and that there is sufficient space for tip waste. If tips are exhausted during the run, this will cause a critical error and the entire run must be redone (see Appendix Table B).

b. Place barcoded sample tubes in any of the Shift-N-Scan racks and load racks onto instrument deck, either capped or uncapped at this time. Ensure all barcodes are visible through the vertical opening in the tube holders.

c. The Nimbus then scans the barcoded samples in the Shift-N-Scan racks and displays all tubes that were successfully scanned in the *Barcode Handler* window. Samples from the worklist that were not scanned are listed in the "Barcodes Not Found" column. These missing sample barcodes can be scanned in manually by clicking on their corresponding location in the *Barcode Handler* screen and scanning the barcode with the handheld scanner. Alternatively, the sample name/barcode may be typed into the corresponding cell. When all worklist samples are represented, click **OK** to proceed.

d. Place the 96-well deep well plate in the "**Norm1**" position on the instrument deck. See Appendix Figure 1.

e. The robot then transfers diluents to the deep well plate.

f. If sample tubes are not already uncapped, do so now.

g. The robot then transfers sample extracts to the deep well plate.

h. When finished, a completed run screen appears. Press **OK** to finish the method.

7. Remove the deep well plate from the instrument deck and cover it firmly with a sealing mat. Vortex the plate briefly to mix the samples, then centrifuge the plate. The normalized samples are now ready to proceed to amplification plate setup.

IMPORTANT: In order for the downstream Nimbus amp plate setup method to recognize this normalization plate, the corresponding normalization "**WL.csv**" file must remain where it is in the ***Desktop\Nimbus Worklists\Dilutions*** folder.

8. Return to the Nimbus work area to cap the samples and cover the reagent trough.

9. Clean the instrument deck, exit out of the **Hamilton Run Control** software, and power off the Nimbus workstation.

10. Return to the ***Desktop\Nimbus Worklists\Dilutions*** folder, move a copy of the "**WL.csv**" file into the ***Archive*** subfolder, and rename that copy to include the date and user initials.

V. **Amplification Setup**

A. **Scope/Principle/Purpose**: This procedure describes the automated setup of the Promega PowerPlex Fusion 6C amplification kit by the Hamilton Nimbus liquid handling platform. Samples are prepared in 2.0mL microcentrifuge tubes and/or a 96-well deep well plate with unique barcodes. Source positions, destination positions, and barcodes as well as kit information are contained in an Excel-based file prepared by the user and read by the Hamilton Run Control software. This setup method provides prompts to load samples, reagents, and plates on the instrument deck and includes an option to prepare the master mix. The instrument dispenses the master mix to the amplification plate, followed by the transfer of samples, standards, controls, and dilutions from barcoded tubes or a normalization plate into designated wells as dictated by the user-prepared worklist. Any manually prepared samples may be added to the plate at this point before the amplification plate is finally sealed and ready for thermal cycling.

B. **Reagents:**

1. Promega PowerPlex Fusion 6C System

C. **Equipment and Supplies:**

1. Hamilton Microlab Nimbus Workstation
2. 2.0mL Screw Cap Tube
3. 96-Well Reaction Plate
4. MicroAmp Clear Adhesive Film, Strip Caps, or Strip Cap Mat
5. Plate Centrifuge

D. **Procedure**

1. Thaw the appropriate kit reagents if necessary.
2. Ensure all samples, standards, controls, and reagents are vortexed and barcoded or labeled.
3. Create a worklist using the DNA sample setup workbook or create a worklist manually. Worklists for amplification plate setup must be in CSV (comma delimited, *.csv) file format and in the ***Desktop\Nimbus Worklist\Amp*** folder for the method to run.
    a. To create a worklist from the DNA workbook, select the "**Nimbus Amp WL**" tab and **Save As** with the following name and file extension: **WL.csv**. Proceed to follow the remaining instructions to clear the contents of empty cells in the "**Instructions**" tab and move it to the above specified folder.
    b. To create a worklist manually on the pre-amp Nimbus computer:
        i. Open the "**WL.csv**" file located in ***Desktop\Nimbus Worklists\Amp*** folder. Enter information for each sample per row as follows:

A	B	C	D	E	F
Enter **"Tube"** OR **"Plate"** for type of sample container	Enter **Barcode** of sample tube OR normalization plate (case sensitive)	Enter **"T"** to indicate sample is in a tube OR **well position (e.g., A1, B1,…)** of sample in normalization plate	Enter **"Amp1"** for the destination plate position on instrument deck	Enter the **destination well position on the amp plate (e.g., C1, D1,…)**	Enter **"PPF"** to specify amp kit

        ii. Click the **Save** icon, then **Yes** to keep the file as CSV format, and close the document without saving (**Don't Save**) when prompted again.
4. This Nimbus setup method also requires a reagent worklist (**RWL.csv**) in the ***Desktop\Nimbus Worklists\Amp*** folder in order to run. This file specifies the reagents needed to prepare the master mix. Do not edit or move this file regardless of the manner of master mix preparation (see Appendix Table A).
5. Power on the Nimbus Workstation and open the **Hamilton Run Control** software from the ***Desktop***.
6. Select **File**, then **Open**, and navigate to the ***C:\Program Files (x86) \HamiltonCompany\Methods\Nimbus*** folder and select **AmpNimbus.med.**
7. After the software has connected to the Nimbus, click the **green play** icon in the toolbar to start. Follow the on-screen prompts to complete the run.
    a. Select the type of plate setup: **Amplification**, then click **OK**.
    b. Tip check: Three *Edit Tip Count* windows appear one after another with the available 1000µL, 300µL, and 50µL tips highlighted, respectively. Verify that the tip check is accurate and click **OK**. If the check is not accurate on any screen, select or deselect those positions to reflect the actual placement of pipette tips on deck. Click **OK** to proceed.

    IMPORTANT: Make sure there are enough tips to completely process the plate and that there is sufficient space for tip waste. If tips are exhausted during the run, this will cause a critical error and the entire run must be redone (see Appendix Table B).

    c. When prompted, type or scan the barcode or name of the amplification plate (using the amp log numbering convention, YY-NNN) and place in the Amp1 position of the instrument deck (see Appendix Figure 1).

d. If applicable and when prompted, type or scan the barcode or name of the normalization deep well plate (i.e., NormMMDDYYXX), and place it in the Norm1 position on the instrument deck. Make sure the worklist for this corresponding normalization plate is still in the ***Desktop\Nimbus Worklists\Dilutions*** folder.

e. If not already done so, place barcoded samples and/or controls in any of the Shift-N-Scan racks and load racks onto the instrument deck, either capped or uncapped at this point. Ensure all barcodes are visible through the opening in the tube holders.

f. The Nimbus then scans the barcoded samples in the Shift-N-Scan racks and displays all tubes that were successfully scanned in the *Barcode Handler* window. Samples from the worklist that were not scanned are listed in the "Barcodes Not Found" column. These missing sample barcodes can be scanned in manually by clicking on the corresponding location in the *Barcode Handler* screen and scanning the barcode with the handheld scanner. Alternatively, the sample name/barcode may be typed into the corresponding cell. When all worklist samples are represented, click **OK** to proceed.

g. The amp plate setup method provides an option for preparing the master mix. Keep in mind, **extra master mix must be prepared for any "Manual Amp Prep" samples** that are added to the plate after the Nimbus amp plate setup portion is complete.

i. Select **No** to manually prepare the master mix. Select this option if any samples are to be added to the plate manually after Nimbus amp plate setup is done. Account for those extra samples when preparing master mix. Place the prepared 2mL screw cap tube of master mix at position 1 of the reagent block. Click **OK** to continue.

ii. Select **Yes** to have the Nimbus prepare the master mix. This option works if there are no "**Manual Amp Prep**" samples to be added to the plate as the calculation will not account for those samples. Follow the method's prompts to scan and place the following tubes of sufficient volume at the specified positions on the reagent block uncapped (see Appendix Figure 2):

- an empty and uncapped 2mL screw cap tube for master mix at position 1
- reaction mix at position 4; scan or type: **RxnMix**
- primer mix at position 2; scan or type: **PrmrMix**

iii. After preparing the master mix, the method prompts the user to remove and vortex/spin down the master mix. Visually inspect that it is of sufficient volume and appropriate color. Return the master mix uncapped back at position 1 on the reagent block and click **OK** to continue.

h. The robot then proceeds to dispense the master mix. After every 32 wells of dispensing, the method prompts the user to spin down the master mix tube and return it to the reagent block.

i. When master mix aliquoting is finished, remove the amp plate from the instrument deck and visually inspect the volumes in each well. If any well is not uniform, rectify the issue by manually removing all liquid from that well and pipetting the correct amount of master mix (10µL for amplification setup) back into that well. Replace the plate when ready and click **OK**.

j. If sample tubes are not already uncapped, do so now.

k. The robot then transfers samples from sample tubes and/or a normalization plate to the amp plate.

l. When finished, a completed run screen appears. Press **OK** to finish the method.

8. Remove the amp plate from the instrument deck and inspect the wells again. If there is any doubt that a sample was incorrectly added, manually adjust it to the correct amount.

9. Close the Nimbus door and return when ready to clean up.

10. For **any "Manual Amp Prep" samples**, bring the plate to a PCR prep hood and use the shaded cells from the "**Norm Amp Template**" sheet as a guide in adding the remaining samples manually to the plate.

a. Use the remaining prepared master mix (or prepare more if needed) and manually aliquot 10µL to the corresponding wells.

b. Add 15µL of the manual amp prep sample to its corresponding well.

11. Seal the plate with MicroAmp clear adhesive film or strip caps and proceed to the thermal cycling process.

12. Return to the Nimbus work area to cap sample tubes and/or re-seal the normalization plate with the sealing mat. Store samples in a 4ºC refrigerator.

13. Clean the instrument deck, exit out of the **Hamilton Run Control** software, and power off the Nimbus.

14. Return to the ***Desktop\Nimbus Worklist\Amp*** folder, move a copy of the "**WL.csv**" file into the ***Archive*** subfolder, and rename that copy to include the date and user initials.

VI. **3500 Setup**

A. **Scope/Principle/Purpose**: This procedure describes the automated setup of amplified DNA samples for Capillary Electrophoresis (CE) by the Hamilton Nimbus liquid handling platform. The post-amp setup method provides prompts to load plates and reagents and includes an option to prepare the master mix. The instrument dispenses the master mix, followed by the transfer of allelic ladders and amplicons from a 96-well PCR plate into designated wells of a 96-well reaction plate for CE processing. The transfer of samples is dictated by an Excel-based worklist prepared by the user which specifies the amplicon plate, the sample source well position, and sample destination well position. Any direct amplification samples may be added to the plate before the CE plate is covered with a septa mat and further prepared before loading onto the 3500 for STR processing. The processed amplicon plate is re-sealed and stored appropriately.

B. **Reagents:**

1. WEN 500 Internal Lane Standard (ILS)
2. PowerPlex Fusion 6C Allelic Ladder
3. Hi-Di Formamide

C. **Equipment and Supplies:**

1. Hamilton Microlab Nimbus Workstation
2. Plate centrifuge
3. 96-Well Reaction Plate
4. MicroAmp Clear Adhesive Film, Strip Caps, or Strip Cap Mat
5. 96-Well Plate Septa Mat
6. 2.0mL Microcentrifuge tube

D. **Procedure:**

1. Thaw the appropriate kit reagents and Hi-Di, if necessary, and thoroughly vortex reagent tubes.
2. Ensure the amplification plate is labeled with the appropriate barcode or identifying information.
3. Create a CE setup worklist using the DNA sample setup workbook or create a worklist manually. Worklists for 3500 plate setup must be in ***.xls** (Excel 97-2003 Workbook) file format and in the ***Desktop\Worklists\CE Setup*** folder for the method to run.
    a. To create a worklist from the DNA workbook, follow the "**Instructions**" tab to copy the relevant cells from the "**3500 WL**" sheet; paste those cells into a new Excel worksheet; rename the sheet tab to from "**Sheet1**" to "**WL**"; clear contents of empty cells; and finally **Save As** with the following name and file extension: **WL.xls**. When ready for Nimbus setup, move the worklist to the above specified folder on the post-amp Nimbus computer.
    b. To create a worklist manually on the post-amp Nimbus computer:
        i. Open the "**WL.xls**" file located in the ***Desktop\Worklists\CE Setup*** folder. Enter information for each sample or Allelic ladder per row as follows:

A	B	C
Enter **Barcode (or name) of Amp plate** (case sensitive)	Enter the **sample well position from amp plate (e.g., C1, D1,...)**	Enter the **sample destination well position for the CE plate (e.g., C1, D1,...)**
Ladder (to add an allelic ladder)	**21** (this is th reagent block position where the allelic ladder tube is placed)	Enter the **destination well position for the ladder on the CE plate (e.g., B1, C4,...)**

        ii. Ensure blank cells are free of formatting by selecting all blank cells, **right click** and select **Delete**.
        iii. Click **Save** and close the document.
4. Power on the Nimbus Workstation and open the **Hamilton Run Control** software from the ***Desktop***.
5. Select **File**, then **Open**, and navigate to the ***C:\Program Files (x86)\HamiltonCompany\Methods\Nimbus*** folder and select **PostAmp-Nimbus.med**.
6. After the software has connected to the Nimbus, click the **green play** icon in the toolbar to start. Follow the on-screen prompts to complete the run.
    a. Populate the **Amp Plate** field with the barcode/name of amp plate; this is the same input field as the Amp Plate Name from the "**3500 Worksheet**." **This must match column A from the worklist**.
    b. Populate the **Load Plate** field with the CE run name (**D**YY-NNN).
    c. Tip check: Three *Edit Tip Count* windows appear one after another with the available 1000µL, 300µL, and 50µL tips highlighted, respectively. Verify that the tip check is accurate and click **OK**. If the check is not accurate on any screen, select or deselect those positions to reflect the actual placement of pipette tips on deck. Click **OK** to proceed.

        IMPORTANT: Make sure there are enough tips to completely process the plate and that there is sufficient space for tip waste. If tips are exhausted during the run, this will cause a critical error and the entire run must be redone (see Appendix Table B).
    d. Place a 96-well reaction plate in the "CE Plate" position of the instrument deck. See Appendix Figure 3.

e. The 3500 setup method provides an option for preparing the master mix.

i. Select **No** to manually prepare the master mix. Select this option if any direct amp samples are to be added to the plate manually after Nimbus CE plate setup is done. Account for those extra samples when preparing master mix. Place the prepared 2mL dolphin tube of master mix uncapped at position 1 of the reagent block. See Appendix Figure 2. Click **OK** to continue.

ii. Select **Yes** to have the Nimbus prepare the master mix. This option works if there are no direct amp samples to be manually added to the plate as the calculation will not account for those samples. Follow the method's prompts to place the following tubes of sufficient volume at the specified positions on the reagent block uncapped (see Appendix Figure 2):

- an empty 2mL dolphin tube for master mix at position 1
- WEN 500 ILS at position at position 3
- Hi-Di formamide at position 4

iii. After preparing the master mix, the method prompts the user to remove and vortex/spin down the master mix. Visually inspect that it is of sufficient volume. Replace the master mix uncapped back at position 1 on the reagent block and click **OK** to continue.

f. The robot then proceeds to dispense the master mix. When finished, remove the CE plate from the instrument deck and visually inspect the volumes in each well. If any well is not uniform, rectify the issue by manually removing all liquid from that well and pipette 10µL back into that well. Replace plate when ready and click **OK**.

g. Vortex and spin down the allelic ladder and place it uncapped at position 21 on the reagent block (see Appendix Figures 2 & 3). Click **OK** to continue.

h. The robot then transfers allelic ladder to designated wells of the CE plate.

i. Place the amplicon plate unsealed in the "Amp Plate" position on the instrument deck. See Appendix Figure 3.

j. The robot then transfers amplicons from the amp plate to the CE plate.

k. When finished, a completed run screen appears. Click **OK** to finish the method.

7. Remove the CE plate from the instrument deck.

8. Close the Nimbus door and return when ready to clean up.

9. If there are any direct amplification samples that are to be added to the plate, do so now. Use the shaded cells from the "**3500 Worksheet**" as a guide in adding the direct amp samples manually to the CE plate.

a. Use the remaining master mix (or prepare more if needed) and manually aliquot 10µL to the corresponding wells.

b. Add 1µL of the direct amplicon to the corresponding well.

10. Cover the CE plate with a septa mat. Balance and centrifuge the CE plate and proceed to heat denature and snap cool procedures before loading onto the 3500 autosampler for STR processing.

11. Return to the Nimbus work area to cap reagent tubes and reseal the amp plate. Store in a 4ºC refrigerator.

12. Clean the instrument deck, exit out of the **Hamilton Run Control** software, and power off the Nimbus workstation.

13. Return to the ***Desktop\Nimbus\CE Setup*** folder, move a copy of the "**WL.xls**" file into the ***Archive*** subfolder, and rename that copy to include the date and user initials.

VII. **Appendix**

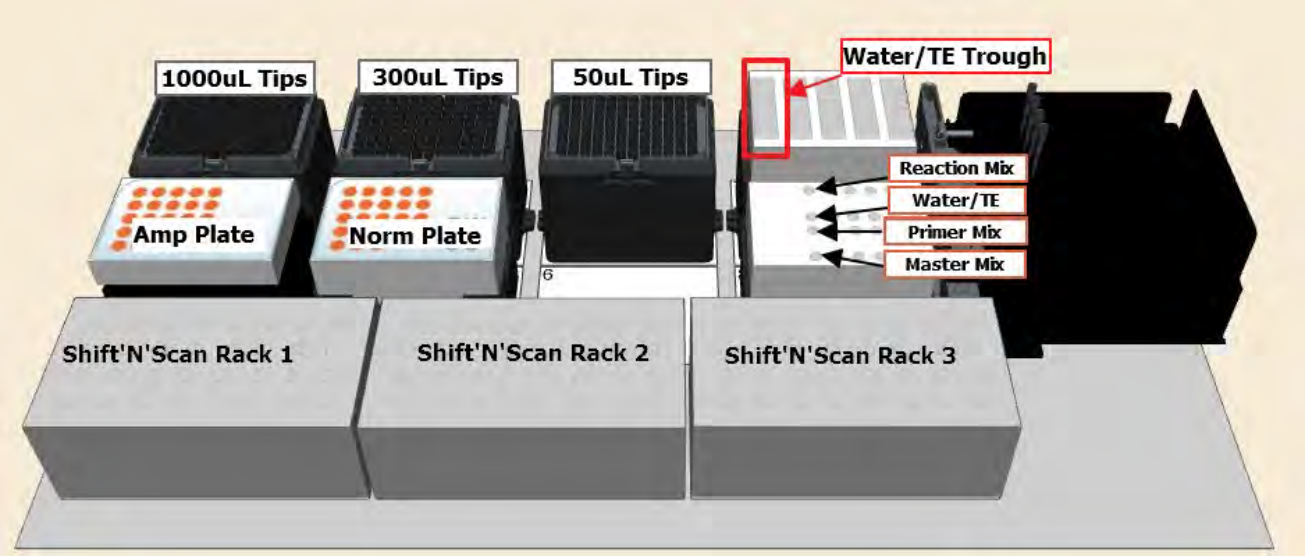
A. **Table A. Reagent Worklist (RWL.csv) for Nimbus Quantitation and Amplification Setup**

	A	B	B
1	kit	PQ	PPF
2	rxn	RxnMix	RxnMix
3	water	AmpWater	0
4	prm	PrmrMix	PrmrMix

B. **Table B. Pipette Tip Setup Usage**

	Master Mix Preparation	1 mL tips	300 µL tips	50 µL tips
Quant	Manual	0	1	1/sample
	Nimbus	3 max	4 max	1 + (1/sample)
Amp	Manual	0	1	1/sample
	Nimbus	2 max	3 max	1 + (1/sample)
Norm	N/A	4 max	4 max	1/sample
3500	Manual	0	1	1/sample
	Nimbus	1 max	3 max	1 + (1/sample)

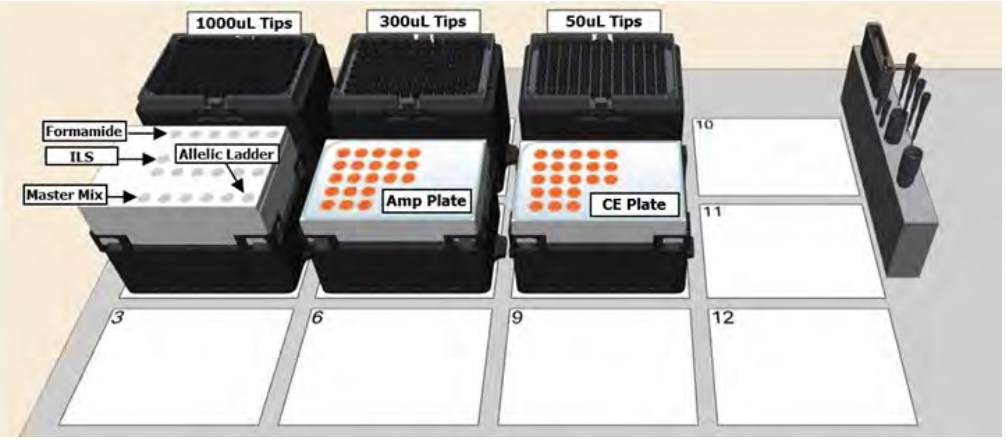
C. **Figure 1. Pre-Amp Nimbus Deck Layout**



D. **Figure 2. Reagent Block Numbering**



E. **Figure 3. Post-Amp Nimbus Deck Layout**



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/6/2016	**NUMBER:** BIO.3.CODIS.01 - General Information and Purpose
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Kim Willey & Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** General Information and Purpose	

Purpose

- Participation in CODIS requires that the laboratory follow guidelines set forth by the NDIS Operational Procedures. In the event there is a discrepancy between FBI's NDIS Operational Procedures and FBI's Quality Assurance Standards (QAS), the QAS has precedence and supersedes any of the provisions in the NDIS Procedures.
- The purpose of this manual is to provide guidance regarding procedures and practices pertaining to CODIS. A list of documents and manuals that may have bearing on the practices of the laboratory related to the operation of CODIS are below:

References

ASCLD/LAB Accreditation Manual Criteria
FBI Director's Quality Assurance Standards for Forensic DNA Testing Laboratories
NDIS Operational Procedures Manual
NDIS Security Requirements
FBI's CODIS Training Manual
CODIS Administrators Handbook
Biology Technical Unit Manual
California Penal Code, Sections 295 - 300
DNA Identification Act of 1994

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1. The acronym CODIS stands for the Combined DNA Index System and is administered by the FBI. CODIS is composed of Offender, Casework, and Missing Persons databases and functions to provide investigative leads for the criminal justice system. It can link DNA evidence from a crime scene to an offender or to another crime scene. It can also link DNA evidence from missing person cases to references and/or relatives.
2. There are three levels of CODIS: The range of responsibility and authority associated with CODIS is dependent with the level of use.
    1. **LDIS** is the Local DNA Index System, the level at which CODIS is typically used by individual crime laboratories.
    2. **SDIS** is the State DNA Index System, the level at which CODIS is used by the State to serve as a state's DNA database. The State maintains eligible DNA profiles from each of the LDIS laboratories and is the gateway to NDIS, the National DNA Index System.
    3. **NDIS** is the National DNA Index System, a database of DNA profiles uploaded by each of the States. NDIS is the highest level in the CODIS hierarchy and is managed by the FBI. NDIS enables each laboratory within the CODIS system to exchange and compare DNA profiles at the national level.
3. The DNA Identification Act of 1994 et. seq. specified the Federal Bureau of Investigation as the oversight authority of NDIS, the CODIS network and its software. The DNA Identification Act also specified the allowable uses for CODIS. To show compliance with this act, the FBI issued procedural guidelines in the NDIS Operational Procedures Manual for State and Local laboratories to follow in order to have and maintain access to the CODIS system.
4. The NDIS Procedures Manual incorporates the FBI Director's Quality Assurance Standards. This manual is maintained at the FBI's CODIS website and is publicly available. Refer to website for the most up-to-date version of the NDIS Operational Procedures.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/10/2016	**NUMBER:** BIO.3.CODIS.02 - Federal and State Legislation
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Kim Willey & Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Federal and State Legislation	

1. The purpose of this document is to provide insight and reference legislation regarding Federal and State authority regarding DNA databases.
2. The Laboratory will follow applicable Federal and State law regarding DNA databases by complying with the Federal DNA Identification Act of 1994, as amended, as well as with California State DNA database laws.

Federal Legislation

1. Refer to the following documents found on the CODIS web site, located on the FBI Criminal Justice Information Services Shared Enterprise Network (CJIS SEN), for a complete review of the following:
    1. Federal DNA Identification Act- 42 USC 14132 of 1994 as amended
    2. Privacy Act Notice for the National DNA Index System, July 18, 1996, Federal Register Vol. 61, No. 139
    3. Federal DNA Advisory Board Resolution (NDIS Operational Procedures)
2. The following is a summary of the DNA Identification Act and the changes made to the Act by the Justice for All Act of 2004:
    1. The DNA Act specifies the categories of data that may be maintained at the National index:
        1. DNA Identification records from:
            1. persons convicted of crimes
            2. persons who have been charged in an indictment or information with a crime.
            3. persons who DNA samples are collected under applicable legal authorities.
            4. DNA samples recovered from crime scenes.
            5. DNA samples recovered from unidentified human remains.
            6. DNA samples voluntarily contributed from relatives of missing persons.
    2. The DNA Act specifies that DNA records and DNA analyses offered to the National Index comply with the following:
        1. Analysis is performed by or on behalf of a criminal justice agency in accordance with the Quality Assurance Standards issued by the FBI Director.
        2. Prepared by a laboratory that is accredited by a nationally recognized accrediting body, such as ASCLD/Lab and undergoes external audits every 2 years to demonstrate compliance with the Quality Assurance Standards.
        3. Disclosure of DNA records only:
            1. To criminal justice agencies for law enforcement identification purposes
            2. For criminal defense purposes, to a charged defendant in connection with the case
            3. For other forensic purposes, such as population statistics, quality control purposes, and forensic research, if personal identifying information is removed.
    3. The Federal Privacy Act of 1974 requires that Federal agencies publish a notice whenever a new system of record is being established. The U.S. Department of Justice submitted a Notice to the Privacy Act regarding the National DNA Index System which was published on July 18, 1996. The Notice provides specific details and requirements that NDIS participation laboratories should be familiar with such as:
        1. Categories of individuals covered by the system (i.e. convicted offenders, missing persons…)
        2. Definitions of records in the system (i.e. DNA sample, DNA profile, DNA record…)
        3. Definition of indexes (i.e. Forensic Index, Convicted Offender Index…)
        4. The purpose of NDIS
        5. Disclosure of DNA Records as stated in the Federal DNA Identification Act
        6. Safeguards
        7. Retention and Disposal
    4. Federal DNA Advisory Board Resolution (Resolution on Review of Privacy Issues)
        1. The Board reviewed the access and disclosure provisions provided by the DNA Identification Act of 1994. The Board agreed with the FBI's interpretation of the access provisions and supports the current level of enforcement of such access and disclosure provisions.
        2. The Board made recommendations that State laws provide for confidentiality of DNA records/samples that comply with the Federal DNA Act. Of concern are those states that appear to have more permissive laws for access to their DNA data. Compliance with the Federal DNA Identification Act will be audited by the Department of Justice Office of Inspector General.

California State Legislation

DNA and Forensic Identification Database and Database Bank Act of 1998 (California Penal Code section 295).

1. The DNA Act of 1998 (Pen. Code, §§ 295) was expanded in November 2004 with the passage of Proposition 69 which authorized the collection of DNA samples for databank purposes from adults or juveniles, who are convicted or found not guilty by reason of insanity for any felony offense, or any juvenile who is adjudicated under Section 602 of the Welfare and Institutions Code for committing any felony offense (Penal Code section 296).
2. Effective January 1, 2009, any adult arrested for or charged with any felony offense is subject to DNA sample collection. Additional information regarding DNA database collection can be found at ag.ca.gov/bfs/prop69.php.

3. CA. COLD HIT GRANT AND STATUE OF LIMITATIONS ON 290 PC CRIMES
   Refer to Sections 800 of the California Penal Code for Statue of Limitations and to Section 803 subdivision (h) for changes to the statue of limitations on PC 290 related crimes. Below is a summation of Section 803(h):

   1. For offenses committed prior to January 1, 2001 where the statue of limitations (6 years) has not expired as of January 1, 2001, the statue of limitations on commencing prosecution shall be extended to 10 years from the date of the offense or one year from the date on which the identity of the perpetrator is conclusively established by DNA testing, whichever is later. **NOTE**: Under these conditions, the one year period applies only when the biological evidence has been analyzed for a DNA profile no later than January 1, 2004.
   2. For offenses committed on or after January 1, 2001, the statue of limitations shall be 10 years or one year from the date on which the identity of the perpetrator is conclusively established by DNA testing, whichever is later. **NOTE**: Under these conditions, the one year period applies only when the biological evidence is analyzed for a DNA type no later than two years from the date of the offense.
   3. **CA Proposition 69, Penal Code Section 297**: allows for the upload and search of DNA reference profiles from named individuals who are suspects and potential perpetrators in an active criminal investigation.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/10/2016	**NUMBER:** BIO.3.CODIS.03 - Requirements, Responsibilities, and Security
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Kim Willey & Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Requirements, Responsibilities, and Security	

Purpose
To list the requirements, responsibilities of the laboratory, and to describe the security measures taken by the laboratory to show compliance with the NDIS Security Requirements manual available on the CJIS SEN.

Laboratory Requirements

Requirements for a laboratory to qualify as an NDIS participating laboratory are addressed in the DNA Quality Assurance Standards. Thus, an audit using the Quality Assurance Standards is a tool that can be used to show that the laboratory is in compliance with these requirements. The Laboratory meets the following operational requirements to be an NDIS participating laboratory:

1. The laboratory is a Criminal Justice Agency.
2. The laboratory is accredited.
3. The laboratory adheres to the FBI Director's Quality Assurance Standards for Forensic DNA Laboratories.
4. The laboratory has more than the minimum employment of two qualified DNA analysts and is capable of performing DNA analysis of forensic casework.
5. The laboratory has a full-time, qualified Technical Leader.
6. The laboratory has a qualified, on-site, casework CODIS Administrator.

Laboratory Responsibilities

1. The laboratory complies with FBI requirements to safeguard against unauthorized use of CODIS by providing a secure site for the computer. See below for discussion on Laboratory Security.
2. The laboratory maintains computer hardware and commercial software needed to access NDIS and to properly operate the CODIS system. This is done with the assistance of Sheriff's Office IT.
3. The CODIS Administrator will, if necessary, make suggestions for software enhancements for user efficiency and recommendations on procedural changes to the FBI.
4. The Supervisor and/or the CODIS Administrator will designate training for the appropriate personnel.
5. The CODIS Administrator notifies CODIS users of revised NDIS Operational Procedures.
6. The laboratory complies with the Federal DNA Identification Act of 1994 and applicable State law. See BIO.3.CODIS.02
7. The laboratory complies with all NDIS Operational Procedures for entering, verifying and expunging DNA records. See BIO.3.CODIS.06 for eligibility and expungement of DNA profiles.
8. The Laboratory maintains records of casework, audits and proficiency testing of CODIS users according to FSD Policy. The CODIS Administrator maintains specific records pertaining to the operation of CODIS and CODIS users.
9. The DNA Technical Lead will monitor and ensure that any vendor laboratory producing DNA profiles for upload to CODIS complies with the QAS document and meets NDIS eligibility requirements.
10. The Laboratory will participate in Office of Attorney General assessments. See BIO.3.CODIS.04 for audits and assessments.
11. The Laboratory takes responsibility for the costs associated with participation in NDIS:
    1. Salary and benefits for personnel employed to operate the CODIS system.
    2. Physical space (and if necessary, any modifications thereto) to accommodate the CODIS system, including operating expenses in connection with that space, such as electric, heat, and air conditioning.
    3. Computer hardware and commercial software (including any necessary maintenance) needed to access NDIS and properly operate the CODIS system.
    4. Travel, personnel and other related expenses for FBI or contractor staff if requesting an installation or move of a CODIS server and the laboratory has already had one install or move of a CODIS server in a ten year period.

Laboratory Security

The laboratory provides a secure location for the CODIS computer to ensure safeguards are in place against unauthorized use of CODIS. The following security measures are implemented at the laboratory to safeguard the CODIS computer:

PERSONNEL

1. Access to the CODIS computer and its software is restricted to individuals who have passed a background check and who have been cleared by the FBI. This is limited to CODIS Users/Administrators and CODIS IT Users, who are employees of the Sheriff's Office, and who have passed a background investigation through the Office of the Sheriff.
2. Only CODIS Users are given a CODIS user account that includes a unique user account and password that allows access to the CODIS software. The CODIS computer is set to notify users of the need to change their passwords every 90 days.
3. CODIS Users must lock the computer or log off when they can no longer observe the CODIS computer or when they are finished. The CODIS room is located in the Forensic Biology Section. The Biology Section is a restricted access area. Note: The CODIS computer is set to lock after ten minutes of non-use and requires the user's password to unlock the computer.
4. A CODIS Contract User is exempt from the above security measures because a contract user does not have physical access to the CODIS computer.
5. An IT employee is permitted access to CODIS for computer hardware/software and telecommunications maintenance purposes and may be added as a CODIS IT user. Because this user has physical access to CODIS, an FBI security check is required (in addition to any security checks performed by the employing governmental agency). A CODIS IT user is not authorized to add, modify or delete DNA records in CODIS.

PHYSICAL SECURITY

1. The CODIS server and CJIS SEN router is located in the CODIS room. This room is located behind the restricted key-card access area of the Forensic Biology Section.
2. A full backup of the CODIS data is conducted weekly with incremental backups conducted daily. The last two most recent full backups are stored off-site in two separate locations within the Sheriff's Office. The backups are rotated on and off-sight in cooperation with Sheriff's Office Technical Support.
3. The CODIS Administrator and/or Alternate administrator works with Technical Support to perform periodic restores to ensure backups are working properly.

CONTINGENCY PLAN

In the event that a catastrophic event or emergency occurs that affects the operation of the CODIS server and CJIS SEN connection, the laboratory will work with the Sheriff's Office Technical Support to re-establish the CODIS system which may include: replacing or salvaging the computer hardware and software and the data, relying on the backups, etc. CJIS and any other entities will be contacted to reestablish communication to the CODIS network.

CODIS COMPUTER SOFTWARE SECURITY

1. Access to the CODIS computer software is limited to CODIS Users as stated above. Only CODIS users are given login rights to access the CODIS software. Although IT users have physical access to the computer, they are not given access rights to the CODIS software. The laboratory works in cooperation with the Sheriff's Office Technical Services for maintenance, installation and upgrades to the CODIS computer.
2. Security related software upgrades/patches/fixes are applied by the CODIS Administrator and Alternate.

COMPUTER NETWORK SECURITY

1. The CODIS software is installed on a computer with no internet access. In the event of a change to this condition, the laboratory will follow the procedures outlined in the NDIS Operational Procedures and NDIS Security Requirements.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/10/2016	**NUMBER:** BIO.3.CODIS.04 - Audits and Assessments
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Kim Willey & Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Audits and Assessments	

The purpose of this document is to describe the laboratory's responsibilities and procedures regarding audits and assessments relevant to CODIS.

1. The Office of the Sheriff's Crime Laboratory is considered an NDIS participating laboratory. To maintain this status, the laboratory must meet certain requirements. Compliance with the requirements is assessed through a DNA Quality Assurance Standards audit of the laboratory's DNA program and periodically through an NDIS Assessment. Access to the National DNA Index System is subject to cancellation if the Quality Assurance Standards are not met.
2. Additionally, the Office of the Inspector General (OIG) periodically will conduct an assessment of the laboratory's compliance with the NDIS Operational Procedures. An OIG audit can occur at any time.

Audits

1. A copy of the QAS external audit document is to be forwarded to the NDIS Custodian within 30 days of receiving the audit document back from the auditors. Responses to findings, or a list of measures actively seeking redress, should be included with the audit document. The original QAS audit document is retained by the Biology Unit under the guidance of the DNA Technical Lead.

2. A copy of both internal and external QAS audits is sent to the State CODIS Administrator in a timely manner.

3. Annually, the "Laboratory Audit Certification" form is forwarded to the State CODIS Administrator. The form is found on the CODIS website. A copy of the certificate is maintained by the CODIS Administrator.

4. Audit records and records pertaining to CODIS users, such as training, competency and proficiency tests are retained minimally for ten years.
5. The CODIS Administrator maintains, at a 10 year minimum, the following records related to CODIS users:

    1. A CODIS user's FBI clearance and any changes to a CODIS user's status. Forms are found on the CODIS website.
    2. A record (certificate or equivalent) of an analyst's successful completion of the annual DNA Records Acceptable at NDIS test.
    3. An analyst's CODIS training.

NDIS Assessments

1. The Laboratory's compliance with the NDIS Operational Procedures is periodically assessed through an NDIS Assessment. The assessment is a review of the Laboratory's CODIS program and is distinct and separate from an external DNA Quality Assurance audit. The FBI requires the laboratory to participate in the assessment.
2. The CODIS Administrator and/or Alternate are the primary points of contact during the assessment process. Applicable laboratory manuals will be subject to review as well as other CODIS related documentation. Refer to the NDIS Operational Procedures Manual for a full review of the NDIS Assessment procedure.
3. Some of the areas that will be under review include:
    1. CODIS user records
    2. Accreditation and audits
    3. Access and disclosure of records
    4. Expungement and eligibility of DNA profiles
    5. Laboratory policies/procedures/protocols

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 02/8/2018	**NUMBER:** BIO.3.CODIS.05 - CODIS Users Requirements and Responsibilities
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** CODIS Users Requirements and Responsibilities	

I. **CODIS users have different levels of access, authority, and responsibility. User training will be determined by their assigned role and responsibilities.**

II. **New Users**

1. A new CODIS User is required to submit identification materials and pass a security check by the FBI, prior to gaining access to CODIS or the CJIS SEN. The necessary forms are found on the CODIS website.

2. The documents will be forwarded to the NDIS Custodian via the State CODIS Administrator, or alternatively directly to the NDIS Custodian with a cc to the State Administrator.

3. The documents should be accompanied by an appropriate cover letter (see CODIS website).

4. A copy of all documents will be retained prior to sending them to the State Administrator or NDIS Custodian.

5. Once the laboratory has been notified that the new user has passed the FBI's security clearance, the new user has 30 days to successfully complete the DNA Records Acceptable at NDIS training. The new user may not access the CJIS SEN or CODIS software before notification that the new user has passed the FBI's security check.

6. The DNA Records Training is available through LMS (Learning Management System) on the CODIS website. Upon successful completion of the training, the laboratory will be notified that the new user has been given access as a CODIS user and is now eligible to submit DNA profiles to NDIS.

III. **CODIS IT Users**

1. Sheriff's Office technical services personnel (IT users) must be cleared by the FBI with the same identification materials as required of a new user. The forms are found on the CODIS website. The IT Users are given physical access to the CODIS hardware, but they are not given access rights to the CODIS software or the CJIS SEN.

2. The Laboratory and Sheriff's Office IT personnel work together on maintenance, installation, and upgrades to the CODIS computer.

IV. **CODIS Contract Users**

1. The Sheriff's Office contract users are DNA analysts from a vendor laboratory who has generated a DNA profile for upload into CODIS. The vendor laboratory relies upon the Sheriff's Office to upload the profile into CODIS.

2. The DNA analyst must meet all the same QAS requirements as a qualified DNA analyst in an NDIS participating laboratory.

3. Contract users do not have physical access to the CODIS computer, thus a security clearance is not required. However, a CODIS User Information form along with a cover letter is routed to the NDIS custodian via the State CODIS Administrator. Refer to the CODIS Website for the CODIS User Information form and cover letter form.

V. **CODIS User:**

1. Requirements:

   a. A CODIS user must be an employee of a Federal, State, or Local government.

b. A CODIS user must be a qualified DNA analyst and maintain appropriate proficiency testing, as specified in the DNA Quality Assurance Standards (QAS 5.4).

c. A CODIS user must pass a security background check through the FBI prior to accessing CODIS or the CJIS SEN.

d. A CODIS user will receive in-house training on the CODIS software to the extent of what is relevant for the CODIS user's need.

e. Participate in the Annual Review of DNA Data Accepted at NDIS assessment.

2. Responsibilities:

a. The CODIS user may enter the DNA profiles from their own casework into CODIS (with the exception of the CODIS Contract User). The CODIS Administrator or Alternate may enter a profile on behalf of an analyst and mark the original analyst who generated the profile in the "assigned" section.

b. The CODIS user entering the profile will verify that the data entered is correct and document the verification by initialing and dating the printed Specimen Detail report.

c. The profile may also be added to the Biology Unit's internal database under "CODIS Profiles".

d. The laboratory will notify the client agency whenever a DNA profile is uploaded or deleted from CODIS or when there is a one-time search. This notification is generally documented in a laboratory report.

e. In the event of a CODIS Hit, the analyst who generated the profile or the CODIS Administrator or Alternate Administrator may write the CODIS Notification Report. The report serves as the Laboratory's record that the client agency was informed of the hit.

f. In the event that the CODIS Administrator or Alternate is unable to disposition a hit, due to the complexity of a match, the DNA analyst who generated the profile will be referred to. The analyst may find it necessary to refer to their original data to discern the proper disposition of the hit. When the original analyst is not available to discern the match, either the CODIS Administrator, Alternate, or an assigned analyst qualified to interpret mixtures will discern the proper disposition of the hit on behalf of the original analyst.

g. The DNA analyst who generated the DNA profile that subsequently generated a CODIS Hit will be assigned to conduct the DNA confirmation testing. Another DNA analyst may conduct the confirmation, on behalf of the original analyst when necessary.

VI. **Casework CODIS Administrator**

1. The CODIS Administrator is a user with administrative rights and privileges applicable to the CODIS computer, software and the laboratory's CODIS program. The CODIS Administrator is a single appointed position in the laboratory and has the responsibility and authority of overseeing the CODIS program. The Administrator has the authority to author and sign all correspondence and to ensure all required reports for the FBI and NDIS Custodian are prepared.

2. The Chief may appoint a new CODIS Administrator at any time, though the importance of stability in this position will be taken into consideration. The individual assigned may be selected from technical, supervisory, or management staff, depending on the needs of the needs of the Division.

3. Requirements:

a. Be an on-site employee of the laboratory **(QAS 4.1.3)**.

b. Be or have been a qualified DNA analyst. This includes at least 6 months of Forensic Human DNA laboratory experience and documented mixture interpretation training **(QAS 5.3)**. (Note: a CODIS Administrator appointed prior to the July 1, 2009 QAS document is deemed to have satisfied the education and experience requirements (grandfathered). This grandfathering is applied to the laboratory in which the CODIS Administrator is employed and is not portable with the employee.

c. Complete training with the newest version of the CODIS software within six months of assuming the Administrator role and duties **(QAS 5.3.3)**. This training is provided by the FBI.

d. Complete the QAS Auditor Training sponsored by the FBI within a year of assuming the CODIS Administrator role or position **(QAS 5.3.3)**.

e. Annually, have a minimum of 8 hours of continuing education **(QAS 5.1.3.1)**.

f. Attend the annual National CODIS Conference sponsored by the FBI. If the CODIS Administrator cannot attend, the Alternate is to attend. If neither the CODIS Administrator nor the backup can attend, an excused absence from attendance must be obtained from the NDIS Custodian.

g. Obtain and remain security clearance with the FBI as a CODIS user.

h. Be qualified to disposition matches:

i. A Candidate Match matching all loci at high stringency may be reviewed and evaluated by an individual who is currently or was previously a qualified DNA analyst.

ii. A match at any loci at less than high stringency shall be reviewed and evaluated by a DNA casework analyst currently or previously qualified in the technology (such as RFLP, STR, YSTR) being reviewed.

4. CODIS Administrator's Responsibilities:

a. Administer the Laboratory's CODIS network **(QAS 5.3.4.1)**.

b. Schedule and document CODIS computer training of casework analysts **(QAS 5.3.4.2)**.

c. Oversee compliance with CODIS security requirements **(QAS 5.3.4.3)**.

d. Ensure that the quality of data stored in CODIS is acceptable according to state/federal laws and the NDIS Operational Procedures **(QAS 5.3.4.4)**.

e. Ensure matches are dispositioned according to NDIS Operational Procedures **(QAS 5.3.4.5)**.

f. Remove an analyst's or the laboratory's participation in CODIS in the event of an issue that questions the reliability and security of the data **(QAS 5.3.5)**.

g. **Note: In the event that the CODIS Administrator and Alternate positions becomes unoccupied, the laboratory will suspend uploads until a new casework CODIS Administrator is appointed (QAS 5.3.6).**

h. Notify the NDIS Custodian, within five business days, of the following (NDIS Operational Procedures):

i. If a CODIS User or CODIS IT User in their laboratory has been arrested for, or convicted of, a criminal offense

ii. If the laboratory loses accreditation status

iii. If the laboratory loses the capability to perform DNA analysis at its facility.

iv. If the laboratory has fewer than two full-time DNA analysts

v. If the laboratory has a vacancy in the laboratory's Technical Leader position and there is no one in the laboratory who meets the QAS qualifications or available to serve in the position.

VII. **Alternate CODIS Administrator** is a CODIS user designated by the CODIS Administrator who has been given administrative rights and privileges to assist the CODIS Administrator and to fulfill the CODIS Administrator's role when absent or unavailable.

1. Requirements:

a. An Alternate CODIS Administrator needs to be designated by the CODIS Administrator within ninety (90) days when the Alternate CODIS Administrator position becomes vacant. In the event that a Alternate CODIS Administrator is not designated within ninety (90) days, the NDIS Custodian needs to be notified.

b. The Alternate CODIS Administrator needs to successfully complete the QAS auditor training sponsored by the FBI within 1 year of assuming the role.

c. The Alternate CODIS Administrator needs to successfully complete the newest version of the CODIS software training within 6 months of assuming the role. This training is provided by the FBI.

VIII. **CODIS Administrator and Alternate Administrator's Duties**

1. Be the laboratory's points of contact for the CODIS program and serve as the gatekeeper for the DNA data entered into CODIS

2. Review CODIS Bulletins and changes to NDIS Operational Procedures, and implementation, if applicable.

3. Maintain hardware, software, and CODIS updates.

4. Ensure weekly backups of the CODIS computer are conducted.

5. Conduct a periodic restore of the backup data to ensure backups are working properly.

6. Conduct incremental and full uploads to SDIS.

7. Review of Reconciliation Reports.

8. Add/Remove/Update CODIS Users

9. Ensure the Quality of DNA Results

a. Ensure all User(s) have successfully completed the following requirements:

i. Annual training on DNA Data Acceptable at NDIS

ii. A competency test prior to being assigned casework.

iii. A proficiency test taken within six months of start of casework.

iv. Two proficiency tests completed per year. (Note: The DNA Technical Lead will inform the CODIS Administrator when a non-administrative discrepancy in a proficiency has occurred and at the time of initiating a corrective action and cite the nature of the discrepancy).

v. Verify with the Technical Leader that standard (QAS 17) has been met for any vendor laboratory used by the laboratory.

vi. Ensure all CODIS qualified profiles have undergone technical review and have been entered into CODIS correctly.

b. Disposition

i. Review and make best efforts to disposition matches within 30 business days.

ii. Ensure proper disposition of CODIS matches and hits.

iii. Verify Conviction matches.

c. Records

i. Maintain records of CODIS users

ii. A CODIS user's FBI clearance

iii. A CODIS user's completion of the annual DNA Records Acceptable at NDIS test

iv. CODIS user's Local CODIS training

v. Update CODIS user information

vi. Laboratory Audit Certification Form

vii. Annually provide internal and external audit documents to State CODIS Administrator

viii. Provide external audit documents to NDIS Custodian

ix. Annual Update of the Points of Contact to State CODIS Administrator

x. CODIS Survey document

xi. Update any internal databases, such as "CODIS Profiles" and "CODIS Hits" located on the Biology Unit's network folder.

xii. Removal of suspect profiles after 2 years.

d. Reporting

i. Ensure reports are generated for CODIS Hits/Matches, Keyboard Searches (SDIS and NDIS), and deleted profiles.

ii. Administrative review of CODIS Hits/Matches, Keyboard Searches (SDIS and NDIS), and deleted profiles. The Administrative reviewer's milestone in LIMS documents completion of both technical and administrative review.

iii. Enter and update required data into California's CODIS Hit Outcome Project (CHOP) website.

iv. The CODIS Administrator and Alternate Administrator may write or administratively review CODIS Notification Reports.

e. Security

i. Ensure FBI background clearance of users.

ii. Ensure security of the CODIS computer through personnel, physical, and computer measures that limit access to CODIS.

f. Training

i. Train and/or oversee training of new CODIS users.

ii. Ensure CODIS Analysts complete the Annual Review of DNA Data Accepted at NDIS training.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/17/2019	**NUMBER:** BIO.3.CODIS.06 - Acceptance Standards, Eligibility and Expungement
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, & Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Acceptance Standards, Eligibility and Expungement	

DNA profiles entered into CODIS must have been produced in accordance with the FBI Director's Quality Assurance Standards. The purpose of this document is to discuss the specific steps taken to ensure that the DNA data entered into CODIS abides by the Quality Assurance Standards, state and federal laws, and the NDIS Operational Procedures for quality, eligibility, and compatibility for searching at the local, state, and national level.

Documented Technical Review

All DNA casework is technically reviewed. The parameters of the technical review can be found in the DNA Technical and Administrative Review checklist (BIO.1.BIOF.02). Prior to data entry into CODIS, the supporting examination records are technically reviewed. The analyst and technical reviewer verify the following information on the case file's Summary Data Sheet prior to upload **(QAS 12.2.7):**

1. Correct DNA types
2. Eligibility for CODIS (see below)
3. Correct specimen name and category. See also BIO.3.CODIS.07 for selecting correct specimen categories.
4. Offense and offense date
5. Agency and agency case number

Verification Prior to Upload

The CODIS Administrator or Alternate verifies that the profile has been technically reviewed and verifies that the information entered into the STR Data entry fields is correct when cross-referenced with the case file's Summary Data Sheet. Verification by the administrator is recorded on a copy of the analyst's Summary Data Sheet with the initials and date of the administrator. The Summary Data Sheet copy is maintained in a binder near the CODIS computer.

Eligibility Requirements

1. The laboratory follows the FBI's decision-making flowchart (see CODIS Administrator's Handbook on the CJIS SEN) to determine if a DNA profile developed from casework is eligible for upload into CODIS. A copy of the flowchart is kept by the CODIS computer for quick referencing.

2. NOTE: The NDIS Procedures state that for those cases not easily resolved through the guidance provided in the flowchart and/or the provided scenarios, it is important to document your reasoning for determining eligibility. This documentation will be made in the case notes. The CODIS Administrator's Handbook may also provide assistance with difficult scenarios.

3. The profile is verified to be interpretable, meaning the data can be used to make exclusions.

4. Only alleles attributed to the putative perpetrator(s) are offered into CODIS (where possible). In cases where there is ambiguity in the assigning of alleles to the putative perpetrator(s), the profile is not precluded from being entered into CODIS.

5. Alleles clearly attributed to a victim or individual other than the perpetrator(s), such as, a consenting partners will not be offered to CODIS. (See Expungement of Elimination Samples below).

6. Forensic profiles for search require a minimum number of original core loci and meet a moderate match estimation (MME) threshold per level of database search. This must be done for all categories except Forensic Unknown. For SDIS, the profile must contain at least 7 loci and meet a minimum MME of one in one million (note: MME is only calculated using original 13 loci plus D2 and D19). For NDIS, the profile must have at least 8 of the original core loci and meet a minimum MME of one in ten million. Forensic profiles that do not meet the minimum MME maybe re-categorized in to Forensic Targeted where the profile must have at least 8 of the original core loci and meet a match rarity estimate (MRE) of one in ten million. The "Match Estimation" utility in CODIS or an equivalent program can be used to

calculate the MME or MRE.

7. A Composite DNA profile is a profile generated by combining typing results from different loci obtained from multiple injections of the same amplified sample and/or multiple amplifications of the same DNA extract. When separate extracts from a given evidentiary item are combined prior to amplification, the resulting DNA profile is not considered a composite profile. Unless there is a reasonable expectation of sample(s) originating from a common source (e.g. duplicate vaginal swabs, known reference samples, or a bone), allelic data from separate extractions from different locations on a given evidentiary item should not be combined into a composite profile. The quality and/or the number of contributors in the profile will determine which specimen category and index the profile will be stored.

LDIS Specimens Eligible for Upload to SDIS and/or NDIS (see BIO.3.CODIS.08 for definitions):

1. Forensic Mixture
2. Forensic Partial
3. Forensic Unknown
4. Forensic Targeted
5. CA Partial (CA SDIS only)
6. CA Mixture (CA SDIS only)
7. Unidentified Human Remains
8. Biological Relatives (Mother, Father, Child, Sibling) / Pedigree Tree
9. Legal

Ineligible Specimens:

1. **LCN/LT (Low Copy Number/Low Template) DNA Analysis:** A subset of Enhanced Detection Methods that, in addition to the increased potential for stochastic effects, have an increased potential for non-reproducible alleles.

2. **Possession Offenses:** Forensic samples related to possession offenses, such as a felon in possession of a firearm can be difficult to discern. DNA profiles developed from possession offenses when the item was removed directly from the person typically are best categorized as a deduced suspect profile and cannot be uploaded to NDIS. The State Administrator or NDIS Custodian may be contacted to help further discern the profiles eligibility for upload.

3. ***Elimination samples:** victim, consensual partner, etc.

   *The laboratory shall make a good faith effort to obtain elimination samples from the law enforcement agency. The request for such samples will be documented in the examination record and shall be requested prior to entering the forensic unknown profile into CODIS. See section below on Expungement of Elimination Samples.

Amplification Kits
The laboratory uses kits approved by NDIS to produce DNA profiles for entry into CODIS. Refer to the NDIS Operational Procedures for a current list of approved amplification kits.

The laboratory strives to amplify the 20 CODIS core loci, of which are part of the PowerPlex Fusion 6C kit. SDIS and NDIS accepts Y-STR data, however, they are not searched. Y-STR profiles are generated with the PowerPlex Y23 kit, of which all loci are accepted. Y-STR will be entered as additional information for eligible Familial Search specimens. See BIO.3.CODIS.08 for the required and accepted loci and MME requirements per specimen category for upload and autosearch.

Acceptance of DNA Profiles from a Vendor Laboratory

Refer to the Biology Technical Unit Manual BIO.5.QAQC.17 for a complete review of the laboratory's requirements and procedures when working with a Vendor Laboratory.

Expungement of DNA Records from CODIS

1. State or local DNA records are maintained at SDIS/NDIS as long as they are substantiated by the internal records of the laboratory and are allowed to be retained by Federal or State law, by judicial decree or by consent. State or local DNA records can be deleted if the laboratory determines that the record is no longer lawfully permitted or appropriate for retention in the system.

2. If a DNA record is deleted from the database (removed from routine search), the event of an upload will record the deletion at SDIS and NDIS as well. A reconciliation report is sent to the laboratory through CODIS. The reconciliation report is printed and retained. The reason for the deletion is recorded on either the recon report or the Specimen Deletion report. The law enforcement agency is informed via a written report or an equivalent document about the deletion of the profile and the documentation is maintained in the case file.

   Legally Obtained Suspect Known (LOSK) Profiles

   A legally obtained suspect known profile must be removed from SDIS after 2 years, unless written notification is provided from the law enforcement agency that the named suspect is still a suspect in an on-going criminal investigation. After two years, the profile can either be unmarked for upload or deleted from LDIS. If the suspect has a profile in the State Offender database, the profile may be deleted. If deleted, a deletion report notifying the agency that the "suspect" profile of the deletion will be written.

Elimination Profiles

Profiles associated with victims, consensual partners, etc. are not allowed for CODIS upload. Effort is made to avoid entering these types of profiles into CODIS. However, there are instances where elimination samples from a victim, boyfriend, etc. could not be obtained from the law enforcement agency prior to the upload of the forensic unknown profile.

In the event an elimination sample is received and found to match the forensic unknown, after the forensic unknown has been uploaded, the forensic unknown will be removed from the database.

In the event a CODIS Hit occurs and the named Offender/Arrestee is determined to match an elimination person, the forensic unknown will be removed from CODIS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/17/2019	**NUMBER:** BIO.3.CODIS.07 - Specimen Categories and Indexes Searched
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Specimen Categories and Indexes Searched	

I. **The purpose of this document is to define and clarify the types of specimens that can be stored, uploaded and searched at the LDIS, SDIS and NDIS levels and the appropriate indexes for which the specimens are stored.**

1. The NDIS Operational Procedures define the types of specimens allowed to be stored and searched at NDIS as well as the indexes for which the allowable specimens are to be stored and searched.

2. State and local laboratories may store and search specimens in CODIS for other categories such as suspect, victim, quality control specimens (such as staff member's profiles) and other elimination specimens, in accordance with State Database Laws (see section on Federal and State Legislation, BIO.3.CODIS.02). States look to their own DNA database laws for determining the categories of DNA data that can be stored and search at the State level.

3. A laboratory's failure to comply with the NDIS authorized categories of DNA records may result in the suspension or termination of that laboratory's access to NDIS in accordance with the DNA Identification Act of 1994.

4. See BIO.3.CODIS.08 for a description of the type of searches that can be conducted at the local level and their associated procedures.

II. **Specimen Category vs Specimen Index**

Specimen Categories **(DNA records from the following types of specimens)**	**Indexes**
*Arrested, indicted, charged persons	Arrestee
*Convicted Offenders *Multi-allelic Convicted Offenders *Juveniles	Offender STR Multi-allelic Offender
Detained (non-US) persons	Detainee
Forensic Unknown Forensic Mixture Forensic Partial Forensic Targeted	Forensic STR Forensic Mixture STR Forensic Partial Forensic Targeted
CA Partial (SDIS only Forensic Partials) CA Mixture (SDIS only Forensic Mixtures)	CA Partial CA Mixture
CA Forensic Prob Gen (SDIS only profiles obtained with probabilistic mixture deconvolution)**	CA Forensic Prob Gen
Legal	Legal
Missing Person Deduced Missing Person	Missing Person
Relatives and spouses associated to the pedigree tree	Pedigree Tree
Biological relatives of missing individual	Relatives of Missing Persons
Spouse (presumed parent of a common child of a missing person)	Spouse
Unidentified Persons (living or dead)	Unidentified Human (Remains)

See the glossary at the end of the document for descriptions.

1. *The State Department of Justice DNA Laboratory is mandated to conduct DNA analysis on Convicted Offender (Adult and Juvenile) and Arrestee (Adults) Specimens.

2. **Candidate matches can only be evaluated by laboratories that have validated probabilistic mixture deconvolution.

3. The laboratory maintains the following specimens within the following indexes. See BIO.3.CODIS.08 for definitions.

Specimen Category	Index
Forensic Unknown Forensic Mixture Forensic Partial Forensic Targeted	Forensic STR Forensic Mixture STR Forensic Partial Forensic Targeted
CA Partial CA Mixture	CA Partial CA Mixture
Staff	Staff
Unidentified Person	Unidentified Human (Remains)
Deduced Missing Person	Missing Person
Biological relatives of missing individual	Relatives of Missing Persons
Relatives and spouses associated to the pedigree tree	Pedigree Tree
Legal (Legally Obtained Suspect Known)	Legal

4. **Indexes Searched**

   a. Searches in CODIS can be conducted at three levels: Local, State, and National. Refer to the NDIS Operational Procedures for searches conducted at the NDIS level. The laboratory searches its own profiles against its own database indexes. The search compares the new profile ("Target") against the panel of older ("Candidate") profiles already in the database. As a specimen is added to an index, the specimen is searched against other specimens in the same index, as well as, against other specimens in other indexes (Forensic Unknown, Forensic Mixture, Forensic Partial, CA Partial, CA Mixture, Staff, Legal, and Unidentified Human).
   b. Settings for each search can be viewed on the Search Configuration tab in Match Details or in the Match Details Report.

Glossary (as defined by the NDIS Procedures Manual)

Arrestee (Specimen Category) - The known sample from a person who has been arrested and in accordance with the law of the applicable jurisdiction is required to provide a DNA sample for analysis and entry into a state DNA database. The term “arrestee” includes persons who have been charged in a formal criminal instrument, such as an indictment or an information. The DNA record for this specimen category is stored in the Arrestee Index.

Arrestee Index -An Arrestee Index consists of DNA records of persons who have been arrested or indicted or charged in an information with a crime and are required by law to provide DNA samples.

Biological Child (Specimen Category) - The known reference sample voluntarily provided by an adult child or provided with the parental/guardian consent for a minor child of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

Biological Father (Specimen Category) - The known reference sample voluntarily provided by the biological father of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

Biological Mother (Specimen Category) - The known reference sample voluntarily provided by the biological mother of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

Biological Sibling (Specimen Category) - The known reference sample voluntarily provided by the full or half biological adult sibling or provided with the parental/guardian consent of a full or half biological minor sibling of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

Convicted Offender (Specimen Category) - The known sample from a person who has been convicted of a Federal, Military or State qualifying offense in a jurisdiction that requires that persons convicted of enumerated crimes or qualifying offenses provide a DNA sample for analysis and entry into a Federal, Military or State DNA database. The DNA record for this specimen category is stored in the Convicted Offender Index.

Convicted Offender Index - A Convicted Offender Index consists of DNA records from offenders convicted of qualifying State crimes and juveniles required by the relevant jurisdiction to provide DNA samples.

Deduced Missing Person (Specimen Category) - The DNA profile of a reported missing person that has been generated by examining intimate items purported to belong to the missing person such as a toothbrush, and compared to close biological relatives, if possible. Considered a reference sample, this DNA record is stored in the Missing Person Index.

Detainee (Specimen Category) - The known sample from a non-United States (U.S.) person detained under the authority of the U.S. and required by law to provide a DNA sample for analysis and entry into a State/national DNA database. The DNA record for this specimen category is stored in the Detainee Index.

Detainee Index - A Detainee Index consists of DNA records from non-United States (U.S.) persons detained under the authority of the U.S. and required by law to provide a DNA sample.

Forensic Index - A Forensic Index consists of DNA records originating from and associated with an evidence sample from a single source (or a fully deduced profile originating from a mixture) that is found at a crime scene. The Forensic Index contains Forensic Unknowns.

Forensic Mixture (Specimen Category) - A specimen category in the CODIS software that is stored in the Forensic Mixture Index and originates from a forensic sample (biological sample found at the scene of a crime) that contains DNA contributed from more than one source attributable to a putative perpetrator(s).

Forensic Mixture Index - A Forensic Mixture Index consists of DNA records from forensic samples that contain DNA contributed from more than one source. The Forensic Mixture Index contains Forensic Mixture DNA records.

Forensic Partial (Specimen Category) - A specimen category in the CODIS software that is stored in the Forensic Partial Index and originates from a single source (or a fully deduced profile originating from a mixture) Forensic Sample attributable to the putative perpetrator with either locus or allelic dropout at any of the 13 Original CODIS Core Loci. Effective January 1, 2017, an analysis of all CODIS Core Loci shall be attempted for Forensic Partial Samples.

Forensic Partial Index - A Forensic Partial Index consists of DNA records from forensic samples that do not contain results for all 13 Original CODIS Core Loci and/or that may indicate a possibility of allelic dropout.

Forensic Targeted (Specimen Category) - A specimen category in the CODIS software that is stored in the Forensic Targeted Index. A forensic targeted specimen originates from a forensic partial or a forensic mixture that does not meet the NDIS moderate match estimate threshold of 1 in 10 million, but does meet the match rarity estimate threshold of 1 in 10 million if searched at a specified stringency by locus (high or moderate).

Forensic Unknown (Specimen Category) - A specimen category in the CODIS software that is stored in the Forensic Index and originates from a single source (or a fully deduced profile originating from a mixture) Forensic Sample attributable to the putative perpetrator and contains results for all 13 Original CODIS Core Loci.

Juvenile (Specimen Category) - The known sample from a juvenile (as that term is defined by the relevant jurisdiction) who is required by State law to provide a DNA sample for analysis and entry into a State DNA database. The DNA record for this specimen category may be stored in the Convicted Offender Index.

Legal (Specimen Category) - The known reference sample from a person whose DNA sample is collected under applicable legal authorities (State law), provided that DNA samples that are voluntarily submitted solely for elimination purposes shall not qualify as a Legal specimen. The DNA record for this specimen category is stored in the Legal Index.

Legal Index - A Legal Index consists of DNA records of persons whose DNA samples are collected under applicable legal authorities (State law).

Missing Person (Specimen Category) - The known reference sample from an individual that is missing. The source of the DNA has been verified as originating from the missing person and is stored in the Missing Person Index.

Missing Person Index - A Missing Person Index consists of DNA records from missing persons and deduced missing persons.

Multi-allelic Offender (Specimen Category) - An offender (arrestee, convicted offender, detainee or Legal Index specimen) DNA record having three or more alleles at two or more loci.

Multi-allelic Offender Index - A Multi-allelic Offender Index consists of DNA records from offenders (arrestees, convicted offenders, detainees or Legal Index specimens) having three or more alleles at two or more loci.

Pedigree Tree - A Pedigree Tree contains genetic information from two or more biological relatives of missing persons (may include spouses, where applicable). A Single Typed Node Pedigree contains the genetic information from only one biological relative of the missing person.

Pedigree Tree Index - A Pedigree Tree Index consists of DNA records of biological relatives and spouses of missing persons that are associated with a Pedigree Tree.

Relatives of Missing Person Index - A Relatives of Missing Person Index consists of DNA records from the biological relatives of individuals reported missing.

Unidentified Human (Remains) Index - An Unidentified Human (Remains) Index consists of DNA records from recovered living persons (e.g., children who can't and others who can't or refuse to identify themselves), and recovered dead persons (including their body parts and tissues) whose identities are not known.

Unidentified Person (Specimen Category) - The DNA profile developed from the recovered deceased (including body parts and tissue) or an individual who is unidentified (e.g., children who can't and others who can't or refuse to identify themselves). The DNA record for this specimen category is stored in the Unidentified Human (Remains) Index.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/17/2019	**NUMBER:** BIO.3.CODIS.08 - Data Entry, Uploads, and Searches
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Data Entry, Uploads, and Searches	

I. Introduction

A. The purpose of this document is to provide general instructions on the process of entering, uploading, and searching specimens at the local CODIS level (LDIS). It is not intended to capture all aspects or to replace the CODIS training provided by a CODIS Administrator or the FBI's CODIS training.

B. Profiles entered at the local level are searched against profiles in the LDIS database prior to upload to the State level. The profiles uploaded to the State are searched against the State database (SDIS) and subsequently uploaded to NDIS. The profiles will be searched against the NDIS database as long as the profiles meet the NDIS autosearch requirements (See below). Refer to section: Specimen Categories and Indexes Searched (BIO.3.CODIS.07). For more information on the category of specimens and their associated indexes, and section: Acceptance Standard, Eligibility, and Expungement (BIO.3.CODIS.06), for information on eligibility of specimens entered into CODIS.

II. Procedure for Data Entry

A. **Prior to Data Entry**:

1. The laboratory will make a good faith effort to obtain elimination samples (where warranted) from the law enforcement agency to prevent ineligible profiles from being uploaded to CODIS. The request for such samples shall occur and be **documented prior** to the forensic unknown being entered into CODIS. See section: Disposition of Candidate Matches (BIO.3.CODIS.09) for the disposition of a match to an elimination sample and section: Acceptance Standards, Eligibility, and Expungement (BIO.3.CODIS.06) for the expungement of elimination samples.

B. **Procedure**:

1. Log on to the CODIS computer using your CODIS user password.
2. Open the CODIS Analyst Workbench and select **STR Data Entry**. Fill in the following fields:

a. Specimen name: the specimen name is a unique identifier of the DNA profile. The name of a specimen generally includes the Laboratory Case File number and specimen item designation. Other identifiers may be added such as: a cell fraction; "sperm" or a component; major/minor."

Example A: 01-1111-2 (Lab Case No) 1-1H (Item) SPERM (Fraction) = 01-1111-2 1-1H SP (Specimen Name)

b. Certain grant program samples have been entered using a grant specific numbering system:

Example B: OCJP 000-100 (Grant Number) 1-1H (Item) SPERM (Fraction) = OCJP 000-001 1-1H SP (Specimen Name)

c. A profile generated from a vendor laboratory may have additional identifiers indicating the vendor lab that generated the profile:

Example C: FASI (Vendor ID) 01-1111-2 (Lab Case No) 1-1H SPERM (Item Designation) = FASI 01-1111-2 1-1H SP (Specimen Name)

d. Specimen category: the specimen must be assigned an appropriate specimen category. See Specimen Categories and Indexes (BIO.3.CODIS.07).

e. Assigned to: defaults to the CODIS User that is logged on. This field can be assigned to another CODIS user or contract user to track profiles generated by a DNA analyst.

f. Source ID: (option: Yes, No, or NA) Select “Yes” if the source of the profile is known and “No” if there is no confirmation of the source. "NA" is not typically used in forensic samples.

g. Partial profile: indicate whether the profile is a partial profile. The box should be marked "Yes", if the profile possesses additional data that could be used to exclude a match but was not or could not be entered for search. In addition, an allele call can be marked by selecting “Yes” in the “Partial Locus” column in STR Data Entry. This will automatically toggle the profile as a Partial Profile. If there is no additional DNA data that can assist in the exclusion or inclusion of a possible match, the box should be marked "No".

h. Enter DNA profile: The STR Data Entry application requires that the DNA data be entered twice to reduce data entry errors. It is acceptable for the same CODIS User to enter both sets. The STR Data Entry application will indicate if there is a mismatch between the duplicate data. If both are correct, the data set will be automatically repeated in a third column. CODIS will also prompt the user of a rare allele entry to confirm the rare allele was entered on purpose and not as a typographical error.

3. Format for entering DNA data:

   a. Heterozygotes and mixtures (in ascending order) should be entered as: "p,q"

   b. Homozygotes: "p,p" or "p"

   c. In the event of a single allele call, where “p,__” then toggle the option of “Partial locus” to “Yes” per qualifying loci.

   d. Alleles below or above the allelic ladder are entered as < (lowest allele) or > (highest allele), respectively.

   e. Single source profiles can be entered exactly as profiled.

   f. Mixtures can be entered in one of several ways to use the search capabilities of the CODIS software. The goal is to return significant candidate matches without incurring a large number of candidate matches.

4. Examples of entering Forensic Mixture data into CODIS:

   a. **Scenario 1**: An apparent 2 component mixture where the major/minor components can be defined:

D3S1358:	**Alleles**:	14	16	17
	Peak height:	2000	1500	500

   b. Major profile:

D3S1358	**Reading 1**	**Reading 2**
Data entry	14, 16	14, 16

   c. Minor profile:

D3S1358	**Reading 1**	**Reading 2**
Data entry	14, 17	14, 17

5. **The major and minor component profiles can be entered as separate single source profiles. In scenario 1, a clear major and clear minor profile can be discerned from each of the loci in the mixture, the profile may be entered under the Forensic Unknown/Partial or CA Forensic Partial categories.**

   a. **Scenario 2**: An apparent 2-person mixture with no clear major/minor contributors (e.g. the victim's profile from a sexual assault swab) where mixture interpretation can be a selected genotype call:

D3S1358	**Alleles**	14	16	17
	Peak height:	1600	1300	1200

   b. Victim's type: 14,16

   c. CODIS Data Entry (variation A): Use CODIS's ability to define one **obligate** allele using the (+) notation to indicate the profile must have 17 allele to return a match:

	D3S1358
Data entry:	14,16,**17**+

   d. Discussion: CODIS matches to a homozygous "17" will return as a (High) match, matches to a 14, 17 or to a 16, 17 will return as (Moderate) matches. High or Moderate match means there is high or moderate stringency to the match. No match will be returned to a 14,16, a 14, or 16.

   e. CODIS Data Entry (variation B): CODIS Data Entry (variation B): Use only the foreign allele (17) as a search criterion. In STR Entry, toggle the “Partial Profile” column as “Yes” to indicate an allele call. A “{P}” will appear in the Specimen Detail Report if the locus is marked as an allele call.

	D3S1358
Data entry:	17 {P}

   f. CODIS will return matches to 17 (as High), and to any heterozygote or mixture profile that contains 17 (as moderate.)

   g. **Scenario 3**: A complex mixture. These mixtures create the most havoc due to the potential for high numbers of candidate matches. To qualify per level of CODIS search, the profile must satisfy the minimum MME. The Match Estimator module in CODIS or another approved match estimator can be used to determine entry into CODIS. If possible, include selected genotypes in the interpretation to help eliminate potential matches.

D3S1358	**vWA**	**FGA**	**D8S1179**	**D21S11**	**D18S51**	**D5S818**	**D13S317**	**D7S820**	**D16S539**	**THO1**	**TPOX**	**CSF1PO**

14,15	16, 17,19	21,23, 25	13,15	27,28, 29,30	12,14, 18	7,9,11, 13	11,12	9,10, 11,12	9,11, 12,13	7,9,9.3	7,8,11	10,11

h. **In scenario 2, both variation A and B, and scenario 3, the profiles are required to be entered under the Forensic Mixture or CA Mixture category.**

6. Save Data Entry: When all the data entry fields have been filled in correctly, the specimen can be added to the local CODIS database by selecting "ADD/Save". The specimen becomes a record in the Specimen Manager application.

7. Verify Specimen Information Entered: To verify that the data entered into CODIS is what was technically reviewed and intended to be entered, the CODIS user will document that they verified the data entered:

   a. Print a copy of the LDIS Specimen Detail Report. The report captures the specimen information entered into STR Data Entry.

   b. Compare the PCR Loci and allele values in the Specimen Detail Report against the copy of the Summary Data sheet (generated and technically reviewed as part of the DNA case file).

   c. Once verified the analyst will initial and date the Specimen Detail Report and the copy of the Summary Data sheet.

   d. The copy of the Summary Data Sheet is retained by the CODIS Administrator as a means of documenting uploads and verification of the data entered. The Specimen Detail Report is filed with the case file.

III. Search Procedure prior to Upload

A. Prior to an upload to SDIS, any newly entered or updated specimen(s) is autosearched against the indexes maintained in the local CODIS database by the CODIS Administrator or Alternate. This is to check the local database for any potential case-to-case hits and for quality control measures. The search can be conducted one of three ways:

   1. using the **Searcher** link in **Specimen Manager**,
   2. using the **Searcher** module, or
   3. using the **Autosearcher** module. For other types of searches, see Search Requirements below.

B. CODIS Administrator/Alternate will check for newly entered specimens that are awaiting upload:

   1. Select the **Specimen Manager** module. From list of saved search configurations, select "Check for upload". A list of any new specimens that are marked for upload will be listed. Note: any previously marked specimens that have been modified will not be listed such as when a specimen's source ID had been modified.
   2. Open each entry individually and verify the data entry fields for appropriateness. The casework analyst may be consulted for this task.
   3. If the STR entry is correct, the verifier will date and initial the copy of the Summary Data sheet. The CODIS Administrator/Alternate will search the newly entered specimen(s) with one of the following search applications: **Searcher** or **Autosearcher**.

C. Searcher:

   1. Select **Specimen Manager** module.
   2. In the **Specimen Manager** window, right click on a Specimen record. From the Pop-up window, select **Search Profile**. **Searcher** module will launch and the selected specimen record data are reflected in the Target Profile window.
   3. Edit the search parameters accordingly and **Perform Search**. Searcher returns candidate matches in the active window. Candidate matches appear in the Candidate Match window. (Note: searches conducted via the linked Searcher application through Specimen Manager must be manually saved to the Match Manager.) If a candidate match to a specimen is obtained, it should be manually saved to **Match Manager (File>Save>To Match Manager)**.

D. Autosearcher: AutoSearcher at LDIS is an on-demand search of specimens within the database on a periodic basis. This search can be configured to test all specimens, or just previously unsearched profiles.

   1. Open the **AutoSearcher** module. From list of search configurations, select **Monthly STR Search**.
   2. Select the **Perform Search** button in the toolbar. **AutoSearcher** will return a list stating the number of matches added to **Match Manager**. Candidate matches are automatically saved to Match Manager. To view the **Autosearch Report**, open the **Message Center** module and select the latest **Autosearch Report**.

IV. Procedure for Uploading Specimens to SDIS

A. **Prior to Upload**
The CODIS Administrator/Alternate will verify the following:

   1. The profile has undergone a technical review. (See BIO.3.CODIS.06 for technical review of vendor lab generated profiles).

2. The STR Data Entry fields (Specimen name, category, source ID, partial profile, etc.) have been filled in. The DNA analyst is responsible for the accuracy of the data entered.
3. The Moderate Match Estimation (MME) has been calculated to determine category of the specimen for upload level.
4. The specimen has been searched against the local CODIS database.
5. The laboratory has the appropriate written request and documentations for uploading a Legal category profile. See below.

B. At this point in the process, the DNA profile entered into CODIS has been technically reviewed and searched against the Local CODIS database. By default, all forensic type specimens added to Specimen Manager are "marked" for upload. See NDIS Operational Procedures for specimens allowed to be marked for upload. The specimen must be manually unmarked if upload of the specimen is unwanted.

C. To **unmark** a specimen for upload:

1. Select the **Specimen Manager** module and click on the specimen record to highlight the record.
2. Right click on the specimen and select "Unmark for upload" from the pop-up list or toolbar.
3. Verify that the sample has no date associated with the "Marked Date" and "Marked by" column headings.

D. **Upload Procedure**:
Reminder: The laboratory shall not upload DNA profiles to NDIS in the event the CODIS Administrator position becomes unoccupied, until a new casework CODIS Administrator is appointed.

E. The procedure for performing an upload is also explained in the FBI's CODIS Training Manual. There are two types of uploads (full and incremental) that a CODIS Administrator or Alternate may perform.

1. Incremental: transmits all data that is new, modified, or deleted since the last time an upload was performed, if the data has been marked for upload.
2. Full: transmits all data in the local database that has been marked for upload.
3. To complete the upload, select **Generate Upload** from the menu bar and select **Send Upload**. Full uploads can be conducted on a periodic basis (approximately two times per year).
4. Check upload reconciliation report for the associated upload: Once a profile is uploaded, received, and processed at the State, a reconciliation report is generated that verifies that the upper level CODIS system has received the upload. If the profile has been subsequently uploaded to NDIS, a NDIS reconciliation report will be issued. The reconciliation reports are sent electronically through **Message Center** on the CODIS computer. The CODIS Administrator and Alternate are responsible for reviewing the reconciliation report and checking for negative reconciliation codes associated with the upload.
   a. Open the **Message Center** module and select the Upload Reports tab. Unopened or unprocessed recon reports appear in red and with a star in the left hand column.
   b. Open unprocessed Recon Reports in the order of upload number, SDIS reports first. It is vital that the reconciliations be opened in the order of upload number to allow correct updates of the Specimen Manager records.
   c. Double click on the Upload Report to update audit trails.
   d. Export a PDF of the report to a designated folder on the workstation.

V. Search Requirements

A. When data is uploaded, any new or modified data is "marked for upload" and flags the specimen as not searched. A profile entered into the local CODIS database is autosearched against other profiles in the database prior to upload to the State level. Previously unsearched profiles that have been uploaded to the State and National level are autosearched against the profiles in their respective databases on a scheduled basis, as determined by the State Administrator and NDIS Custodian.

B. AUTOSEARCHES: The requirement for an autosearch is dependent on the index and level at which the profile will be searched. For example, in order for a specimen in the forensic index to be autosearched at NDIS, the specimen must have a minimum of 8 of the original core CODIS loci (See below for definition of original core loci) and satisfy the minimum NDIS MME. This differs from an autosearch conducted at the State level which requires a minimum of any 7 loci to search, however, has to have the minimum MME which is calculated off of the 13 original core loci plus D2 and D19. Refer to the NDIS Operational Procedures for a complete listing of required search parameters for indexes.

C. Below is the number of loci required for an autosearch of the indexes applicable to the Office of the Sheriff's Laboratory. (Note: MME thresholds must be met to be entered in CODIS.)

Category	Min # of loci	Min NDIS MME
Forensic Unknown	20 core loci	$>10^7$
Forensic Partial	8 original core	$>10^7$

Forensic Mixture	8 original core	$>10^7$
Legal	20 core loci	n/a
Unidentified Human (remains)	8 original core	n/a
Biological relatives	20 core loci	n/a

Category	Min # of loci	Min SDIS MME*
CA Forensic Partial	7 loci	$>10^6$
CA Forensic Mixture	7 loci	$>10^6$

* = calculated based on the 13 original core loci. There is no minimum number of original core loci required, as long as the MME is $>10^6$.

Forensic Targeted: 8 of the original core loci with Match Rarity Estimate (MRE) $>10^7$.

1. The following table lists the STR loci that are required and accepted at SDIS and NDIS in relation to PowerPlex Fusion 6C kit per index.

Loci	Forensic	Missing Person and Unidentified Human (Remains)	Relatives of Missing Person	Legal
AMEL	Accepted	**Required**	**Required**	Accepted
D3S1358	**Required**	**Required**	**Required**	**Required**
D1S1656	**Required**	**Required**	**Required**	**Required**
D2S441	**Required**	**Required**	**Required**	**Required**
D10S1248	**Required**	**Required**	**Required**	**Required**
D13S317	**Required**	**Required**	**Required**	**Required**
PENTA E*	Accepted	Accepted	Accepted	Accepted
D16S539	**Required**	**Required**	**Required**	**Required**
D18S51	**Required**	**Required**	**Required**	**Required**
D2S1338	**Required**	**Required**	**Required**	**Required**
CSF1PO	**Required**	**Required**	**Required**	**Required**
PENTA D*	Accepted	Accepted	Accepted	Accepted
TH01	**Required**	**Required**	**Required**	**Required**
VWA	**Required**	**Required**	**Required**	**Required**
D21S11	**Required**	**Required**	**Required**	**Required**
D7S820	**Required**	**Required**	**Required**	**Required**
D5S818	**Required**	**Required**	**Required**	**Required**
TPOX	**Required**	**Required**	**Required**	**Required**
D8S1179	**Required**	**Required**	**Required**	**Required**
D12S391	**Required**	**Required**	**Required**	**Required**
D19S433	**Required**	**Required**	**Required**	**Required**
SE33*	Accepted	Accepted	Accepted	Accepted
D22S1045*	**Required**	**Required**	**Required**	**Required**
DYS391	Accepted	Accepted	Accepted	Accepted
FGA	**Required**	**Required**	**Required**	**Required**
DYS576	Accepted	Accepted	Accepted	Accepted
DYS570	Accepted	Accepted	Accepted	Accepted

Bold loci: current 20 core loci
Bold and underlined: original 13 core loci
* = loci not autosearched at SDIS and NDIS

2. The following table lists the Y-STR loci that are accepted at SDIS and NDIS in relation to PowerPlex Y23 kit per index. Y-STR loci are not searched and only added to full STR profiles to aid in Familial searching.

Loci	All indexes
DYS576	Accepted
DYS389 I	Accepted
DYS448	Accepted
DYS389 II	Accepted
DYS19	Accepted
DYS391	Accepted
DYS481	Accepted
DYS549	Accepted
DYS533	Accepted
DYS438	Accepted
DYS437	Accepted

DYS570	Accepted
DYS635	Accepted
DYS390	Accepted
DYS439	Accepted
DYS392	Accepted
DYS643	Accepted
DYS393	Accepted
DYS458	Accepted
DYS385	Accepted
DYS456	Accepted
YGATAH4	Accepted

D. Keyboard Search:

1. Profiles that do not meet the minimum number of loci/MME to be searched at SDIS and or NDIS may be searched via a keyboard search. A keyboard search compares the target DNA profile to other DNA profiles in the database without resulting in the target profile being uploaded or permanently included in the database. A keyboard search can be conducted at the State or National level. The request form can be found in the NDIS Operational Procedures. The DNA profile, where the profile was developed, and associated crime must be included with the keyboard request form.

    a. A Keyboard Search at SDIS: A keyboard search of the State database requires a written request be faxed or emailed to the State CODIS Administrator.

    b. A Keyboard Search at NDIS: If after a search of the State level database yields no matches, a request to search the NDIS database may be forwarded to the NDIS Custodian by the State CODIS Administrator. NDIS requires a minimum of 7 loci for searching. Refer to the NDIS Operational Procedures for the appropriate forms and cover letter required for the request. A communication in the form of a letter or e-mail, confirming the search was performed, shall be returned to the State CODIS Administrator or agency.

2. **A match estimation, the number of potential hits estimated based on the DNA profile, must be performed prior to submitting the search request. Generally, one estimated match in the size of the database is accepted.**

E. Batch Target File Search:

1. The **Searcher** module allows target profiles (either a singular profile or multiple profiles in a file) to be placed into a "Batch Target File" to be searched against the Local CODIS database without the profiles being permanently entered into the local CODIS database. In other words, the profile(s) will not be stored in "Specimen Manager". Conducting a batch target file search is voluntary and may occur at the request of an external laboratory or initiated by the Office of the Sheriff's Laboratory.

    a. The location and procedure for a batch target file search is in the NDIS Operational Procedures:

        i. Navigate to the CODIS website homepage and locate “DNA Search Requests”.

        ii. Click on the following link “STR Target File” to download the batch target file.

F. Legally Obtained Suspect Known Search:

1. DNA profiles developed for reference purposes such as from a victim or suspect, other than from staff members for QC purposes, are not maintained in the LDIS database for searching or uploaded to the State. California Penal Code section 297(c)(1) authorizes a known sample legally obtained from a person who is identified by a law enforcement agency as a suspect in an ongoing criminal investigation to be placed in the California offender DNA database. Such a sample shall be known as a Legally Obtained Suspect Known (LOSK) sample. It is a special type of Legally Obtained Sample because of the two-year time limit for its retention in CODIS. The DNA record generated from a LOSK sample will be assigned to the Legal DNA record category and the Legal DNA index at LDIS, SDIS and NDIS.
The LOSK sample is an evidentiary reference sample with a sufficient chain of custody. It will have been received and processed by the DNA casework laboratory providing service to the investigating agency. To qualify for upload to SDIS the LOSK sample must be documented by the submitting law enforcement agency with the following data:

    a. Eligibility Requirements:

        i. Subject’s identification: name, DOB, and means of identification (SID or CII number, Driver’s License, ID Card, etc);

        ii. Affirmation of the subject’s status as a suspect;

        iii. Investigator’s name, rank, ID number, agency and case file number;

        iv. Type of crime and county of jurisdiction.

        v. A completed CAL-DNA LOSK form with the requested information. (Refer to the SDIS procedures under Serology/CODIS Adm/CODIS Adm docs for the form).

vi. Expungement of the DNA profile when the two-years limit has been reached. If the subject is still part of an ongoing investigation, the profile can be renewed for another two years with a new LOSK form..

G. Interpol Search:

1. Refer to the CODIS website for the requirements of an Interpol search.

VI. Familial Search and "Partial Matches"

A. The California Department of Justice has authorized searching of the State database for an individual(s) who may be a close relative to the true source of the forensic specimen. Refer to the CA Department of Justice's published "Information Bulletin, no 2008-BFS-01" which describes the policy for familial searches.

1. Familial searching is based on the principal that first-order relatives, (siblings, parents) and to a lesser extent (aunt, uncles, cousins) share genetic features more so than does an unrelated individual. Thus, this type of search may be used as a tool for developing an investigative lead. A "partial match" may occur as a result of a routine autosearch or as a result of a special search request.

2. In the event of a "partial match" obtained through a routine search of the CA CODIS database, the following conditions must be met before the DOJ releases the offender's name:

a. The target profile is a single source profile.

b. The offender's profile shares at least 15 alleles throughout the profile.

c. The case is unsolved and all investigative leads have been exhausted.

d. A commitment is made by the agency and prosecutor to further investigate the case, if the name of the potentially related offender is released.

e. A kinship analysis to indicate the strength of the association needs to be conducted.

f. Y-STR analysis is completed by the submitting agency and is concordant with the Offender's Y-STR profile obtained by CA DOJ.

g. A DOJ committee reviews the case and discusses the case with the law enforcement agency, the prosecutor's office, and the local laboratory. After review, the offender's name may be released.

h. If a consensus is not reached, the decision to release the offender's name will be made by the Attorney General or his designee.

3. In the event that a law enforcement agency has an unsolved case that has critical public safety implications, the agency may request a familial search of the database for any offender(s) who may be related to the perpetrator. This request should be on agency letterhead. The name of the offender may be released to the investigating agency if all of the following conditions are met:

a. A written request is sent to the State of California's Chief of the Bureau of Forensic Services (1102 Q Street, 6th Floor, Sacramento, CA 95811) describing the case and attesting that all other investigative leads have been exhausted, and that the investigating agency and the prosecutor's office are committed to further investigate the case if the name of the offender is eventually released.

b. The evidence profile must be a single source profile.

c. A Y-STR profile of the evidence has been completed by the submitting agency prior to the search.

d. The search conducted by DOJ must result in a manageable number of candidates.

e. The candidate matches will be prioritized by DOJ using statistical calculations for relatedness.

f. Based on the prioritization, DOJ will conduct Y-STR typing on the offender sample(s).

g. If the Y-STR profiles of the evidence and offender match, steps as described in section 2 above will be followed.

4. In the event of a partial match through an NDIS search, please refer to Appendix G of the NDIS Operational Procedures. Below is a copy of the NDIS partial match plan:

For purposes of this Plan, a “partial match” is a moderate stringency candidate match between two single source profiles having at each locus at least one allele in common indicating that a potential familial relationship may exist between the offender and the putative perpetrator (casework) profiles.

The FBI CODIS Unit is aware that there may be certain circumstances when NDIS participating laboratories encounter a candidate match that could be classified as a "partial match." For those candidate matches occurring at NDIS, the FBI has developed procedures with accompanying guidance to allow for the disclosure of personally identifying information by NDIS participating laboratories in appropriate cases.

The FBI is implementing this Plan to provide guidance to Casework Laboratories to pursue partial matches identified at NDIS in accordance with applicable State law and policies. This guidance will also assist the Offender Laboratory to determine whether to disclose information in accordance with applicable State law and policies to the Casework Laboratory requesting identifying information. Forensic Partial and Forensic Mixture profiles shall not be considered for purposes of determining a partial match.

Casework Laboratory

a. A Casework Laboratory involved in a partial match, after documented consultation with its agency's legal representative and the relevant prosecutor, may send a written request for the release of the personally identifying information of the offender involved in the partial match to the Offender Laboratory.

b. The Casework Laboratory shall direct a written request for the release of personally identifying information of the offender involved in the partial match, on the agency letterhead, to the Offender Laboratory and shall include the documented concurrence of the prosecutor. The Casework Laboratory shall provide the NDIS Custodian with a copy of the correspondence to the Offender Laboratory.

c. The casework profile must be a single source forensic unknown profile with a minimum of 15 Loci (original 13 CODIS core plus D2 and D19).

d. The written request by the Casework Laboratory shall include the statistical analysis used to conclude that there may be a potential familial relationship between the profiles identified by the Casework Laboratory and the Offender Laboratory.

e. Individual Expected Match Ratios (EMR) and Expected Kinship Ratios (EKR) shall be calculated according to "SWGDAM recommendations to the FBI Director in the “Interim Plan for the Release of Information in the Event of a ‘Partial Match’ at NDIS.” ***The Casework Laboratory shall not submit a request to the Offender Laboratory that does not satisfy the EKR and EMR thresholds recommended by SWGDAM.***

f. The Casework Laboratory shall notify the NDIS Custodian in writing of the outcome of any further investigation and the final resolution of any resulting prosecution in the criminal case no later than 30 calendar days from the Casework Laboratory's notification by the prosecutor, other law enforcement entity or other reliable source of that outcome and resolution. The NDIS Custodian should be notified as to whether the criminal case was solved using the partial match information.

Databank Laboratory

1. The Offender Laboratory shall be responsible for determining whether the release of the offender's personally identifying information is prohibited by its applicable State law or policies.

2. The Offender Laboratory may request the Casework Laboratory perform additional DNA analysis (such as Y-STR and mtDNA), if appropriate to provide additional genetic data in common between the partial match offender and the putative perpetrator.

3. If the Offender Laboratory determines that the release of the offender's identity is permitted by its applicable State law or policies, the Offender Laboratory shall provide written notification of that determination and the offender's identity, on agency letterhead, to the Casework Laboratory. The Offender Laboratory shall provide the NDIS Custodian with a copy of the correspondence to the Casework Laboratory ***with the offender's personally identifying information redacted.***

4. If the Offender Laboratory determines that the release of the offender's identification is not permitted by its applicable State law or policies, the Offender Laboratory shall provide written notification of that determination, on agency letterhead, to the Casework Laboratory. The Offender Laboratory shall provide the NDIS Custodian with a copy of the correspondence to the Casework Laboratory.

5. The determination of the Offender Laboratory having responsibility for the offender information shall be final.

5. **See CODIS Manual sections: Disposition of Candidate Matches and Reporting and Disclosure of Matches for disposition and reporting of matches that have occurred as a result of a search.**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/17/2019	**NUMBER:** BIO.3.CODIS.09 - Disposition of Candidate Matches
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Disposition of Candidate Matches	

I. INTRODUCTION

A. A "**Match**" occurs between a "Target" DNA profile and "Candidate" DNA profile based on the search parameters. Matches and hits are not interchangeable terms or events. A match simply signifies an association has been made between the DNA profiles. A "**Hit**" is a match that provides value to an investigation. Refer to the NDIS Operational Procedures for further differentiation and for the "Hit Counting" rules.

B. Match + Investigation Aided = Hit

C. The purpose of this document is to illustrate the proper disposition of matches, laboratory procedure for dispositions, and the CODIS Administrator / Alternate's responsibilities regarding dispositions.

II. DISPOSITION OF CANDIDATE MATCHES

A. Matches in CODIS are processed differently depending on level and search type. A match occurring as a result of a Local CODIS search (via Searcher or Autosearcher) is populated automatically in Match Manager. (See section: Data Entry, Uploads, and Searches for more information.) CODIS automatically sends results of an autosearch to all laboratories involved conducted by SDIS or NDIS. These matches are sent via the Message Center module and will be processed by the involved laboratories. The results will be displayed per autosearch configuration and matches will be added to Match Manager when the message has been executed.

1. **Definitions**:

   a. Message Center: A CODIS module used to communicate between CODIS labs.

   b. Match Manager: A CODIS module used as a storage center for all candidate matches.

2. **Types of Dispositions**:

   a. **Candidate Match**: A possible match between two or more DNA profiles as a result of a search. This is the default disposition and serves as the interim disposition until the match record is opened. Once the record has been opened for viewing, the disposition automatically is updated to “Pending”. See definition below.

   b. **Pending**: This is an interim disposition that indicates the match record has been viewed and is a temporary disposition only until an appropriate final disposition is applied. See other types of dispositions below.

   c. **No Match**: A disposition that updates an interim disposition (Candidate, Pending, or Waiting for More Loci Match) to reflect that the target DNA profile and the candidate DNA profile do not match. This disposition requires no further work. This is a final disposition.

   d. **Conviction Match**: A disposition of Conviction Match is when a match has occurred between a sourced ID’d forensic DNA profile and an Offender/Arrestee's profile. Since this match does not provide additional investigative information, no further work is required. Prior to dispositioning this match however, an inquiry must be made to the Offender Laboratory to confirm that the Offender is in fact the same named suspect already associated to the forensic unknown profile. See match procedure below.

   e. **Benchwork Match**: A disposition where CODIS has identified a match, however, the laboratory was already aware of the link between the cases or profiles before using CODIS. In other words, a CODIS search did not assist in providing a link between the cases. Classically, these are matches where an analyst recognizes that a profile from one case matches another. <u>This would include a match between a Legally Obtained Suspect Known sample and a forensic unknown profile where the suspect was known previously to be associated with that case.</u>

   f. **Forensic Hit**: This is a match between a DNA profile from a source unknown forensic specimen to another source unknown forensic specimen. The match is considered a forensic hit because it has assisted the investigations and the hit provides the investigators the link between the cases. This type of match provides useful investigative information and is therefore termed a "hit."

g. **Legal Hit**: A match between a Legally Obtained Suspect Known profile and a forensic specimen from an unsolved case where the suspect was previously unassociated with that case.

h. **Offender Hit/Arrestee Hit**: This disposition is for a match between an offender/arrestee's DNA profile and a source unknown forensic profile in an unsolved case. This is considered an Offender Hit when an investigator is unaware of the offender's involvement, had insufficient evidence to establish probable cause, or had not obtained a reference standard prior for comparison purposes. The match aids the investigation and provides useful investigative information, therefore is termed a "hit."

Note: In the event that the Offender/Arrestee Hit is discovered to match an elimination sample (consenting partner, victim, etc.), the forensic profile will be subsequently removed from the database and a comment explaining the match (ie. match to consenting partner) can be provided in the match disposition comments field. See expungement procedure in section: Acceptance Standards, Eligibility, and Expungement.

i. **Duplicate**: This disposition is for a match that has occurred between a forensic specimen to more than one offender/Arrestee specimens with the same profile during the same search. The offender has been sampled more than once resulting in multiple records for the same individual. One of the matched pair records is dispositioned as an Offender Hit, and the second is dispositioned as a Duplicate. This applies to Conviction Matches to multiple offender specimen matches on the same search.

j. **Investigative Information**: At NDIS level - a disposition for a match where two or more solved cases have been linked through their DNA profiles. The match record does not provide investigative information in the identity of the suspect or aids either law enforcement agency's case. However, since there has been a positive association between the two cases, a notification must be written to notify the law enforcement agencies of the association. See reporting requirements section: Reporting and Disclosure of Matches. At LDIS level – a disposition for case-to-case matches of profiles that exist at SDIS. The subsequent SDIS search will produce the same candidate match where it will be either marked as Forensic Hit or State Defined #1 depending on source ID.

k. **State Defined #1**: This is used to mark case-to-case matches in SDIS when at least one of the profiles has the source ID known. This is used to update the CHOP database and notify those California Law Enforcement Agencies who have CHOP access.

l. **State Defined #2 and 3**: Situations for these dispositions have not been defined and is not is use.

m. **User Defined #1, 2 and 3**: Situations for these dispositions have not been defined and is not is use.

III. MATCH DISPOSITION PROCEDURE

A. Match Manager is the CODIS module where the matches are stored. Matches resulting from a search of the Local CODIS database will appear in Match Manager. Results of an autosearch conducted at any level are sent to the Message Center module and results from each search will be contained in a Match Message.

1. SDIS and NDIS Match Messages have to be manually executed to see the results of a search. This will show candidate matches and add them to Match Manager or indicate no matches resulted from the search.

2. Double click on a single match record to access Match Details. The Match Details provides a means of viewing details of the match: The DNA profiles of the Target and Candidate specimens, the specimen names, the stringency of the match (High, Medium, and Low), search configuration, match audit trail, and dispositions.

3. The result of opening a match record automatically (by default) modifies the disposition status from "Candidate Match" to "Pending". "Pending" is an interim status and must be updated in a timely manner (best effort within 30 business days) to an appropriate disposition.

a. For single source profile matches where the target and candidate DNA profiles show concordant results at all loci, the profiles can be declared a match and the appropriate final disposition can be applied. See above for disposition options.

b. For matches with less than high stringency (such as partial profiles and mixtures), evaluation of the match may require referencing the original case file notes to assist in the proper disposition of the match. See below for additional reviewer qualification requirements for dispositioning matches (NDIS Operational Procedures):

i. A match occurring at all loci at high stringency may be reviewed and evaluated by an individual who is currently or was previously a qualified DNA analyst.

ii. A match at any loci at less than high stringency shall be reviewed and evaluated by a DNA casework analyst who currently or was previously qualified in the technology (such as RFLP, STR's, Y-STR) being reviewed.

4. Disposition the Match. See above for appropriate disposition options.

B. **If dispositioned Offender/Arrestee/Legal Hit**:

1. A request must be made to the Offender Laboratory for the Offender's identifying information. Note: If the match is to a CA State Offender, the CAL DOJ Databank Laboratory will automatically initiate process confirm the offender sample once disposition is updated to Offender or Arrestee hit. The Offender Hit information will come to the Laboratory through the CODIS Hit Outcome Project (CHOP) program located through the RISSNET website.

2. If the match is to an Offender specimen from out of the state, a request for the identifying information must be made to the Offender Laboratory. An example request form can be found in the NDIS Operational Procedures. The Offender's information may be sent electronically through the LEO (Law Enforcement Online) program.

3. When the Offender's identifying information has been made known, the source ID field needs to be changed from 'NO" to "YES". As a result of this modification in the record, the profile will automatically be marked for upload to update the profile the upper level CODIS databases. No identifying information or criminal history records about an Offender (i.e. DOB, Name, CII/SID #) may be added to the record.

C. **If dispositioned Forensic Hit or State Defined #1**:

1. Contact the casework laboratory to facilitate an exchange of case file/investigative information. A request form (see NDIS Operational Procedures) can be used to initiate an exchange of case information with the candidate laboratory that will be needed for the associated law enforcement agencies. If the match occurred in SDIS, CHOP is the preferred platform for information exchange.

2. The exchange of information may be informally exchanged such as through the phone. This type of exchange requires documentation of the contact and content of the conversation.

3. A match may occur where the forensic unknown case is solved and the suspect's name is provided. Once the suspect's name is provided, the forensic profile will be changed from "No" to "Yes."

D. **If dispositioned Conviction Match**:

1. Prior to the disposition of these matches, the CODIS Administrator or Alternate will verify with the Offender Laboratory that the match is from the same (known) individual. This verification will be documented and will be maintained with the case file.

E. **If dispositioned a Benchwork Match**:

1. The definition of this disposition implies the laboratory was aware of an association between the forensic unknown profiles or to a Legal profile prior to searching in CODIS. However, if not already done so, the law enforcement agencies associated with the matches should be informed of the match and the exchange of case information should be provided to the law enforcement agencies, documented and maintained in the case files.

F. **Keyboard Search**:

1. The match(s) resulting from an external keyboard search will be transmitted to Match Messages through the Message Center Module. Any matches resulting from an internal keyboard search will be populated in Match Manager only when manually saved. All matches need to be dispositioned appropriately. Any match where a positive association has been made, follow-up contact will be made with the involved laboratory(s).

G. **Batch Target File**:

1. The results of a batch target file search will be in Match Messages. In the event of a match, the Laboratory who generated the target profile may need to be contacted to assist in the disposition and follow-up of the match. The match may be dispositioned as pending until further resolution of the match has been conducted. Upon resolution, a final disposition will be added.

2. Refer to section: Reporting and Disclosure of Matches for follow-up reporting requirements for matches dispositioned as Matches and Hits.

IV. CODIS ADMINISTRATOR/ALTERNATE'S RESPONSIBILITIES

A. Review and evaluate the match to determine if further information is needed to disposition the match or to assign a DNA analyst to further review the data to assist in the disposition of the match.

B. Ensure that a laboratory request is generated, when a follow up laboratory report is required (see section on Reporting and Disclosure of Matches).

C. Ensure the source ID field is updated following an Offender/Arrestee/Legal Hit.

D. Ensure candidate matches are dispositioned appropriately (See details above).

E. Ensure no personal identifying information; including criminal history is contained in the DNA record stored in CODIS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/17/2019	**NUMBER:** BIO.3.CODIS.10 - Reporting and Disclosure of Matches
	RELATED ORDERS:	
APPROVED BY: Da-Shing Peng, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA Quality Assurance Standards**	
CHAPTER: CODIS	**SUBJECT:** Reporting and Disclosure of Matches	

I. Introduction

A. The laboratory is responsible for reporting to the law enforcement agency when positive associations (meaning when information of value is obtained from a search) have occurred, as well as, under other conditions. The purpose of this document is to describe when and what is required of a report when a match and or hit has occurred as a result of a CODIS search and what case file documentation is required.

B. Additionally, this document discusses the laboratory's policy and procedure on disclosure of DNA records, DNA databases, reports and case file notes.

II. Reporting Requirements

A. **When to report CODIS Matches and Hits:**

1. ANAB interpretation of ISO 17025 5.10.1:

   a. Anytime a forensic sample profile is entered into CODIS under the condition that it will be repeatedly searched, a report must be generated (which may be a simplified notification) that informs the law enforcement agency that the profile was or will be entered into CODIS.

      i. DNA reports generated in the laboratory are verified to contain this information as part of the technical review process

   b. Anytime a positive association is made as a result of a CODIS search, a report or follow-up report must be generated. The report may be a simplified notification (i.e. Hit Notification letter or an email transmission) as long as the notification is written and a record of the notification is retained by the laboratory.

      i. The laboratory generates a laboratory report for the associated law enforcement agency(s) in the event that there has been a positive association between 1) a case-to-case hit (solved or unsolved), 2) an unsolved case-to-offender/arrestee hit and 3) an unsolved case-to-Suspect Known hit. See disposition definitions in section: Disposition of Candidate Matches.

   c. Anytime a search is conducted as a one-time search, a report must be generated stating the results of the search. A one-time search is defined as meaning the profile is not retained in the database and will not being automatically searched against the database on a routine basis. The report which may be in the form of a simplified notification, must clearly inform the law enforcement agency of the search.

      i. The laboratory generates a laboratory report for the associated law enforcement agency(s) anytime a keyboard search has been conducted. The report will contain the outcome of the search whether a negative or positive association has occurred.

B. **When to generate a CODIS notification:**

1. Offender/Arrestee Hits
2. Forensic Hits (including State Defined #1 and Investigative Information for NDIS case-to-case match where case is solved)
3. Legal Hits (Legally Obtained Suspect Known specimens)
4. Benchwork Matches
5. Keyboard Searches
6. Deleted Profiles

C. **How to Report CODIS Matches and Hits**

1. **Laboratory Procedure**

a. **Offender/Arrestee Hits:** Contact the Offender Laboratory to request that the Offender Lab begin the confirmation process for the identity of the Offender specimen. This will be performed by the CODIS Administrator/Alternate. NDIS requires the Offender Laboratory to verify the Offender profile prior to reporting the identifying information to the Target lab. The request for information can be documented using the CODIS DNA Match Data Request form (available on the CODIS website or see below). Note: The California Department of Justice automatically begins this process without a specific request.

   OR

   Forensic Hits (including State Defined #1 for SDIS and Investigative Information for NDIS): Contact the Candidate laboratory to exchange case information. The exchange of information can be requested using the CODIS DNA Match Data Request form available on the CODIS Website (see below) or via the CODIS Hit Outcome Project (CHOP).

b. Once the offender's ID is known and or the case information has been exchanged, the law enforcement agency will be notified to provide the investigator with the putative perpetrator's identifying information or case information. For California Offender/Arrestee Hits, information pertaining to hits will be released via CHOP, located on the RISS network. The LEO (Law Enforcement Online) network may be used for out-of-state and other lab-to-lab correspondence.

c. Generate a laboratory request and assign an analyst to prepare a CODIS Notification report detailing the hit. The report may be written by the analyst who generated the CODIS profile or the CODIS Administrator or Alt Administrator.

d. Modify the DNA record in CODIS: Change the Source ID from "No" to "Yes". **Reminder:** No identifying information about an Offender (i.e. DOB, Name, Criminal history information CII/SID #) may be placed in CODIS.

e. Prepare case file documentation. The CODIS Match Documentation form may be used to assist in documenting case file information. The case file documentation should consist of as many of the following, when possible:

   i. **Case File Documentation**

      1. A Match Inventory Report which lists all matches to the casework specimen at the time of the match
      2. The CODIS Match Detail Report(s) which typically includes the following information:
         1. The DNA profiles of the Target and Candidate specimens
         2. The level of the CODIS hit (LDIS, SDIS, NDIS)
         3. The type of match (Offender/Arrestee, Forensic)
         4. The match ID and specimen ID's
         5. The date the match occurred
         6. The candidate/target laboratory's ORIs
         7. The size of the database searched at the time of the match
      3. The report issued by the Offender Lab/or a laboratory's forensic hit documentation
      4. Records of correspondence and information received or provided to the investigating agencies.
      5. Copy of any keyboard fax request.
      6. Copy of the Legally Obtained Suspect Known sample form
      7. Contra Costa casework information:
         1. Laboratory case #
         2. Law Enforcement Agency
         3. Agency case number
         4. Contact person and number
         5. Type of case/Offense
         6. Date of Incident

7. Status of case: solved/unsolved

8. Candidate Offender or Casework Laboratory information:

1. Laboratory ORI and specimen ID

2. Laboratory contact name and number

3. Casework Information:

1. Law enforcement agency

2. Case number

3. Agency contact and number

4. Type of case/Offense

5. Status of case: solved/unsolved

f. Write Report (See below for report content) and issue to law enforcement agency

2. **Report Content**

a. Anytime a DNA profile has been or will be entered into CODIS, the laboratory informs the law enforcement agency of the laboratory's intent to search their evidence profile(s) against the CODIS database(s). This notification, in practice, is a part of the original DNA report prepared by the DNA analyst who conducted the analysis and development of the profile.

b. The profile may become a part of a routine search in the database, if eligible (see section: Acceptable Standards, Eligibility, and Expungement), or be a one-time search (keyboard search) of a database. When a positive association has been made due to any type of search, the agency must be notified. This notification, in practice, is in the form of a Laboratory report. A simple notification report (e-mail, Offender Lab Hit Notification letter), may satisfy the reporting requirement upon Laboratory policy approval.

c. Elements of a report
A laboratory report should address sufficient information for the agency to understand;

i. what has taken place with their evidence profile,

ii. what has occurred as a result of a search of CODIS, and

iii. what, if any, follow-up investigative actions are required of the agency (i.e. obtaining offender reference sample, making contacts with other agencies). Due to the different types of hits, this information may vary. Laboratory Reports should include:

1. Brief history/summary of the generation and source of the CODIS profile

2. Specimen name and source

3. Agency item number, where available

4. Result of search

Additionally for Offender Hit Report Information

5. Offender identifying information

6. A request for a reference sample from the named Offender to confirm the match

d. A confirmation of the hit should occur. Confirmation of an offender hit means the target laboratory must conduct DNA analysis on the Offender's reference sample to do a direct comparison of the Offender's DNA profile to the forensic unknown profile. Note: Confirmation of Offender Hits to DNA profiles generated by a vendor laboratory will be conducted by the Vendor Laboratory who generated the profile or at the discretion of the Office of the Sheriff's Laboratory.

Additionally for Forensic Hit Report Information:

i. Law Enforcement Agency Information (i.e. agency case number, contact person, contact number)

ii. Case type

iii. Identifying Offender information, if available at this laboratory.

3. **Disclosure of DNA Records**

a. Disclosure of laboratory reports and case file notes:

i. The release of laboratory reports and case files notes is addressed in the Division Manual:

1. FSD.43: Issuance of Laboratory Reports

2. FSD.45: Discovery requests for Records

b. Disclosure of DNA records and database information
Definitions:

i. Databases: a collection of multiple DNA records.

ii. DNA Record: a database record that includes the DNA profile as well as data such as the Agency Identifier, specimen identifier, and DNA analyst associated with the profile (NDIS Operational Procedures/QAS definition).

c. The laboratory's DNA records are considered confidential. In the event that there is a request for the release of DNA records or database information (whether in CODIS or from an internal laboratory database), the laboratory will follow applicable state and federal law regarding access and disclosure of DNA records:

i. The Federal DNA Identification Act of 1994 (as amended by the DNA Backlog Analysis Elimination Act of 2000; "DNA Act") provides that the National DNA Index System "shall include only information on DNA identification records and DNA analyses that are maintained by Federal, State, and local criminal justice agencies (or the Secretary of Defense in accordance with section 1565 of title 10, United States Code) pursuant to rules that allow **disclosure of stored DNA samples and DNA analyses only--**

1. to criminal justice agencies for law enforcement identification purposes;

2. in judicial proceedings, if otherwise admissible pursuant to applicable statutes or rules;

3. for criminal defense purposes, to a charged defendant, who shall have access to samples and analyses performed in connection with the case in which such defendant is charged;

or

4. for other forensic purposes; for population statistics database, for identification research and protocol development purposes, if personally identifiable information is removed, or for quality control purposes." [42 U.S.C.§14132(b)(3)]

ii. Federal DNA Advisory Board Resolution (Resolution on Review of Privacy Issues)
The Board reviewed the access and disclosure provisions provided by the DNA Identification Act of 1994. The Board agreed with the FBI's interpretation of the access provisions and supports the current level of enforcement of such access and disclosure provisions. The Board made recommendations that State laws provide for confidentiality of DNA records/samples that comply with the Federal DNA Act. Of concern are those states that appear to have more permissive laws for access to their DNA data. Compliance with the Federal DNA Identification Act will be audited by the Department of Justice Office of Inspector General.

iii. The California Penal Code 299.5 to 299.6 provides for the disclosure of DNA records at the State level and states in part:

1. 299.5(f) DNA samples and DNA profiles and other forensic identification information **shall be released only to law enforcement agencies, including, but not limited to,** parole officers of the Department of Corrections, hearing officers of the parole authority, probation officers, the Attorney General's office, district attorneys' offices, and prosecuting city attorneys' offices, unless otherwise specifically authorized by this chapter. Dissemination of DNA specimens, samples, and DNA profiles and other forensic identification information to law enforcement agencies and district attorneys' offices outside this state shall be performed in conformity with the provisions of this chapter.

2. 299.5(g) A defendant's DNA and other forensic identification information developed pursuant to this chapter shall be available to his or her defense counsel upon court order.

3. 299.5(h) Except as provided in subdivision (g) and in order to protect the confidentiality and privacy of database and data bank information, DOJ and Local public DNA laboratories shall not otherwise be compelled in a criminal or civil proceeding to provide any DNA profile or forensic identification database or data bank information or its computer database program software or structures to any person or party seeking such records or information whether by subpoena or discovery, or other procedural device or inquiry.

4. 299.6(1) The procedures used by the local public DNA laboratory for the handling of specimens and samples and the disclosure of results are the same as those established by the Department of Justice pursuant to Sections 297, 298, and 299.5.

    1. According to ASCLD/LAB (ISO 17025): CODIS is considered an Individual Characteristics Database (ICD). Any evidence sample from which a DNA profile has been produced, as part of a criminal investigation (regardless of whether the profile is entered into CODIS), is considered and treated as evidence prior to and after the development of a DNA profile. See the Division Manual for procedures which address the submission, movement, security, handling, disposition and release of evidence through the laboratory.

d. The Laboratory will respond to requests for access to a DNA record, by the subject of that record, in accordance with State law, when that record has been generated by the laboratory.

    i. A defendant may have access to DNA samples and his/her exemplar samples and the analyses performed in connection with his/her case. The defendant is not entitled access to all of the DNA records, samples, or the DNA analyses that is not associated with his/her case, under the provisions of the DNA Act.

    ii. The level of documentation routinely contained within original DNA analysis report(s), case file notes and reports/notes associated with a "CODIS Match/Hit" report, predominantly will capture any and all DNA records relevant to a defendant's case and should satisfy a discovery request for disclosure of DNA records and databases records related to the defendants case. See case file documentation and report content above.

e. The Laboratory, if not the investigation agency, will not publicly disclose or make any public statements regarding information obtained from or included in CODIS and/or in NDIS that would directly or indirectly identify unapprehended suspects without the prior approval of the investigation agency.

f. **Reminders:**
Information in the NDIS Operational Procedures is the property of the Federal Bureau of Investigation and may be distributed to federal, state, tribal, or local government law enforcement officials with a need-to-know, as determined by the FBI. Distribution without FBI authorization is prohibited. Precautions should be taken to ensure this information is stored and/or destroyed in a manner that precludes unauthorized access.

g. No personally identifiable information relating to the donor, such as name, date of birth, social security number, or criminal history record number, is included in a DNA record stored at NDIS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 08/20/2018	**NUMBER:** BIO.4.TRAIN.01 - Biology Training
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB: 5.2**	
CHAPTER: Forensic Biology	**SUBJECT:** Biological Screening Training Program	

I. **The goal of the Biological Screening training program is to provide a trainee the knowledge, skills, and ability to perform biological screening on casework samples.**

A. **Intent of the Training Program**

1. To develop knowledge, skills, and abilities in the area of biological screening culminating in the ability to perform screening for blood, semen, and saliva on casework samples.
2. To develop the necessary skills required for performing biological screening, such as evidence handling, using proper equipment, analyzing samples, interpreting results, etc
3. To develop the knowledge necessary to provide expert testimony in biological screening in court.

B. **Overview of the Training Program**

1. Training is required for a new biology screener or a current employee new to biological screening, prior to conducting casework. The training program for biological screening should take approximately 4 months to 1 year.
2. The training will be tailored to the employee's job duties and to the extent they will conduct casework.
3. Training may be abbreviated for an employee with previous training and prior casework experience. Records of the employee's prior training and experience will be reviewed by the Supervisor and will be maintained in the LIMS training module. A copy may also be maintained in the employee's training binder.
4. Training will be under the guidance of a Unit Supervisor or an experienced member of the Biology Unit.
5. Training will entail literature readings and hands-on practical exercises. Training is administered in a modular format and assessments are built into each module, which allows for the trainee to begin casework in any of the areas for which the trainee was trained and competency tested. Training may also be supplemented by external training, such as college coursework, workshops, or other formal training courses.
6. Separate training will given for DNA analysis, see BIO.4.TRAIN.02

C. **Educational Requirements:**

1. The roles of individuals in the Biology unit and the educational requirements for each role is documented in BIO.5.QAQC.05.

D. **Expectations of the Trainee**

1. The trainee is expected to keep a notebook/binder of information compiled during the training program, including practical exercises.
2. The trainee will document their progress on the Biological Screening Training Log, BIO.1.BIOF.04, to include the date each portion of the training was completed, the trainee's initials, and the date and initials of the trainer. The training records will be retained in LIMS and may also be maintained in the trainee's training binder.
3. Trainees are expected to communicate any concerns about their training to the training coordinator and/or Unit Supervisor.

E. **Guidelines for Competency**

1. To demonstrate the trainee's knowledge, skills, and abilities, the trainee will undergo a competency test to the extent they received training, prior to participating in casework. See BIO.5.QAQC.13 for Biology's procedures regarding competency testing. Criteria for successfully passing the competency test will be documented prior to the individual receiving the competency test. A record of the competency test will be tracked and maintained through LIMS.

2. The signature of the Unit Supervisor on the training log will signify approval of the training and successful completion of the competency test. Approval signifies authorization for the trainee to conduct casework using all the equipment, instrumentation and procedures to the extent they received training and were competency tested.
3. If the trainee is expected to issue laboratory reports and has met the report writing competency requirements, the trainee will also be considered to be authorized to issue reports and give opinions and interpretations in the areas(s) for which they received training and competency.
4. The examiner will enter into the proficiency test cycle within a year of the authorization to conduct casework.

F. **Task 1. Laboratory Introduction**

New employees undergo an orientation program prior to the commencement of training. The orientation covers a variety of topics, such as safety, ethics, and quality assurance. Refer to FSDF.01 for a list of topics covered under orientation. Related topics that are specific to Biology Unit operations and procedures are addressed in the below training plan:

1. Goal: To familiarize the trainee with the Biology Manual and the expectations of the training program.
2. Task:
    a. Review and discuss the Biology Training Manual and the training plan
    b. Review the Biology Screening Procedures Manual
    c. Introduction to the Quality Assurance/Quality Control Program
        i. Review the Biology Unit's QA/QC Manual
        ii. Review the Forensic Services Division Manual
        iii. Instruction/Discussion on Contamination Controls/Prevention.
    d. Review the FSD Safety Manual
        i. Bloodborne Pathogen Training
        ii. Chemical Hygiene Training
        iii. Chemical Waste Disposal Training
    e. Orientation to the laboratory facility and security features.
    f. Description of the organization and management
        i. Goals and Objectives
        ii. Code of Ethics
        iii. Chain of Command of the Forensic Services Division
        iv. Laboratory administrative policies
    g. Ethics and Bias as it relates to forensic biology
3. Assessment:
    a. This module will be completed by biological screening trainees and laboratory support personnel assigned to the biology unit.
    b. Evaluate and discuss with the trainee his/her understanding of laboratory and Biology Unit's Policies.
    c. Successful completion of each task will be documented on the Biology Training Log.
    d. Review of biology and division policies and procedures will be documented through Power DMS.

G. **Task 2. Evidence/Sample Handling and Control**

1. Goal: Develop an understanding of sample and/or evidence control in the forensic laboratory.
2. Tasks:
    a. Receive instruction on the following, as applicable:
        i. Sample and/or evidence collection, packaging, and storage
        ii. Chain of custody, receiving, and handling samples and/or evidence
        iii. Case acceptance policy/Case management

iv. Case workflow

v. Consumption of samples and/or evidence

vi. Distinction between evidence and work product

vii. Laboratory documentation policy (paper and/or electronic)

b. Review LIMS presentation (QAT.09) and LIMS DOS and DONT'S (QAT.09.01) in powerDMS.

3. Assessment:

a. Documentation of successful completion/assessment of each task shall be noted on the trainee's Training Log.

b. Evaluate and discuss with the trainee his/her knowledge and understanding of laboratory and Biology Unit's Policies.

c. A record and acknowledgement of the review of these policy and procedures is captured through Power DMS.

H. **Task 3. Fundamental Scientific Knowledge**

1. Goal: To ensure the trainee has or is provided the formal education and working knowledge of the fundamental scientific basis of forensic serology.

2. Task/Reading Assignments: Review and be familiar with the following references:

a. Gaensslen, R.E., Sourcebook in Forensic Serology, Immunology and Biochemistry, U.S. Government Printing Office Washington, D.C., 1983, Unit 1 & 3.

b. Saferstein R., ed. Criminalistics, Chapter 12 Forensic Serology.

c. SWGDAM Guidelines for the Processing of Sexual Assault Evidence Kits in a Laboratory.

3. Assessment:

a. Evaluate and discuss with the trainee his/her knowledge and understanding of biological screening

b. Completion of this task will be assessed by review of college transcripts and, if necessary, review of course descriptions or syllabi, and completion of the assigned reading.

I. **Task 4: Examinations for Blood**

1. **Applied Scientific Reading Material** The goal of this module is to provide practical hands-on instruction and applied knowledge to the trainee on blood screening procedures. Read the reference literature below and review the blood screening procedure, see BIO.1.BIO.03.

a. Ortho-Tolidine/Presumptive Tests

i. Burdett, P.E. "Presumptive Tests for Blood-A Comparative Survey." HOCRE Report No. 201, October 1976.

ii. Cox, M., "A Study of the Sensitivity and Specificity of Four Presumptive Tests for Blood

iii. "Sensitivity Comparison of Blood Enhancement Techniques," Identification News, August 1985, pp. 10-14.

iv. "Chemistry of Tests Used for the Identification of Blood", California Criminalistics Institute Basic Serology Course Notebook, Chap. II.

v. "Testing Methods for the Identification of Blood", California Criminalistics Institute Basic Serology Course Notebook, Chap. III.

vi. Cox, M., "Effect of Fabric Washing on the Presumptive Identification of Bloodstains," Journal of Forensic Sciences. JFSCA, Vol. 35, No.6. Nov. 1990.

vii. Black, E., "Microorganisms and the Presumptive Tests for Blood," Journal of Police Science and Administration. Vol 1, No 4. 1973.

viii. Bevel, T. and Gardner, R.M., "Bloodstain Pattern Analysis (With an Introduction to Crime Scene Reconstruction)", CRC Press, Boca Raton N.Y., copyright 1997. Chapters 1, 3-9.

b. HemaTrace Testing

i. Technical Information Sheet provided by manufacturer, Abacus Diagnostics. "OneStep ABAcard HemaTrace for the Forensic Identification of Human Blood." 1998.

ii. Marion Dorrill and P.H. Whitehead "The Species Identification of Very Old Human Blood-Stains". Forensic Science International, 13, 1979, 111-116.

iii. Spear, T., Khoskebari, N. "The Evaluation of ABAcard HemaTrace". Presented at a California Association of Criminalists DNA Users Group Meeting, March 1999.

iv. Johnston, S., et. al., "Validation Study of the Abacus Diagnostics ABAcard HemaTrace Membrane Test for the Forensic Identification of Human Blood." Can. Soc. Forens. Sci. J. Vol. 36, No3 (2003) pp 173-183.

v. Saferstein, R., ed. Forensic Science Handbook, pp. 283-299.

c. Safety

i. Read the SDS's for each of the presumptive blood testing reagents.

2. **Hands on Testing**

3. Ortho-Tolidine

a. **Dried Blood Dilution Samples:**

i. Goal: Evaluate the sensitivity of the o-tolidine presumptive test, as well as the length of time to see a positive test result.

ii. Task: Using liquid blood, prepare dried bloodstains on cloth swatches using neat, 1:10, 1:100, 1:500, 1:1000, 1:5000, and 1:10,000 dilutions of blood in water. Test each dried stain with o-tolidine, until no positive reaction occurs, using the transfer method (rubbing the stain) and the direct method (applying reagents directly to the stain).

1. Record the visual color appearance of the dried samples.

2. Record the length of time to see a reaction for each of the test results. Save swatches for the Hematrace exercises.

b. **Fresh Blood Dilution Samples:**

i. Goal: Evaluate the sensitivity of the o-tolidine presumptive test, as well as the difference in sensitivity of the test with liquid blood compared to dried bloodstains.

ii. Task: Transfer a portion of the liquid blood dilutions created above to a spot well plate and test the liquid dilutions directly with the o-tolidine presumptive test.

1. Record the visual color appearance of the liquid samples.

2. Record the length of time to see a reaction for each of the test results.

c. **Non-blood Samples:**

i. Goal: Evaluate the specificity of the o-tolidine presumptive test with non-biological samples. Record any false positive results and the visual color/appearance of the non-blood substance.

ii. Task:

1. Test o-tolidine on dried non-blood substances, such as ketchup, horseradish, tomato, 20% and undiluted bleach, chocolate, coffee, and rust using the transfer method.

1. Observe and record any color development and the length of time, over several minutes.

2. Repeat using fresh (non-dried) samples and using the direct method.

1. Observe and record any color development and the length of time, over several minutes.

3. Using a water moistened swab, rub a copper jacketed bullet and test using the transfer method and the direct method.

1. Observe and record any color development and the length of time, over several minutes.

4. Using a water moistened swab, rub a lead bullet and test using the transfer method and the direct method.

1. Observe and record any color development and the length of time, over several minutes.

d. **Other Body Fluids:**

i. Goal: Evaluate the test for sensitivity of blood (occult blood) in other body fluids**.**

ii. Task: Test o-tolidine using the transfer method and the direct method on the following body fluids. Record the length of time for a positive test result. Save swabs for the HemaTrace exercises.

1. Oral swab

2. Vaginal swab

3. Rectal swab

4. Semen on a swab
5. Dried Urine (can use toilet paper as a "collection device")
6. Dried Feces (can use toilet paper as a "collection device")

e. **Transfer Method vs. Direct:**

i. Goal: To consider any down stream testing, such as HemaTrace testing, DNA, that could be affected by the choice of using the transfer method vs. the direct method on limited bloodstains.

ii. Task:

1. Smear a small amount of blood on a piece of fabric (such as a cotton swatch) and on a non-absorbent surface. Both stains should be barely visible.
2. Rub the stained area with a swab moistened with water, and separately rub the stain with the tip of a folded filter paper. Repeat on nearby unstained areas as a substrate control.
3. Test the swab, filter paper, and the substrate controls using o-tolidine.
4. Repeat using the direct method. What limitations occur with following this method?
5. Record test results for future reference.

f. **Stain Patterns and Photo Documentation:**

i. Goal: To evaluate and observe the visual appearance of deposited blood and bloodstain patterns caused by blood in motion by various events.

ii. Task: Use appropriate personal protective equipment (gloves, full-face shield, disposable tyvek suit) and conduct inside a chemical fume hood. Prepare blood stains on various fabrics using assorted deposition techniques. These depositions should include direct transfers from several objects, transfers with swiping motion, wipes through pre-existing wet bloodstains, dripping blood from a disposable pipet, stains produced by dripping blood into a blood pool, and atomized blood stains (use compressed can of air to break apart a single hanging drop from a pipet tip.)

1. Describe the overall appearance of each stain pattern, including size, shape, distribution, voids and any appearance of motion.
2. Document the stains with photography using appropriate scales.

g. **Washed Blood:**

i. Goal: Evaluate the affects of washing bloodstains on presumptive test results using both transfer and direct methods.

ii. Task: If not already available, prepare washed bloodstains: Deposit diluted, such as 1:2, 1:10 and 1:50, and undiluted blood onto two sets of cloth swatches and allow to dry 1 to 2 days. Wash one set in cold water and the other in hot water and put through a dryer. Test the washed stains using o-tolidine. Conduct tests using the transfer method as well as the direct method using o-tolidine.

1. Record the visual color appearance of the stains, as well as the test results for future reference. Save swatches for the HemaTrace exercises.

h. **Aged Blood:**

i. Goal: Evaluate the affects of environmental conditions and aging on the ability to detect blood using a presumptive test.

ii. Task: If not already available, prepare aged bloodstains: Deposit neat and diluted (1:2, 1:10, 1:50, 1:100, 1:200, 1:500, 1:1000) onto two sets of cloth swatches. Allow one set to be exposed to hot temperatures and/or direct sunlight and the second at room temperature with no direct sunlight for approximately 1 month. Test the aged stains using o-tolidine. Conduct tests using the transfer method and the direct method. Record the visual appearance of the stains, as well as any difference in test results. Save swatches for the HemaTrace exercises.

4. **Human Hemoglobin (HemaTrace testing)**

a. Goal: Evaluate the sensitivity of the Hematrace (hemoglobin) test and compare to sensitivity of ortho-tolidine. Evaluate whether there is a difference using the kit buffer compared to water. Evaluate how insolubility, due to washing and aging, can affect test results. Evaluate the presence of hemoglobin in other body fluids and specificity to other animals.

b. Tasks:

i. Review the literature above and the procedure on the use of human hemoglobin test devices, BIO.1.BIO.03 .

ii. Extract the dried bloodstain dilutions prepared above using the test kit buffer. Test the dried stains, starting at the 1:10 dilution and continue until no positive reaction occurs. Record the dilution at which no reaction occurs. Record any color in the buffer extract at each dilution.

iii. For those diluted samples above that had a positive reaction, extract the same dried bloodstains using sterile distilled water. Record any color in the extract at each dilution. Record any difference between using the buffer and water.

iv. Test a few of the washed bloodstains using the test kit buffer. Record any color in the extracts. Record any reaction differences, if any, between the hot and cold washed stains. Record how this compares to the sensitivity of the o-tolidine results.

v. Test the aged bloodstains using the test kit buffer. Test the aged dilution stains until no positive reaction occurs. Note any color in the extracts. Note the dilution at which no reaction occurs. Record how this compares to the sensitivity of the o-tolidine test and to fresh stains.

vi. Extract one of the positive aged bloodstains and one of the negative aged bloodstains using the ammonia protocol. Was there an improvement in reaction? Record results.

vii. Conduct testing on the following materials; Oral, vaginal, rectal, semen, feces, and urine. Was there any reactivity with other fluids? Record results.

viii. Conduct specificity testing on commonly encountered animal bloods, such as dog, cat, chicken, fish, goat, and cow. Record results.

5. **Infra-red Camera/Video Screening**:

a. Goal: Evaluate the affects of different colored and textured fabrics on the ability to detect bloodstains through an infra-red camera.

b. Task: If not already available, place blood on various dark colored and textured fabrics and allow to dry. Review the procedure on Infra-red screening. BIO.1.BIO.02 . View the fabrics under the infra-red, discuss, and document your findings

6. **Assessment:**

a. The trainee's understanding of the purpose of each test and its strengths and weakness will be evaluated through oral interview and review of the examiner's training note packet.

J. **Task 5: Examinations for Semen**

1. **Applied Scientific Reading Materials:** The goal of this module is to provide practical hands-on instruction and applied knowledge to the trainee on semen screening procedures. Read the literature reference listed below and review the semen screening procedure, see BIO.1.BIO.04.

a. Acid Phosphatase Testing

i. "The Acid Phosphatase Test," Methods of Forensic Science, Vol. 3, pages 267-283

ii. Rupp, "Sperm Survival and Prostatic Acid Phosphatase Activity in Victims of Sexual Assault," Journal of Forensic Sciences, 14:177, 1969.

iii. Davies, A. and Wilson, E., "The Persistence of Seminal Constituents in the Human Vagina," Forensic Science, 3 (1974) pp 45-55.

iv. Nicholls, "Seminal Stains and Stains of Other Body Fluids," in The Scientific Investigation of Crime, pp 196-208.

v. Biology Methods Manual, 1978 Baechtel, F. S. "The Identification and Individualization of Semen Stains," in Forensic Science Handbook, vol. 2. (Chapter 7).

vi. Sensabaugh, G. "Quantitative acid phosphatase test. A statistical analysis of endogenous and post-coital acid phosphatase levels in the vagina." J. Forens. Sci. 24:246 (1979).

vii. Poyntz, F.M, "Comparison of p30 and Acid Phosphatase Levels in Post-Coital Vaginal Swabs," Forensic Science International, 24 (1984) 17-25

viii. Dziack, Renata, "Providing Evidence Based Opinions on Time Since Intercourse (TSI) based on Body Fluid Testing,"

ix. SERI AP Spot Test Internal Validation Study

b. Safety

i. Read the SDS's for each of the presumptive semen testing reagents

c. P30

i. Technical Information Sheet provided by manufacturer, Abacus Diagnostics. "OneStep ABAcard p30 Test for the Forensic Identification of Semen".1999

ii. Hochmeister, M., et. al. "Evaluation of Prostate-Specific Antigen (PSA) Membrane Test Assays for the Forensic Identification of Seminal Fluid", J. Forensic Sci 1999; 44: 1057-1060.

iii. Sensabaugh, G. "Isolation and Characterization of a Semen Specific Protein from Human Seminal Plasma: A Potential New Marker for Semen Identification," Journal of Forensic Sciences, 23, No. 1, 1978.

iv. Spear, T., "The Evaluation of ABA card p30 Test for the Identification of Semen," CCI Winter 2000.

v. Bryson, C., Garlo, A., and Piner, S., "Vaginal Swabs: Endogenous and Postcoital Components," Journal of Forensic Sciences Society, 29, No. 3, 1989.

vi. Kamenev, L., Leclercq, M., and Francois-Gerard, Ch., "Detection of p30 Antigen in Sexual Assault Case Material," Journal of Forensic Sciences Society, 30, No. 4, 1990.

vii. Yu, H., et al. "Prostate-Specific Antigen in Milk of Lactating Women," Clinical Chemistry, Vol 41, No 1, 1995 54-58.

viii. Yu, H., et. al., "Prostate-Specific Antigen (PSA) in Women." Journal of La State Medical Society, Vol. 151, April, 1999.

ix. Laux, D., et. al., "Forensic Detection of Semen III. Detection of PSA Using Membrane Based Tests: Sensitivity Issues with Regards to the Presence of PSA in Other Body Fluids." Not Published.

x. Philippe Lunetta PhD, Helmuth Sippel Lic. Phil., "Positive Prostate-Specifice Antigen (PSA) Reaction in Post-Mortem Rectal Swabs: A Cautionary Note", J. Forensic and Legal Medicine, Vol 16, (2009) 397-399.

xi. Xavier Filella, Rafael Molina, Juan Alcover, Pablo Carretero, Antonio M.. Ballesta, "Detection of NonProstatic PSA in Serum and Nonserum Samples from Women", Int. J. Cancer: 68, 424-427 (1996).

xii. Sara E. Bitner, M.S, "False Positives Observed on the Seratec PSA SemiQuant Cassette Test with Condom Lubricants", J. For. Sci., Nov 2012, Vol. 57, No 6, pp 1545-1548.

d. Spermatozoa

i. Peter R. De Forest, D. Crim., "Foundations of Forensic Microscopy", Forensic Science Handbook, Saferstein, Chapter 9, pp. 433-435.

ii. E. Kafarowski, A.M. Lyon and M.M. Sloan, "The Retention and Transfer of Spermatozoa in Clothing by Machine Washing", Can. Soc. Forens. J. Vol. 29. No 1 (1996) pp. 7-11.

iii. R.M. Jobin and M. De Gouffe, "The Persistence of Seminal Constituents on Panties After Laundering. Significance to Investigation of Sexual Assault", Can. Soc. Forens. J. Vol 36. No 1 (2003) pp. 1-10.

iv. Willott, GM., et al., "The Detection of Spermatozoa in the Mouth," Forensic Science Society 1986; 26: 125-128.

v. Willott, GM., et al., "Spermatozoa - Their Persistance After Sexual Intercourse," Forensic Science International, 19 (1982) 135-154.

vi. Enos, W.F., et al., "Spermatozoa in the Anal Canal and Rectum and in the Oral Cavity of Female Rape Victims," J. Forensic Sci., July 1977: 231-233.

e. Alternate Light Source

i. Milutin Stoilovic, "Detection of Semen and Blood Stains Using Polilight as a Light Source", Forensic Science International, 51 (1991) 289-296.

ii. Hilton J. Kobus, D. Phil., Edmund Silenieks, Jordana Scharnberg, B.Sc., "Improving the Effectiveness of Fluorescence for the Detection of Semen Stains on Fabrics", J. For. Sci., July 2002, Vol. 47, No 4.

iii. Michael J. Auvdel, M.Sc., "Comparison of Laser and Ultraviolet Techniques Used in the Detection of Body Secretions", J. For. Sci., JFSCA, Vol. 32, No 2, 1987, pp 326-345.

2. **Presumptive Semen Test (Acid Phosphatase)**

a. **Semen Dilution:**

i. Goal: Evaluate the sensitivity of the AP spot tests.

ii. Task: Using liquid semen, prepare dried semen stains on cloth swatches using neat, 1:2, 1:10, 1:50, 1:100, 1:200, and 1:500 dilutions of semen in water. Test a portion of each dried stain using the AP spot test method using Fast Red RC Salt or Fast Blue BC Salt and SERI AP Spot test.

1. Record the length of time for reaction and record observations.

2. Save remaining cloth swatches for p30 and Sperm Identification exercise.

b. **Other Body Fluids:**

i. Goal: Evaluate the reaction that occurs with other body fluids.

ii. Task: Sample an approximate 1/4 to 1/3 portion of the following swabs and conduct acid phosphatase spot testing on the following samples. Record the color and time to reach a reaction and maximum color. Record observations and test results for future reference. Retain remaining swabs for p30 testing.

1. Blank swab

2. Swab with semen

3. Vaginal swab

4. Oral swab

5. Anal swab

6. A swab with a mixture of blood and semen

7. Save a portion of the swabs (approximately 1/2) for p30 testing exercise.

c. **Washed Semen:**

i. Goal: Evaluate the affects of laundering on the ability to detect semen using the presumptive tests.

ii. Task: If not already available, prepare washed semen stains: Deposit diluted semen, such as 1:2 and 1:4 semen/water dilutions, and neat semen onto two sets of cloth swatches. Allow them to dry for 1 to 2 days. Prepare a control set that is not washed. Wash one set in cold water and the other in hot water and put through a dryer. Test the washed stains and control using an AP spot test. Record the visual appearance of the stains, as well as the length of time for a positive rxn and color of rxn. Retain remaining semen stains for the ALS and p30 testing exercises.

d. **Aged Semen:**

i. Goal: Evaluate the affects of aging on the ability to detect semen using the presumptive tests.

ii. Task: If not already available, prepare aged semen stains: Deposit neat and diluted semen, such as 1:2, 1:4, 1:8, 1:16, 1:32, 1:64, 1:128, 1:256 onto two sets of clean cloth swatches. Allow one set to be exposed to direct sunlight and a second control set to be stored at room temperature protected from sunlight for approximately 1 month. Test the stains in increments using an AP Spot test until no reaction is obtained. Test any aged semen stains that may have previously been created by the laboratory as well. Record the visual appearance of the stains, as well as the length of time for a reaction and the color development of the reaction. Save swatches for the ALS and p30 testing exercises.

e. **Degradation**

i. Goal: Evaluate the effects of storage conditions on AP activity.

ii. Task: Using neat, 1:2, 1:4, 1:10, and 1:50 dilutions of semen in water, deposit onto two sets of clean cotton swatches. Deposit a sufficient amount of material to be tested several times for AP spot, as well as for p30. Without allowing the stains to dry, place one set in the refrigerator, and the second set in an incubator at >37°C, in a sealed plastic bag. Test stains for AP activity and p30 at approximately 30 days. Record the visual appearance of the stains, as well as the length of time for a reaction and the color development of the reaction. Save p30 extracts (frozen if not testing immediately) for the Identification of Sperm exercises.

3. **ALS and AP Mapping:**

a. Goal: Evaluate how different colors and textures affect the ability to locate a semen stain using an ALS. Compare these results with the AP Mapping technique.

b. Task: If samples are not already made, using a 1:2 dilution of semen and water, and neat semen, apply to fabrics of different color, such as yellow, dark blue, purple, black and different types, such as cotton, permanent press, nylon, and other types and allow to air dry. Use an ALS to search for the stains and conduct AP Mapping. Use an

ALS to search for the aged and washed stains. Record your observations and compare the ALS differences between the stains.

4. **Alternate Light Source Screening**

   a. Task:

      i. Read and discuss the instrument procedure on BIO.1.BIO.02

      ii. Using the samples of semen applied to swatches of different types of fabric (cotton, jeans, polyester, velour, corduroy,etc) attempt to locate the stain on the fabric with a visual exam. Lightly feel the fabric and note stiffness in the area of the stain, if any.

      iii. Look at the fabric swatches using an alternate light source under different wavelengths of light and different colored goggles. Record your observations and findings.

5. **AP Mapping:**

   a. Task: Practice the AP Mapping technique using filter paper transfers on the above different fabrics using Fast Red RC Salt and Fast Blue BC Salt. Record the length of time for a positive rxn. Evaluate and compare the color development differences between the two dyes.

6. **P30** Read the reference literature listed above and review the procedures on p30 testing using p30 test devices, see BIO.1.BIO.04

   a. **Semen Dilutions:**

      i. Goal: Evaluate the sensitivity of the p30 test. Compare sensitivity of the p30 test to the AP spot presumptive test.

      ii. Task: Using the semen dilutions prepared above for AP Spot testing, test the sensitivity of the p30 test. Test the dried stains, starting at the 1:2 dilution and continue until you have reached a dilution where no positive reaction occurs. Record the dilution at which no reaction occurs. Note how this compares to the sensitivity of the presumptive test.

   b. **Other body Fluids:**

      i. Goal: Evaluate the presence of p30 in other body fluids.

      ii. Task: Conduct p30 test on other semen-free body fluid swabs, such as on oral, vaginal, and rectal swabs, and on dried urine and feces and dried breast milk (if available). Record all test results.

   c. **Post-Coital:**

      i. Goal: Evaluate the persistence of the p30 test.

      ii. Task: Conduct p30 on post-coital swabs collected at varying time intervals, such as every 4-8 hours up to 2 days. Test the time interval swabs until you have reach an interval where no positive reaction occurs. Record the interval at which no reaction occurs. Record all test results. (The ability to conduct this test is dependent on an available donor, thus is optional).

   d. **Washed Semen:**

      i. Goal: Evaluate how washing can affect test results. Compare the sensitivity of the p30 test to the AP spot presumptive test.

      ii. Task: Conduct p30 test on one set of washed semen stains and the control stains. Compare and record the test results.

   e. **Aged Semen:**

      i. Goal: Evaluate how insolubility, due to aging, and environmental conditions can affect test results. Compare sensitivity of the P30 test to the AP spot presumptive test.

      ii. Task: Conduct p30 test on one set of the aged semen stains and the control stains. Record any observance of insolubility of the stains. Compare the sensitivity of p30 to the AP spot test. Record all test results.

   f. **Degradation**

      i. Goal: Evaluate the effects of storage conditions on p30 activity. Compare these results to the results obtained for the AP spot presumptive test.

      ii. Task: Test stains for p30 activity at approximately 30 days. Record the visual appearance of the stains, as well as the length of time for a reaction and the color development of the reaction. Which semen component (AP or p30) persists longer? Retain extracts and prepare slides for the Identification of Sperm exercise.

7. **Identification of Spermatozoa** Read the reference literature listed above and review the procedures on stain and swab extraction, microscopic examination, and staining, see BIO.1.BIO.02 and BIO.1.BIO.09 .

   a. **General Microscopy**

      i. Receive training on the following:

         1. Parts of a microscope
         2. Slide preparation
         3. Staining methods
         4. Bright field vs Phase Contrast

   b. **Semen Dilutions:**

      i. Goal: Compare the differences and evaluate the difficulties between identifying spermatozoa from neat semen and diluted semen.

      ii. Task: Extract the semen stains on cloth containing neat, 1:10, and 1:50 dilution of semen.

         1. Elute the material gently so as not to break the tails from the sperm cells.
         2. Prepare slides and stain with Christmas Tree stain.
         3. Examine the slides microscopically at 400X and 200X with bright field and phase contrast for the presence of intact spermatozoa.

   c. **Vaginal Swabs:**

      i. Goal: Compare the differences and evaluate the difficulties between identifying spermatozoa from neat semen and semen mixed with other body cavities.

      ii. Task: Using vaginal swabs spiked with semen or post-coital swabs, if available, extract swabs, with varying concentrations of semen.

         1. Prepare slides from the swab extracts and stain with Christmas Tree stain.
         2. Examine the slides microscopically at 400X and/or 200X with bright field and phase contrast.
         3. Differentiate between spermatozoa, white blood cells and yeast.

   d. **Washed Stains:**

      i. Goal: Evaluate the differences in washed stains compared to unwashed stains.

      ii. Task: Extract the semen stains from the diluted and neat semen stains from the washed cloth as well as from the unwashed set.

         1. Prepare slides from the extracts and stain with Christmas Tree stain.
         2. Examine the slides microscopically.
         3. Record number of sperm in each.

   e. **Degradation**

      i. Goal: Evaluate the presence and condition/morphology of the sperm following storage conditions.

      ii. Task: If not already prepared, extract the semen stains from the degraded stains prepared under the AP spot and p30 exercises above and prepare slides from the extracts.

         1. Stain with Christmas Tree stain and examine at 400X and/or 200X with bright field and phase contrast.
         2. Record the presence and condition of the sperm number**.**

   f. **Animal Spermatozoa:**

      i. Goal: Compare the differences between human and animal spermatozoa.

      ii. Task: Examine the collection of animal spermatozoa slides and compare the appearance of human sperm cells to those from other species (nineteen species in collection). Record observations and differences.

8. **Assessment:**

   a. The trainee's understanding of the purpose of each test and its strengths and weakness will be evaluated through oral interview and review of the examiner's training note packet.

K. **Task 6: Examination of Vaginal Material**

1. **Applied Scientific Reading Materials:**

   a. Goal: The goal of this module is to provide practical hands-on instruction and applied knowledge to the trainee on screening procedures used to evaluate vaginal material.

   b. Task: Read the literature references below and review the procedures on stain and swab extraction, microscopic examination, and staining, see BIO.1.BIO.02 and BIO.1.BIO.09.

      i. Thomas, F. and Van Hecke, W. "The Demonstration of Recent Sexual Intercourse in the Male by the Lugol Method," Medicine, Science, and the Law, vol. 3, no. 3, pp. 169-171.

      ii. Randall, B., and Riis, R., "Penile Glycogenated Epithelial Cells as an Indicator of Recent Vaginal Intercourse," American Journal of Clinical Pathology, vol. 84, no. 4, 1985, pp. 524-

      iii. Randall, B., "Glycogenated Squamous Epithelial Cells as a Marker of Foreign Body Penetration in Sexual Assault," Journal of Forensic Sciences, Vol. 33, No. 2, 1988, pp. 511-514.

      iv. Jones, E.L., et. al., "Lugol's Test Reexamined Again: Buccal Cells." J. Forensic Sci., Jan. 2004, Vol. 49 No. 1, pp. 64-65.

      v. Hausmann, R., at el., "The value of the Lugol's Iodine Staining Technique for the Identification of Vaginal Epithelial Cells," Int J Leg Med (1994) 106:298-301.

   c. Safety

      i. Read the SDS's for each of the testing reagents.

2. **Christmas Tree Stain:**

   a. Goal: Evaluate vaginal material and be able to differentiate between vaginal cells, yeast, and bacteria. Observe and recognize features of the cellular material contained in vaginal material and the differential staining of the various vaginal cells.

   b. Task: Extract a vaginal swab (no semen) and prepare a slide from the extract.

      i. Stain the slide with Christmas Tree stain.

      ii. Examine the slide microscopically at 400X and 200X with bright field and phase contrast.

3. **Slide Collection:**

   a. Goal: Observe and differentiate the various organisms in vaginal material (epithelial cells, white blood cells, yeast, bacterial) from spermatozoa.

   b. Task: Examine the collection of vaginal flora and venereal disease organisms. Record your observations.

4. **Lugols:**

   a. Goal: Observe how cells from other body areas react to Lugol's reagent and differentiate from vaginal epithelial cells.

   b. Task: Prepare swabs, if not already available, and extract the following swabs: Vaginal, Oral, penile, rectal, dermal.

      i. Prepare slides from the swab extracts and stain with Lugol's reagent.

      ii. Examine the slides microscopically and note any brown staining caused by the presence of glycogen. Record observations.

5. **Menstrual Cycle:**

   a. Goal: Observe and record any differences in the appearance/morphology of the vaginal cells throughout the menstrual cycle. Observe any differences in the Lugol's cell staining throughout the menstrual cycle.

   b. Task: Collect vaginal swabs representing approximately seven day intervals of the menstrual cycle (Early proliferative, late proliferative, midsecretory, late secretory). Extract the vaginal swabs from the different stages of the menstrual cycle and prepare 2 sets of slides from the extracts.

      i. Stain one set with Christmas Tree stain and the other with Lugol's reagent and examine microscopically. Record observations.

6. **Assessment:**

   a. The trainee's understanding of the purpose of each test and its strengths and weakness will be evaluated through oral interview and review of the examiner's training note packet.

L. **Task 7: Examinations for Saliva**

1. **Applied Scientific Reading Materials:**
   a. Goal: The goal of this module is to provide practical hands-on instruction and applied knowledge to the trainee on saliva screening procedures.
   b. Task: Read the literature reference listed below and review the procedure on amylase diffusion, see BIO.1.BIO.05 .
      i. Kipps, A.E., et. al., "The Significance of Amylase in Forensic Investigations of Body Fluids." Forensic Science 6 (1976), pp 137-144.
      ii. Auvdel, Michael J., "Amylase Levels in Semen and Saliva Stains,"Journal of Forensic Sciences, Vol 31, No 2, April 1986, pp. 426-431.
      iii. Keating, SM., at el., "The Detection of Amylase on Swabs from Sexual Assault Cases," Journal of Forensic Science Society 1994; 34. 89-93
      iv. Quarino, Lawrence., at el., "An ELISA Method for the Identification if Salivary Amylase," Journal Forensic Science, July 2005, Vol 50, No. 4, 873-876.
      v. Old, Jennifer., at el., "Developmental Validation of RSID Saliva.." Journal Forensic Science, July 2009, Vol 54. No 4, 866-873.
      vi. Casey, David G., at el., "The Sensitiviy and Specificity of the RSID Saliva kit.." Forensic Science International, 194 (2010) 67-71.
      vii. Rapid Stain Identification of Human Saliva (RSID Saliva) Protocol Sheet.
   c. Safety:
      i. Read the SDS's for each of the testing reagents.
2. **Amylase Diffusion**
   a. Goal: Evaluate amylase activity in saliva and in other physiological fluids.
   b. Task: Apply the following samples to an agarose starch gel:
      i. 1:10 dilution of neat saliva
      ii. 1:100 dilution of neat saliva
      iii. 1:200 dilution of neat saliva
      iv. 1:400 dilution of neat saliva
      v. 1:800 dilution of neat saliva
      vi. Urine
      vii. Blood
      viii. Fecal
      ix. Semen
      x. Vaginal swab
      xi. Breast milk (if available)
      xii. Saliva stain extracted from cloth
      xiii. Skin surface swab
   c. Incubate overnight and develop with iodine solution. Photograph and record the results. Measure the diameter of the rings.
3. **RSID Saliva Cards**
   a. Goal: Evaluate amylase activity in saliva and other phsyiological fluids.
   b. Task: Perform saliva testing using the RSID Saliva cards on the following samples:
      i. 1:100 dilution of neat saliva
      ii. 1:200 dilution of neat saliva
      iii. 1:400 dilution of neat saliva
      iv. 1:800 dilution of neat saliva

v. Urine

vi. Blood

vii. Fecal

viii. Semen

ix. Vaginal swab

x. Breast milk (if available)

xi. Saliva stain extracted from cloth

xii. Skin surface swab

iii. Record which samples give positive results.

4. **Microscopic Examination**

a. Goal: Evaluate the cell content in saliva on various surfaces.

b. Task: Spit in a tube and let saliva liquify for at least an hour refrigerated. Transfer a portion of the neat saliva to a slide and examine the cell content of neat saliva under the microscope.

i. Collect saliva from various typical surfaces where saliva may be commonly deposited, such as drink containers, cups, cigarette butts, straws, etc. and licked skin.

ii. Collect the saliva onto a swab.

iii. Digest 1/2 or the entire swab and examine the cell content under the microscope.

5. **Assessment:**

a. The trainee's understanding of the purpose of this test and its strength and weakness will be evaluated through oral interview and review of the examiner's training note packet.

M. **Task 8: Hair Characterization and Suitability for DNA Typing**

1. **Applied Scientific Reading Materials:**

a. Goal: The goal of this module is to provide practical hands-on instruction and applied knowledge to the trainee on distinguishing a human hair and determining if suitable for DNA typing.

b. Task: Read the reference literature listed below and review the procedure on Hair Collection and Examination, see BIO.1.BIO.13 .

i. Robert Ogle, Michelle Fox: "Atlas of Human Hair Microscopic Characteristics" CRC Press (1999)

ii. Moore et.al.: "Identification of the Dorsal Guard Hairs of Some Mammals of Wyoming" Wyoming Game and Fish Department Cheyenne, Wyoming Bulletin No. 14 (1974)

iii. Petraco et.al.: "The Morphology and evidential Significance of Human Hair Roots" J. For. Sci. (1988) Vol. 33, No. 1

iv. Linch et.al.: "Evaluation of the Human Hair Root for DNA typing Subsequent to Microscopic Comparison" J. For. Sci. (1998) Vol. 43, No. 2.

v. Charles A. Linch, "The Ultrastructure of Tissue attached to the Telogen Hair Root" J. For. Sci. (2008) Vol. 53, No. 6.

vi. Linch et.al.: "Human Hair Histogenesis for the Mitochondrial DNA Forensic Scientist" J. For. Sci. (2001) Vol. 46, No. 4.

vii. Richard E. Bisbing, B.S., "The Forensic Identification and Association of Human Hair", Chapter 5, Forensic Science Handbook, Richard Saferstein

c. Safety:

i. Read the SDS's for the mounting media.

2. **Hairs and Fibers**

a. Goal: Observe morphology differences between a fiber and a hair. Observe differences between animal and human hair. Recognize hairs suitable for DNA analysis.

b. Task: From the Hair and Fiber example slide collection, obtain the following samples:

i. Examples of various fibers (cotton, polyester, rayon, etc.).

ii. Examples of various common/domestic animal hairs (dog, cat, rabbit, rodent, horse, etc.).

iii. Examples of known human hairs from various races (Caucasian, black, Asian).

iv. Examples of known body region hairs (specifically head and pubic).

v. Utilizing the stereomicroscope (Nikon SMZ 1500), examine the samples listed above and document your observations on a worksheet. Observe the samples under reflected and transmitted light. Note characteristics such as color, structure, root, tip, shaft variations, cuticle, and medulla. Note: you may not be able to observe the scale patterns due to the mount medium.

c. Additionally, examine the samples listed above under bright field microscopy or polarized light and note any additional or different observations.

3. **Water mount exercise:**

a. Task: Place dog, cat, and horse hair under a water mount and document your observations as above.

i. Place several of your own hairs and/or a variety of other donor's hair (head and/or pubic) under a water mount and document your observations as above.

ii. Determine whether the hairs are anagen, catagen or telogen. Assess whether the hair(s) is suitable for DNA typing and why.

4. **Assessment:**

a. The trainee's understanding of the purpose of this practice set will be evaluated through oral interview and review of the examiner's training note packet.

N. **Task 9: Clothing/Fabric Examinations**

1. Reading Assignments:

a. Crowe, G., at el., "The Effect of Laundering on the Detection of Acid Phosphatase and Spermatozoa on Cotton T-Shirts," Can Soc. Forens. Sci J. Vol 33. No 1 (2000) pp 1-5.

b. Joshi, U.N., at el., "Effect of Water Immersion on Seminal Stains on Cotton Cloth," Forens. Sci Int., 17 (1981) 9-11.

c. Kipps, A., at el., "The Detection of Mixtures of Blood and Other Body Secretions in Stains," J Forens. Sci. Soc. (1978), 18, 189.

d. Monahan, D., at el., "Damage to Clothing - Cuts and Tears," J. Forens Sci, Vol 35, No 4 July 1990, pp 901-912.

e. Costello, PA., at el., "Do Stab-Cuts Reflect the Weapon which made them?" JFSS 1990; 30(2) 89-95.

f. Alakija, P., at el., "Stellate Clothing Defects with Different Firearms, Projectiles, Ranges, and Fabrics," J Forens Sci 1998; 43(6) 1148-1152.

2. Training and testing will be conducted on clothing or fabrics with a range of substances commonly encountered in casework.

3. **Commonly Encountered Stains:**

a. Goal: To observe and recognize the appearance of various substances on fabric.

b. Task: Prepare various fabrics, such as colored, printed, cotton, jeans, etc. with various commonly observed stains, such as food, grass stains, juice, etc.

i. Use various lighting techniques (ALS and Infra-red) and normal room lighting to observe the stains and examine using a stereo-microscope. Evaluate and record characteristics and observations.

4. **Commonly Encountered Red-Brown Stains (Non-blood):**

a. Goal: To observe and recognize the appearance of non-blood, red-brown substance on fabric.

b. Task: Prepare various fabrics, such as colored, printed, cotton, jeans, etc. with various red-brown colored substances, such as ketchup, chocolate, lipstick, blush/eyeshadow, soil-dirt, rust, wood dye, juice, soda, etc. Use various lighting techniques (ALS and Infra-red) and normal room lighting to observe the stains and examine using a stereo-microscope. Evaluate and record characteristics and observations.

5. **Fabric Damage:**

a. Goal: To observe and recognize the appearance of various damage to various fabrics.

b. Task: Prepare various fabrics with damage, such as cuts, tears, abrasions, puncture, stab. Use various lighting angles and sources to observe the damage and examine using a stereo-microscope. Evaluate and record characteristics and observations.

6. **Bullet Hole/Powder Residue:**

a. Goal: To observe and recognize the appearance of bullet hole damage and GSR.

b. Task: Prepare various fabrics with bullet hole damage and GSR. Observe direction of entry and exit. Use various lighting angles and sources to observe the damage and GSR on the fabric and examine using a stereo-microscope. Evaluate and record characteristics and observations.

7. **Blood/Semen/Saliva/Urine/Fecal Stains**

a. Goal: To observe and recognize the appearance of various body fluid stains on articles of clothing and items.

b. Task: Prepare various clothing items, such as pants, hats, socks, jeans, shirts, underwear with difficult print patterns (plaid, floral, etc) with various body fluid stains and smears. Examine bloodstains and smears on items, such as a knife, hammer, etc. Evaluate and record observations.

i. Use various lighting techniques (ALS and Infra-red) and normal room lighting to observe the stains.

ii. Examine using a stereo-microscope to determine the side of deposit of the stain. Evaluate and record characteristics and observations about the stains.

8. **Presumptive Testing**

a. Goal: To practice presumptive testing on stains deposited on fabric and other items.

b. Task: Conduct o-tolidine and AP spot testing on the suspected stains deposited on the clothing from the exercise above. Record observations and results.

9. **Mock Sexual Assault Scenario**

a. Goal: To gain hand-on experience with sexual assault evidence.

b. Task: To be prepared by the trainer: Prepare vaginal, oral, rectal smears, vaginal and rectal swabs, swabs of potential saliva on skin (i.e breast swabs), condom (if available), underwear with biological stains.

10. **Assessment:**

a. The trainee's understanding of the purpose of this practice set will be evaluated through oral interview and review of the examiner's training note packet.

O. **Task 10: Casework Documentation and Report Writing**

1. Goal: To provide instruction to a trainee on reporting analytical results or issuing written notifications according to the laboratory's policy

2. Tasks:

a. The trainee shall receive *instruction and training* in the following areas:

i. Case Documentation

ii. Report Writing

iii. Technical and Administrative Review

3. The trainee shall

a. Review a variety of other examiner's completed case notes.

b. Compile case notes for each of the sets of samples analyzed during training.

c. Review a variety of completed reports.

d. Write reports from the training sample sets generated above.

e. Reports should cover the typical casework, to minimally include:

i. SAEK reports/notes

ii. Preliminary Screen reports/notes

4. **Assessment:**

a. Evaluate and discuss with the trainee his/her understanding of laboratory and Biology Unit's Policies.

P. **Task 11: General Knowledge of Forensics**

1. Goal: To familiarize the trainee with other forensic disciplines
2. Tasks: The trainee should have general knowledge of other forensic disciplines for the purpose of recognizing, collecting, and preserving evidence. Training may be met by one or a combination of the following:
    a. Formal education in Forensic Science and/or classes, workshops, or webinars focused on other disciplines. Classes need to be documented in the examiner's training binder (electronic or hard copy)
    b. Supplemental Reading/Training
    c. Shadowing analysts in other units
    d. Resources:
        i. Forensic Technology Center of Excellence Webinars: https://forensiccoe.org
        ii. Saferstein, Richard. *Criminalistics: An Introduction to Forensic Science*.
3. Assessment
    1. Documentation of successful completion/assessment of each task shall be noted on the trainee's Training Log.

Q. **Task 12: Court Room and Legal Procedures**

1. Goal: To provide basic instruction and allow trainee to research the legal system of his/her jurisdiction
2. Tasks:
    a. The trainee shall receive *instruction and training* on courtroom procedures and presentation of evidence to cover:
        i. Court structure (trial and appeals courts)
        ii. Format of hearing or trial
        iii. Discovery and Subpoenas
        iv. Rules of evidence (401, 402, 403 hearings)
        v. Admissibility rules (Daubert, Kelly Frye)
        vi. Courtroom demeanor and attire
        vii. Biological screener qualifications
        viii. Ethical responsibility of expert witness
        ix. Evidence/Exhibit presentation
        x. Confidentiality/disclosure of information
        xi. Applicable Criminal and Civil Laws
            1. CA Penal Codes
            2. Crimes against persons
            3. Crimes against person involving sexual assault, against public decency and good morals
            4. Crimes against property
            5. Statute of Limitations
    b. Observe courtroom testimony
    c. The trainee will prepare a statement of qualifications.
    d. The trainee will participate in mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits as part of the competency test.
3. Reading Assignments:
    a. Nicholas T. Kuzmack, J.D., M.A., "Legal Aspects of Forensic Science", Chapter 1, Forensic Science Handbook, Richard Saferstein. (GC207)
    b. Mark A. Farley, M.S., J.D, "Legal Standards for the Admissibility of Novel Scientific Evidence", Vol. III, Forensic Science Handbook, Richard Saferstein. Chapter 1 (GC165)

c. Thomas J. Gardner, "Criminal Evidence-Principles, Cases and Readings", 1978, pages 39-40, 50-62, 66-67, 80-93, 107-113, 120-126, 137-138, 189-204, 216, 220-221, 249-254, 485-487, 579-597. (GC169)

d. David L. Faigman, Michael J. Saks, Joseph Sanders, Edward K. Cheng, "Modern Scientific Evidence: The Law and Science of Expert Testimony", Volume 1: chapters 1 and 3, Volume 4: chapters 30, 31 and 32.

e. CA Peace officers Legal Sourcebook (found on CopWare)

4. Assessment

a. This module should be completed by all trainees.

b. Completion of the module will include documentation of completion of the relevant reading assignments.

R. **Task 13: Final Evaluation**

1. **Competency Test:**

a. Following the completion of training, individuals will be competency tested to assess the trainee's skills and understanding of the biology screening procedures and to assess the effectiveness of the training.

b. Successful completion of the training program and a competency test is required prior to the authorization of the trainee performing their job duty(s).

c. Task:

i. A test of unknown samples representative of the type of samples the trainee will be analyzing on the job.

ii. A written test report (if the trainee will be issuing reports)

iii. A written or oral test that assesses understanding of the fundamental scientific knowledge of biological screening.

iv. Mock testimony questions or a mock court.

d. Assessment

i. Competency test will be reviewed and documented in LIMS.

ii. Authorization will be given to the trainee after successful completion.

iii. Authorization will be documented on the Biological Screening Training Log.

S. **Assessing the Effectiveness of Training**

1. The following will be used to evaluate the effectiveness of the training program.

a. Technical and administrative review of all casework

b. Proficiency testing

c. Court critiques

d. Yearly performance evaluations

T. **Retraining and Remedial Training**

1. **Retraining** may be required when an examiner has been absent greater than 12 months from performing casework or when there has been a significant change to a procedure.

2. **Remedial** training may be required if technical issues arise during training, competency testing, proficiency testing, courtroom testimony, or casework. A competency test in the area of weakness may be re-issued, if deemed necessary. A record of the remedial will be documented through a QA Action.

a. A modified training program will be created by the Supervisor or training coordinator and documented on the training log.

b. The reason for the retraining/remedial training will also be documented on the training log.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 07/31/2019	**NUMBER:** BIO.4.TRAIN.02 - DNA Training
	RELATED ORDERS:	
APPROVED BY: D. Romano, T. Nguyen & D. McKillop	**DNA Quality Assurance Standards** **ANAB**: 5.2	
CHAPTER: Training	**SUBJECT:** DNA Training Program	

I. The goal of the DNA training program is to provide a trainee the knowledge, skills, and ability to perform DNA STR testing on casework samples.

A. **Intent of the Training Program**

1. To develop knowledge, skills, and abilities in the area of Forensic DNA culminating in the ability to perform DNA testing on casework samples.
2. To develop the necessary skills required for performing DNA testing, such as evidence handling, using proper equipment, analyzing samples, interpreting results, etc
3. To develop the knowledge necessary to provide expert testimony in Forensic DNA testing in court.

B. **Overview of the Training Program**

1. Training is required for a new DNA Analyst/Technician or a current employee new to DNA analysis, prior to beginning casework. Training will be tailored to an employee's job duties and to the extent they will conduct casework, such as a technician versus a DNA analyst.
2. Training will entail literature readings, instruction, demonstrations, hands-on practical exercises, and court training. Training is administered in a modular format and assessments are built into each module which allows for the trainee to conduct casework in any of the areas for which the trainee was trained and competency tested. Training may be supplemented by external training, such as college coursework, workshops or other formal training courses.
3. A new DNA analyst must undergo a **minimum of six months** of training in accordance with the FBI Director's Quality Assurance Standards. The actual length of the training period may vary and will be left to the determination of the DNA Technical Lead/Supervisor or training coordinator, but should be approximately one to two years.
4. Training may be abbreviated for an analyst with previous training and prior forensic DNA casework experience. Records of the trainee's prior training and experience will be reviewed by the DNA Technical Leader/Supervisor and will be maintained in the LIMS Training Module. A copy may also be maintained in the examiner's training binder.
5. Training will be given under the guidance of the DNA Technical Leader/Supervisor or an experienced DNA analyst may act as a training coordinator. The trainer is expected to communicate with the trainee throughout the program, offering feedback and guidance.
6. Separate training will be given for biology screening, see Biology Training Manual BIO.4.TRAIN.01.

C. **Educational Requirements:**

1. The roles of individuals in the Biology unit and the educational requirements for each role is documented in BIO.5.QAQC.05.

D. **Expectations of the Trainee**

1. The trainee is expected to keep a notebook/binder of information compiled during the training program, including practical exercises.
2. The trainee will document their progress on the DNA Training Log, BIO.1.BIOF.05, to include the date each portion of the training was completed, the trainee's initials, and the date and initials of the trainer. The training records will be retained in LIMS and may also be maintained in the trainee's training binder. Training records will be retained by the Laboratory, minimally 10 years, according to Division policy "Control of Records" FSD.44. (QAS 3.2)
3. Trainees are expected to communicate any concerns about their training to the training coordinator and/or DNA Technical Leader/Supervisor.

E. **Guidelines for Competency**

1. To demonstrate the trainee's knowledge, skills, and abilities, the trainee will undergo a competency test to the extent they received training, prior to participating in casework or DNA testing activities. See BIO.5.QAQC.13 for Biology's procedures regarding competency testing. Criteria for successfully passing the competency test will be documented prior to the individual receiving the competency test. A record of the competency test will be tracked and maintained through LIMS.
2. The signatures of the DNA Technical Leader/Supervisor on the training log will signify approval of the training and successful completion of the competency test. Approval signifies authorization for the trainee to conduct casework using all the equipment, instrumentation and procedures to the extent they received training and were competency tested.
3. If the trainee is expected to issue laboratory reports and has met the report writing competency requirements, the analyst will also be considered to be authorized to issue reports and give opinions and interpretations in the areas(s) for which they received training and competency.
4. The trainee will enter into the proficiency test cycle within 6 months of the authorization to conduct casework.

F. **Task 1. Laboratory Introduction**

New employees undergo an orientation program prior to the commencement of training. The orientation covers a variety of topics, such as safety, ethics, quality assurance. Refer to FSDF.01 for a list of topics covered under orientation. Related topics that are specific to the Biology Unit operation and procedures are addressed in the below training plan:

1. Goal: To familiarize the trainee with the DNA manuals and the expectations of the training program
2. Tasks
    a. Review and discuss the DNA Training Manual and Plan
    b. Read SWGDAM's Training Guidelines (2013), Reference Training document 44
    c. Review the DNA Analytical Procedures Manual
    d. Introduction to the Quality Assurance/Quality Control Program
        i. Review the Biology Unit's QA/QC Manual
        ii. Review the Forensic Services Division Manual
        iii. Instruction/Discussion on Contamination Controls/Prevention.
            1. SWGDAM Contamination Prevention and Detection Guidelines (2017) (Training Document 1)
    e. Review the FSD Safety Manual
        i. Bloodborne Pathogen Training
        ii. Chemical Hygiene Training
        iii. Chemical Waste Disposal Training
    f. Orientation to the laboratory facility and security features.
    g. Description of the organization and management
        i. Goals and Objectives
        ii. Code of Ethics
        iii. Chain of Command of the Forensic Services Division
        iv. Laboratory administrative policies
    h. Ethics and Bias as it relates to forensic DNA
        i. Read: Budowle, A perspective on Errors, Bias, and Interpretation in Forensic Sciences, Training Document 54
3. Assessment
    a. This module should be completed by analysts, technicians, and laboratory support personnel.
    b. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.
    c. Documentation of acknowledgement of laboratory policies and protocols is documented through PowerDMS

G. **Task 2. Evidence/Sample Handling and Control**

1. Goal: Develop an understanding of sample and/or evidence control in the forensic laboratory.

2. Tasks:
    a. Receive instruction on the following, as applicable:
        i. Sample and/or evidence collection, packaging, and storage
        ii. Chain of custody, receiving, and handling samples and/or evidence
        iii. Contamination Controls/Prevention.
        iv. Case acceptance policy/Case management
        v. Case workflow
        vi. Consumption of samples and/or evidence
        vii. Distinction between evidence and work product
        viii. Laboratory documentation policy (paper and/or electronic)
    b. Review LIMS presentation (QAT.09) and LIMS DOS and DONT'S (QAT.09.01) in powerDMS.

c. Assessment:
    a. This module should be completed by analysts, and technicians.
    b. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

H. **Task 3. Fundamental Scientific Knowledge**

1. Goal: To ensure that a trainee has or is provided the formal education and the working knowledge of the fundamental scientific basics of forensic DNA analysis.
2. Tasks/Reading Assignments
    a. Butler, John M. *Forensic DNA Typing*. MA: Elsevier Academic Press, 2005.
    b. Butler, John M. *Advanced Topics in Forensic DNA Typing: Methodology*. MA: Elsevier Academic Press, 2011.
    c. Butler, John M. *Advanced Topics in Forensic DNA Typing: Interpretation*. MA: Elsevier Academic Press, 2014. Required reading for DNA analyst training only.
    d. SWGDAM Validation Guidelines for DNA Analysis Methods (2012). (Training Document 9).
    e. SWGDAM Guidelines for STR Enhanced Detection Methods (2014). (Training Document 14).
    f. Scientific Working Group on DNA Analysis Methods (SWGDAM), Guidelines for the Validation of Probabilistic Genotyping Systems. 2015.
    g. Current Quality Assurance Standards for Forensic DNA Testing Laboratories (Training Reference 5).
3. Assessment
    a. Module should be completed by DNA analysts and technicians.
    b. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

I. **Task 4. Applied Scientific Knowledge**

1. Goal: To educate the trainee on the specific knowledge related to the field of forensic DNA analysis. The level of detail should be applicable to the trainee's job description.
2. The following bibliography represents a sample list of resources that may be helpful to the trainer in defining the breadth and scope of the materials for the trainee's reading. This list is not meant to be all inclusive.
3. Tasks/Reading Assignments: Wherever possible, instruction in theoretical knowledge areas should be supplemented through continuing education courses available through sources such as the California Criminalistics Institute. LCN tesing and mtDNA analysis are not conducted in this laboratory, and the training provided is merely foundational. Articles describing legacy systems such as PM+DQA1 and D1S80 should be read for historical perspective. Source material may be found in the following location **G:Serology/Literature References.**
    a. **Forensic applications of genetic polymorphisms**
        i. For. Sci. Handbook III, Chap. 6 (Lab Library GC 165)
        ii. Repetitive DNA and Human Genome Variation . . .Training, document 6

b. **Historical DNA Methods**

i. **RFLP:** Forensic Science Handbook III, Chap 7 (Lab Library GC 165)

ii. **RFLP:** DNA Analysis by RFLP…; Training Document 10

iii. **Polymarker (PM) + DQA1:** Genetic Analysis of Amplified DNA. . ., Training document 13

iv. **D1S80:** Validation of the AmpliFLP D1S80. . .; Training document 16

c. **DNA Extraction**

i. Application of DNA polymorphisms. . . to sperm; Training document 7

ii. 26 DNA Extraction Strategies. . .; Training document 8

d. **Real-Time PCR Quantitation**

i. The PowerQuant System…..; Training Document 46

ii. A Study of PCR Inhibition Mechanisms Using Real Time PCR; Training document 45

e. **Polymerase Chain Reaction (PCR)-based methods**

i. For. Sci. Handbook III, Chap 8 (Lab Library, GC 165)

ii. PCR Technology, Chap 1 and 2 (Lab Library, PF 62)

iii. Preferential PCR Amplification of Alleles; Reference Training document 11

iv. Avoiding False Positives. . .; Reference Training document 12

f. **Short Tandem Repeats (STR)**

i. DNA Microsatellites: Agents of Evolution? ; Reference Training document 18

ii. Analysis and Interp, of STR microvariants. . . ; Reference Training documents 19

iii. Sequence analysis and characterization. . . ; Reference Training document 20

iv. Developmental Validation of PowerPlex…; Training document 47

v. Validation of STR Typing..., Training document 48

g. **Population Genetics and Forensics Statistics**

i. The Evaluation of Forensic DNA Evidence (Lab Library PF 96)

ii. Allele frequencies of 15 STR loci; Reference Training document 34

iii. Population data on the 13 CODIS. . .; Reference Training document 35

iv. CODIS STR loci data. . .; Reference Training document 36

v. Expanded CODIS Core…; Training document 50

vi. Variability of New STR Loci; Training document 49

vii. ISFG-Recs. on biostatistics in paternity testing; Reference Training document 38

viii. Popstats Paternity stats; Reference Training document 39

h. **Mixture Interpretation**

i. Analysis and Interp. of Mixed. . .; Training document 32

ii. Mixture Interp. Defining. . .; Training document 33

iii. Wang-Least Square…; Training document 52

iv. Gill....Recommendations on the interpretation of mixtures; Training document 2

v. The German Stain Commission: Recommendations from the interpretation of mixed stains; Training document 3

i. **Probabilistic Genotyping**

i. Probabilistic genotyping software: An overview M. Coble, J. Bright Forensic Science International: Genetics 38 (2019) 219–224

ii. Bright J-A, Taylor D, McGovern CE, Cooper S, Russell L, Abarno D, et al. Developmental validation of STRmix™, expert software for the interpretation of forensic DNA profiles. Forensic Science International: Genetics. 2016;23:226-39.

iii. Gittelson, S, Kalafut, T, Myers S, et el. A Practical Guide for the Formulation of Propositions in the Bayesian Approach to DNA Evidence Interpretation in an Adversarial Environment. Journal of Forensic Sciences: Jan 2016, Vol 61. No.1 186-195.

iv. Taylor, D., J.-A. Bright, and J.S. Buckleton, The interpretation of single source and mixed DNA profiles Forensic Science International: Genetics, 2013. 7(5): p. 516-528.

v. D. Taylor, J.S. Buckleton. Do low template DNA profiles have useful quantitative data? Forensic Science International: Genetics, 2015. 16: 13-16.

vi. Buckleton, et al, The Probablistic Genotyping Software STRmix: Utility and Evidence for its Validity, J. Forensic Sci, March 2019, Vol. 64, No. 2 393-405.

vii. S.J. Cooper, C.E. McGovern, J.-A. Bright, D. Taylor, J.S. Buckleton. Investigating a common approach to DNA profile interpretation using probabilistic software. Forensic Science International: Genetics, 2014. 16: 121-131.

viii. Moretti TR, Just RS, Kehl SC, Willis LE, Buckleton JS, Bright J-A, et al. Internal validation of STRmix for the interpretation of single source and mixed DNA profiles. Forensic Science International: Genetics. 2017;29:126-44.

ix. Bright J-A, Taylor D, Curran JM, Buckleton JS. Developing allelic and stutter peak height models for a continuous method of DNA interpretation. Forensic Science International: Genetics. 2013;7:296-304.

x. Brookes C, Bright J-A, Harbison S, Buckleton J. Characterising stutter in forensic STR multiplexes. Forensic Science International: Genetics. 2012;6:58-63.

xi. Taylor, D., Using continuous DNA interpretation methods to revisit likelihood ratio behaviour. Forensic Science International: Genetics, 2014. 11: p. 144-153.

xii. Bright, J.-A., et al., The variability in likelihood ratios due to different mechanisms. Forensic Science International: Genetics, 2015. 14: p. 187-190.

xiii. Taylor, D., et al., An illustration of the effect of various sources of uncertainty on DNA likelihood ratio calculations. Forensic Science International: Genetics, 2014. 11: p. 56-63.

xiv. Triggs, C.M. and J.M. Curran, The sensitivity of the Bayesian HPD method to the choice of prior. Science & Justice, 2006. 46(3): p. 169-178.

xv. J.-A. Bright, D. Taylor, J.M. Curran and J.S. Buckleton, Degradation of forensic DNA profiles, Australian Journal of Forensic Sciences, 2013. 45(4): 445-449

xvi. D. Taylor, J-A. Bright and J.S. Buckleton. Interpreting forensic DNA profiling evidence without specifying the number of contributors. Forensic Science International: Genetics, 2014. 13: 269-280

xvii. T.W. Bille, S.M. Weitz, M.D. Coble, J.S. Buckleton, J.-A. Bright. Comparison of the performance of different models for the interpretation of low level mixed DNA profiles. ELECTROPHORESIS. 2014;35:3125-33.

xviii. D.A. Taylor, J.S. Buckleton, J.-A. Bright, Factors affecting peak height variability for short tandem repeat data. Forensic Science International: Genetics, 2016. 21:126-133.
Bright, J.-A., et al., A series of recommended tests when validating probabilistic DNA profile interpretation software. Forensic Science International: Genetics, 2015. 14: p. 125-131.

xix. J.-A. Bright, et al., Internal validation of STRmix; A multi laboratory response to PCAST. Forensic Science International: Genetics, 2018. 34:11-24.

xx. J.-A. Bright, J.M. Curran and J.S. Buckleton, The effect of the uncertainty in the number of contributors to mixed DNA profiles on profile interpretation. Forensic Science International: Genetics, 2014. 12: 208-214.

xxi. D .Taylor, J.-A. Bright and J.S. Buckleton, Considering relatives when assessing the evidential strength of mixed DNA profiles. Forensic Science International: Genetics, 2014. 13: 259-263

j. **Touch DNA**

i. Swabbing Firearms..; Training document 31

ii. Obtaining DNA from fired and unfired ammunition; Training document 51

iii. Recovery of DNA from Latent...; Training document 17

iv. The Influence of Selected Fingerprint...; Training document 23

k. **Other Forensic DNA Topics (i.e Paternity, Low Copy Number, Y-STRs)**

i. **mtDNA**: Extraction, PCR Amplification and Sequencing of mtDNA... ; Reference Training document 21

ii. **mtDNA:** Validation of mtDNA...; Training document 22

iii. Prenatal and newborn paternity testing. .; Reference Training document 37

iv. **LCN:** Amplification of Low Copy. . .; Reference Training document 40

v. **LCN:** Low Copy Number Consideration. . .; Reference Training document 41

vi. **YSTRs**: Evaluation of Y-chromosmal STRs. . .; Reference Training document 42

vii. **YSTRs:** Y-STR Interpretation...; Training document 43

viii. **Rapid DNA:** Evaluation of the RapidHIT..; Training document 53

ix. **Rapid DNA:** Internal Validation of the DNAscan/ANDE...; Training Document 56

4. Assessment:

1. This module should be completed by DNA analysts.

2. Acknowledgement of the trainee's reading will be documented and the trainee's understanding of fundamental scientific knowledge will be evaluated through the competency test (written test of knowledge).

J. **Task 5. Laboratory Analysis**

1. Goal: To provide practical instruction to the trainee on technologies, methodologies, and platforms used in the laboratory. Training will include instruction, demonstration of testing methods by qualified analysts, observation of trainee performing testing methods, and directed practical exercises for each of the relevant work areas. When available, training will be supplemented with continuing education through external sources such as the California Criminalistics Institute.

2. Tasks

a. *Instruction, Demonstration and Observation*

i. Digestion: Differential (manual/robotic) and straight digestion.

ii. EZ1 Extraction

iii. Real time PCR (manual and robotic setup)

iv. Amplification with current kits used in the laboratory (manual and robotic setup)

v. Genetic Analyzer: Sample setup (manual and robotic) and instrument setup

vi. Genetic Analyzer maintenance

b. *Practical Exercises* DNA analyst training shall include practical exercises on a **minimum of 50 human biological "case-like" samples**. The type of samples included must vary, reflecting the range, type, and complexity of casework analyses routinely handled by his/her laboratory duties. No more than 1/3 of the samples tested should be included in the same sample type category. An individual with prior DNA casework experience may perform practical exercises on less than 50 samples.

i. **Sample Types:**

1. Bloodstains (5-10)

2. Oral swabs (5-10)

3. Hair (5-10)

4. Semen or Mixed Semen/Non-sperm DNA (Differential digestions) (10-15)

5. Low Level samples (touch and wearers DNA) (10-15)

6. Fingernails

7. Bone and/or teeth

8. Degraded DNA (if possible)

9. Select samples will include mixtures of DNA sources to be typed in using approved PCR typing methodologies below.

ii. **Extraction**

1. Straight Digestions
2. Manual Differential Digestions
3. Differential Digestion using the Versa 1100
4. EZ1 Extraction

iii. **Quantitation**

1. Perform DNA quantification using the PowerQuant kit and using the 7500 with HID software
    1. Setup manually and also using the liquid handling robot

iv. **Amplification**

1. Robotic sample normalization
2. Experience setting up amplification reactions using all kits currently in use for casework by the Biology Unit on the ProFlex Thermal Cycler.
3. Kits: PowerPlex Fusion 6C, PowerPlex Fusion 6C Direct amplification
4. Differing amounts of target DNA should be amplified (16pg, 32pg, 64pg, .125ng, 0.5ng, 1ng)
5. Amplifications of DNA mixtures should be performed (two to four contributors 0.25ng to 1.25ng)
6. Direct amplification of buccal swabs and blood on FTA
7. Sample concentration using the evaporative centrifuge
8. Setup manually and also using the liquid handling robot

v. **CE STR Analysis**

1. 3500 manual and robotic sample setup
2. 3500 instrument setup
3. 3500 routine maintenance

3. Reading Assignments

a. **Kit manufacturer's literature**

i. EZ1 DNA Investigator Handbook; Training document 24
ii. PowerQuant User's Manual; Training document 25
iii. 7500 Real-Time HID Software User Manual; Training document 26
iv. PowerPlex Fusion 6C Amplification Kit User Manual; Training document 27
v. ProFlex User Manual; Training document 28
vi. ABI 3500 User Manual, Training document 29
vii. Hamilton Nimbus User Manual, if applicable; Training document 55

b. **Laboratory's Validation Studies**

i. EZ-1 Bio Robot Validation Summary
ii. Selective Degradation Differential Digestion Validation Summary
iii. PowerQuant Validation Summary
iv. Fusion 6C/3500/Genemapper ID-X Validation Summary
v. Hamilton Nimbus Validation Summary
vi. Fusion 6C Direct Amplification Validation Summary
vii. Selective Degradation Differential using the Versa 1100

4. Assessment

1. This module should be completed by DNA analysts and technicians to the extent in which they perform casework.

2. Assessment will occur through review of the trainees compiled DNA data. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

K. **Task 6. Interpretation/Analysis and Case Documentation/Reports**

1. Goal: To provide practical instruction to the analyst on interpretation of DNA analysis for the technologies, methodologies and platforms used in the laboratory in accordance with the analyst's job responsibilities and the extent to which the analyst will participate in DNA analysis. To provide instruction to an analyst on reporting analytical results or issuing written notifications according to the laboratory's policy

2. Tasks:

a. The analyst shall receive *instruction and training* in the following areas. (Training may include the use of presentations, webinars, and continuing education coursework).

i. Mixture Interpretation (Binary and using STRmix)

ii. Statistical Analysis (RMP, mMRP, and Likelihood Ratios)

iii. Paternity/Kinship analysis

iv. Case Documentation (analyst and technician)

v. Report Writing

vi. Technical and Administrative Review (analyst and technician)

vii. CODIS software

b. The analyst should perform the following on *practice* casework samples (at least 10 sets of samples):

i. Data interpretation using Genemapper ID-X

ii. Analysis of single source samples

iii. Analysis of mixture samples

iv. Practice using STRmix on single source and mixtures of up to four people

v. Practice using RMP/mRMP statistical workbook

vi. Practice using CoSTaR software

c. **Case Documentation**

i. Compile case notes for each of the sets of samples analyzed during training. (analyst and technician)

d. **Report Writing**

i. Write reports from the training sample sets generated above.

ii. Reports should cover the typical casework analysis and interpretations expected in casework, to minimally include:

1. Sexual Assault evidence analysis (differential digests)

2. Parentage analysis

3. Mixture analysis

e. **Reading Assignments:**

a. GeneMapper ID-X User Manual, Training document 30

b. Statistical Workbook Validation Summaries

c. Estimation of STRmix Parameters Summary

d. STRmix Validation Summary

e. STRmix v.2.6 Operation Manual 4/8/19

f. STRmix v.2.6 Users Manual 8/18 pg 7-52, 66-92, 207-212

g. SWGDAM STR Interpretation Guidelines for Autosomal STR Testing (2017) (Training Document 4).

h. Committee on DNA Forensic Science, National Research Council I (1992) DNA Technology in Forensic Science. Chapters 4 and 7 Lab library PF 82.

i. Committee on DNA Forensic Science, National Research Council II (1996) *The Evaluation of Forensic DNA Evidence* Chapters 1-6 Lab library PF 96.

3. Assessment:

1. This module should be completed by DNA analysts to the extent in which they perform casework.

2. Assessment will occur through review of the trainees compiled DNA data, case packets, and reports. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

L. **General Knowledge of Forensics**

1. Goal: To familiarize the trainee with other forensic disciplines

2. Tasks: The analyst should have general knowledge of other forensic disciplines for the purpose of recognizing, collecting, and preserving evidence. Training may be met by one or a combination of the following:

a. Formal education in Forensic Science and/or classes, workshops, or webinars focused on other disciplines. Classes need to be documented in the examiner's training binder (electronic or hard copy)

b. Supplemental Reading/Training

c. Shadowing analysts in other units

d. **Resources:**

i. Forensic Technology Center of Excellence Webinars: https://forensiccoe.org

ii. Saferstein, Richard. *Criminalistics: An Introduction to Forensic Science*.

3. Assessment

1. This module should be completed by DNA analysts.

2. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

M. **Task 7. Courtroom and Legal Procedures**

1. Goal: To provide basic instruction and allow trainee to research the legal system of his/her jurisdiction

2. Tasks:

a. Instruction on courtroom procedures and presentation of evidence to cover:

i. Court structure (trial and appeals courts)

ii. Format of hearing or trial

iii. Discovery and Subpoenas

iv. Rules of evidence (401, 402, 403 hearings)

v. Admissibility rules (Daubert, Kelly Frye)

vi. Courtroom demeanor and attire

vii. DNA analyst qualifications

viii. Ethical responsibility of expert witness

ix. DNA Database legal authority (State and Federal)

x. Confidentiality/disclosure of information

xi. Applicable Criminal and Civil Laws

1. CA Penal Codes

2. Crimes against persons

3. Crimes against person involving sexual assault, against public decency and good morals

4. Crimes against property

5. Statute of Limitations

b. Observe courtroom testimony or complete a testimony course.

c. The analyst will prepare a statement of qualifications.

d. The analyst will participate in mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits as part of the competency test

3. Reading Assignments:

a. Nicholas T. Kuzmack, J.D., M.A., "Legal Aspects of Forensic Science", Chapter 1, Forensic Science Handbook, Richard Saferstein. (GC207)

b. Mark A. Farley, M.S., J.D, "Legal Standards for the Admissibility of Novel Scientific Evidence", Vol. III, Forensic Science Handbook, Richard Saferstein. Chapter 1 (GC165)

c. Thomas J. Gardner, "Criminal Evidence-Principles, Cases and Readings", 1978, pages 39-40, 50-62, 66-67, 80-93, 107-113, 120-126, 137-138, 189-204, 216, 220-221, 249-254, 485-487, 579-597. (GC169)

d. David L. Faigman, Michael J. Saks, Joseph Sanders, Edward K. Cheng, "Modern Scientific Evidence: The Law and Science of Expert Testimony", Volume 1: chapters 1 and 3, Volume 4: chapters 30, 31 and 32.

e. CA Peace officers Legal Sourcebook (found on CopWare)

4. Assessment

a. This module should be completed by analysts/technicians.

b. Completion of the module will include documentation of completion of the relevant reading assignments.

N. **Task 8. Final Evaluation:** Following the completion of training, all analyst's, technicians, and support personnel will be competency tested to assess the trainee's skills and understanding of the DNA Analytical Procedures and to assess the effectiveness of the training.

1. **Competency Test:** Successful completion of the training program and a competency test is required prior to the authorization of the trainee performing their job duty(s).

a. Task:

i. A test of unknown samples representative of the type of samples the trainee will be analyzing on the job.

ii. A written test report (if the trainee will be issuing reports)

iii. A written or oral test that assesses understanding of the fundamental scientific knowledge of forensic DNA analysis.

iv. Mock testimony questions or a mock court

b. Assessment

i. Competency test will be reviewed and documented in LIMS.

ii. Authorization will be given to the trainee after successful completion.

iii. Authorization will be documented on the DNA Training Log.

O. **Assessing the Effectiveness of Training**

1. The following will be used to evaluate the effectiveness of the DNA training program.

a. Technical and administrative review of all DNA casework

b. Proficiency testing

c. Court critiques

d. Yearly performance evaluations

P. **Retraining and Remedial Training**

A. **Retraining** may be required when an examiner has been absent greater than 12 months from performing casework or when there has been a significant change to a procedure.

B. **Remedial** training may be required if technical issues arise during training, competency testing, proficiency testing, courtroom testimony, or casework. A record of the remedial will be documented through a QA Action.

A. A modified training program will be created by the DNA Technical Lead/Supervisor or training coordinator and documented on the DNA training log.

B. The reason for the retraining/remedial training will also be documented on the DNA training log.

C. The individual shall successfully complete a competency test prior to returning to participation in casework analysis.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 10/16/2018	**NUMBER:** BIO.4.TRAIN.03 - YSTR Training
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** **DNA Quality Assurance Standards:**	
CHAPTER: TRAINING	**SUBJECT:** YSTR Training	

I. The goal of the DNA training program is to provide a trainee the knowledge, skills, and ability to perform DNA Y-STR testing on casework samples.

A. **Intent of the Training Program**

1. To develop knowledge, skills, and abilities in the area of Y-chromosome DNA testing culminating in the ability to perform Y-STR testing on casework samples.
2. To develop the necessary skills required for performing Y-STR testing, such as using proper equipment, analyzing samples, interpreting results, etc
3. To develop the knowledge necessary to provide expert testimony on Y-STR testing in court.

B. **Overview of the Training Program**

1. This training program is intended for technicians/analysts that are already trained to perform DNA STR testing. Training will be tailored to an employee's job duties and to the extent they will conduct casework, such as DNA technician or DNA analyst.
2. Training will entail reading literature, instruction, hands-on practical exercises, and court training.
3. Training will be given under the guidance of the DNA Technical Leader/Supervisor or an experienced DNA analyst may act as a training coordinator. The trainer is expected to communicate with the trainee throughout the program, offering feedback and guidance.

C. **Expectations of the Trainee**

1. The trainee will keep a notebook/binder of information compiled during the training program, including practical exercises.
2. The trainee will document their progress on the Y-STR Training Log, to include the date each portion of the training was completed, the trainee's initials, and the date and initials of the trainer. The training records will be retained in LIMS and may also be maintained in the trainee's training binder. Training records will be retained by the Laboratory, minimally 10 years, according to Division policy "Control of Records" FSD.44. (QAS 3.2)
3. Trainees will communicate any concerns about their training to the training coordinator and/or DNA Technical Leader/Supervisor.

D. **Guidelines for Competency**

1. To demonstrate the trainee's knowledge, skills, and abilities, the trainee will undergo a competency test to the extent they received training, prior to participating in casework or DNA testing activities. See BIO.5.QAQC.13 for Biology's procedures regarding competency testing. Criteria for successfully passing the competency test will be documented prior to the individual receiving the competency test. A record of the competency test will be tracked and maintained through LIMS.
2. The signatures of the DNA Technical Leader/Supervisor and Trainer on the training log will signify approval of the training and successful completion of the competency test. Approval signifies authorization for the trainee to conduct casework using all the equipment, instrumentation and procedures to the extent they received training and were competency tested.
3. If the analyst is expected to issue laboratory reports and has met the report writing competency requirements, the analyst will also be considered to be authorized to give opinions and interpretations in the areas(s) for which they received training and competency.
4. The analyst will enter into the proficiency test cycle within 6 months of the authorization to conduct casework.

E. Reading Assignments

1. Butler, John M. *Advanced Topics in Forensic DNA Typing: Methodology*. MA: Elsevier Academic Press, 2011. Chapter 13.
2. Butler, John M. *Advanced Topics in Forensic DNA Typing: Interpretation*. MA: Elsevier Academic Press, 2014. Chapter 15. *Required reading for DNA analyst training only.*
3. SWGDAM Interpretation Guidelines for Y-Chromosome STR Testing (2014).
4. CCCSO Y-STR Internal Validation Summary
5. PowerPlex Y23 System Technical Manual (4/17)
6. Thompson JM, et al. Developmental validation of the PowerPlex®Y23 System: A single multiplex Y-STR analysis system for casework and database samples. Forensic Sci Intl: Genetics 7 (2013) 240-250.
7. Ballantyne KN, et al. Mutability of Y-Chromosomal Microsatellites: Rates, Characteristics, Molecular Bases, and Forensic Implications. The Amer J of Human Gen 87, 341-353, September 10, 2010.
8. Gill P, et al. DNA Commission of the International Society of Forensic Genetics: recommendations on forensic analysis using Y-chromosome STRs. Forensic Sci Intl 124 (2001) 5-10.
9. Ge, J., Budowle, B., et al. US Forensic Y-chromosome Short Tandem Repeats Database. Legal Med 12 (2010) 289-295.

F. **Laboratory Analysis**

1. Goal: To provide practical instruction to the trainee on technologies, methodologies, and platforms used in the laboratory. Training will include instruction, on the Y-STR testing methods, and practical exercises for each of the relevant work areas. When available, training will be supplemented with continuing education through external sources such as the California Criminalistics Institute.
2. Tasks:
    a. *Instruction*
        i. Receive instruction on Y-STR Testing/Analysis
        ii. May include observing a demonstration of Y23 amplification set up and
        iii. performing Y23 amplification set up while being observed by a trainer
    b. *Practical Exercises* DNA analyst training shall include practical exercises on **"case-like" samples**. The type of samples included must vary, reflecting the range, type, and complexity of casework analyses routinely handled by his/her laboratory duties.
        i. Single source male DNA samples
            1. At the following target amounts: 0.032ng, 0.064ng, 0.125ng, and 0.250ng
        ii. Non-probative Mixed Semen/Non-sperm DNA (Differential digestions)
        iii. Male/Female Mixtures
            1. At different male:female ratios such as 1:100, 1:500, or higher
        iv. Mixtures of Two Males
            1. Targeting several different amounts of male DNA: 0.125ng, 0.250ng, and 0.5ng
            2. At the following ratios: 1:3 1:4, 1:10, 1:20 or similar
3. **Assessment:**
    a. Assessment will occur through review of the trainees compiled DNA data. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

G. **Interpretation/Analysis and Case Documentation/Reports**

1. Goal: To provide practical instruction to the analyst on the interpretation of Y-STR analysis in accordance with the analyst's job responsibilities and the extent to which the analyst will participate in DNA analysis. To provide instruction to an analyst on reporting analytical results according to the laboratory's policy
2. Tasks:
    a. The analyst shall receive *instruction and training* in the following areas:
        i. Mixture Interpretation

ii. Statistical Analysis

iii. Case Documentation (analyst and technician)

iv. Reporting Results/Report Writing

v. Technical and Administrative Review (analyst and technician)

vi. US YSTR database

b. The analyst should perform the following on *practice* casework samples:

i. Data interpretation using Genemapper ID-X

ii. Analysis of single source samples

iii. Analysis of mixture samples

iv. Practice using the statistical program

c. **Case Documentation**

i. Compile case notes for each of the sets of samples analyzed during training. (analyst and technician)

d. **Report Writing**

i. Write reports from the training sample sets generated above

ii. Reports should cover the typical casework analysis and interpretations expected in casework.

3. Assessment:

a. This module should be completed by DNA analysts to the extent in which they perform casework.

b. Assessment will occur through review of the trainees compiled DNA data, case packets, and reports. Documentation of successful completion/assessment of each task shall be noted on the trainee's DNA Training Log.

H. **Final Evaluation:** Following the completion of training, all analyst's, technicians, and support personnel will be competency tested to assess the trainee's skills and understanding of the DNA Analytical Procedures and to assess the effectiveness of the training.

1. **Competency Test:** Successful completion of the training program and a competency test is required prior to the authorization of the trainee performing their job duty(s). A competency test will consist of the following:

a. A test of unknown samples representative of the type of samples the trainee will be analyzing on the job.

b. A written test report (if the trainee will be issuing reports)

c. A written or oral test that assesses understanding of the fundamental scientific knowledge of forensic DNA analysis.

d. Mock testimony questions or a mock court

2. Assessment:

a. Competency test will be reviewed and documented in LIMS.

b. Authorization will be given to the trainee after successful completion. Authorization will be documented on the DNA Training Log.

I. **Assessing the Effectiveness of Training**

1. The following will be used to evaluate the effectiveness of the DNA training program.

a. Technical and administrative review of all DNA casework

b. Proficiency testing

c. Court critiques

d. Yearly performance evaluations

J. **Retraining and Remedial Training**

1. **Retraining** may be required when an examiner has been absent greater than 12 months from performing casework or when there has been a significant change to a procedure.

2. **Remedial** training may be required if technical issues arise during training, competency testing, proficiency testing, courtroom testimony, or casework. A record of the remedial will be documented through a QA Action.

    a. A modified training program will be created by the DNA Technical Lead/Supervisor or training coordinator and documented on the DNA training log.

    b. The reason for the retraining/remedial training will also be documented on the DNA training log.

    c. The individual shall successfully complete a competency test prior to returning to participation in casework analysis.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/30/2014	**NUMBER:** BIO.5.QAQC.01
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS 3.1.1.1	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Overview and Scope of the Quality Assurance Program	

BACKGROUND

The DNA Identification Act of 1994 established the DNA Advisory Board (DAB) and was composed of a panel of professionals from the public and private sectors. The DAB first convened in 1995 and set out to develop and revise recommended standards for quality assurance. The first DNA Quality Assurance Standards (QAS) were developed in October 1998 and have become benchmarks for assessing the quality practices and performances of DNA laboratories across the country. When the Federal DNA Advisory Board's statutory term expired, the responsibility for recommending revisions to the QAS was transferred to the Scientific Working Group on DNA Analysis Methods (SWGDAM).

The DNA Identificaton Act of 1994 also requires that the FBI ensure that all DNA laboratories that are federally operated, receive federal funds or participate in the National DNA Index System (NDIS) demonstrate compliance with the QAS. Documentation of the laboratory's compliance with these established standards is measured through an audit process which is conducted yearly. The QAS audit document defines and interprets each standard, and is structured so that criteria, which overlap with ASCLD/LAB, are consistent for interpretation purposes.

GOALS AND OBJECTIVES

One of the Biology Unit's primary roles is the examination and identification of biological materials, such as hair, tissue, bones, teeth, blood, semen, and other bodily fluids. Not all biological evidence is readily visible, thus the key to any examination is the ability to detect the biological evidence.

One or more types of biological evidence may be associated with any one case, and each type of biological evidence may have a unique importance, as well as its own probative value. The Biology Unit plays a role in assessing and conveying the significance of the evidence to the criminal justice community.

DNA, which can be obtained from a number of different biological materials, is utilized by the Biology Unit to identify the human source of the biological material through the use of DNA typing methods.

The goal of the Biology Unit is to provide a high quality work product that can be effectively employed by, communicated to, and relied upon by the criminal justice system.

The field of forensic science is constantly changing with developments in new techniques, refinements to existing capabilities, and providing new capabilities. The Biology Unit's quality assurance program is a means to guide, direct, assess, and monitor (on an on-going basis) the quality, integrity and reliability of the techniques, procedures, and capabilities currently used in the Biology Unit, as well as those that may be utilized in the future.

OVERVIEW AND SCOPE

The Laboratory is accredited by ASCLD/LAB (American Society of Crime Lab Directors Laboratory Accreditation Board). The Biology Unit acknowledges and abides by the DNA Quality Assurance Standards (QAS) for Forensic DNA Testing Laboratories.

The Biology Unit has developed a quality program to ensure the accuracy and reliability of work performed in the unit. The quality system is documented primarily in the Quality Assurance/Quality Control Chapter of the Biology Technical Unit Manual. The Biology Technical Unit Manual consists of the following chapters:

1. Biology Procedures (chapter, BIO.1.BIO.et al)
2. DNA Analytical Procedures (chapter, BIO.2.DNA.et al) **QAS 9.1.1**

3. CODIS (chapter, BIO.3.CODIS.et al)
4. Training (chapter, BIO.4.TRAIN.et al)
5. Biology Unit Quality Assurance\Quality Control (chapter, BIO.5.QAQC.et al)
6. Forms (BIO.1.BIO.F.et al & BIO.5.QAQCF.et al)

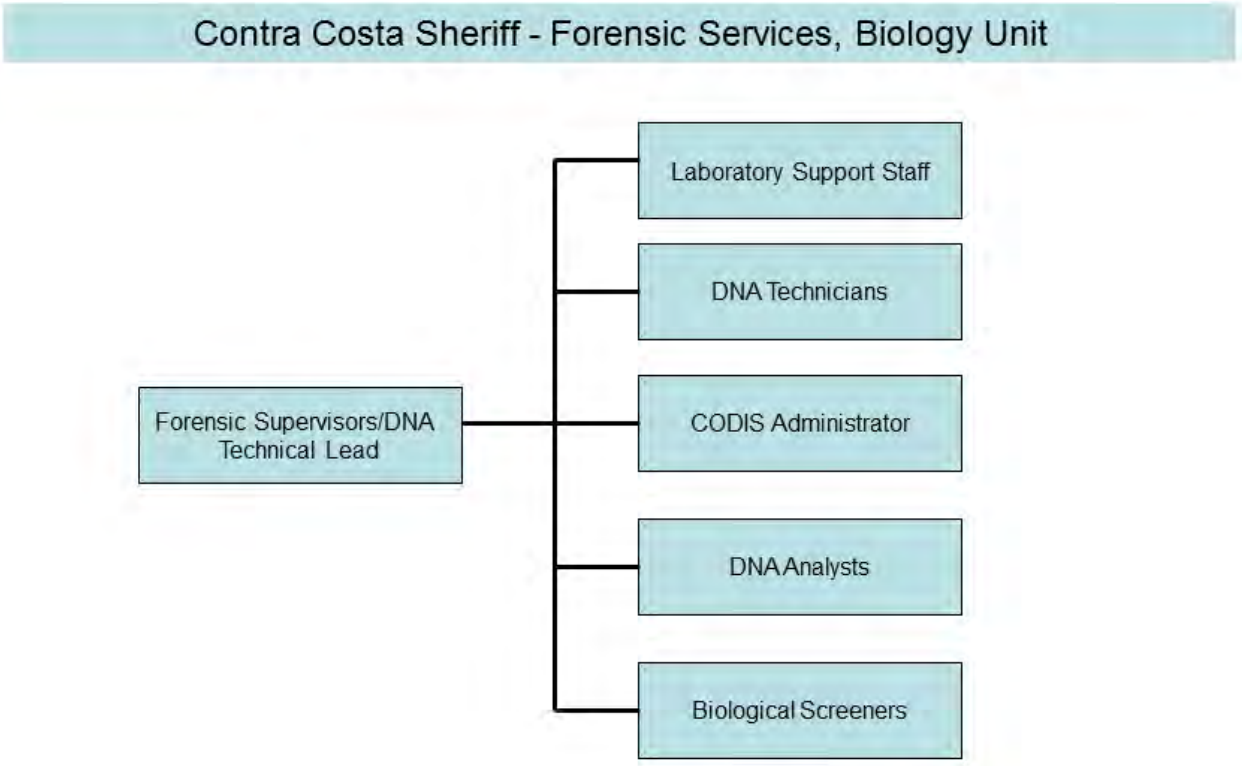
The Biology Unit's policies, procedures and forms are controlled according to the Division's document control policy FSD.44 . The documents are controlled to prevent procedural drift which could lead to the misuse or misunderstanding of procedures and methods.

The DNA analytical procedures are reviewed annually as part of the annual Quality Review of the Biology Unit at the direction of the DNA Technical Leader. **QAS 9.1** The review is documented in a memo or other form of interoffice communications. For additional information on the annual Quality Review, refer to BIO.5.QAQC.12. Supplemental quality assurance measures can be found in the Division Manual (FSD.et al) & Division Quality Assurance Manual (QA.et al).

A current version of the DNA Quality Assurance Standards can be referenced electronically through the laboratory's document control system (PowerDMS) or on the Biology's Unit network folder.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 2/20/2018	**NUMBER:** BIO.5.QAQC.04 - Organization and Management
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 4	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Organization and Management	



I. Organization

A. An organizational chart with the names of current personnel and their specific position or assignment is maintained on the Biology Unit's network folder. **QAS 4.1.1, 4.1.5**

B. The Biology unit has greater than two qualified DNA analysts and will maintain a minimum of two full time employees qualified to do DNA analysis among the technical staff of the Biology Unit. **QAS 4.1.4**

C. A Division-wide organization chart and chain of command is defined in the Division Manual under section (FSD.02)

II. Management

A. Job descriptions within the Division are defined in the Division Manual under section (FSD.03). Job descriptions for the following positions are defined in the Division Manual under the following sections:

1. Chief of Forensics (FSD.04)
2. Section Manager (FSD.05)

3. Technical Unit Supervisor (FSD.06)
4. Quality Assurance Coordinator (FSD.07)

III. Roles maintained within the Biology Unit

A. **Biology Unit Supervisor:** The Biology Unit has at least one Supervisor position in the unit. The Supervisor is responsible for directly supervising technical and support personnel in the Biology unit. The position and responsibilities are defined in the Division Manual under section FSD.06 .

B. **DNA Technical Leader:** The Biology Unit has one DNA Technical Leader position in the unit. The DNA Technical Lead is responsible for the technical operations. The position and responsibilities are defined in the Biology Technical Unit Manual under section (BIO.5.QAQC.05). **QAS 4.1.2**

1. The Division has a documented contingency plan, approved by laboratory management, in the event of a vacancy in the DNA Technical Leader position. A copy of the plan is kept within the Biology Unit. **QAS 4.1.6**
2. The Chief may appoint a new DNA Technical Leader at any time depending on the needs of the Division though the importance for stability in this position will be taken into consideration. In the event that the technical leader position is vacated and there is no individual in the laboratory who meets the requirements of this standard to serve as a technical leader, the laboratory will immediately contact the FBI and submit their contingency plan within 14 days to the FBI for its approval. DNA casework will cease until the contingency plan or a new DNA Technical Leader is set in place.

C. **Casework CODIS Administrator:** To meet NDIS requirements, the Biology Unit has a casework CODIS Administrator position in the unit. The CODIS Administrator position and responsibilities are defined in the CODIS Manual (BIO.3.CODIS.05). **QAS 4.1.3**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 1/22/2019	**NUMBER:** BIO.5.QAQC.05 - Biology Unit Personnel
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 5 ISO/IEC 17025: 5.2	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Biology Unit Personnel	

I. **Personnel in the Biology Unit will possess education, training, and experience in accordance with ANAB and FBI Quality Assurance Standards for Forensic DNA Laboratories.**

A. **Job Descriptions**

1. The FSD manual section on Job Descriptions (FSD.03) sets policy on general job descriptions for all employees of the division. The County Human Resources Department maintains written job descriptions for each job title within the County. The Biology Unit maintains personnel with specific roles and with these roles they must meet additional requirements as specified in the FBI DNA Quality Assurance Standards for Forensic DNA Testing. The requirements of the Biology Unit as well as the qualifications, responsibility, and/or authority of each position is described below.

2. **Biological Screener**

a. Role: A biological screener performs casework requiring the identification and collection of physiological fluids, preparation of case reports, and expert testimony. Additional duties may include preparation of reagents, validation, calibration of equipment and other quality control checks, and ordering supplies.

b. Qualifications: A biological screener will be an employee of the Contra Costa Sheriff's Office and have, at a minimum, the following education, experience, and training:

1. A bachelor's degree in a natural science or a closely related field.

2. Prior experience or training (in-house or external) in biological screening to include; hands-on testing in the types of procedures performed at the laboratory.

3. A competency test in the category(s) of testing to be performed in casework.

c. Authorization:

1. Upon successful completion of training and competency testing, an examiner will be authorized to access evidence storage, reagents and supplies necessary to perform casework, use all equipment, instrumentation and procedures they were trained to use, perform validation studies, issue reports, give opinions and interpretations associated with the scope and category(s) of tests the examiner has been qualified to perform.

2. The examiner is authorized to release results to the client agency and provide expert testimony.

3. Acknowledging successful completion of training and competency testing and authorization to conduct casework will be documented on the examiner's training log.

3. **Technicians QAS 5.5**

a. Role: Technicians conduct a variety of duties including preparation of reagents, calibration of equipment, quality control checks, validation and performance verification, and ordering supplies. A technician may also assist with processing casework samples through analytical methods not involving interpretation and analysis.

b. Qualifications: A technician will be an employee of the Contra Costa Sheriff's Office and have, at a minimum, the following education, experience, and training:

1. A bachelor's degree in a natural science or a closely related field.

2. Prior experience or training (in-house or external) in forensic DNA testing to include; procedures and tasks to be performed at the laboratory.

3. A competency test in the analytical techniques to be performed.

c. Authorization:

1. Upon successful completion of training and a competency test, a technician will be authorized to handle DNA extracts and products from casework at the direction of a qualified examiner for purposes of assisting with analytical techniques related to DNA analysis. This includes all equipment, software, procedures, reagents and supplies necessary to perform their job duties. The technician will be authorized to perform other assigned duties based on the scope of their training.

2. Technicians will not; interpret or draw conclusions on analytical results, serve as a reviewer, prepare final reports, or release information or results to any outside agency.

3. Technicians will have limited access to evidence storage and may need to testify to the scope of their duties.

4. **DNA Analysts QAS 5.4**

a. Role: A DNA analyst will perform DNA analysis on a range of evidentiary materials to the extent they have received training and competency testing, including evaluation and preparation of the evidence, interpretation of analytical results, preparation of reports and expert testimony. A DNA analyst may also conduct some of the Unit's quality control activities, such as performance checks, calibrations, and validation activities.

b. Qualifications: A DNA analyst must be an employee or contract employee of the Laboratory and have, at a minimum, the following education, experience, and training:

1. A bachelor's degree in biology, chemistry or forensic science related area which includes; a minimum of nine cumulative, semester-equivalent hours credited in coursework in biochemistry, genetics and molecular biology (molecular genetics, recombinant DNA technology). The subject of biochemistry, genetics, or molecular biology must constitute an integral component of such credited coursework. Course work and/or training in statistics and population genetics as it applies to forensic DNA analysis is also required.

2. Documented approval of coursework by the DNA Technical Leader, prior to commencing casework.

3. Prior experience or a minimum of six months of forensic DNA laboratory experience to include; analysis on a range of samples typically encountered in forensic casework or training (in-house or external) in DNA analysis to include; hands-on training following laboratory procedures and analysis on a range of samples typically encountered in forensic casework.

4. A competency test in the DNA analytical techniques and procedures used in the Laboratory, using a range of samples typically encountered in casework.

c. Authorization:

1. Upon completion of training and competency testing, an examiner will be authorized to access evidence storage, use reagents and supplies necessary to perform casework, use all equipment, instrumentation and procedures they were trained to use, issue reports, give opinions and interpretations associated with the scope of DNA testing the examiner has been qualified to perform.

2. The examiner is authorized to release results to the client agency, adhering to Division Policy, and provide expert testimony.

3. Acknowledgement of completion of training and competency testing and authorization to conduct casework will be documented on the examiner's training log and an authorization will be written.

5. **Laboratory Support Personnel QAS 5.7**

a. Role: Laboratory Support Personnel are employees who perform laboratory duties exclusive of analytical techniques on forensic samples. These individuals can be responsible for performing activities such as quality control duties, instrument maintenance, validation studies/performance checks, ordering, and reagent preparation.

b. Qualifications: Laboratory Support Personnel will be employees of the Contra Costa Sheriff's Office. They will have at a minimum the following:

1. Meet the degree requirements for a Sheriff's Specialist.

2. Training on the procedures and tasks to be performed at the laboratory.

3. A competency test in the techniques to be performed.

c. Authorization: Upon successful completion of training and a competency test, laboratory support staff will be authorized to perform the tasks they were trained to perform within the unit.

6. **Contract Employees QAS 5.4**

a. Role: An individual who is not an employee of the Contra Costa Sheriff's Office and who meets the requirements specified in the DNA Quality Assurance Standards on education, experience, and training as a DNA analyst, if providing DNA casework services, or an individual who is qualified to perform biological screening services. The contract employee must work in accordance with Division policy and procedures, as well as, the laboratory's quality system. If employed or seeking employment by another NDIS participating and/or vendor laboratory, the contract employee shall disclose this information and seek approval from the Technical Leader. The Technical Leader will review the employment for potential conflict of interest issues.

b. Qualifications: A contract employee may perform biological screening, DNA analysis, or technical review. The contract employee must meet the same qualifications regarding education, experience, training, and competency testing as specified for a Biological Screener, DNA analyst, or Technical Reviewer.

c. Authorization:

1. Upon successful completion of training and a competency test, a contract employee will be authorized to conduct and technically review casework to the extent in which they are trained.

2. Acknowledgement of completion of training, competency testing, and authorization to conduct casework will be documented on the individuals training log.

3. The contract employee cannot serve as a Technical Leader or a CODIS Administrator, and is not counted as a full time employee for purposes of meeting the minimum staffing requirements for a DNA Laboratory.

7. **DNA Technical Leader QAS 5.2**

a. Roles and Responsibilities of the DNA Technical Leader : The Technical Leader will work closely with the Unit Supervisor on quality issues and inform the CODIS Administrator of any quality issues that may affect CODIS, and be responsible for the following duties: **QAS 5.2.3**

1. Oversee the technical operations of the DNA program
2. Oversee Quality Assurance of the DNA program
3. Evaluate and document the approval of all validations and methods, and to propose new or modified analytical procedures to be used by DNA analysts
4. Review the academic transcripts and training records for newly qualified analysts and approve their qualifications prior to independent casework analysis and document such review.
5. Approve the technical specifications of outsourcing agreements.
6. Review internal and external DNA Audit documents and, if applicable, approve corrective action(s), and document such review.
7. Review, on an annual basis, the DNA procedures and document such review
8. Review and approve the training, quality assurance and proficiency testing programs
9. Review requests by contract employees for employment by multiple NDIS participating and/or vendor laboratories and, if no potential conflict of interest exist, approve such requests.
10. A newly appointed DNA Technical Leader will be responsible for the documented review of the validation studies and methodologies currently used by the DNA unit and the review of the educational requirements and training records of the currently qualified DNA analysts. **QAS 5.2.5**

b. Qualifications for DNA Technical Leader **QAS 5.2.2**: The DNA Technical Leader must be a full time employee of the Laboratory and have, at a minimum, the following education, experience, and training: Completion of all requirements for a DNA Analyst.

1. Minimum of three years of Forensic DNA laboratory experience as a qualified DNA analyst of forensic samples. This experience must have been obtained at a laboratory where forensic DNA testing was conducted for the identification and evaluation of biological evidence in criminal matters.

2. Either A or B:

A. A minimum of a Master's degree in biology, chemistry, or a forensic science-related area and successful completion of a minimum of 12 semester or equivalent credit hours from a combination of undergraduate and graduate course work covering the subject areas of biochemistry, genetics and molecular biology, and statistics or population genetics. This must include, at minimum, the following: **QAS 5.2.1**

The 12 semester or equivalent credit hours shall include at least one graduate level course of three or more equivalent credit hours.

The specific subject areas listed above must constitute an integral component of the course to qualify towards meeting the required 12 semester hours.

B. Possess a waiver obtained from the American Society of Crime Laboratory Directors.

3. The technical leader must have successfully completed the FBI sponsored auditor training course, or complete the training within one year of appointment.

4. The individual appointed as the DNA Technical Leader will be a full time employee of the Laboratory and may be selected from technical, supervisory, or management staff, depending on the staffing levels of the Division, the existing budget situation, and the needs of the Division.

c. Authorization: The Technical Leader shall be accessible to the Laboratory to provide onsite, telephone or electronic consultation as needed. **QAS 5.2.4.** The DNA Technical Leader has the same authorities as those listed for a DNA analyst and Technical Reviewer, such as conducting independent casework and assisting in the technical review of casework. The Technical Leader is authorized to assist in assigning and administering DNA proficiency tests and assist in technical problem solving of analytical methods. The DNA Technical Leader has the authority to initiate, suspend and resume DNA casework for the Biology Unit or an individual.

8. **Casework CODIS Administrator QAS 5.3**

a. See BIO.3.CODIS.05 for the casework CODIS Administrator's role, qualifications and authorizations.

9. **Technical Reviewer of In-house Generated Data QAS 5.5/12.1.1**

a. Role: A technical reviewer evaluates reports, notes, data, quality controls, and other documents to ensure there is appropriate and sufficient data for the test results and conclusions drawn.

b. Qualifications: A technical reviewer is an employee or contract employee currently or previously qualified in the methodologies being reviewed. A technical reviewer typically is an experienced examiner, who has gained expertise through training and experience in the discipline or category of testing. Other requirements are as follows:

1. Technical reviewers are trained in the scope of technical review, prior to participating in the technical review of in-house generated data/results.

2. An employee, such as a contract employee, whose sole responsibility is to perform technical review will be proficiency tested for the role of technical reviewing. The proficiency testing will cover the same technology, platform and typing amplification test kits that are used to generate in-house data/results.

3. Qualified DNA analysts who undergo semi-annual proficiency testing and who also conduct technical reviews of in-house casework meet the "technical review proficiency testing requirement" through the successful completion of their proficiency tests.

c. Authorization: After technical review training, an employee will be authorized to perform technical review to the extent they received training. The technical reviewer cannot be the author of the report or of the contents of the technical case notes supporting the report.

10. **Technical Reviewer of Outsourced/Vendor Generated Data QAS 17**

a. The qualifications of the technical reviewer and the requirements of the technical review process of examinations and results generated by another laboratory is addressed in BIO.5.QAQC.17.

11. **Administrative Reviewers QAS 12**

a. Role: An administrative reviewer will evaluate the report for concordance and accuracy of information with the supporting case notes, for consistency with laboratory and unit policies, and for format, content and grammar.

b. Qualifications: An administrative reviewer will be an employee of the laboratory and demonstrate knowledge and understanding of the Laboratory's administrative review process (FSD.18) and the Biology Unit's review process (BIO.5.QAQC.12). Biology Unit examiners will be given authorization to conduct administrative reviews by the Biology Unit Supervisor. An administrative reviewer is not required to be a current or former DNA analyst or biological screener, however having experience will provide an added measure of review for the casework. An examiner who has training and who has gained expertise through casework experience in the discipline or category of testing will typically be designated by the Supervisor to be an administrative reviewer.

c. Authorization: After administrative review training and individual will be authorized to perform administrative review. An administrative reviewer cannot be the author of the report or of the contents of the technical case notes supporting the report. An administrative reviewer may also be the technical reviewer of the case file. When this occurs, the administrative reviewer must meet the qualifications of a technical reviewer.

B. **Continuing Education QAS 5.1.3**

1. Continuing education is an integral part of maintaining expertise in the field of Forensic Biology. Each member of the Biology Unit, which includes the DNA Technical Leader, CODIS Administrator, Biological Screeners, DNA Analysts, and DNA Technicians will stay abreast of developments and issues within the field of Forensic Biology. This requirement is considered a mutual responsibility of both the employee and the laboratory management.

2. As an aid in maintaining currency in the field of Forensic Biology, the Laboratory will afford each Biology Unit member at least one session of continuing education per calendar year, that will be a minimum of 8 hours. DNA analysts must have a minimum of *8 hours* of continuing education on subject areas relevant to the developments in DNA typing. A session of continuing education is generally defined as a discreet unit of on-duty work time devoted to professional development in a relevant discipline among one or more of the following categories: **QAS 5.1.3.1**

3. **External Continuing Educational Categories:**

   a. University level coursework. This coursework may be for formal credit, continuing educational credit, or on an instructor-approved audited coursework basis.

   b. Professional development courses offered through an outside agency, professional organization, or vendor. Examples include, but are not limited to:

      1. Formal instruction courses hosted by outside agencies such as the California Criminalistics Institute (CCI) and the Federal Bureau of Investigation (FBI)
      2. Workshops conducted by professional organizations such as IAFS, AAFS, CAC, and similar professional organizations
      3. Formal training offered by vendors such as Applied Biosystems and Promega.

   c. Seminars, symposia, or related scientific forums designed to disseminate recent technical material in the field of Forensic Biology. Examples include, but are not limited to:

      1. Seminars hosted by forensic societies such as AAFS, CAC, and similar organizations
      2. Symposia such as the International Symposium on Human Identification.

   d. Study Group and User Group forums. Examples include, but are not limited to:

      1. CAC User Group meetings hosted at semi-annual seminars
      2. CODIS user group conferences
      3. Vendor user group meetings such as the Applied Biosystems Users Group
      4. CAC DNA Study Group sessions.

4. **Internal Continuing Education:**

   a. Biology unit members may also fulfill continuing educational requirements through documented training conducted within the Laboratory. Valid internal continuing education will consist at a minimum of a program which includes a course title, date of training, attendance list, curriculum vitae of instructors, and a record or the material covered in the training session. **QAS 5.1.3.1.1**

5. **Multimedia or Internet based Continuing Education:**

   a. Biology unit members may fulfill continuing education requirements through programs based on multimedia or internet delivery (i.e. webinars, online courses). Participation in such programs shall be documented as well as the amount of time required to complete the training. Use of these programs for continuing education shall be reviewed and approved by the DNA Technical Lead, if the program is to be used as continuing education in the field of DNA analysis. **QAS 5.1.3.1.3**

6. **Scientific Literature:**

   a. The Laboratory provides and maintains relevant materials such as current books, journals, and other applicable literature in the field of Forensic Biology; the Laboratory provides internet capabilities for accessing off site resources; and the Laboratory affords each employee with on-duty time to pursue and maintain currency in the field. **QAS 5.1.3.2**

b. As part of the continuing education program, scientific journal articles on relevant forensic biology issues are reviewed by staff and approved by the DNA technical leader. Literature review can be documented in the form of a Literature Circulation Form or in the Laboratory's electronic document control system (PowerDMS).

7. **Documentation and Retention**

a. Individual records of continuing education may consist of a certificate, agenda/syllabus or travel documentation. The documents are maintained electronically in the examiner's training module in LIMS and may also be maintained as hard copies in the examiner's training binder. **QAS 5.1.3.1.2**

b. Each individual in the unit is to maintain and keep current their Statement of Qualifications which is administered through the Laboratory Information Management System (LIMS) training module. The Statement of Qualifications reflects an examiner's qualifications, training, skills and experience records. **QAS 5.1.4**

c. The DNA Technical Lead will maintain records of literature read/reviewed by active DNA analysts. **QAS 5.1.3**

d. Continuing education records are retained minimally for 10 years according to Division Manual policy "Control of Record" FSD.44 **QAS 3.2**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 01/23/2017	**NUMBER:** BIO.5.QAQC.06 - Facilities and Environmental Conditions
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano, & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 6 ISO/IEC:17025 Std 5.3	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Facilities and Environmental Conditions	

From the time of receipt until relinquished back to the client agency, the integrity of evidence is controlled through the use of security, facility layout and design, handling practices, and procedural controls for monitoring.

Refer to BIO.5.QAQC.19 for evidence controls dealing with evidence handling practices and procedural controls for monitoring for DNA contamination.

Facility Layout and Design Controls (QAS 6.1)

The laboratory layout, as well as, segregated Biology Unit examination areas play a role in preventing the contamination of evidence. All examination functions throughout the laboratory are in areas separate from office/administrative areas to ensure staff's safety and to prevent contamination.

1. An evidence item may be examined by more than one discipline in the laboratory. Each discipline has their own dedicated work spaces and are separated from one another in the laboratory.
2. Biological evidence typically will progress through one or more of the designated work areas within the Biology Unit, such as through the biological screening area, DNA extraction and setup, and amplification.
3. Each area is designed and equipped for the type of examination(s) or for the type of procedures that will be conducted in the particular work space area. The design is intended to meet specific examination requirements, as well as, to ensure casework efficiency and prevention of evidence contamination. **(ISO/IEC:17025 Std 5.3.3)**

The Biology Unit is organized and separated into the following examination areas: (**QAS 6.1.2 & 6.1.3)**

1. The main examination/screening areas are comprised of dedicated work stations that are individually equipped to conduct biological screenings and/or for preparing and handling specimens for DNA analysis.
2. Additional isolated areas are available for instrumental examinations that require the use of specialized lighting or equipment, such as a microscope, an ALS or IR lighting. These work areas are separated from the DNA extraction areas, PCR setup areas, and the PCR room.
3. DNA extraction is conducted in a designated area separate from screening and amplification areas. The extraction area is equipped with dedicated chemical hoods with pipettes and centrifuges for performing organic extractions and extraction robots that are fully enclosed for DNA extraction and recovery. The equipment and supplies for either organic extraction or robotic extraction are dedicated to the extraction work space. Concentration of DNA is conducted either with single use concentration devices, or in an evaporative centrifuge within the extraction area.
4. The mastermix setup for qPCR and PCR is conducted manually in dedicated hoods or within an enclosed liquid handling robot. The equipment and supplies for manual and robotic qPCR and PCR set-up are dedicated to the work space area. PCR and qPCR setups are conducted within the same dedicated work space hoods, but the setups are conducted at different times.
5. The PCR room is dedicated to the amplification and typing of DNA and is furnished with instrumentation, equipment, and supplies dedicated for this purpose. The PCR room is in an enclosed room that is physically separated from the other examination areas. All generated DNA product, equipment and supplies are maintained indefinitely in the PCR room until discarded.

Security Controls (QAS 6.1)

1. Access to the laboratory is controlled and limited to prevent access by unauthorized personnel. Security and controlled access areas in the laboratory are described in the Division Manual section on Security, FSD.32 **. (QAS 6.1.1.a & .b)**
2. Designated Biology areas have limited access to Biology staff, Supervisors, and Management via key card.
3. Authorized FSD employees have access to the evidence storage rooms, including the incoming and outgoing freezers. In-progress Biology freezers are restricted to biology staff within the biology work area.
4. The PCR room door(s) are kept closed at all times. The PCR room and the CODIS room are situated in designated Biology areas where access is limited to Biology staff, Supervisors, and Management. **(QAS 6.1.3.a)**
5. The last employee to leave any of the dedicated Biology Unit areas is responsible for turning off the lights and ensuring the doors are closed upon leaving.

Environmental Controls

In addition to security and facility designs with dedicated examination areas, other evidence control measures are implemented to protect the integrity of the evidence and analyses conducted.

To ensure the evidence remains unaltered by improper environmental conditions, the laboratory is climate controlled and uses climate controlled equipment, such as refrigerators and freezers, and provides suitable lighting, energy, and noise reduction for the examination and equipment needed for the analysis of biological specimens. **(ISO/IEC:17025 5.3.1)**

1. Proper environmental temperatures are to be maintained during biological examinations and testing, for sample storage, and for proper function of instrumentation.

2. The proper evidence storage temperatures for refrigerators and freezers are dependent on the evidence, reagents and supplies that are maintained in each individual unit.

    a. The temperature conditions of refrigerators and freezers are monitored on a routine basis and the procedures for monitoring are described in the common laboratory equipment procedure, BIO.5.QAQC.24

3. Temperature and environmental conditions required for particular technical or instrumental procedures are specified in the relevant technical procedures.

    a. To monitor the performance of analyses that might be affected by environmental factors, internal procedural controls are used to monitor the performance of the analysis. For example, the size standard can be used to monitor for fluctuations in the ambient temperature of the PCR room.

4. Unnecessary noises and distractions that affect an examiner's concentration or draw the examiner's attention away from their work are to be minimized and avoided, when possible. Examinations should be postponed if a laboratory activity has the potential to jeopardize the quality of the work product.

5. Examination will be stopped when environmental conditions jeopardize test results, such as poor lighting, temperature, risk of contamination, safety, and excess noise and distractions.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 04/24/2019	**NUMBER:** BIO.5.QAQC.07 - Evidence Control
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** DNA QA Standards DNA QAS Std 7 ISO/IEC17025 7.4	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Evidence Control	

I. The Biology Unit follows the Division's policies for evidence handling and itemization with the following additions and/or clarifications. All evidence will be handled and stored in a way that will minimize the possibility of loss, degradation, contamination, and deleterious change.

A. **Evidence Receipt and Chain of Custody QAS 7.1.2**

1. The Biology Unit adheres to the Division Manual, FSD.35 for procedures addressing evidence receipt and chain of custody.

B. **Conditions Requiring Work to be Halted**

1. If the Biology Unit begins an examination but finds abnormal conditions that impact the Unit's ability to complete the work, the customer will be contacted to resolve the situation. For example, when a package does not contain the item described on the request form or the package is labeled incorrectly.

C. **Evidence Examination and Collection**

1. Each item of evidence submitted to the laboratory and created by the laboratory is assigned a unique LIMS submission number. An examiner uses the LIMS submission number(s) assigned to the Lab request to obtain the correct evidence from incoming storage. The condition of the packaging is inspected for proper seal to ensure the evidence has not been accessed, altered, compromised or potentially lost. Once opened, the content(s) are inventoried.
2. Prior to evidence being permanently altered or consumed the evidence needs to be documented. See BIO.5.QAQC.21 for information regarding evidence documentation. Documentation may also include sketches or photographs.
3. The evidence collection should first concentrate on evidence easily lost, such as hair and trace, and then to stains.
4. Paper folds and Post-It notes may be used for the collection of trace evidence such as hairs and fibers.
5. Collection should be done using the most direct but least intrusive method.
6. **Collection Procedures**
   a. **Cutting** may be used for stains absorbed into a porous surface, such as clothing or bedding. For large items, such as carpets, bedding, upholstery, etc. it may be necessary to cut out the stained areas for later testing and preservation.
      i. Use a clean razor blade or scalpel to excise a portion of the stain (typically 0.5cm x 0.5cm), however larger cuttings may be taken.
   b. **Swabbing** is the preferred method when the stain is on a non-porous surface, such as condoms, glass, leather, metals, plastics, and various weapons. Swabbing may also be the preferred method if a direct cutting is likely to increase inhibitors in the sample, or when surface cells are the targeted evidence.
      i. Moisten a sterile cotton swab(s) using sterile water. Be sure not to saturate the swab completely.
      ii. Rub the wet swab(s) over the area of interest thoroughly, collecting and concentrating as much of the stain or touch DNA as possible.
      iii. Allow the swabs to thoroughly air-dry and package or take directly to DNA digestion.
      iv. If the stain is limited or the target evidence is touch DNA, use a single swab to completely collect and concentrate the sample. More than one swab can be used for larger surface areas or large stains.

7. **Wet Biological Evidence:** Typically this is when condoms containing liquid are submitted to the laboratory. Dry cotton swabs or cloth swatches should be used to collect all the liquid. Allow swabs/swatches to air-dry and package.

8. **Substrate Controls** can be obtained by taking a swab sample or cutting of a visually unstained area next to a stained area. These are typically collected when there is a potential that background DNA on an item will affect the ability to interpret the profile developed from the stain. The control and biological stain should be collected in the same manner. For example, if a swab is used to collect the stain, a swab should be used to collect from the control area. The same sized surface area or cutting should be taken as the stain when sampling.

9. All collected evidence must be itemized and must meet the criteria for chain of custody in FSD.35. See below for chain of custody criteria for DNA extracts.

D. **Consumption of Evidence QAS 7.3**

1. The Biology unit will make every effort to preserve a portion of the original evidence. Some items that typically contain trace levels of DNA (such as touch DNA swabs) may need to be consumed during testing. If evidence is to be consumed during testing a photograph of the item/swabs must be taken.

2. If evidence requires consumption and the case is filed with the DA's office, permission must be granted by the DA's office before examination commences. A defense representative or a defense expert may view and/or photograph the original evidence under the supervision of a biology unit staff member. All precautions to prevent contamination will be taken by all parties involved in the process.

3. If requested by the defense, a defense DNA expert may witness DNA testing (Sampling through STR amplification). The expert may take notes, however to minimize disruption to the analyst's concentration, photography or video taping of the testing will not be permitted. Experts are not permitted in the PCR room.

E. **Evidence vs Work Product QAS 7.1.1**

1. Evidence:

   a. Is any item or sample submitted as part of a criminal investigation and identified by the client agency as evidence.

   b. Is any sample split or directly removed from the original evidence (such as cuttings of stains, swabs, and trace evidence).

2. Work product:

   a. DNA extracts, PCR products, direct amplification digests, and anything generated during biological screening are considered work product.

   b. Remaining DNA extracts from evidence samples **will be returned** to the client agency. When a DNA extract is consumed the empty tube **may be discarded.**

   c. Processed substrates (swabs and cuttings) that have gone through cellular digestion are deemed to no longer contain biological material and **may be discarded**.

   d. Screening examination products may **be retained** for DNA analysis or **returned** to the client agency.

   e. Remaining PCR products, direct amplification digests, and internal lab QC samples **will be discarded.**

   f. Remaining DNA extracts from reference samples (where original reference material remains for re-testing) **may be returned or discarded.**

3. Biological screening products and DNA extracts are uniquely identified throughout processing. The unique identifier consists of the laboratory number and item number. The examiners initials and the date created will also be placed on the tube. Alternatively, tubes may be labeled with a unique barcode, created from the lab number and item number. The analyst will also initial and date the tubes as well.

4. For work products that cannot be directly labeled, such as those in 96-well plates, the specimen may be identified with a position number (i.e well A1, A2, etc). The lab number and item number of the evidence assigned to each well will be documented on a DNA worksheet.

5. DNA extracts are not evidence but will be itemized in LIMS as a child of the item it is being derived from.

F. **Evidence Packaging**

1. Paper bags and envelopes will be used for packaging of most biological material.

2. Wet or moist biological evidence must be dried prior to packaging.

3. Paper folds and Post-Its used to collect trace evidence such as hairs and fibers will be placed into evidence envelopes and properly sealed to prevent loss.

4. Evidence collected or generated during examinations, such as the collection of biological stains from the parent item, may be repackaged within the parent packaging or packaged separately from the parent.

5. Evidence collected and split from different evidence submissions or sub-items from the same case may be packaged together as long as each of the individual items/specimens are individually packaged and uniquely identified.

6. Biology work products may be placed back into an original package or a new package may be created to contain them. Where the biology work products are contained should be included in the case file.

7. A green disposition sticker advising the agency on how to store the evidence at their facility should be placed on the outer evidence packaging as well as a biohazard sticker.

G. **Evidence Storage QAS 7.1.4**

1. The Biology Unit adheres to the Division's security measures and controlled access areas for evidence storage and work product in progress, FSD.32 and FSD.35 . Additional Biology Unit specific facility lay out and design, security measures and access to the biological evidence are described in BIO.5.QAQC.06. Evidence not in the process of examination must be properly sealed.

2. In general, evidence containing any dried biological fluid should be stored frozen. Room temperature storage may be warranted for items when condensation may occur and alter the evidence.

3. Items too large to fit in the freezer may be retained in room temperature evidence storage or in secured and limited access areas. The evidence should be examined as soon as practical to minimize the amount of time left at room temperature.

4. Liquid biological evidence, such as liquid reference blood kits are stored refrigerated and examined as soon as possible. Liquid biological fluids, such as semen in a condom or in a container that may leak may be temporarily refrigerated (1 week) until examined or preserved for future examination. Fluids should be collected onto swabs or cloth and dried as soon as possible.

5. Abortion products may be stored temporarily refrigerated (1 week) or frozen.

H. **In Progress Evidence Storage QAS 7.1.3**

1. In progress evidence or samples may be stored in secured or limited access areas of the Biology Unit, such as in one of the locked examination rooms or in one of the Unit's in-progress refrigerator/freezers.

2. For short absences (a few hours to overnight), it is not necessary to package and/or reseal evidence being examined when the examination occurs in the secured or limited access areas of the Biology Unit. The item may be left out overnight in a secured or limited access examination area, but must be protected and clearly identified/ labeled, such as:

   a. Covered with clean butcher paper

   b. Labeled "Evidence" with examiner's initials and date

3. When all biological evidence has been removed, or no biological material was found, items may be stored at room temperature under secured and limited access conditions until returned to the agency.

I. **Disposition of Evidence QAS 7.2, 7.3**

1. All evidence is typically returned to the agency or Sheriff's Property Services, including evidence split from the original item and collected, such as cuttings of stains, collected swabs, and collected trace material.

2. The status of the original evidence will be documented in the case file as either; retained, returned, or consumed.

3. The location of DNA extracts and biology work product will be denoted in the case file.

4. If the evidence DNA extracts are consumed, it will be denoted in the case file.

5. The disposition of reference DNA extracts that are routinely discarded during the normal course of examinations will be noted in the examiner's case file.

6. Dried reference blood samples may be retained at the Laboratory for long term storage. This will be noted in the examiner's case file

7. Some of this information may be contained in the annex section of the report.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 05/22/2019	**NUMBER:** BIO.5.QAQC.08 - Validations
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** **DNA QA Standards:** DNA QAS Std 8	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Validations	

I. **The Biology unit will use validated methods that adhere to the DNA Quality Assurance Standards for Forensic DNA Laboratories and to the Forensic Services Division Manual.**

II. **Validations**

1. The Biology Unit will adhere to the requirements of the Division Manual, Method Selection and Validation FSD.27, where applicable, when validation studies are performed.

2. Two types of validation are required to implement or modify scientific technical procedures for forensic analysis:

    1. Developmental Validation

        1. In general, developmental validation of novel forensic biology methods is not conducted in the Biology unit. Examiners will be familiar with publications, preferably peer-reviewed publications, supporting the underlying scientific principles. These publications will be maintained by the laboratory.

    2. Internal Validation

        1. An internal validation will be performed prior to implementing a new or significantly modified method, instrumentation that affects the test, and significant software (including software tools created in-house). Validation of software may occur simultaneously with the validation of the instrumentation that it is used with (for example, the validation of data collection software with the validation of a genetic analyzer).

        2. The appropriate sample number and the type of samples used in the internal validation studies should be sufficient to support and document the reliability and potential limitations of the method.

        3. All applicable internal validation studies, described below will be performed. Studies determined to be not applicable shall be addressed in the internal validation summaries.

            1. **Known and non-probative evidence samples or mock evidence samples:** Methods shall be evaluated and tested using known samples and non-probative evidence samples or mock case samples prepared from authentic cellular material(s). Mock evidence samples should be reflective of the type and quality expected to be encountered in casework (e.g., various substrates, various stain concentrations). Results from these studies should be compared to the previous results where possible to ensure concordance (i.e., demonstrate agreement between the results obtained compared to those using previous methods or published data). Observed discordance should be documented and where possible a reason given for the non-concordance.

            2. **Precision and Accuracy:** Precision and accuracy studies should address repeatability (i.e., evaluate results of the same instrument and/or operator) and/or reproducibility (i.e., evaluate results among different instruments and/or operators), when practicable.

            3. **Sensitivity and stochastic studies:** Sensitivity studies are used to determine the dynamic range, ideal target range, limit of detection, limit of quantification, heterozygote balance (e.g., peak height ratio) and the signal to noise ratio associated with the assay. Sensitivity studies should include a range of template DNA/cellular material that brackets the optimal quantity. Stochastic studies are used to evaluate excessive random effects (e.g., allele drop-out, peak height imbalance) generally resulting from low quantity and/or low quality samples. Where appropriate to the interpretation model utilized, these studies are used to determine the laboratory's stochastic threshold.

            4. **Mixture studies:** Mixed DNA samples that are representative of those typically encountered in testing shall be evaluated. Forensic mixture studies should use known samples that represent the number of contributors and the range of general mixture types for which the procedure will be used in casework (e.g., mixture

proportions, template quantities) and should be used to develop interpretation guidelines.

5. **Contamination assessment:** The laboratory shall evaluate the detection of exogenous DNA (e.g., allele drop-in) originating from reagents, consumables, operator and/or laboratory environment using both controls and known samples. The contamination assessment should be used when developing quality control procedures and interpretation guidelines.

4. Analysis parameters, such as match criteria and guidelines for interpretation including guidelines for mixture interpretation will be based on the data compiled in the validation study.

5. The scope of the validation will be assessed by the Supervisor and/or the DNA Technical Leader. Internal validations will also be reviewed and approved by the Biology Unit Supervisor or DNA Technical Leader prior to implementation.

III. **Performance Verifications**

1. A performance verification is a check of the reliability of a previously validated method, procedure, software, or equipment by demonstrating through objective evidence that the performance characteristics of the item have been met. Performance verifications are typically less extensive than validations.

2. Performance verifications are performed:

    1. When a new critical instrument of the same model and analysis software package is obtained. The performance check will entail a comparison of the new instrument (added or upgraded model) against a current or previous instrument using the same DNA controls or previously characterized DNA samples.

    2. When software is upgraded but the upgrade does not impact interpretation, the analytical process, or sizing algorithms. The performance verification may entail a comparison of the interpretation, analytical process, and sizing algorithms of current or previous validated software to the upgraded software.

    3. When software that conducts calculations or data transfers is created by the laboratory using a commercial software (for example, DNA Worksheets created in Excel). The software will be checked to ensure accuracy of the data transfers and calculations by comparing them against another calculation method.

    4. When a procedure is modified in such a way as to alter the validated steps, reagents, or critical instruments. The modified procedure must be evaluated by comparing the original procedure to the modified procedure using similar DNA samples.

IV. **Documentation**

1. A Plan must be submitted prior to starting a validation or performance verification. The plan is documented on FSDF.20.

2. The scope of the validation/performance verification will be assessed by the Supervisor and/or the DNA Technical Leader. It will also be reviewed and approved by the Biology Unit Supervisor or DNA Technical Leader prior to implementation. This approval will be documented on FSDF.12.

3. Validation studies and performance verifications will be documented, summarized, and retained on the Biology Unit's network folder and will be accessible for all Biology Unit staff to review.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 05/22/2019	**NUMBER:** BIO.5.QAQC.09 - Assuring the Quality of Tests
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** 7.7 **DNA QA Standards**	
CHAPTER: DNA Quality Assurance	**SUBJECT:** Assuring the Quality of Tests	

I. The Biology Unit is committed to assuring the accuracy and reliability of the tests performed. Methods to monitor the validity of the results include the following:

A. **Use of Reference Materials**

1. Certified Reference Materials: The following certified reference materials are purchased from an externally traceable source with vendor certification:

   a. ***PCR-Based DNA Profiling Standard.*** This is a NIST SRM and is used to establish NIST traceable samples.

   b. ***Human DNA Quantification Standard***. This is a NIST SRM used to conduct a calibration check of the DNA standard provided in the PowerQuant Quantification Kit.

   c. **Storage and Handling**

      i. All reference materials are handled wearing appropriate PPE to prevent contamination of the material. They are stored according to manufacturer specifications and are not used past the expiration date listed on the manufacturer's certificate of analysis.

2. Other Reference Materials:

   a. ***NIST Traceable Samples***. Known blood or other biological samples from known individuals are compared against the NIST SRM PCR-Based DNA Profiling Standard to generate internal reference materials. The reference materials may be dried biological stain swatches or swabs.

   b. ***Promega Human Genomic DNA Standard***. This DNA standard is purchased from an external vendor and includes a certificate of analysis. The standard may be used to conduct a calibration check of the DNA standard provided in the PowerQuant Quantification Kit.

   c. **Storage and Handling:**

      i. Reference materials are handled and prepared wearing appropriate PPE to prevent contamination of the material. They are stored frozen or according to manufacturer specifications.

B. **Annual Performance Check of DNA Procedures/Equipment QAS 9.5.5**

1. A performance check using NIST or NIST traceable samples is conducted annually to ensure reliable and accurate results are obtained for each DNA procedure. These procedures include cellular digestion, robotic and organic extraction, quantification, amplification, and detection on the Genetic Analyzer and include the following equipment:

   a. Qiagen EZ-1 and EZ1 XL Robots

   b. Liquid Handling Robots

   c. Real Time PCR Instruments

   d. Thermal Cyclers

   e. Genetic Analyzers

2. Any new or modified procedure/instrument introduced into the DNA process is also checked using NIST or NIST traceable sample(s) prior to use with casework to verify its performance.

3. The procedure for the annual performance check of DNA procedures is maintained in the Biology Unit's network folder.

C. **Functional Checks of Measuring and Testing Equipment**

1. Measuring and testing equipment is validated or performance checked prior to being placed in service and annual preventative maintenance or calibration is performed on instruments that have an affect on testing. See BIO.5.QAQC.10 for a list of instruments that undergo annual calibration and preventative maintenance.

D. **Review of Reported Results**

1. The Biology Unit annually conducts several reviews of reported results which include:

   a. An annual FBI Quality Assurance Audit (See BIO.5.QAQC.15)

   b. An annual internal audit

   c. The annual DNA Quality review conducted by the DNA Technical Lead (See BIO.5.QAQC.12)

E. **Technical and Administrative Review**

1. All casework conducted by the Biology Unit is technically and administratively reviewed (See BIO.5.QAQC.12)

F. **Interlaboratory Comparisons**

1. See FSD.23 and BIO.5.QAQC.13 for more information

G. **Use of Standards and Controls for DNA Testing**

1. The use of standards and controls are documented in each of the individual DNA procedures. See the individual procedures for additional use of each of the standards and controls.

2. Controls for DNA Extraction

QAS 9.5.3 At least one reagent blank (negative control) is required to be associated with an extraction set. Generally two reagent blanks are associated with an extraction set and are used to monitor for DNA contamination.

QAS 9.5.3.1 The reagent blank is extracted concurrently with the extraction set and is carried through the extraction, concentration, amplification, and the typing process as a check of all reagents used during processing.

   a. The reagent blank associated with a reference sample set is named RBR. The reagent blank(s) associated with an evidence set is named RB-1, RB-2, etc.

   b. Each fraction of a differential digest includes at least one reagent blank.

   c. If the digest buffer volume for a particular sample is doubled, the corresponding RBR or RB-1, RB-2, etc. must also contain double the volume of digest buffer.

   d. If several evidence samples are combined into a single extract, multiple reagent blanks must be similarly prepared and combined into a single extract.

   e. If multiple reagent blanks are extracted, at least one of the reagent blanks must be amplified and typed concurrently with the evidence. If more than one reagent blank is quantified, the sample with the highest signal, if any, is amplified. Reagent blanks are not required to be quantified, unless DNA analysis is terminated at the quantification stage.

   f. If samples are concentrated at any point, the corresponding reagent blank from the extraction set must also be concentrated to an equal (or lesser) volume to ensure the most sensitive volume conditions have been met.

A positive extraction control (QC sample) monitors if the DNA procedures used worked properly. The QC sample is a DNA profile from a known source that is extracted and may be typed concurrently with the extraction set. **QC samples are optional.**

3. Controls and Standards for DNA Quantitation

   a. **QAS 9.5.1** A set of quantitation standards are **required** in the quantification process and is used with the PowerQuant Kit. The standards are used to establish a calibration curve to estimate DNA concentration. The quantitation standards are calibration checked against a NIST SRM or equivalent reference material.

   b. A positive control (IPC) is integrated into the PowerQuant Quantification Kit's components and monitors for proper amplification.

   c. A negative template control (NTC) is **required** for PowerQuant reactions and contains master mix and amplification grade water. The negative control monitors for contamination in the quantitation reagents or

in the quantitation setup environment. See Human DNA Quantitation procedure BIO.2.DNA.06.

4. Controls for STR Amplification

   a. **QAS 9.5.2** Positive and negative amplification controls are **required** in the STR amplification process. The positive control is known human DNA that monitors if the amplification and typing process worked properly. The negative control monitors for DNA contamination in the PCR reagents or PCR setup environment.

   b. The controls must be amplified concurrently in the same instrument with the same kit primers as the samples. The correct DNA profile must be obtained from the known positive control and no DNA must be detected in the negative control in order to make DNA typing calls for the evidence samples. See Amplification procedure BIO.2.DNA.08.

   c. **QAS 9.5.3** At least one reagent blank control associated with each extraction set is **required** to be amplified. The reagent blank must be amplified using the same kit primers, instrument model, and concentration conditions as the sample(s) in the extraction set with the least amount of DNA.

5. Controls and Standards for Capillary Electrophoresis (CE)

   a. A CE reagent blank, consisting of formamide and sizing standard, is run with each CE plate. The purpose of this reagent blank is to detect contamination that might occur in the CE reagents or in the CE setup environment.

   b. **QAS 9.5.3.3** At least one reagent blank control associated with the evidence set is **required** to be typed on the same CE instrument model, at the same injection time, and under the most sensitive volume conditions as the associated extraction set.

   c. **QAS 9.5.4** An allelic ladder and an internal size standard are **required** for typing amplified DNA (STR) products. The allelic ladder must span the allelic size range of the STR typing kit used for amplification. Each amplified sample, evidence as well as all controls, must contain an internal size standard in order to perform typing. See procedures for Capillary Electrophoresis BIO.2.DNA.09 and Analysis of Short Tandem Repeats BIO.2.DNA.10.

H. **Methods not used to monitor tests**

1. At this time the Biology unit does not use calibrated alternative instrumentation, control charts, intermediate checks on measuring equipment, replicate tests or calibrations using the same or different methods, verification of results, and testing of blind samples. The unit also does not retest retained items.

I. **Documentation and Recording**

1. The data derived from the monitoring activities above are documented the following ways:

   a. Equipment logs, maintenance documents, and performance check documentation

   b. Reagent logs

   c. Level I and II corrective actions

   d. Annual reviews and audit documents

J. **Monitoring**

1. The outcome of monitoring is reviewed, at minimum annually during internal audits and DNA QAS audits.

II. The Biology Unit maintains the following reference collections:

A. The staff DNA profiles reference collection contains the DNA profiles of laboratory staff and other individuals involved with evidence handling. This reference collection is maintained to possibly help identify the source DNA in events of contamination. Each profile is assigned a unique CODIS code and is stored in the local CODIS database and in a spreadsheet on the Biology Unit's internal network drive that is only accessible to Biology Unit staff.

1. The database is updated when new staff is hired. A buccal sample is collected from the individual and is typed by any available staff authorized or in training to perform DNA testing. The profile is then assigned a CODIS code and added to the local CODIS database by a CODIS administrator. The profile is also added to reference collection spreadsheet followed by a Supervisor check.

B. The "CoCo Profiles" reference collection is a spreadsheet containing DNA profiles generated from cases within the Unit. This reference collection is maintained to help identify possible sources of DNA in contamination events. Each profile is assigned a unique laboratory request and item number. The spreadsheet is maintained on the Biology Unit's internal network drive and is accessible only to Biology Unit staff.

1. The database is updated with any single source or clearly deduced profile generated in casework. The database is populated by the administrative reviewer during review.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 09/11/2019	**NUMBER:** BIO.5.QAQC.10 - Equipment Quality Control Checks: Overview
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB: DNA QA Standards** DNA QAS Std 10 ANAB 6.6	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Equipment Quality Control Checks: Overview	

I. **The Biology Unit maintains an inventory of current equipment and software. Equipment that can influence test results are calibrated or subject to quality control checks to verify that their performance is suitable for the methods being used.**

II. **Equipment and Software**

1. **Equipment**

   a. The Biology Unit uses equipment suitable for biological screening and DNA analysis. A list of equipment and significant software dedicated to the Biology Unit is maintained electronically. The list is updated when new equipment is acquired and equipment is permanently removed from service.

   b. Equipment in the inventory list is itemized by an identification number, manufacturer, model number, and item description. The Biology Unit designates the equipment identification number with an assigned letter and/or number.

   c. Equipment that provides unsatisfactory results will be removed from service and labeled with an "Out of Service" sign until the problem has been resolved and shown to perform correctly, or until the equipment has been permanently removed, if applicable.

   d. Copies of manufacturer user manuals for critical equipment are maintained in hard copy or electronically in the Biology Unit's network folder.

2. **Software**

   a. The Biology Unit uses software suitable for the methods employed. The Biology Unit maintains an electronic inventory of the the commercial software used, corresponding serial numbers, firmware version, and asset numbers of the computers associated with the software.

   b. Procedures that require the use of commercial critical software must identify the software and the version number. Software parameters are outlined in the procedure. Excel created software applications and any approved updates are listed in a log maintained by the unit. The Biology Unit uses the following critical software:

      1. HID Real Time PCR Analysis Software v1.2

      2. GeneMapper ID-X Software v1.5 and 3500 Data Collection Software v3 & 4

      3. STRStatFUSION and DOJ's KIn CALc

      4. STRmix v2.6

   c. Validation/Performance verification's of software will be documented through the QA Action process.

3. Equipment and software are safeguarded from adjustments that could invalidate test results by restricting electronic access to the Biology Unit staff and limiting its use to staff authorized to use the equipment and software. For GeneMapper ID-X and STRmix, parameters are set by an Administrator account and prevents users from changing certain parameters, Electronic worksheets are protected, when possible.

4. It is the responsibility of the Biology staff to ensure that equipment and software are set to the correct parameters before use. If for any reason, parameters are temporarily changed on shared equipment or software, it is the individual's responsibility to ensure the original parameters are restored after use.

III. **Quality Control Checks**

1. The schedule for equipment checks, calibration, and maintenance is found in BIO.5.QAQC.18.

2. Procedures for maintenance checks of equipment and software are found in Quality Assurance/Quality Control documents BIO.5.QAQC.24 through BIO.5.QAQC.27.

3. **Annual Performance Checks of Critical Equipment**

   a. The following critical equipment undergo annual calibration by an outside vendor**:**

      1. Digital Reference Thermometer, see BIO.5.QAQC.24
      2. Balances, see BIO.5.QAQC.24
      3. Thermal Cycler Temperature Verification Device, see BIO.5.QAQC.24
      4. Robotics (EZ-1 XL extraction robots and liquid handling robots (Nimbus and Versa)), see BIO.5.QAQC.25
      5. Capillary Electrophoresis Instruments/Genetic Analyzers, see BIO.5.QAQC.27
      6. Pipettes, see BIO.5.QAQC.25

      7. 7500 Real Time PCR Instruments, see BIO.5.QAQC.26

      8. Below are the required specifications for the calibration vendor and the equipment:

1.

Equipment	Interval	Specifications for Calibration Lab	Calibration requirements
Digital thermometer	Annual	Rice Lake: ISO 17025:2005 accrediated by A2LA ILAC-MRA. Listed on scope	calibrate at 0C, 100C
Temperature verification unit	Annual	Alpha Technics: Calibrated by instrument manufacturer	manufacturer's tolerances
Pipettes	Annual	Ranin: Calibrated by instrument manufacturer	manufacturer's tolerances
Nimbus Liquid Handling Robots	Annual	Hamilton: Calibrated by instrument manufacturer	manufacturer's tolerances
Balances	Annual	Rice Lake: Comparison to NIST-certified weights	manufacturer's tolerances
EZ1 XL Robots	Annual	Qiagen: Calibrated by instrument manufacturer	manufacturer's tolerances
7500s	Annual	Applied Biosystems: Calibrated by instrument manufacturer	manufacturer's tolerances
3500 Genetic Analyzer	Annual	Applied Biosystems: Calibrated by instrument manufacturer	manufacturer's tolerances
Versa Robot	Annual	Aurora: Calibrated by instrument manufacturer	manufacturer's tolerances

2. Equipment sent for calibration is packaged in a way to ensure that equipment from the pre and post-PCR rooms do not commingle and that they are protected from sustaining any damage during transport. All equipment sent out for calibration should be wiped down with a 10% bleach solution prior to being used in casework.

3. The following critical equipment is performance checked in-house using a vendor-calibrated temperature verification kit:

    a. Thermal Cyclers (ProFlex), see Bio.5.QAQC.26

4. The EZ-1 Robots are performance checked annually in-house by extracting at least two QC samples. The samples will be quantified to determine if an adequate amount of DNA was extracted.

5. **Annual Performance Checks of Non-Critical equipment**

    a. A performance check of the following non-critical equipment is performed annually either in-house or by an outside vendor:

        1. Heat blocks

        2. Refrigerator/freezers

        3. Hoods

        4. Microscopes

6. Intermediate checks of equipment may be performed by the Biology Unit. The procedures for intermediate checks are found in documents BIO.5.QAQC.24 through BIO.5.QAQC.27

IV. **Information on Services that Affect the Quality of Tests**

1. **Selection**

a. Vendors are selected for the calibration of Biology Unit equipment based on one or more of the following criteria:

    1. Calibration services are provided by an ISO17025 vendor

    2. Calibration services are provided by the manufacturer of the equipment

    3. The laboratory has a prior history of satisfactory service with the vendor

b. Evaluations of services will be conducted by the Unit Supervisors. The following are used to evaluate vendor's:

    1. A vendor's scope document can be reviewed to ensure the calibration being requested is within the scope of the vendor

    2. A performance check using known DNA samples may be conducted after service

    3. Certificates previously issued by the vendor for services performed on a specific piece of equipment can be reviewed

c. The unit will communicate to the vendor the requirements for the calibration/service being provided. This may be done through:

    1. A service contract being put in place

    2. A quote for services to be provided

    3. A letter outlining the requirements for service

d. Acceptance of services will be conducted by the Unit Supervisors through review of calibration paperwork and certificates provided by the calibration vendor. If a calibration or service is not adequate for the Unit's needs the vendor will be contacted and a subsequent service/calibration may have to be performed.

I. **Preventative Maintenance, Repair, Service, or Calibration**

1. The following critical equipment is performance checked prior to use with casework, or after a repair, service, or calibration:
    a. EZ-1 and EZ-1 XL Robots

    b. Liquid Handling Robots (Nimbus and Versa)

    c. Thermal Cyclers (7500 & ProFlex)

    d. Genetic Analyzer

V. **Maintenance/Service Records**

1. Records of service, repair, and calibrations as well as any follow-up performance checks are maintained by the Biology Unit. Records are accessible for review to all Biology staff. Maintenance logs for previous years may be electronically archived.

2. In-house intermediate checks and routine maintenance are captured on Inspection Records Forms BIO.5.QAQCF.03 and BIO.5.QAQCF.04.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 09/20/2019	**NUMBER:** BIO.5.QAQC.11 - Reports
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** 5.10 **DNA QA Standards: Std 11**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Reports	

I. The Biology Unit provides a clear and accurate written test report to the customer. Generally, two types of reports are written in the Biology Unit: Laboratory Examination Reports and Laboratory Records of Notification Reports.

A. **Types of Reports and Report Contents**

1. **Laboratory Examination Report:** Documents the results, and conclusions of any technical work that has been performed, and interpretations and opinions associated with such testing. A laboratory examination report will be written with the following service types: Preliminary Screen, SAEK, Forensic Biology, DNA, and CODIS confirmation. The format of Laboratory Examination Reports are as follows:

   a. **Header:** The header includes a unique laboratory number assigned to the report, the agency's case number, the name of the customer, issue date, and other relevant administrative information. See Division policy "Test Reports" for further requirements in the Header. **This information needs to match the information on the request form.**

   b. **Purpose:** (select "Observation" under result type in LIMS.) This section is optional and includes information on what testing or activity was performed if the service type does not properly describe the testing performed.

   c. **Summary**: (select "Summary" under result type in LIMS.) This section is optional, but should be included if there is a significant amount of information contained in the examination and results section.

   d. **Examinations and Results: (**select "Examination Results" under result type in LIMS). The content of the examination and results section will consist of the following, when applicable:

      1. An item number and description of the examined evidence will be reported.
      2. Any evidence not examined will also be reported.
      3. Relevant or significant observations about the evidence.
      4. Category of testing performed, such as testing for blood, semen, saliva, or DNA.
      5. Screening tests performed and results and DNA results for each evidence item examined.
      6. For DNA testing the following information will be included in the results and conclusions section:
         1. If there is an insufficient amount of DNA detected at quantification and samples will not be taken forward for amplification
         2. If a DNA profile was generated
         3. Is the profile single source or a mixture
         4. If a mixture, what is the minimum number of contributors to the mixture or the assumed number of contributors.
         5. Any assumptions used in the interpretation
         6. If any major/minor contributors were determined (for binary interpretation)
         7. All DNA inclusions and exclusions
      7. A conclusion statement will be reported for each item of evidence that was tested and the basis for all conclusions will be communicated in the report. Reasons for an inconclusive result or limitations to offering a conclusion will be explained. Examples include, data is too low level or there are too many contributors to the mixture.
      8. If applicable, a statistical statement is provided with all probative DNA inclusions to express the strength of the inclusion. A qualitative statement is reported for non-probative inclusions (for example, victim's profile generated from the victim's vaginal swab).
      9. Definitions specific to the testing or examinations performed, if not common knowledge or contained in the annex.

10. Results obtained by a vendor laboratory during outsourcing, if included in a report, must be clearly identified. The address of the vendor laboratory where the testing was performed will be captured in the case notes.

e. **CODIS Profile:** If applicable, the report will inform the client of any DNA profile that was entered into CODIS. If a profile is to be searched only at the state level it will be documented here.

f. **Recommendations**: A statement will be provided in the report when the client agency needs to be given further guidance, such as recommending DNA testing, when a different testing method is needed such as YSTR testing, or when a reference sample is needed for comparison.

g. **Evidence Submitted:** (This will populate automatically for evidence related to the request). The evidence section includes a list of either the evidence submitted under the request. The evidence descriptions should include from whom or where the evidence originated, such as from the victim, suspect, or the crime scene. The other ID field should be populated with the agency's item number, if included on the request form.

h. **Disposition:** (select "Disposition" under result type in LIMS). All examination reports will contain a disposition reflecting:

1. A description that denotes the status of the original evidence (retained, returned or consumed), as well as any generated/derived secondary evidence or DNA extracts (swabs, cuttings, and DNA extracts and screening products). Some of this information may be captured in the annex.

2. The retention of digital images, if applicable

i. **Signature Lines and Date:** Includes at a minimum:

1. Name, title, date, and signature of the analyst authorizing and accepting responsibility for the contents of the report.
2. Name, title, date, and signature of technical reviewer (if applicable).

3. Name, title, date, and signature of administrative reviewer. This is also the date that the report is issued.

j. **Annex:** May include depending on the service type:

1. A statement about the DNA technology and typing kit used for testing.

2. Definitions related to testing.

3. A statement regarding the scope of CODIS searches (unless only searched at the state level), how long profiles will be searched, and the circumstances under which a sample will be removed.

4. A statement regarding the report containing the opinions and interpretations of the analyst.

5. Additional compliance statements.

k. **Page numbering:** Page number, laboratory request number, and name of analyst on each page of report.

2. **SAEK Examination Report Layout** Most of the report will be automatically generated from the case notes. There are several sections that have to be added manually. They should be added by selecting "**Edit Findings**" Under the request number right click and select "**Add Result**".

a. **Purpose: (if applicable)**

1. select "Observation" under Result Type.
2. Type in the purpose of your testing in the narrative section

b. **Evidence**

1. This is automatically populated from LIMS

c. **Examination Results and Conclusions**

1. Overall Bio Screen Comments

1. Select "Bio Screen" under Result Type
2. Type in general comments about the type of testing performed here

2. Individual item Results

    1. This is automatically populated from the case notes

d. **Items not Examined**

1. This is automatically populated
2. All items with no screening notes added in LIMS will be added here

e. **Overall Examination Results/Conclusions**

1. Select “Examination Results” under Result Type
2. Type in any overall examination results and conclusions, comments here

f. **Items to be forwarded for DNA Analysis**

1. This will automatically be populated with the items that have the “DNA Analysis” box selected in the case notes.

g. **Disposition**

1. This will automatically populate from the disposition added in the notes

3. **Report of Laboratory Notification:** Notifies the client agency about an activity or a service provided by the Biology Unit as it relates to the client agency's case. These activities do not include evidence examination or testing. A notification report will be written for the following service types: CODIS notification, Discovery Requests, and Liquid Blood Preparation.

B. **Personnel Issuing Reports**

1. Reports are typically generated by the examiner who performed the work.

2. An examiner may be the author of a report as long as they are competent in the discipline or category of testing performed. The author may be the examiner who conducted, observed, or directed the testing, or has evaluated the observations, testing performed, and/or the technical data generated by another examiner.

3. If a circumstance arises that prohibits an examiner from issuing the report another qualified examiner may write the report. The examination notes will reflect the original examiner(s) responsible for the testing results. The examiner taking responsibility for the results and authoring the report will document their review of the case notes on the assignment notification page and will include the date(s) of review, and the pages reviewed and relied upon for the report.

4. An examiner testifying to the results generated by another examiner will review **all** of the original analyst’s notes and document the review of those notes on the assignment notification page. The documentation will include the name of the analyst testifying, date(s) of review of the case notes, and the pages reviewed for testimony.

C. **Review of Reports**

1. All Examination reports will undergo a technical, as well as an administrative review.

2. Laboratory Records of Notification Reports will undergo an administrative review. Additionally, for CODIS and DANY Grant Hit notifications the administrative reviewer's milestone in LIMS documents completion of both technical and administrative review.

D. **Maintenance and Retention of Reports**

1. Once administratively reviewed, the report and supporting case notes are transferred to the clerical area for filing into the case file. Clerical staff is responsible for the filing and maintenance of the case files.

2. Recently filed reports are retained at the laboratory for several years. Older reports may be stored off-site or archived according to Division Manual policy “Control of Records” FSD.44.

E. **Access and Release of Reports, DNA Records, and DNA Databases**

1. Access to Biology Unit reports is in accordance with the Division Manual policy “Control of Records”.

2. Reports are released and distributed according to Division Manual policy “Test Reports”.

3. Reports containing "DNA records" are similarly released according to Division Manual policy “Test Reports”. Release of DNA records in the Laboratory's CODIS database, however, is further restricted by State and Federal Law. See

BIO.3.CODIS.10 for further clarification.

4. **Reports:**

   a. Reports containing DNA records may be released to the primary law enforcement agency, the District Attorney's Office for judicial proceedings or to defense counsel for criminal defense purposes. Access and release of DNA records is limited to those DNA samples, exemplar samples, and analyses that were performed in connection with the defendant's case. The defendant is not entitled access to other DNA records, samples, or other DNA analyses that are not associated with his/her case, under the provisions of the DNA Act.

   b. When a positive association occurs as a result of a CODIS database search, a "CODIS Hit" Laboratory Notification Report will be written.

   c. In the event that there is a CODIS hit and a reference sample is submitted for confirmation, a CODIS confirmation examination report will be written and typically will be a sub-request to the CODIS Hit request. A report will also be written if a profile is being removed from CODIS by the Laboratory.

5. **DNA Records:**

   a. A DNA profile is considered a DNA record.

   b. Access and release of reports containing DNA records is similar and in accordance with normal laboratory practices for the access and release of records.

6. **DNA Databases:** The laboratory's CODIS database is composed of electronic DNA records generated from evidence samples. When a DNA profile is eligible for searching in CODIS, the evidence profile becomes a DNA record in the CODIS database.

   a. Physical access to DNA records in the Laboratory's CODIS database is limited to the CODIS Administrator and CODIS users.

   b. Release of DNA records in the CODIS database is prohibited and allowed only according to Federal and State law. See CODIS Manual "Reporting and Disclosure of Matches" (BIO.3.CODIS.10).

   c. The Biology Unit maintains an internal DNA database for quality control purposes. Access to the QC database is limited to the Biology Unit staff. The database contains profiles and information from other cases, as well as, quality control samples and laboratory staff profiles. Consequently, the QC database will not be released to any external entity for reasons of confidentiality.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 09/20/2019	**NUMBER:** BIO.5.QAQC.12 - Review
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** **DNA QA Standards: Std 12**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Review	

I. The Biology Unit conducts technical and administrative reviews for examinations and test results generated at the laboratory in accordance with policies set forth in the Division Manual on Technical Review (FSD.17) and Administrative Review (FSD.18).

II. **Technical Review**

A. Requirements

1. All Laboratory Examination Reports undergo Technical Review.

2. CODIS notifications will undergo a Technical Review. The administrative reviewer's milestone in LIMS documents the completion of both technical and administrative review

3. All examination notes and technical reports which include technical data such as testing results, interpretations and/or conclusion statements from biological screening and DNA testing require a technical review.
4. Written or verbal results are not released to an outside agency prior to technical review. A technical review may be streamlined to a particular part or area of the case file in order to expedite the release of results. The specific data or area(s) in the case file that were reviewed will be captured with the date and initials of the reviewer. Release of verbal results are to be documented in the case file.

5. Prior to upload into CODIS, the examination notes and supporting data must be technically reviewed. The review includes verification that the correct DNA type was obtained, the case and profile is eligible for upload, and that the appropriate specimen category has been chosen. This verification is documented in the case notes on the data summary sheet which serves as a summary table of the DNA results. The procedure for verification and resolution of database matches is described in the CODIS Procedures Manual (BIO.3.CODIS.09).
6. For expedited cases, where it is imperative that the profile is entered into CODIS in a timely manner, the technical review can be concentrated on the relevant testing, data, and quality controls specifically related to the development of the CODIS profile. Those elements or pages in the case file that are technically reviewed will be captured in the case notes by initialing and dating the areas that were technically reviewed.

7. Review of data generated by an outside/vendor laboratory is governed by Standard 17 of the DNA Quality Assurance Standards and is discussed under the Biology Unit Outsourcing procedure BIO.5.QAQC.17.

B. Personnel Conducting Technical Review

1. Technical reviews are conducted by individuals that meet the qualifications listed in the Biology Unit's Personnel policy (BIO.5.QAQC.05).
2. A technical review cannot be conducted by the individual that performed the work or the author of the examination report.

C. Procedure

1. When the analyst has determined the case note packet to be complete, the examiner will sign the Technical/Administrative Review Checklist as "draft complete". The examiner will then turn the completed case note packet and report over to a technical reviewer or place it into the technical review bin. A technical reviewer may be assigned to the case by the Unit Supervisor or a qualified technical reviewer may assign themselves to the task.

2. The reviewer will address the elements of the technical review as documented on the Technical/Administrative Checklist Review Checklist(s). Documentation and the scope of the technical review is captured on the checklist and retained as part of the case notes. The below technical review checklists are used, as applicable to the type of analysis conducted. The elements to be addressed during the review of CODIS notification reports are listed in BIO.3.CODIS.10. CODIS notifications do not require the "Technical and Administrative Review" checklist.

D.

1. Technical and Administrative Review BIO.1.BIOF.02
   STRmix DNA Data Technical Review BIO.1.BIOF.06

DNA Data Technical Review BIO.1.BIOF.06.01
Vendor DNA Technical Review BIO.1.BIOF.03

E. The technical reviewer will document any observations, data, or test results that are rejected and why on the "Technical and Administrative Review Checklist". If corrections are needed, the case file is returned to the analyst to make any changes that might be needed.

F. Disagreements between the analyst and technical reviewer must be resolved prior to issuing a final interpretation and report. Resolution of disputes between analysts and reviewers will follow the Division Manual policy on Technical Review (FSD.17)

G. When technical review of the entire note packet is complete, the reviewer signs and dates the "Technical and Administrative Review Checklist" signifying concurrence with the examiner's testing and conclusions. The completion of the review is also electronically captured in LIMS.

H. Corrections

1. Corrections made to the notes, may be corrected by hand or electronically. Handwritten corrections are captured with the analyst's initials next to the corrected text. The corrected text may include an insertion, or a deletion with a single line strikeout.

2. Corrections made to notes after the case notes have been marked "draft complete", may be corrected by hand or electronically. When corrected by hand, the corrected text will be denoted with the date and initials of the analyst making the change. If corrected electronically a single line is drawn diagonally across the page being replaced, as well as the date, analyst initials, and the reason the page is being replaced. The replaced pages are retained in the case notes, typically at the end.

I. Scope of Technical Review

1. Technical review of examination reports will entail evaluating all criteria listed on the Technical and Administrative Review Checklist (BIO.1.BIOF.02) as well as the criteria listed on the DNA Data Technical Review sheet (BIO.1.BIOF.06.01) for all cases involving DNA analysis.

III. **Administrative Review**

A. An administrative review is an evaluation of the report and the supporting notes for concordance and accuracy of information, for consistency with laboratory and unit policies, and for format, content, and grammar.

B. Requirements

1. All reports and case packets will undergo administrative review.

2. Administrative review must occur prior to releasing a test report to an outside agency.

3. Administrative review cannot be conducted by the author of the test report.

C. Personnel Conducting Administrative Review

1. Administrative reviews are conducted by authorized individuals.

2. Administrative review of Biology Unit cases will be conducted by the Unit Supervisor, or another Supervisor, or another authorized individual.

3. Additional members of the Biology Unit may conduct reviews upon authorization by the Unit Supervisors.

4. Administrative and technical reviews may be conducted by the same individual as long as the individual meets the qualifications of a technical reviewer (see BIO.5.QAQC.05) and is authorized by the Supervisor to conduct administrative review.

D. Procedure

1. Case files ready for administrative review are forwarded to an approved reviewer or placed in the administrative review bin.

2. The administrative reviewer will follow, at a minimum, the scope of review as outlined in Division Policy FSD.18. and additionally the elements of the administrative review as outlined in the Technical/Administrative review checklist.

3. Documentation and the scope of the administrative review is captured on the checklist (only for examination requests) and is retained as part of the case notes or case record. **QAS 12.3.3**

4. If corrections are needed, the case file is returned to the examiner. See corrections under technical review for information on how to document corrections during administrative review.

5. For Laboratory examination requests, when the administrative review is complete, the reviewer signs the "Technical and Administrative Review Checklist" (this includes date and scope of pages reviewed). There is no review checklist for Laboratory notification requests. The reviewer will mark the case request in LIMS as administratively reviewed. The signature of the administrative reviewer on the laboratory report signifies completion and approval for release of the report and the supporting case notes.

E. Administrative Review Guidelines

1. **Notes**
   a. Verify Lab request #, analyst initials, page # on all pages
   b. Verify total # of pages on first and last page
   c. Verify all corrections recorded appropriately per FSD.42. Verify that all changes made after draft complete are dated and initialed.
   d. Verify technical review of the case notes is documented with the reviewer's signature, date, and pages reviewed on the appropriate pages, if applicable.
   e. Verify the information on the CODIS Specimen Detail Report is correct.

2. **Report**
   a. Header information is correct and concordant with Evidence Request Form.
   b. Reviewer concurs with the report language (spelling, grammar, transcription).
   c. Report follows appropriate format per BIO.5.QAQC.11
   d. Signature, date, and title of analyst and technical reviewer, if applicable, is present.

3. Other
   a. Activities are added in LIMS
   b. LIMS Data fields are completed
   c. DNA QC database updated
   d. GeneMapper IDX project is exported.
   e. DNA request is generated, if applicable.
   f. CODIS administrators are notified of a change in source ID
   g. Information for sexual assault DNA requests are added to the SAFE-T database.

IV. Annual Quality Review

A. The Quality System, as it pertains to DNA, is reviewed annually under the oversight of the DNA Technical Leader. The annual quality review includes an assessment of the following:

1. Review of any audits/assessments conducted and any findings as the result of the audits. Including any internal audits, DNA Quality Assurance audits and external assessments.
2. Review of technical manuals used for DNA analysis, including the DNA Analytical Procedures, Quality Assurance/Quality Control Manual and DNA Training Manual.
3. Review of validations, performance checks, updates to procedures and requests for changes in procedures.
4. Review of facilities.
5. Review of equipment, including any new critical equipment purchased and critical equipment retired within the year.
6. Periodic review of critical software for suitability and compliance with requirements, per FSD.34.
7. Review of personnel, including any new analysts or new trainees and the status of analysts' proficiency tests, court critiques and continuing education for the year.
8. Review of CODIS users.
9. Review of any level two corrective actions regarding DNA analysis from within the year.
10. Review court testimony is in accordance with the Division's Court Testimony Monitoring Policy (FSD.26).
11. Changes to the volume or type of DNA work being performed.
12. Recommendations for improvement/future projects.

B. The Annual Quality Review is documented in a memo or other equivalent form of interoffice communication and is retained by the Biology Unit. DNA quality reviews are retained for 10 years.

V. **Technical Review of Testimony**

A. All analyst's will have their testimony technically reviewed at least once per year, in each discipline they conduct testing (when applicable).
B. The technical review must be conducted by an individual competent in the testing the testimony is being given on.
C. Technical review of testimony is recorded on the Court Critique Form.
D. Retention of court testimony reviews is 10 years.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 1/22/19	**NUMBER:** BIO.5.QAQC.13 - Competency and Proficiency Testing
	RELATED ORDERS: FSD.21 & FSD.23	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 13 ISO/IEC:17025 5.9.3	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Competency and Proficiency Testing	

I. **All staff regardless of prior training and experience will undergo a competency test prior to being authorized to perform work in the Biology unit.**

A. **Purpose**

1. The purpose of a competency test is to demonstrate the individual's knowledge and understanding, skill set in conducting tests, and ability to convey results and/or conclusions.

B. **Scope of Testing**

1. The scope of the competency test will be tailored to the individual's job duties and to the extent they will do casework.

2. The competency test may be administered in a modular format allowing the examiner to conduct casework in the area of competency.

3. A due date will be assigned in LIMS for all competency tests.

4. The criteria for successful completion of the competency test will be given to the trainee prior to the competency test being taken.

5. Previously used proficiency tests can be used but the identity of the test must be completely unknown to the trainee and the lab must have previously obtained the correct results. The expected results from internally created competency tests must be know to the individual creating the test prior to issuing the test.

6. **Elements of a Competency Test**

   a. A competency test will consist of hands-on practical test sets consisting of unknown biological samples.

   b. Completion of a written and/or oral examination to assess the individual's knowledge of the discipline and the methods and testing procedures.

   c. If the examiner's job responsibility entails writing laboratory examination reports, the examiner's competency test will also include a written report to demonstrate the examiner's ability to properly convey results and/or conclusions.

   d. Mock testimony.

C. **Competency Documentation and Authorization**

1. The Unit Supervisor’s signature on the examiner's training log, will signify approval of the examiner's training and successful completion of the competency test. The DNA Technical Lead’s signature will additionally be required for approval on the DNA training log. The approval will signify authorization for the examiner to conduct work to the scope of their training and competency.

2. Upon authorization, the individual is authorized to use all equipment, instrumentation and procedures as well as perform validations to the extent they received training and were competency tested.

3. If the examiner was competency tested in the area of report writing, the examiner is additionally considered to be authorized to issue reports and give opinions and interpretations in the area(s) for which training and competency has been documented.

4. Documentation and approval of the examiner's competency test will be maintained in the laboratory's Information Management System (LIMS), according to procedures detailed in QA.10.

    a. The Unit Supervisor and/or DNA Technical Lead will review the competency test and will be document the review on the Proficiency/Competency Test Data Summary Form.

    b. The signature of the tested individual, the DNA Technical Leader/Unit Supervisor and QA Coordinator on the Proficiency/Competency Test Data Form signifies notification of the test results to these individuals and approval of the competency test.

5. The examiner will enter into the proficiency test cycle within six months from the casework authorization date for a DNA analyst/technician and within 1 year for a biology screener.

II. **All Biological Screeners will complete at least one proficiency test per year and all DNA analyst's/technician's will complete at least two external proficiency tests per year. Additionally, each analyst must be tested at least once during the five year accreditation cycle in each category of testing in which they have performed casework during that period.**

A. **Purpose**

1. Proficiency testing is an element of the Biology Unit's quality assurance program. Proficiency testing is a means of monitoring the test methods and processes used in Biology, such as reagents, instrumentation, and procedures, as well as the methods and processes used by the examiner. The proficiency test is to be completed by the examiner similar to casework which includes a technical and administrative review.

B. **Schedule of Testing**

1. The Unit Supervisors maintain a schedule of proficiency testing for all Biology unit staff. The manufacturer's due date is routinely used to track and schedule Biology unit proficiency tests.

2. Each analyst, technical reviewer, technician, will undergo two external proficiency tests per year, in each technology (containing the CODIS core loci) that they perform casework testing, and to the full extent in which they participate in casework. The first test will be given in the first six months of the year and the second in the last six months of the year, where the interval between the two proficiency tests is no less than four months and no more than eight months.

3. The team approach (DNA analyst/DNA technician) currently being used for processing casework samples may be used during proficiency testing. A DNA analyst must however perform all DNA methods and platforms that they are qualified in at least once per year.

4. DNA analysts/technicians who become qualified in an additional method, technology, or platform will be proficiency tested on their new qualification in the next scheduled proficiency test.

5. Dedicated biological screeners will undergo external proficiency testing, at least once in the calendar year, in the areas for which they are qualified to conduct casework. For examiners qualified in screening and DNA analysis, a DNA proficiency that includes reporting biological screening and DNA will be conducted at least once in a five year cycle.

6. A newly qualified biological fluid examiner will enter the proficiency testing program within 1 year following their qualification to conduct casework.

7. A newly qualified DNA analyst/technician will enter the external proficiency testing program within six months of the date of their qualification. **(QAS 13.1.2)** Between the first proficiency and the second, the new examiner will cover all methods and technologies in which the examiner is qualified to conduct casework.

8. An examiner who does not conduct DNA casework but who's sole role is to perform DNA technical review will be proficiency tested in the DNA technical review process by reviewing two external proficiency tests per year to the full extent in which they are qualified to conduct technical review. The technical reviewer must currently be or have previously been qualified in the methodology that the review encompasses.

C. **Scope of Proficiency Testing:**

1. All external proficiency tests conducted in the Biology Unit are from an approved external proficiency test provider, such as Collaborative Testing Services (CTS) that is accredited to ISO/IEC 17043 by an accreditation body that is a signatory to the APLAC MRA or IAAC MLA and has the applicable proficiency tests on its scope of accreditation.

2. The results must be submitted to the proficiency test provider in order to be included in the provider's published external summary report.

3. **Additional DNA Requirements:**

   a. DNA analysts will attempt typing of all CODIS core loci for each technology in which the analyst is qualified, for both DNA proficiency tests in the year. This typing applies to each sample included in the proficiency test packet/set unless the sample does not meet the technical requirements of the technology (e.g. Y-STR's in the absence of male DNA.) **QAS 13.1.5**

   b. DNA casework examiners will be proficiency tested at least once a year in each of the manual and automated methods. **QAS 13.1.1**

D. **Documenting Proficiency Tests:**

1. The following proficiency case records are documented and maintained electronically in LIMS, according to LIMS Proficiency Testing Procedures (QA.10), as well as, a hard copy is placed in the laboratory's proficiency test file (**QAS 13.1.6)**:

   a. The analyst's case notes and data supporting the conclusions. **QAS 13.1.6.4**
   b. The analyst's laboratory report.
   c. The proficiency test results and conclusions recorded on the test provider's data sheets. **QAS 13.1.6.5**
   d. The test provider's report of the intended and/or compiled (consensus) results.
   e. The Proficiency/Competency Test Data Summary Form which records the following:

      1. The LIMS laboratory (case file) number.
      2. Proficiency test number or test-set identifier. **QAS 13.1.6.1**
      3. Identity of the test provider (i.e. CTS and CAP)
      4. Test Provider's/Manufacturer's due date.
      5. Identity of the examiner. **QAS 13.1.6.2**
      6. Date assigned and completion date. **QAS 13.1.6.3**
      7. Any corrective action taken. **QAS 13.1.6.7**
      8. Satisfactory or Unsatisfactory completion of the proficiency test. **QAS 13.1.7.4**

E. **Evaluation of Proficiency Results**

1. Biological Screening

   a. Biology screening test results are assessed against the consensus of reporting laboratories. For a satisfactory grade, no analytical errors or wrong conclusion can be reported to the test provider.

   b. Reported inconclusive or uninterpretable results should be consistent with the Biology Unit's interpretation guidelines and will be reviewed by the Biology Unit Supervisor.

2. DNA Testing/Analysis

   a. DNA proficiency test results are assessed against the consensus of reporting laboratories. For a satisfactory grade, no analytical errors can be observed in the typing data of the DNA profile and all reported inclusions/exclusions must be correct. **QAS 13.1.7.4**

      1. If unsatisfactory, a corrective action will be implemented and the discrepancy and/or root cause will be documented. **QAS 13.1.6.6**

   b. Reported inconclusive or uninterpretable results should be consistent with Biology Unit's interpretation guidelines and will be reviewed by the DNA Technical Leader. **QAS 13.1.7.2**

   c. The Proficiency Test Data Summary Report form documents evaluation of the following for DNA proficiency testing **QAS 13.1.7.1:**

      1. All reported inclusions and exclusions are correct.

      2. All reported genotypes are correct according to the consensus results or according to the Biology Unit's interpretation guidelines.

      3. Inconclusive or uninterpretable results were reported according to the Biology Unit interpretation guidelines and were reviewed by the DNA Technical Leader.

d. Proficiency results may be verified by another qualified examiner or the Unit Supervisors. This verification will be documented in LIMS.

e. The Unit Supervisor and/or DNA Technical Lead will review the proficiency test with the examiner and will be documented on the Proficiency/Competency Test Data Summary Form.

f. The signature of the tested examiner, the DNA Technical Leader/Unit Supervisor and QA Coordinator on the Proficiency/Competency Test Data Form signifies notification of the test results to these individuals and approval of the proficiency test. **QAS 13.1.8 and 13.1.9.**

3. **Corrective Actions:**

a. A discrepancy or analytical error reported to the test provider will require a documented corrective action . The corrective action is documented according to the Quality Assurance Action Policy FSD.16 and procedure QA.18. **QAS 13.1.7.3**

b. At a minimum, corrective actions involving DNA proficiency testing, the DNA Technical Leader will review, and approve the corrective action(s) prior to implementation. **(QAS 14.2)** The approval of the DNA Technical Lead is documented on the Quality Action Request.

c. The DNA Technical Lead will inform the CODIS Administrator at the time of initiating a non-administrative corrective action (Quality Assurance Action Request) citing the nature of the discrepancy in the proficiency test. **QAS 13.1.9.a**

4. **Documentation and Retention:**

a. Proficiency tests are documented according to the LIMS Proficiency Testing Procedure QA.10 and will be retained by the Laboratory according to Control of Records Policy FSD.44 . This retention is minimally 10 years. **QAS 3.2**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 06/09/2019	**NUMBER:** BIO.5.QAQC.14 - Non-Conforming Work/Corrective Action
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 14 ASCLD-LAB: ISO/IEC 17025 4.9, 4.11	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Non-Conforming Work/Corrective Action	

I. Introduction

A. Corrective actions and preventative actions are part of improving and maintaining the Unit's overall quality management system. The Unit's corrective action policy adheres to the FSD policy (FSD.15), ANAB requirements, and the requirements set forth in the DNA Quality Assurance Standards for Forensic DNA Laboratories **(QAS 14)**.

II. Authorities and Responsibilities

A. The Unit Supervisor(s) has the discretion to determine the appropriate corrective action(s) to be taken.

B. The DNA Technical Lead oversees the quality assurance of the DNA program, thus has the authority to suspend and resume technical operations of the unit or for an individual, if deemed necessary. (QAS 5.2.3) The corrective action plan requires the approval of the technical leader before implementation.

C. The CODIS administrator must be notified when the nonconformity impacts DNA records entered into CODIS. If necessary, the CODIS administrator may terminate an analyst's or laboratory's participation in CODIS until the reliability and security of the computer data can be assured in the event an issue with the data is identified

III. Levels of Non-Conforming Work and the Corrective Actions

A. **Quality Action Correction (QAC Level 3):** Action taken to correct a non-conformity when the significance of the non-conforming work is minimal. The correction is readily apparent and can be made quickly. The action will be taken immediately, often by the person observing the non-conformity and non-conformity may or may not be documented. Examples of such non-conformities include but are not limited to:

1. transcription errors
2. grammatical errors
3. typographical errors
4. omission errors

B. **Quality Action Correction (QAC Level 2):** Action taken to correct a non-conformity when the non-conforming work is of some significance and the investigation demonstrates that the non-conformity did not affect the validity and accuracy of the test result. Level II non-conformities are typically observed and corrected prior to issuing a report and are addressed on a case-by-case basis. Non-conformities at this level do not affect or cause immediate concern for the fundamental reliability of the work product. Technical non-conformities may include but are not limited to:

1. A contamination event but the contaminant is subsequently demonstrated not to affect the validity, reliability, and accuracy of the reported results.
2. A sample switch but the switch is subsequently demonstrated to not affect the validity, reliability, and accurately of the reported results.
3. Improper use or no use of controls, but it is subsequently demonstrated that it did not affect the validity and accuracy of the reported results.
4. Use of expired kits or reagents or non-QC'd kits and reagents, but it is subsequently demonstrated that it did not affect the validity and accuracy of the reported test results.
5. Omission of quality control check measures, but it is subsequently demonstrated that the omission did not affect the validity and accuracy of the reported test results.
6. The use of non-calibrated or performance checked equipment, but it is subsequently demonstrated that the equipment is in good working order and its use did not affect the validity and accuracy of the test results.
7. When equipment fails or a procedure fails, but it is subsequently demonstrated that the failure did not affect the validity or accuracy of the test.
8. Using an improper procedure or deviating from a protocol, but it is subsequently demonstrated that the deviation did not affect the validity and accuracy of the test results.

9. Level 2 non-conformities typically will be identified by the analyst or observed during the review process. These non-conformities typically will be corrected by repeating one or more of the testing processes or analysis steps, if possible. If the corrective actions taken demonstrate that the results are reliable and accurate, the results can be reported.

10. When the non-conformity is not or cannot be corrected, such as with the use of an expired kit or reagent, it must be shown that the non-conformity did not affect the reliability and accuracy of the results.

11. Level 2 non-conformities will be documented in the case notes. The analyst will describe the "issue/problem" in the case notes and the notes will contain what corrective actions were taken, if applicable, to rectify the non-conformity.

12. A Level 2 will be documented in LIMS using FSDF.23. The analyst or unit supervisor will document the following aspects, if applicable:

    1. A summary of the event
    2. Analysis, including any troubleshooting and investigation
    3. Corrective actions taken to address the non-conformity

13. The Unit Supervisor and/or DNA Technical Leader will review the documentation and have the discretion to determine the appropriate course of action.

C. **Quality Action -Correction (QAC Level 1):** Action to address a significant technical or quality issue. Level 1 non-conformities may include but are not limited to:

1. When there has been an erroneous test result/conclusion reported in casework or proficiency test
2. When there has been a misidentification of a biological substance reported in casework or proficiency testing
3. When test results or records have been falsified
4. When erroneous or falsified testimony has occurred
5. When the original evidence has been lost, destroyed or compromised by some action or event that occurred within the laboratory
6. When PCR contamination is detected in non-PCR designated areas.
7. Audit findings.

8. See FSD.15 for information regarding the elements of a Quality Action Correction-1.

IV. **Documentation and Retention**

A. Documentation of level one and two corrective actions are maintained by the Laboratory in LIMS, according to FSD procedure QA.18. Documentation will be retained according to Control of Records Division Policy (FSD.44). **(QAS Std 3.2)**

V. **Review and Monitoring**

A. Level 2 corrective actions are reviewed at the time of each incident by the Unit Supervisor, and DNA Technical Lead, if DNA related. Additionally, level 2 corrections are annually reviewed during the Unit's Annual Quality Review, as specified in BIO.5.QAQC.03, and as part of the DNA Quality Assurance Standards.

B. Level 1 corrective actions are monitored for effectiveness for the period of time specified in the Corrective Action Report by the Unit Supervisor and DNA Technical Leader, if DNA related. The Corrective Action may be closed if the monitoring finds that the corrective actions taken have been effective.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 2/8/2018	**NUMBER:** BIO.5.QAQC.15 - Audits
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 15 ASCLD-LAB ISO/IEC:17025 4.14	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Audits	

I. **Audits are an important part of the Quality Assurance Program. An audit is designed to evaluate the laboratory's performance through examining policies, procedures, and records pertaining to the overall quality system.**

II. **The Biology Unit undergoes an annual quality audit. See the Division Manual on Quality Audits (FSD.20) for further information.**

III. **DNA Quality Assurance Audit**

1. The DNA section of the Unit is audited annually in accordance with the DNA Quality Assurance Standards for Forensic DNA Laboratories. **QAS 15.1**

2. A DNA audit will be conducted once every calendar year. The date between audits must be greater than 6 months apart and no more than 18 months apart between one calendar year to the next.

3. At least once every two years, an external audit must be conducted by a team of auditors from external laboratories. **QAS 15.2**

4. Regardless of whether the audit is internal or external, one or more of the auditors must be a qualified or previous qualified analyst(s) qualified for each of the DNA technologies and platforms used in the laboratory.

5. At least one of the audit team members must be a “qualified auditor”: a person who has successfully completed the FBI Quality Assurance Auditor course.

6. Documentation of internal and external audits, as well as the auditor’s qualifications will be maintained by the Biology Unit. **QAS 15.2 a, b and QAS 15.3 a, b**

7. Audit documentation for individuals who have had their qualifications evaluated and approved during two external audits will be maintained. **QAS 15.2.1**

    a. DNA analysts, the casework CODIS Administrator, and DNA Technical Lead who have not had their training qualifications evaluated and approved for two successive external audits, will continue to have their experience, education and training qualifications reviewed until at least two external audits.

8. Audit documentation for validations that have been previously evaluated and approved during one external audit will be maintained. **QAS 15.2.2**

    a. DNA validation studies that have not been previously reviewed and evaluated through one external audit will continue to be reviewed and documented until at least one external audit.

9. The internal and external audits will be conducted using the most current FBI DNA Quality Assurance Standards Audit document. **QAS 15.4**

10. DNA Quality Assurance Audit documents and findings are reviewed by the DNA Technical Leader. Findings from the Audit are addressed through the Corrective Action process (see Division Manual Non-Conforming Work FSD.15). The corrective actions are reviewed for approval by the DNA Technical Lead. This allows for audit findings to be appropriately addressed prior to any corrective action being implemented. **QAS 15.5**

11. A copy of all external audit documents, including the laboratory’s responses and corrective actions to any audit findings, will be provided to the NDIS custodian within 30 days of receipt of the audit document/report. **QAS 15.1.1**

    a. A copy of all audits (internal and external) along with the laboratory’s responses/corrective actions to any audit findings will be provided to the SDIS custodian.

12. Prior Quality Audit Documents including resolution of audit findings and corrective actions are retained in the Biology Unit by the DNA Technical Lead. The documents are retained minimally for 10 years according to Division Manual policy "Control of Records" FSD.44 . **QAS 3.2, 15.6**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 01/23/2017	**NUMBER:** BIO.5.QAQC.16 - Safety and Contamination Prevention
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 16 ISO/IEC:17025 5.3.6	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Safety and Contamination Prevention	

An effective safety program in the workplace is an important part of every organization. Safety programs promote safe practices, and reduce injuries and illness. The Laboratory maintains a safety program that adheres to State and Federal regulations as well as to accreditation standards to ensure the safety of all employees.

Safety Program

Part of an effective health and safety program is having a written safety manual which specifically states the issues and requirements regarding environmental health, safety and responsibility in the workplace. All examiners in the Biology Unit shall comply with the Division Safety Manual. **(QAS 16.1)**

Examiners in the Biology Unit receive and follow the blood borne pathogens and chemical hygiene training provided through the Division's safety program **(QAS 16.1.1).** The blood borne pathogens and chemical hygiene training is conducted once a year. Examiner completion is documented by Laboratory management. **(QAS 16.1.2)**

According to FSD.08 , the Safety Coordinator will oversee the Laboratory's health and safety program and will oversee the annual review of the program. The annual review is documented through the Laboratory's annual quality audit and retained according to FSD.20. **(QAS 16.2)**

Biological Hazards

Biological hazards are biological substances that pose a threat to human health. Biological evidence contains biological hazards, such as bacteria, viruses, fungi, and parasites.

All examiners in the Biology Unit are exposed to biological evidence. All biological evidence must be treated as if it is hazardous. Proper protective equipment, cleaning, spill procedures and waste disposal are essential to the safety program to protect the employee from exposure.

Safety Precaution Guidelines

1. Protect yourself
2. Protect others
3. Protect the evidence
4. Handle all biological materials and fluids with universal precautions
5. Body fluids, wet or dry, carry diseases
6. The key to safety is prevention.

Exposure Prevention

Personal Protective Equipment

Personal protective equipment (PPE) is used to prevent the transfer of biological hazards and minimize the exposure and risk to the examiner. The examiner must be aware and consider the potential health risks at all times when handling biological evidence. PPE, such as gloves, goggles, and face masks, are the first line of defense in preventing exposure.

I. Gloves must be worn when handling evidence.

II. Contact with the face, nose, mouth, and eyes should be avoided, until gloves have been removed and/or hands have been washed.

III. Minimize contact with personal items or shared contact areas, such as phones, computers, and doorknobs while wearing gloves.

IV. Gloves must be discarded if they are suspected to have been contaminated with a biological substance.

V. Gloves and face masks need to be disposed of when contaminated with biological material, deteriorated, torn and when the laboratory examination is complete.

VI. Examination areas are physically separated from office and administrative areas. Laboratory coats are to be worn while examinations are being conducted and are not to be worn in the office areas.

VII. Lab coats should be changed frequently and are laundered through the Laboratory's laundry service.

Hygiene

I. As an extra precaution, hands and exposed skin should be washed frequently and after removing PPE.

II. Long hair should be tied back.

III. Eating, drinking, smoking, and gum chewing during the examination of evidence or in the examination area is prohibited.

Cleaning

I. Disposal and cleaning of equipment needs to be conducted in an appropriate manner to avoid exposing others to biological hazards.

II. Bench tops and shared work surfaces are routinely cleaned with a 10% to 20% bleach and water solution before and after the examination of evidence.

III. Disposable bench covers or butcher paper is placed on the bench top work area prior to use to capture potential shed biological material. The covers are disposed of after use, into the trash or biohazard container, depending on the amount of soiling.

IV. Shared equipment is cleaned during periodic scheduled maintenance.

Biological Spills

I. Biological fluid spills (e.g digested, extracted DNA or blood) pose an immediate health threat and require immediate and specialized action.

II. Immediately contain and prevent the spread of the spill, by applying an absorbent material such as shop towels to block the further spread of the spill. Absorbent material available in spill kits may also be used, if needed.

III. Access to the area of the spill needs to be limited to those involved in the clean up.

IV. Appropriate PPE, such as gloves, lab coat, face shield, needs to be worn during the clean-up.

V. The spill area needs to be decontaminated with a 20% bleach solution and allowed to stand for at least 10 minutes.

VI. The towels need to be disposed of in biohazard containers.

VII. Spills involving amplified DNA: The spill needs to be cleaned up immediately with absorbent towels and the area needs to be decontaminated with a 20% bleach solution and allowed to stand for at least 10 minutes. If personal clothing was contaminated during the spill, the analyst must not return to the examination or extraction areas until the affected clothing has been removed. To protect personal clothing as much as possible during the clean up, PPE such as gloves, disposable booties and a lab coat may need to be worn. Dispose of the contaminated absorbent towels in a PCR waste container in the PCR room.

Chemical Spills

Information regarding the proper clean up procedures, including needed protective clothing, for hazardous chemicals can be found in the appropriate Safety Data Sheets.

When an emergency spill occurs, an employee typically will not have time to begin researching the proper emergency procedures before taking action. Therefore, it is critical that employees be familiar with the correct emergency action in the event of an accidental spill before using a chemical.

Each chemical may require a different response in the event of a spill, therefore certain general guidelines can be followed:

I. If an employee knows a chemical is not hazardous, he/she should clean up a spill in the appropriate manner as soon as possible.

II. If the employee knows that the chemical is hazardous, but is able to safely clean up the spill using available protective equipment as necessary, he/she must do so immediately.

A. If the chemical poses a contact hazard, the employee must ensure that other employees do not come into contact with the chemical.

B. If the chemical poses an inhalation hazard, the employee will ensure that employees without the proper protective equipment vacate the area.

III. If the employee does not know the identity of the chemical, does not know the correct clean up procedures, or it is beyond the capability of the laboratory to safely clean up the chemical, he/she will immediately vacate the area and advise other employees to leave also.

IV. Anytime an immediate clean up is not possible, the employee will notify his/her supervisor. If that supervisor is not available, then at least one of the following individuals must be notified in the order listed:

A. Immediate Supervisor or Designee

B. Another Division Manager

C. Division Safety Coordinator

D. Chief of Forensic Services

E. County Hazardous Materials (335-3200 or the 24 hour hotline 335-3232)

V. After evaluating the situation, the supervisor may determine that it is safe to proceed with cleaning up or may ask Hazard Materials personnel for advice or help with the clean up.

Refer to the Division Safety Manual, SAF.21 for further instructions on chemical spills.

Waste Disposal

I. Typically, materials that have wet biohazardous materials present on them and items soaked with biological fluids will be disposed of in biohazard waste containers.

II. Bench covers, wipes, gloves, pipette tips with the potential to have small amounts of biological material on them can be disposed of in trash cans.

III. Sharps, such as scapel blades, razor blades will be disposed of in the Biohazard Sharps waste containers. The containers should not be filled past the "fill line" indicated on the container.

IV. Hazardous waste generated in the examination areas, such as screening reagents and extraction chemicals are placed in labeled chemical waste containers and when full or when the hazardous waste vendor picks up the waste, the containers are placed in the hazardous waste pick up area.

V. Waste contained in the PCR room, such as all tubes, tips, wipes, gloves, etc. used in the PCR room need to be disposed of only in the PCR waste container located in the PCR room. When full, the PCR waste container is removed by Biology Unit staff directly into waste containers located outside the laboratory. The PCR waste containers are not to be carried through any of the laboratory examination areas.

VI. Hazardous chemicals (formamide, polymer etc.) generated in the PCR room are placed in labeled plastic chemical waste jars located in the PCR room. When full, or when the hazardous waste vendor picks-up the waste, the containers are moved directly to the hazardous waste pick up area. The PCR hazardous waste containers will not be carried through the rest of the laboratory examination areas.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 2/26/2018	**NUMBER:** BIO.5.QAQC.17 - Outsourcing
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards** DNA QAS Std 17 ASCLD-LAB ISO/IEC:17025 4.5	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Outsourcing	

I. The Biology Unit may review casework outsourced to a vendor laboratory for purposes of uploading the DNA profiles generated by the vendor laboratory into CODIS. The Biology unit will follow the FBI Quality Assurance Standards when engaging in outsourcing practices. The Biology Unit currently participates in outsourcing, but does not do subcontracting.

II. **Definition of Outsourcing:**

A. Under the FBI's Quality Assurance Standards**,** outsourcing is the utilization of a vendor laboratory that provides DNA services in which the Sheriff's Office laboratory agrees to upload the vendor laboratory's DNA data into CODIS. By agreeing to upload the vendor laboratory's DNA data into CODIS, the Sheriff's Office accepts ownership of the DNA profile as long as it resides in CODIS.

III. **Requirements**

A. The laboratory may enter into an outsourcing agreement only with a qualified vendor laboratory that meets the requirements of Standard 17 of the FBI Quality Assurance Standards. The vendor laboratory must demonstrate competency through documentation of training, accreditation and laboratory procedures.

B. Any DNA outsourcing agreement will require approval of the technical specifications between the Forensic Services Division and the vendor laboratory. Prior to the setup of an agreement, the following will be required of the vendor laboratory: **QAS 17.1**

1. Documentation of the vendor laboratory's accreditation status with ASCLD/LAB or ANAB

2. Documentation of the vendor laboratory's compliance with the FBI Quality Assurance Standard; Documentation will specifically include the most recent external audit, any corrective actions implemented to address audit findings, and any additional audit documents generated during the course of the agreement.

C. Documentation of the above will be maintained by the Sheriffs Office laboratory. **QAS 17.1.1** The DNA Technical Leader will be an approving authority of the technical specifications of the outsourcing agreement prior to its commencement. The DNA Technical Leader's signature on the agreement will signify review and approval of the technical specifications stated in the agreement. **QAS 17.2**

D. Prior to initiating casework for the Contra Costa County Sheriff's Laboratory the vendor laboratory must have documented approval from the Sheriff's Office DNA Technical Leader that the laboratory will accept ownership of the DNA profiles developed by the vendor laboratory. The date of signature on the agreement will signify approval for the vendor laboratory to commence casework. **QAS 17.2.1/17.3**

IV. **Site Visit Procedure QAS 17.7**

A. Prior to the commencement of casework analysis, the DNA Technical Leader, a designated individual from the Biology Unit, or the FBI will conduct an initial on-site visit of the vendor laboratory.

B. When the outsourcing agreement extends beyond a year, an annual on-site visit of the vendor laboratory will be conducted. Alternatively, an on-site visit performed by the FBI or another NDIS Laboratory using the same technology, platform, and amplification kits may substitute for the annual on-site visit. Their on-site visit will be reviewed and approved by the DNA Technical Leader. Documentation of the approval will be maintained in the Biology unit. **QAS 17.7.1 and QAS 17.7.2.**

C. The DNA Technical Leader or designated employee of the laboratory who conducts the initial on-site visit, or annual on-site visit must be a qualified or previously qualified DNA analyst in the technology, platform, and typing amplification kit used to generate the DNA data. **QAS 17.7.1.1**

D. The purpose of the site visit is to confirm that the vendor laboratory's performance is in compliance with the FBI Quality Assurance Standards.. The site visit does not require a complete audit in accordance with the FBI Quality Assurance Standards, but should

predominantly entail a review of areas such as personnel, proficiency testing, evidence control, quality assurance program, facilities, and corrective actions.

V. **Review of Outsourced Data QAS 17.4**

A. **Scope of Review**

1. The Biology Unit will conduct a modified technical review of the vendor's data prior to upload of the vendor laboratory's data into CODIS and document the review using the "Vendor DNA Profile Review Checklist." **QAS 17.5 & 17.6.**

2. The Technical reviewer must be someone who is qualified or has been previously qualified in the technology, platform, and typing amplification kit used by the vendor laboratory to generate the DNA profile, and who is also currently in the DNA proficiency testing program to the extent they conduct casework. **QAS 17.6.a.** This may include the CODIS Administrator, DNA Technical Leader, a technical reviewer, an analyst qualified in the data being reviewed, or a contract employee.

3. The case file will be administratively reviewed according to Division Policy (FSD.18) and the Biology Technical Unit manual section on Administrative Review BIO.5.QAQC.12.

B. **Review Procedure**

1. A laboratory request is generated in LIMS.

2. The Assignment Notification Request Form and the "Vendor DNA Profile Technical Review Checklist" BIO.1.BIOF.03 are printed.

3. The vendor laboratory's report will be reviewed and the following information will be verified:

   a. Victim(s), suspect(s) and/or subjects names
   b. Agency and agency case number
   c. Correct item numbers
   d. Each tested item, or probative fraction is addressed.
   e. Reported results and conclusions are supported by the vendor's DNA STR data

4. The vendor laboratory's case documentation will be reviewed and the following information verified:

   a. Date laboratory received vendor data/documentation
   b. Vendor laboratory ID#/report# (if applicable)
   c. Verification of the vendor lab's technical review
   d. Methods, technology, and platform used (Quantification method, Typing Kits, and Electrophoresis platform)

5. Review of the vendor's STR typing data will entail verification of either pre-printed electropherograms or the electronic data of all the samples and controls. If electronic data is to be reviewed, the appropriate genetic analysis software, such as GeneMapperID/ID-X software, will be used with the same analysis parameters used by the vendor laboratory and adhering to the vendor's validation studies. The vendor's parameters will be detailed in their protocols and procedures which are maintained and available on the Biology Unit's Network.

6. The vendor laboratory's **STR data** will be reviewed and the following information will be verified:

   a. That expected results were obtained from all controls: sizing standard, ladder, positive and negative controls, and reagent blanks.

   b. Typing results, allele calls and any results tables.

7. The profile being entered into CODIS will be reviewed and the following information will be verified/recorded:
   a. If the sample meets the eligibility to be entered into CODIS
   b. Specimen category (Forensic Unknown, Mixture, etc)
   c. Specimen name
   d. Offense date
   e. Source ID
   f. Agency information
   g. If an elimination sample is needed/requested

8. The reviewer's initials and date on the "Vendor Laboratory DNA Profile Review Sheet" signifies the technical reviewers concurrence with the vendor's data and approval of the DNA profile for upload into CODIS.

9. After approval, the profile can be entered into CODIS. **Note**: for partial or mixture profiles, a CODIS match estimation will be calculated to determine if the profile meets SDIS/NDIS minimum match requirements for upload.

C. **Discrepancies:**

1. In the event there is a discrepancy between the review performed by the Biology Unit and the vendor laboratory, the reviewer will consult with the Unit Supervisor or the DNA Technical Leader. The vendor laboratory may be contacted to resolve the situation. The vendor laboratory may need to re-assess or take other corrective measures before ownership is taken for their DNA data.

2. The vendor laboratory's DNA profile may be uploaded if the cause of the discrepancy has been resolved and does not affect the interpretation of the DNA results/profile or outcome for the CODIS search.

3. The vendor's DNA profile may not be uploaded if the discrepancy cannot be resolved to the Biology Unit's satisfaction. The customer or vendor laboratory will be notified of the unresolved issue either verbally or via a laboratory report.

D. **Case Documentation**

1. The vendor laboratory's case note packet documenting the contents and review of the vendor laboratory's data will be compiled and will consist of the following records:

   a. An Assignment Notification Form
   b. Any communication logs
   c. The vendor laboratory's final report
   d. Table of DNA typing results
   e. CODIS entry details (eligibility, specimen name & category, source ID, offense date, and agency name & case number)
   f. Match estimator calculation
   g. Print-outs of relevant electropherograms to support the results/conclusions
   h. Vendor DNA Technical Review Checklist
   i. LDIS Specimen Detail Report, if applicable
   j. CODIS Match Estimation, if applicable

E. **Laboratory Report**

1. The reviewer will generate a “Record of Notification Report.” The report will serve as notification to the customer (law enforcement agency or other law enforcement laboratory) that a DNA profile was uploaded to CODIS, or not uploaded, if the profile is determined to be ineligible.

2. The report will clearly state that the profile was generated by the vendor laboratory.

3. The technical reviewer will "Draft Complete" the request in LIMS as the "Analyst." This will signify the technical review of the vendor laboratory's data.

VI. **Release and Retention**

A. After administrative review, the completed laboratory case packet and report will be retained by the Clerical Unit. The report is sent to the client agency and not to the vendor laboratory unless the vendor laboratory is the client agency. The vendor laboratory's data will be retained either on CD/DVD or electronically in LIMS, or on the laboratory's internal network drive.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/22/2019	**NUMBER:** BIO.5.QAQC.18 - Equipment Quality Control Check Schedule
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**ASCLD-LAB:** 6.4 **DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Equipment Quality Control Check Schedule	

I. The Biology Unit maintains a schedule for the quality control checks of equipment and instrumentation and uses inspection record forms and logs to document the actions taken. The following is the quality control check schedule and reference to the quality control check procedures:

A. Weekly Checks

1. Refrigerators/Freezers (temperature monitoring). QC Procedure: BIO.5.QAQC.24

B. Monthly Checks

1. pH meter (fluid check). QC Procedure: BIO.5.QAQC.24
2. Lab Cleanup. QC Form BIO.5.QAQCF.43
3. 7500 background

C. Quarterly Checks

1. Water Purification System (monitoring). QC Procedure: BIO.5.QAQC.24

D. Every Four Months

1. Versa volume calibrations. See BIO.5.QAQC.25

E. Semiannual Checks

1. Centrifuges (function and cleaning). QC Procedure: BIO.5.QAQC.24
2. Autoclave (cleaning). QC Procedure BIO.5.QAQC.24
3. EZ-1 Robots. QC Procedure: BIO.5.QAQC.25
4. Real Time PCR Instruments (ROI, Optical, Pure Dye Spectra). (One of the semiannual checks must be performed by a service technician). Computer maintenance. QC Procedure: BIO.5.QAQC.26
5. Genetic Analyzers, computer maintenance. QC Procedure: BIO.5.QAQC.27
6. Liquid Handling Robots (computer maintenance). QC Procedure: BIO.5.QAQC.25

F. Annual In-house Checks

1. Thermal Cyclers (System Performance, Temperature Verification and Temperature Uniformity checks). QC Procedure: BIO.5.QAQC.26
2. Water Purification System (filters replaced annually or as needed). QC Procedure: BIO.5.QAQC.24
3. Heat blocks, Oven, Refrigerators/Freezers (temperature checks with NIST traceable thermometer). QC Procedure: BIO.5.QAQC.24
4. EZ1 Robots. QC Procedure BIO.5.QAQC.25
5. Digital Thermometers (replace batteries, as needed).
6. M-VAC. QC Procedure BIO.5.QAQC.24

G. Calibrations/Maintenance Performed by Outside Vendor

1. Digital reference thermometer (by Rice Lake) Frequency of calibration is indicated on certification paperwork
2. Temperature verification kit for thermal cyclers (Annually by Alpha Technics)
3. Pipettes (Annually by Ranin)
4. Balances (Annually by Rice Lake)
5. Weights (calibrated every 2 years by Rice Lake)
6. Microscopes (Annually by TI)
7. PCR/Chemical Fume Hoods (Annually by TSS)

8. Qiagen EZ1 XL robots (Annually by Qiagen)
9. Liquid Handling Robots (Annually by Hamilton)
10. Real Time PCR Instruments (Annually by Applied Biosystems)
11. Genetic Analyzers (Annually by Applied Biosystems)
12. Versa Robot (Annually by Aurora)

H. Annual Performance Check using NIST traceable DNA reference samples **QAS 9.5.5**: Instructions and records for the annual performance check of DNA procedures using the following instrumentation is found on the Laboratory's internal network drive.

1. Qiagen EZ-1 and EZ1 XL Robots
2. Liquid Handling Robots
3. Real Time PCR Instruments
4. Thermal Cyclers
5. Genetic Analyzers

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** BIO.5.QAQC.19 - Contamination Control
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Contamination Control	

I. Contamination Prevention and Control (QAS 9.7)

A. There are several possible **sources of contamination** including but not limited to:

1. Laboratory personnel
2. Laboratory environment (i.e surfaces, equipment, ventilation system)
3. Cross contamination from another evidence item
4. Consumables and reagents

B. Contamination can occur **directly** or **indirectly**

1. **Direct Contamination:** Transfer of DNA from the source of contamination to the evidence item or DNA sample. This may occur when staff are handling an item but may also occur without direct physical contact such as speaking, sneezing or coughing on an item or DNA sample.
2. **Indirect Contamination**: Transfer of DNA from the source to the evidence or DNA sample through an intermediary such as pens, packaging, and lab surfaces.

C. **Personal Protective Equipment**

1. Lab coats, gloves, and masks are required when handling evidence. Optionally head covers, sleeve extenders, and face shields can be worn when handling evidence.
2. Masks are required for all individuals examining evidence or any individual that will be entering the examiner's workbench area, PCR setup area, EZ1 extraction robot work area, or reagent preparation area.
3. Head covers shall be worn during extensive screening of biological evidence, and may be worn at any stage of examination.
4. Laboratory coats are changed when soiled or when determined to need laundering by the examiner. Lab coats are cleaned through a laundry service contracted by the laboratory. PCR coats are laundered on an as needed basis separately from general laboratory coats.
5. Gloves are changed or decontaminated between examination of items, whenever contaminated, or when suspected to be contaminated with biological substances or DNA material.
6. Gloves are changed after touching areas that may come in contact with un-gloved hands (i.e door handles, exterior evidence packages).
7. Gloves should be changed after a set of transfer steps within a procedure, between different DNA extraction batches, and after touching camera or computer keyboard.
8. If adjusting a face mask with a gloved hand, gloves should be changed before handling evidence or samples. Avoid touching ones face or hair with gloved hands.
9. For extra precaution, the examiner should wash their hands frequently.

D. **Personnel**

1. Access to the biology unit is limited to biology unit staff.
2. Activity in the examination area should be restricted to conducting laboratory procedures
3. Avoid talking while in the examination area. Food, drinks, and gum are not allowed in the examination area.
4. Evidence examination should be avoided when sick and coughing/sneezing excessively.
5. Collect DNA reference samples from anyone entering the evidence examination area, if possible.

6. Portable music devices and cell phones can be used to listen to music during examination, but must not be handled or placed on examination tables.

E. **Cleaning**

Analysts are responsible for maintaining a clean work area and general lab cleanliness. To control against biological contamination, the following procedures on cleaning and decontamination, and sterilization of equipment and work surfaces to prevent contamination of the evidence is to be followed:

1. Bleach dilutions should be prepared fresh weekly.
2. Bench tops, work surfaces, work space hoods, centrifuges, pipettes will be cleaned with a 10% bleach minimally before and after use.
3. Bench tops should then be covered with clean bench paper or diaper paper.
4. Personal examination tools, such as forceps, scissors, tube de-cappers pens, rulers, etc., are cleaned with 20% bleach, and rinsed with water or ethanol, minimally before and after use and ideally between each specimen.
5. Where practical, disposable supplies are used, such as razor blades and scalpels.
6. Tube racks and pipettes are cleaned with a 20% bleach solution, minimally after use.
7. Glassware is washed after use with laboratory detergent, rinsed thoroughly with tap water, and then rinsed thoroughly with distilled water. Heavily soiled items may be soaked for several hours. For greases and oils, a more rigorous cleaning may be needed using organic solvents (e.g. alcohols, acetone).
8. The PCR setup hoods are additionally decontaminated with the hood's built-in UV light, after each use.
9. Any spilled chemicals are brushed off balances with dry, lint free wipes. Pans may be removed for cleaning in a sink, if needed, but must be thoroughly dried before replacing back on the balance.
10. Additionally, common areas of the Biology laboratory will be cleaned an a monthly basis

F. **Reagents and Consumables**

1. When possible consumables should be purchased that are ISO 18385 compliant (DNA grade)
2. DNA reagents are prepared in the designated reagent preparation room.
3. Keep reagents closed when not in use.
4. A separate single use barrier pipette tip is used for each sample transfer and then discarded.
5. **Steam Sterilization (Autoclaving)** Steam sterilization provides a means to destroy bacterial organisms and proteins such as nucleases. Steam sterilization will damage endogenous DNA, however it may not completely be effective in destroying all template DNA viable for PCR.
    a. Glass containers used to prepare DNA critical reagents are autoclaved either prior to use, or at the same time as a reagent requiring sterilization. Autoclave tape on the containers is used to indicate appropriate sterilization conditions were met.
    b. Reagent preparation logs specify which reagents require steam sterilization. Containers will be labeled with autoclave tape to indicate sterilization conditions were met.
    c. Plastic tubes used in the extraction, recovery, storage, and amplification of DNA are to be sterilized prior to use, if not purchased in a sterilized condition. Only appropriate types of plastics (e.g. polypropylene, polymethlypentene, polypropylene copolymer, etc.) are to be autoclaved.
    d. Autoclave the tubes in autoclave packs or in an open container which allows the tubes to receive maximum even exposure to the steam.
    e. Label the packs (if no autoclave indicator is present) or the apparatus with autoclave tape to show that appropriate sterilization conditions were met.
    f. After sterilization, allow packs to cool and store for use. If tubes are in an open container, transfer tubes into a clean closeable container(s) labeled containers with initials, date, and autoclave status.
    g. Tube storage containers should be autoclaved periodically.

G. **Contamination Prevention during Sample Handling**

1. Each evidence item is placed on a fresh piece of paper or other suitable disposable material.

2. Exterior evidence packages and paperwork that may have been handled with un-gloved hands should not be placed on the same paper that evidence examination is taking place.
3. DNA digestion is performed on a different surface than evidence examinations, by placing new bench paper or diaper paper down, or using a separate area of the workstation.
4. To avoid fluid dispersal from the sample tube or the cap when opening, briefly centrifuge sample tubes to remove fluid or condensation that may have accumulated at the top of the tubes.
5. Open sample tubes carefully and in a controlled manner using a decapping device or a fresh kimwipe.
6. Keep reagents and evidence tubes closed when not in use. Only one evidence item should be open at a time.
7. Transfer of liquid specimens is conducted over disposable absorbent paper. Dispersal of aerosols needs to be conducted in an appropriate fume hood.
8. DNA from evidence and reference samples must be sampled, digested, and extracted separately, either in time or space.
9. When possible, samples anticipated to contain low levels of DNA should be sampled, digested, and extracted separately, either in time or space from high level DNA samples.
10. Samples known to originate from the victim, such as a vaginal swab must be sampled, digested, and extracted separately, either in time or space from suspect samples (i.e penile swabs).
11. Where practical, handle low level DNA samples, such as touch DNA or hair samples, prior to samples with higher concentrations of DNA or extract and recover at different times or space.
12. Examination paper should be carefully folded up and discarded to contain any inadvertent material from being dispersed throughout the examination area.

H. **Prevention of amplified DNA contamination:** In addition to physically isolating the area where amplified DNA is generated and handled, the following additional steps are taken:

1. All activities involving the handling of amplified DNA are confined to the PCR room.
2. Dedicated equipment and supplies located in the PCR room are specific for use only with amplified DNA procedures, such as thermal cyclers, pipettes, glassware, centrifuges, and genetic analyzers.
3. Non-disposable sample tube racks carried into the PCR room will not leave the PCR room unless it has been thoroughly cleaned (e.g. bleach, ethanol) and then must be thoroughly cleaned again once removed from the PCR room.
4. To avoid fluid dispersal when uncapping a PCR product tube, briefly centrifuge to remove possible fluid or condensation inside the cap. Open tubes carefully, using a decapping device or kimwipe.
5. PCR product remaining after typing is stored in the refrigerator/freezers in the PCR room until discarded. Discarded PCR product is packaged into press lock bags prior to being placed in the trash. The trash is carried out of the PCR room by Biology staff to ensure the trash does not get carried back through the examination and extraction rooms.
6. Lab coats are dedicated to the PCR room and are visually distinguishable by color from other laboratory coats. PCR lab coats are not to leave the room except to be laundered.
7. Gloves must be removed before leaving the PCR Room. As an extra precaution, the examiner should wash their hands immediately after leaving the room.

I. **See BIO.2.DNA.10 for information on detecting, investigating, and managing contamination.**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/12/2019	**NUMBER:** BIO.5.QAQC.20 - Reagents and Supplies
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**DNA QAS** Std 9.2, 9.3 **ANAB**: 6.6	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Reagents and Supplies	

I. **Purchasing Reagents and Supplies that affect the quality of tests**

A. **Selection**

1. Most reagents and supplies in the Biology Unit are purchased solely for use by the Unit. These reagents and supplies are selected for their specific use in DNA testing.

2. The Biology Unit Supervisor's will evaluate vendors of externally provided products to ensure their suitability for use in testing. Reagents and supplies are selected based on one or more of the following criteria:

    a. The vendor’s product is specified by the technical procedure

    b. The vendor supplies a certificate of analysis specifying the grade (e.g. molecular grade)

    c. The vendor providing consumables is the manufacturer of the instrumentation they are used with

    d. The vendor provides products that are forensic grade, pre-sterilized, or DNA free

    e. The laboratory has a prior history of satisfactory service with the vendor product

3. Evaluations of reagents and supplies can be conducted by:

    a. Reviewing the product's certificate of analysis to ensure it is the proper grade needed for DNA testing

    b. Reviewing the products shipping documents

    c. Checking the products performance during QC testing

    d. Checking the products performance through validation

4. A vendor's products will be re-evaluated on an on-going basis through the use of controls and QC testing.

    a. If an issue occurs involving a consumable/reagent it should be brought to the attention of the Unit Supervisors and action will be taken.

    b. Actions could involve contacting the vendor to report the issue or replacing a particular lot with a new lot.

5. The Biology Unit's list of approved vendors for supplies and reagents that affect the quality of tests is maintained on the laboratory's internal network.

B. **Ordering Procedure**

1. The Biology Unit purchase list is located on the laboratory's internal network.

2. Supplies and reagents may be placed on the purchase list by any personnel within the Biology Unit.

3. The requirements for externally provided supplies will be communicated to the vendor through the Unit's purchasing documents. This will include the item description, catalog #, and any specifications the Unit requires of the product, such as forensic grade, or DNA free.

4. The staff member forwards the purchasing sheet to someone with budgetary authority (i.e., a Manager or the Chief) to obtain final approval to place the order.

5. The staff member then places the order and forwards the purchasing sheet into the Clerical Unit for record keeping.

C. **Receiving Procedure**

1. When supplies are received the shipping documents must be reviewed and the items inspected to verify that all the supplies ordered were received and that they conform to the Unit's requirements for externally provided products. This review should include checking to see if the correct part/catalog number was received.

2. If they do not conform to the Unit's requirements or the correct product was not received, the Unit will not accept the products, the Supervisors will be notified, and the vendor will be contacted.

3. If the Unit accepts the product the packing form should be signed and dated by the individual receiving the order.

4. The signed packaging slip should be forwarded to the Clerical Unit.

D. **Storage**

1. Commercial reagents and supplies are stored according to manufacturer specifications.

E. **Labels, Lot Numbers, and Expiration Dates**

1. As commercial reagents and supplies are received by the Biology Unit, the item(s) or the immediate internal packaging are to be labeled with the date of receipt and the initials of the person who received it.

2. The manufacturer generally labels commercial reagents with the identity of the reagent, lot number, and expiration date. If the reagent lacks any of this information, the laboratory will add in the missing information.

3. If an expiration date is not provided by the manufacturer, the laboratory will assign it a five year expiration from the date received (unless otherwise noted on the reagent preparation log).

4. If commercial reagents are aliquoted, the individual aliquot containers are to be labeled with the reagent name and any additional original manufacturer information, including the lot number and expiration date when possible.

5. Specific lot information and/or any quality control information provided with the commercial reagent or supply are to be recorded and maintained in the Biology Unit's Reagent Preparation Log.

II. **In-House Reagents**

A. The Biology Unit maintains a Reagent Preparation Log which is a collection of all the individual reagent log sheets for each reagent prepared in-house and commercial reagents bought for use within the Unit.

B. The preparation instructions for each in-house reagent is recorded its own reagent-specific log sheet. The sheet is filled out each time a reagent is prepared with the following information, as applicable:
   1. Reagent name
   2. Lot number, tracking number
   3. Date and initials of person preparing the reagent
   4. Expiration date
   5. Purpose of reagent
   6. Preparation instructions
   7. Storage conditions
   8. Manufacturer and lot number of each component used to make the reagent
   9. Quantity of each component used
   10. Procedure for QC testing the reagent
   11. QC check info: performed by and date and individual approving QC testing
   12. Specific hazards associated with the use or production of the reagent

C. **Labels, Lot Numbers, and Expiration Dates**

1. In-house reagents or aliquots are labeled with the following information listed below. A container holding much smaller aliquots may be labeled on the exterior of the container with all the information in place of each individual aliquot.
   a. Name of reagent
   b. Lot number (mm/dd/yy of preparation followed by initials of preparer)
   c. Tracking number (a sequential number for batching the critical reagents)
   d. Expiration date (optional)
   e. Hazard label

2. The expiration date for each in-house prepared reagent is specified on the respective reagent preparation form.

3. Most critical in-house prepared reagents are given an 18 month expiration date from the date of preparation, unless otherwise specified in the reagent log procedure.

4. In most cases, the initial expiration date of a reagent is the only valid expiration date. However, an expiration date of an in-house reagent may be extended once the reagent is re-qualified through a quality control check that demonstrates its continued reliability and effectiveness. The expiration date may be extended in three month intervals and must be approved by the Unit Supervisor or the DNA Technical Leader. An approved extended reagent takes on a modified lot number, such as the initial mm/dd/yy followed by **"A"**, or a modified tracking number, if applicable.

III. **Critical Reagents**

A. Critical reagents are reagents and supplies that have a significant effect on the quality of testing.

B. The following reagents are deemed critical reagents and are quality control tested prior to use in casework:

1. Stain Extraction Buffer
2. Proteinase K
3. Dithiothreitol (DTT)
4. TE-4
5. Phenol Chloroform
6. DNase I
7. Tween 80
8. EDTA
9. $CaCl_2$ + $MgCl_2$

IV. **Critical Commercial Kits**

A. The following commercially available kits are deemed critical and are quality control tested prior to use in casework:

1. Qiagen Investigator Kit
2. PowerQuant Quantitative PCR Kit
3. PowerPlex Fusion 6C
4. PowerPlex Y23
5. PowerPlex Swab Solution

B. **Labels, Lot Numbers, and Expiration Dates**

1. The commercial kits listed above are pre-labeled by the manufacturer with the name of the reagent, manufacturer lot number, and expiration date. Upon being quality control tested with the Reagent Quality Control procedure below, the commercial critical reagent is then additionally labeled with the following information:

   a. Tracking number (a sequential number given for each lot of commercial reagent or kit)

   b. Quality Control check info (mm/dd/yy followed by the analyst's initials)

2. In general the manufacturer’s expiration date for commercial kits is adopted. However, the expiration date for a commercial critical reagent may be extended if the reagent is re-qualified through a quality control check demonstrating its continued reliability and effectiveness. The reagent expiration may be extended in three month intervals with the approval of the DNA Technical Leader or Unit Supervisor. An approved extended reagent takes on a modified tracking number and is labeled with the re-qualified quality control check date. See Reagent Quality Control Procedure below.

V. **Critical Reagent QC Checks**

A. Each new commercial kit lot or in-house lot of critical reagents is quality control tested prior to use with casework.

B. Multiple commercial kits of a given type, such as the Qiagen Investigator Kit, PowerQuant System, PowerPlex Y23, or PowerPlex Fusion 6C System, are quality control tested as a batch when the kits share the same manufacturer's lot number. The reagents tested in one kit represent reagents for all kits with the same lot number.

C. If the quality control indicators do not meet the quality specifications, notify the Supervisor and the DNA Technical Leader to evaluate the data. Additional testing may be required.

D. Reagents that fail this quality control check cannot be used for casework. The Unit will notify the vendor that the provided product does not meet our specifications.

E. The signature of the DNA Technical Leader, Unit Supervisor, or an individual as authorized by either, signifies approval for casework.

F. The quality control procedure and specifications for passing the QC check for each critical reagent and kit are found in the following reagent forms below:

1. Qiagen Investigator Kit, see form BIO.5.QAQCF.29
2. Phenol-Chloroform-Isoamyl Alcohol, see form BIO.5.QAQCF.20
3. PowerQuant Quantitiation Kit **QAS 9.3.1**, see form BIO.5.QAQCF.30.01
4. PowerPlex Fusion 6C DNA Amplification/Typing Kit **QAS 9.3.1,** see form BIO.5.QAQCF.26.01
5. Stain Extraction Buffer, see form BIO.5.QAQCF.23
6. Proteinase K (20mg/mL), see form BIO.5.QAQCF.21
7. Dithiothreitol (DTT), see form BIO.5.QAQCF.22
8. TE-4, see form BIO.5.QAQCF.24
9. Tween 80, see form BIO.5.QAQCF.27
10. DNase I, see form BIO.5.QAQCF.28
11. EDTA, see form BIO.5.QAQCF.37
12. $CaCl_2$ + $MgCl_2$, see form BIO.5.QAQCF.41
13. Swab Solution, see form BIO.5.QAQCF.42
14. PowerPlex Y23, see form BIO.5.QAQCF.44

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 11/12/2019	**NUMBER:** BIO.5.QAQC.21 - Case Documentation
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Pamela Hofsass	**ANAB:** 7.5 **DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Case Documentation	

I. **Test records** are administrative records and technical records generated or received by a laboratory pertaining to testing performed, and may be stored in one or more locations.

A. The **case file** is a *part of the test record* that contains the report, and a portion of the technical and administrative records for a particular case.

B. Technical records must be sufficiently detailed that in the absence of the analyst, another competent analyst or supervisor could evaluate what was done, interpret the data and understand the basis of the conclusions.

II. The test record will consist of the following administrative and technical records (as applicable). The records can be found in the case file unless stated otherwise below.

A. **Test Report** (See BIO.5.QAQC.11 for information regarding biology reports.)

B. **Laboratory Request Form:** An administrative laboratory form that functions as the agency's official request for service. The form captures the client's case information, the list of evidence submitted and/or associated with the case, the specific laboratory examination(s) requested, and any associative information, such as where or whom the evidence originated (victim, suspect, or the crime scene).

1. Changes to the request will be documented in the case packet or electronically in LIMS. Any correspondence with the client agency will include the name of the person authorizing the changes and the date of the change.

2. A request form is required for all evidence examined in a particular case.

C. **Correspondence:** Any records of phone conversations or e-mail communications regarding the specific case. These may be printed and placed in the case file or recorded electronically in LIMS.

D. **Case synopsis:** Relevant case facts that have an impact on the evidence or its evidentiary value. It may include background information and case history gathered from police reports, medical examinations, and any correspondence with the client agency. The synopsis helps clarify the purpose of the laboratory examination or activity, and CODIS eligibility. The request form may include a synopsis written by the requesting agency.

E. **Previous laboratory request documents:** Copies of previously reviewed laboratory requests may be included in the case notes for the purposes of documenting or providing a relevant link between the two examinations. The examinations may have been performed by the same examiner or another examiner and may be included in the case notes. This could include copies of documents such as previous reports, examination notes, and photos. Copies need to be clearly identified as a "copy".

F. **Examination notes:**

1. Item numbers of the evidence received and a description of the items examined needs to be included in your case notes. The full itemized inventory of the evidence will be maintained in LIMS.

2. Relevant or significant observations regarding the condition of the evidence and the presence of staining on the examined items. The size of any stains, number of swabs and any staining on the swabs will be noted. This can also be done through the use of a photograph.

3. All items received by the laboratory shall have an outer package that is tape sealed and initialed, therefore this information does not need to be included in the case notes. A note should be made if the outer package is not tape sealed and initialed or contains the "RWI" stamp. The description of an item's outer packaging is included in the LIMS item descriptions. The condition (tape sealed, closed, etc) and description of any inner packages should be noted.

4. **Diagrams and Photographs:**

    a. All examined items and consumed swabs should be photographed prior to testing to document its original condition. Additional photographs may be taken to document an area or location where a stain was tested or sampled. Not all photographs taken need to be incorporated into the examination notes as long as a thumbnail printout of all retained photographs is included in the case notes. All screening test cards (for example, p30 and RSID cards) must be photographed or photocopied and placed in the case notes. If a test band is too light to be seen in a photograph/photocopy then a second qualified individual will have to confirm the results and add their initials and date.

    b. Photographs in the examination notes will be labeled with a description identifying what is being depicted in the photograph (for example, item #) and marked so that attention is drawn to specific observations, where applicable.

    c. If the examination notes contain a digital image that is altered, including cropping, or adjusting the brightness/contrast, this information should be noted in the examination notes next to the photograph.

    d. Digital images must be retained on the Laboratory's digital storage server. Information regarding their retention must be included in the case file.

    e. Photographs taken in the Biology Unit are used for general documentation purposes and are not treated as evidence for comparison purposes.

    f. Refer to Division Manual (FSD.42.01) for additional information regarding “Diagrams, Photographs, and Digital Images.”

G. **Testing methods:** All testing methods are to be documented in the case file and include:

1. The identification of all screening test methods used.

2. Instrumentation used and the operating parameters of instrumental analyses, such as the magnification, wavelengths, and any filters used for examination will be recorded in the case notes. Some instrumental parameters may be maintained electronically, such as those parameters associated with instruments for quantification (RT PCR) and STR analysis (Genetic Analyzers and STRmix).

3. For DNA analysis, the identification of the extraction and quantitative test methods used and a description of the DNA amplification kit(s) used must be included in the case file**.**

4. Screening quality control checks performed during testing (for example, positive and negative controls) and their results must be documented in the case notes, along with the lot numbers and expiration dates of all reagents and test kits used.

H. **Examination Results:** Examination results of all tests performed for each item examined must be documented.

I. **DNA Specific Worksheets:**

1. DNA data technical review sheet.

2. Digestion/Extraction worksheet(s) with DNA reagents and lot numbers.

3. Quantification worksheet with reagents and lot numbers.

4. Quantification results worksheet. (The real-time PCR run file will be maintained on the internal network drive)

5. Amplification worksheet(s) with sample concentration or dilution, reagents, and lot numbers.

6. Summary table(s) of DNA results (for binary interpretation methods only)

7. Documentation of CODIS profile eligibility, specimen name and category, and source ID. Printouts of any calculated minimum match estimates (MMEs) must also be included.

J. **Electropherograms**

1. Hard copies of electropherograms for all reported DNA evidence profiles used to substantiate reported conclusions are provided in the case file. For samples being interpreted using STRmix, copies of the electrophrograms with both stutter filters on and off must be printed in the case notes.

2. Control samples: Allelic ladders, reagent blanks, positive/negative amplification controls, size standards, and quality control samples, if applicable, are maintained electronically in the GeneMapper project within the GeneMapper run folder on the Unit's internal network drive. All raw data files are maintained on the Unit's internal network drive, even if they are not used

for reporting.

K. **Records of Genemapper-IDX data edits to reported samples:**

1. Edits made to controls and evidence samples are recorded electronically within the GeneMapper IDX project.

2. Edits made to reported evidence samples are also contained within the case file.

L. **Interpretation notes or worksheets,** if applicable.

M. **Summary tables from previous requests,** if applicable.

N. **Statistical Analysis worksheets,** if applicable

O. **Propositions** used for interpretation and statistical analysis, if applicable

P. **STRmix Interpretation and LR from Previous Reports** used for reporting must be included in the case notes. In some cases involving large STRmix reports, only the relevant portion of the report may be printed in the case notes. All STRmix reports and data will be maintained on the Laboratory's Internal Network drive.

Q. **Disposition:** The disposition will be included within the case file, on the **test report,** and will reflect:

1. A description that denotes the status of the original evidence (e.g., whether retained, returned or consumed), as well as any collected evidence (trace materials, swabs, stains) must be contained within the case file.

2. DNA extracts generated and if DNA extracts were consumed or returned. If returned, the submission they will be returned in will also be included.

R. **Technical and Administrative Review Checklist:** A checklist used by the analyst and the technical and administrative reviewers to review the required documentation and information.

S. **LDIS Specimen Detail Report:** A document that shows the DNA profile entered into CODIS.

T. **Police Reports (if applicable)**

U. **Chain of custody:** The official chain of custody is maintained in the Laboratory Information Management System (LIMS). The chain of custody at the time the case is submitted for review may be included in the case notes.

V. **Use logs:** Logs for the DNA equipment used in testing are maintained on the Unit's internal network drive.

III. General info regarding Case Notes

A. Examination notes, observations, data and calculations shall be recorded at or near the time they are made and shall be identifiable to the specific task.

B. The date(s) of testing/analysis will appear in the case notes so that it is clear on what date each activity was performed.

C. The notes can be LIMS generated, typed, or handwritten. See below for instructions on LIMS generated notes.

D. The laboratory case number, handwritten initials of the analyst or the secure electronic equivalent, date, and page number are required on every page of the case notes, with the total number of pages listed on the first and last page. This information is typically documented, either all or in part, in the upper right corner of the case note page.

E. When an examiner batches their work with another examiner, the examiner who performed the testing (if other than the reporting analyst) must be clearly identified on the shared worksheet with their handwritten initials or a secure electronic equivalent.

F. Abbreviations specific to terminology used in the Biology Unit will be defined or documented. A list of common abbreviations used by analysts in the Biology Unit may be found in BIO.1.BIO.12.01.

G. Any results produced by an outside laboratory that are relied upon and/or used for interpretation are to be included in the case notes. Identification of the laboratory that conducted the tests must be documented in the case notes.

H. When a planned deviation from a test method occurs, the Unit Supervisor and/or DNA Technical Leader must be aware of the deviation and it must be documented in the case notes.

IV. Review of and Corrections made to Case Records

A. Non-contemporaneous corrections made to notes must be tracked.

B. Corrections to handwritten records must have the analyst's initials and date of correction. The corrected text may include an insertion, or a deletion with a single line strikeout.

C. Corrections made to electronic records created outside of LIMS may be corrected by hand or electronically.

1. Handwritten corrections must have the date of correction and the analyst's initials.

2. If corrected electronically, a single line will be drawn diagonally across the original page. The page should include the date, analyst initials, and a brief explanation for the replacement. The replaced pages are retained within the case packet, typically at the end and will be page numbered as part of the case packet.

3. If an observation, data, or a test result is amended, the reason it was amended and the identity of the individuals taking the action will be documented (This may be recorded on the technical/administrative review sheet).

D. Corrections made to electronic records created in LIMS will be tracked electronically in LIMS.

1. If an observation, data, or a test result is amended, the reason it was amended and the identity of the individuals taking the action will be documented (This may be recorded on the technical/administrative review sheet).

Notes for Sexual Assault Evidence Kit (SAEK) examinations conducted directly in LIMS:

For the service type "SAEK", screening and evidence examination case notes will be recorded directly in LIMS. The following are directions on how to generate SAEK case notes.

1. Subitemize all evidence within the kit in LIMS. Items can be sub-itemized directly from the **"Enter Findings"** screen. This automatically relates them to the request.

2. Under the request number, right click, and select **"Edit Findings."**

3.Select the main SAEK, right click, then select "**Add Result**."

4. Under the result type select "**Bio Inventory**" and hit "**Apply.**"

5. On the bottom right select the **"…"** icon. This will open a data tab where information for the items within the kit can be populated, such as: # of items, date of inventory, and condition.

6. Under each item tested, select the item, right click, then select **"Add Result."**

7. If performing body fluid identification, under the result type select **"Bio-Screen"**. If proceeding directly to DNA select **"Bio Swab"** and hit **"Apply".**

8. On the bottom right select the **"…"** icon. This will open a data tab where information about that item can be populated, such as: # of swabs, amount sampled, staining, test results, etc.

9. If performing body fluid identification, in the main narrative box, insert the conclusion for that item as it should appear on the report. For SAEKs taken directly to DNA testing, leave this narrative box empty.

10. *For body fluid identification only*: If the item is to be forwarded for DNA analysis, check the box, "**Forward to DNA.**" This will populate the item # under the items to be forwarded to DNA category in the report.

11. To add additional notes under a given item, right click **"Add Result"** and select **"Notes"** under that item. Any additional screening notes can be added to the case notes here.

12. Any items that do not have a result type, will automatically be placed in the **Items Not Examined** section in the report.

13. For biological fluid identification only: Add a disposition to the case notes: Right click on the request number and select **"Edit Findings."** The General Analytical Module will open. Right click on the request and select "**Add Result,"** Select **"Disposition"** under Result Type, and type the disposition in the narrative field. The disposition will be added to the case notes and will automatically be added to the report.

14. Reagent lot numbers and QC control checks can be added under **"Edit Findings"** by selecting **"Traceability"** under the Result Type or alternatively, a QC sheet can be added via the imaging module.

15. Any notes/worksheets written outside of LIMS may be included in the case notes by using the JusticeTrax Image Module.

a. The JusticeTrax Imaging Printing Preferences must be set to:
i. Resolution: Low 200x200 DPI
ii. File format: JPEG
iii. Filename generation: use doc name
iv. Output Directory: C:\Temp

b. To add images to the case notes, click on the camera icon on the bottom left in LIMS to open the JusticeTrax Image Module

c. Click on the **Requests tab** in the Image Module and select the request number.

d. Click on the **Add New Image icon.**

e. Find your file in the C:\Temp folder

f. Name the file and click **OK.**

g. Image size should be less than 1000 KB and should always be checked before adding to the imaging module.

h. Files will be placed in the note packet in a particular order. Below is the order in which files will be added and what should be placed within each:

i. **REQ:** These documents will be placed into the note packet before any examination notes.

ii. **IMG**: This is for other communications such as emails or records of conversations not captured in LIMS, as well as any images of the evidence.

iii. **DATA**: This can be used for any hand written notes or data printouts.

iv. **QC**: The QC sheet can be saved using this designation. This will place the QC sheet at the end of the notes, but before the Technical and Administrative checklist. (for biological fluid identification only)

v. Image names are sorted by prefix and then alphabetically. For example, “REQ01” will come before “REQ02,” and both will come before “IMG01”, etc. Prefixes that don’t match will go last. Additional remarks can also be added after the prefix to help label the images as to item number or image type: “DATA12 s:5 i:5-1-A P30 and amylase”, or “DATA13 s:5 i:5-1-A reagent traceability”. This will help the analyst or reviewer sort through a large number of images in the packet.

vi. A copy of a blank Technical and Administrative checklist must be added as the last page in the note packet.

vii. To print the notes, right click on the request number, select **“Edit Lab Notes”** and select the printer icon.

LIMS Generated Notes for DNA Sample Selection

When a DNA request consists of swabs only, the sample selection notes can be generated in LIMS. The following are the directions on how to generate sampling notes in LIMS.

1. Subitemize all evidence within the kit in LIMS. Items can be sub-itemized directly from the **“Enter Findings”** screen. This automatically relates them to the request.

2. Under the request number, right click, and select **“Edit Findings.”**

3. Select the outer package, right click, then select "**Add Result**."

4. Under the result type select "**Bio Inventory**" and hit "**Apply**".

5. On the bottom right select the **“…”** icon. This will open a data tab where information for the items within the kit can be populated, such as: # of items, date of inventory, and condition.

6. Under each item tested, select the item, right click, then select **“Add Result.”**

7. Under the result type select **“Bio Swab”** and hit **"Apply"**.

8. On the bottom right select the **“…”** icon. This will open a data tab where information about the swabs can be populated, such as # of swabs, visual condition, amount sampled, and if the sample was consumed.

9. If the swab is to be tested for the presence of biological fluids, the result type "**Bio Screen**" should be selected instead of "**Bio Swab**."

10. Follow the directions pertaining to "**Bio Screen**" in the SAEK notes section.

Case Documentation using Microsoft Surface Pro

1. Turn on the Surface Pro.

2. Log in using the Sheriff's Office network account.

3. To incorporate photographs taken with the Surface Pro into case notes, open the camera app.

4. Tap the screen to focus on a particular area. Do not use the zoom feature. Tap the camera icon to take a photo.

5. Photos will be saved to the **Pictures>Camera Roll** folder.

6. Open Microsoft Word.

7. To insert a photo into Word, tap **Insert** at the top of the screen. Choose the photo from the Camera Roll folder.

8. To draw on the photo, tap **Draw** on the taskbar.

9. **Save** the Word document and photographs to the U:/ drive to access it from a desktop computer.

Maintenance and Retention of Case Notes

1. Once administratively reviewed, the case notes and report are transferred to the clerical area for filing into the case file. Clerical staff are responsible for the filing and maintenance of the case files.

2. Case records are stored in hard copy format in the case file and may be stored electronically within the laboratory's LIMS system or on the Biology Unit's network folder (for example GeneMapper data files).
3. See Forensic Service Division Manual policy "Control of Records" FSD.44 for additional information.

Release of Verbal Results and Case Notes:

1. Verbal results can be provided to the customer, prior to a completed report, once the result(s) or relevant portion of results has been technically reviewed. A record of the verbal results provided to the client agency must be documented in the case notes.

2. Written examination results are not released until the report has been technically and administratively reviewed.

3. Release of case records is done according to Division policy on Control of Records. FSD.44

4. Physical access to case records is limited to the Chief, Managers, Supervisors, and clerical staff.

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Biology Technical Unit Manual**	**REVISION DATE:** 04/21/2017	**NUMBER:** BIO.5.QAQC.22 - Quality Control Sample Procedure and Preparation
	RELATED ORDERS:	
APPROVED BY: Kim Willey, Dawn Romano & Debbie McKillop	**ASCLD-LAB: DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Quality Control Sample Procedure and Preparation	

The purpose of a quality control (QC) sample is to demonstrate that the DNA analytical process worked properly. A QC sample can be extracted and/or typed concurrently with evidence samples. The QC sample is from a previously characterized source, thus it serves as both an extraction control and as an additional known typing control for the DNA process. A quality control sample may be analyzed with a case request to demonstrate recovery and appropriate typing using the DNA protocols.

Guidelines:

1. A QC sample may be included in a digest/extraction set of evidence samples.
2. If cases are batched, a single QC sample may serve as the extraction control for all the cases as long as the samples within the batch are extracted under the same conditions. If monitoring for a different extraction method within the batch is desired, a second QC sample would be needed to monitor the extraction conditions.
3. If the QC sample is carried on to DNA typing the DNA analyst and technical reviewer will verify that the correct typing results were obtained. Verification of the correct results is documented by the technical reviewer on the DNA Data Technical Review Sheet.

Preparation of Quality Control Samples:

1. Dried blood swatches are prepared from known individuals or from liquid blood samples received from a Quality Assurance Testing body such as the College of American Pathologists (CAP) and Collaborative Testing Services (CTS) who's DNA type has been previously characterized.
2. The dried blood samples are placed into envelopes and given a unique identification number.
3. The number, along with the source information, is recorded in a QC Sample preparation log.
4. The dried blood samples are stored frozen in the Biology Unit's reagent freezer.
5. The QC Sample Log is maintained electronically and is accessible to all staff in the Biology Unit. The DNA analyst and technical reviewer will refer to the electronic log or to a answer key printed on Data Summary Table worksheet to verify that the correct DNA typing results were achieved.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:**01/29/2019	**NUMBER:** BIO.5.QAQC.24 - Equipment: Scheduled Maintenance and Calibration
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Equipment: Scheduled Maintenance and Calibration	

I. **Performing planned maintenance on equipment is a quality control measure taken to ensure equipment is in good working condition and fit for its intended use.**

A. Measures taken include cleaning, calibration, and inspection of equipment.

B. Records of checks are maintained by the Biology Unit on Inspection Record Forms BIO.5.QAQCF.03 and BIO.5.QAQCF.04.

Alternate Light Source (ALS): Analysts are responsible for maintaining the operation and cleanliness of these instruments on a per use basis.

Balances (QAS 10.2.1.2)

1. Annually, balances are performance checked by a qualified outsider vendor. The balances must meet the manufacturer's requirement for calibration.

2. Documentation of the balance checks are maintained by the laboratory.

Centrifuges

1. Individuals are responsible for maintaining the operation and cleanliness of the centrifuges at their workstations.

2. Semiannually, shared centrifuges in common areas are cleaned and inspected to ensure they are in good working order.

3. Cleaning Procedure:

a. Discard any counter weight tubes or size reduction tubes left in the centrifuge.

b. Clean any trunnions with a bleach solution followed with deionized water.

c. Wash and wipe the head and bowl with a bleach solution followed by deionized water.

Evaporative Centrifuge

1. Semiannually, the evaporative centrifuge is cleaned and inspected to ensure it is in good working order. The rubber gasket is inspected for brittleness.

2. Cleaning Procedure:

a. The centrifuge is cleaned with a mild detergent soap solution and dried thoroughly.

b. Lightly coat the drive shaft and rotor center with vacuum grease. Do not lubricate the cover O-ring.

c. The acrylic top can only be cleaned with a mild detergent soap solution and water. Do not use solvents.

pH Meter

1. Calibrate the Beckman pH meter whenever a pH-specific reagent is prepared. Document the calibration on the reagent log form. The calibration is conducted using commercially available buffer standards to create an internal calibration curve. The pH meter conducts an internal diagnostic check at the time the calibration curve is determined.

2. Procedure: The calibration is conducted by selecting two appropriate standard buffers that bracket the desired pH of the reagent.

a. Inspect the pH meter for signs of obvious damage.

b. Set the pH meter to Automatic Temperature Correct mode.

c. Remove the electrode bulb from the bulb reservoir, rinse the bulb and temperature probe with reverse osmosis (RO) water, and blot dry.

d. Place the electrode bulb and temperature probe in the standard pH 7 buffer and depress the STANDARD key. When the instrument has locked in the value for pH 7, remove the pH electrode and temperature probe, rinse with RO water, and blot dry.

e. Place the electrode bulb and temperature probe in the second pH standard (pH 4 or pH 10) and depress the STANDARD key again. When the instrument has locked in the value for the second standard, remove the electrode bulb and temperature probe from the standard buffer, rinse with RO water, and blot dry.

f. The pH meter is now calibrated for the range displayed on the LCD readout.

g. Repeat this calibration procedure for each reagent tested.

3. Monthly or as needed, conduct the following maintenance:

a. Inspect the pH meter for signs of obvious damage.

b. Replace the electrode junction solution.

c. Replace the electrode solution in the bulb reservoir.

Digital Reference Thermometer

1. Annual Performance Check: The digital reference thermometer is considered a critical instrument and is performance checked against a NIST traceable calibrator by a qualified outside vendor (**QAS 10.2.1.1)**. Documentation of the NIST traceable certification is kept in the Calibration and Maintenance Log. The digital thermometer must meet the manufacturer's tolerance for calibration.

Heat blocks

1. Before each use, the temperature of the heat block used for enzymatic digests is visually verified. If the temperature is outside of the prescribed temperature limits (e.g., 50 – 60ºC), adjust the heat block accordingly while taking into consideration any offset recorded on the instrument. Recheck the temperature prior to beginning a digest.

2. Annual Performance Check: The thermometers in the heat blocks are performance checked in-house against the digital reference thermometer, which is annually performance checked against a NIST traceable thermometer by a qualified outside vendor.

a. The set temperatures specified for the heat block's intended use are checked against the digital reference thermometer.

b. The temperatures of both the heat block's thermometer and reference thermometer are recorded on the Thermometer Calibration Check Form.

c. Any calculated offsets are recorded on the check form. The offsets are also recorded on the heat block for the examiner's reference.

d. Any necessary temperature adjustments on the heat block should be made with the calculated offset in mind.

e. Any instrument thermometer with an offset of greater than 10 ºC should be rechecked at a later time. If the same variance is observed, the instrument thermometer must be replaced.

3. Procedure:

a. Place a microcentrifuge tube with sterile water into a well of the heat block.

b. Place the probe of the digital reference thermometer into the microcentrifuge tube.

c. Allow the temperature to stabilize for 5 to 10 minutes. When the digital display of the reference thermometer no longer fluctuates, record the temperature readings from both thermometers on the Thermometer Calibration Check Form.

d. Calculate any offset. Record the offset on the check form and on the heat block.

e. Make temperature adjustments to the heat block as needed.

Refrigerators and Freezers

1. Weekly: The temperature of refrigerators and freezers are monitored. Record the "Current Temperature" displayed on the unit's thermometer, as well as any "Lo/Hi" (or Min/Max) values on the Refrigerator/Freezer Weekly Temperature Check Form BIO.5.QAQCF.06.

2. When applicable, clear the thermometer's Min/Max readings to begin the following week's temperature monitoring.

3. If the current temperature is outside the specified temperature range for the unit, actions may be need to be taken. In general, the temperature range for refrigerators is 2 to 8 ºC and the temperature range for freezers is -30 to 2 ºC.

    a. Monitor the temperature throughout the day to determine if it is a temporary temperature fluctuation. If the temperature falls back into compliance, record the final temperature. Record that the temperature was monitored in the "Comments" column.

    b. If the temperature continues to fall outside the acceptable range, adjust the thermostat of the refrigerator/freezer to compensate. Monitor the temperature for several hours or throughout the day. If the temperature falls back into compliance, record the final temperature. Record the adjustment in the "Comments" column.

    c. If the temperature continues to fall outside the acceptable range, the refrigerator or freezer may be taken out of service. Notify a Supervisor of the problem and place an "Out-of-Order" on the unit. Record the actions taken in the "Comments" column.

    d. After servicing, the equipment must be checked using the digital reference thermometer to determine a new offset value.

4. In the event that a weekly temperature check is missed, evaluate the preceding week's recorded temperature values with the current week's values. If both sets are within the acceptable range, the temperature range for the missing week can be considered to be in compliance.

    a. A Supervisor must be notified of the missed week's temperature monitoring, and upon review and if applicable, the missed record can be deemed "Compliant" in the "Comments" column. Include the initials and date of the individual performing the check. If the missing week cannot be considered compliant, monitor the temperature as in steps 1 to 3 above.

5. Annual Performance Check: The thermometer in the refrigerators and freezers are checked in-house against the digital reference thermometer. Checks are recorded on the Thermometer Calibration Check Form BIO.5.QAQCF.02 and maintained in the Calibration and Maintenance Log.

    a. Procedure:

        1. For refrigerators and freezers, place the probe of the digital thermometer into the unit.

        2. Allow the temperature to stabilize for 5 to 10 minutes. When the digital display of the reference thermometer no longer fluctuates, record the temperature readings from both thermometers on the Thermometer Calibration Check Form.

        3. Calculate any offset.

        4. Record the offset on the check form and on the thermometer associated with the refrigerator/freezer.

        5. Make temperature adjustments to the instrument as needed.

Temperature Verification System

1. The temperature verification device used to check the well temperatures of the thermal cyclers is considered a critical piece of equipment **(QAS 10.2.1.3)** and is annually checked against a NIST traceable calibrator from a qualified outside vendor to meet the manufacturer's tolerance for calibration. Certification of the NIST traceable calibration is maintained in the Calibration and Maintenance Log.

2. Annually, the temperature verification kit is used to conduct in-house temperature performance verification of the thermal cyclers. See the procedure outlined in BIO.5.QAQC.26.

Microscopes

1. Annually, maintenance and cleaning is conducted on the microscopes by a qualified vendor. Documentation of the maintenance is retained by the Biology Unit.

Steam Sterilizer (Autoclave)

1. The autoclave has preset programs for different types of items to be sterilized (e.g., liquids, packs, etc).

2. Cleaning

a. At minimum, the autoclave is inspected, cleaned/descaled, and reservoir water drained and replaced with fresh water seminanually.

b. Perform other preventative maintenance measures as outlined in Tuttnauer Operation and Maintenance Manual (pp 39-51) as necessary and document these additional maintenance activities in the Inspection Record Form BIO.5.QAQCF.04.

Water Purification Systems

1. **Millipore Direct-Q 3**

1. The Millipore Direct-Q 3 System has prompted display readouts for monitoring water quality. In general, the maintenance schedule is based on these readouts.

2. Quarterly Monitoring: Record the below values on the Water System Maintenance Log BIO.5.QAQCF.05:

a. **Product Resistivity and Temperature:** The product resistivity and temperature are displayed automatically during DISPENSING mode or during RECIRCULATION.

b. **RO Permeate Conductivity:** Press the "+" button. This displays the RO permeate water conductivity value. Note that the units are in mS/cm.

c. **Pressure Gauge readings for the "IN" and "OUT" water feed:** The pressure gauges should read between 0.5-6 bars (15-90 psi). If the difference between the "IN" and "OUT" pressures is >1 bar, change the pretreatment pack as recommended by the Millipore vendor.

3. Annual Maintenance (see Direct-Q 3 System User Manual Rev. 2, 01/06, pp 37-56): The Direct-Q 3 System actively monitors the water pressure and quality of water to provide service alarm display warnings when these functions fall below acceptable values. Refer to the Direct-Q 3 System User Manual (p 62) to correct each situation. Document this maintenance in the Water System Maintenance Log BIO.5.QAQCF.05. The following are conducted annually, or as prompted by the service alarms:

a. **Screen Filter Cleaning:** Perform every 12 months or as necessary.

b. **Tank Level Calibration:** Refer to Direct-Q 3 System User Manual (pp 44-45).

c. **Pretreatment Pak:** Replace every 12 months or as necessary.

d. **System Sanitization:** During a system sanitization, the tank will also be sanitized. It is recommended to sanitize the system near the time of the SmartPak replacement (typically annually). The SmartPak, Final Filter, and Vent Filter all need to be replaced after the system sanitization is complete, and the flow calibration should also be performed.

e. **Sanitization of the Tank:** If a system sanitization has been performed, then it is not necessary to perform a tank sanitization. The Vent Filter must be replaced after the sanitization is complete.

f. **SmartPak Replacement:** Replace the SmartPak after a system or tank sanitization, when the Pak Alarm is displayed, or when the system resistivity display is blinking. Note that the Final Filter and Vent Filter must be replaced when the SmartPak is replaced and the flow calibration should also be performed.

g. **Final Filter Replacement:** Replace the Final Filter when the SmartPak is replaced or when the Product Water flow rate drops. The Flow Calibration should also be done after the Final Filter is replaced.

h. **Vent Filter Replacement:** Replace the Vent Filter when the SmartPak is replaced.

i. **Flow Calibration:** Perform after the Final Filter is replaced or periodically.

j. When performing the annual maintenance for the Direct-Q water system, perform the tasks in the following order:

i. Inlet strainer screen filter (located inside the attachment coming from the wall. Turn off the water at the main valve first.)

ii. Pretreatment Pak (located on the wall)

iii. Sanitization of the System (which includes the tank- uses a concentrated hydrogen peroxide. See manual for grade and how to use sanitization kit)

iv. Vent filter (disc looking filter at rear of the tank)

v. Final filter (at the water dispensing point)

vi. Replace SmartPak (inside the Direct Q)

2. **Millipore Direct 8**

1. The Millipore Direct 8 System has prompted display readouts for monitoring water quality. In general, the maintenance schedule is based on these readouts.

2. Quarterly monitoring: Record the below values on the Water System Maintenance Log BIO.5.QAQCF.05:

a. **Product Resistivity and Temperature:** The product resistivity and temperature are displayed automatically during DISPENSING or RECIRCULATING mode.

b. **RO Permeate Conductivity:** The display shows the RO permeate water conductivity value. Note that the units are displayed in mS/cm.

3. Annual Maintenance (see Milli-Q Direct 8 System User Manual V2, 09/10, pp 72-94): The Direct 8 System actively monitors the water pressure and quality of water and provides service alarms and display warnings when these functions fall below acceptable values. Refer to the Direct 8 System User Manual to correct each situation. Document this maintenance in the Water System Maintenance Log BIO.5.QAQCF.05. The following are conducted annually, or as prompted by the service alarms:

a. **Progard Pak Replacement:** Perform every 12 months or as necessary. The Progard Pak must be flushed after installation.

b. **Tank Vent Filter Replacement:** The Progard Pak and Tank Vent Filter should be replaced at the same time. Refer to Millipore Reservoir User Manual Rev. F 04/08, pp 6-7.

c. **Q-Pak Replacement:** Replace every 12 months or as necessary.

d. **TOC Curve Check:** Perform after Q-Pak installation or when prompted by an LCD message. The TOC Curve Check can be initiated manually following replacement and flushing of the Q-Pak. The system automatically performs a TOC Curve Check daily, so if it is not started manually, it may be performed within the next 24 hours.

e. **POD Pak Replacement:** Replace every 12 months or as necessary. A decrease in Milli-Q water flow rates may be due to a clogged POD Pak. The POD Pak should be replaced when it appears to be clogged.

f. **RO Sanitization:** Perform every 12 months or when prompted to perform the RO Cl_2 cleaning. Cleaning the RO cartridge should only be performed when recommended by a Millipore Service Representative.

g. **Inlet Strainer Cleaning:** Perform every 12 months, when prompted by an LCD message, or when a clog is suspected.

h. **Flow Rate Calibration:** The Flow Rate Calibration should be done when the Q-Pak and/or POD Pak is replaced, when a sensor or major component is changed, or when volumetric dispensing is not accurate.

i. When performing the annual maintenance for the Direct- 8 water system, perform the tasks in the following order:

i. Inlet strainer screen filter (located inside the attachment coming from the wall. Turn off the water at the main valve first.)

ii. Progard Pak (located inside the Direct-8)

iii. Q-Pak (located inside the Direct-8)

iv. Tank Vent Filter (located on top of RO water tank)

v. Final filter (at the water dispensing point)

vi. TOC curve (instrument will automatically perform once a day)

vii. RO sanitization (if not conducted in the last 12 months perform one during the annual maintenance)

viii. Flow rate calibration (only if using the volumetric function on the instrument)

PCR Workstation Hoods

1. The PCR Workstation Hood provides a clean environment for setting up PCR reactions. Maintenance is designed to ensure proper laminar airflow and UV light sterilization conditions.

2. Cleaning:

a. Sterilization is conducted on a per use basis using the UV light feature of the hood.

3. Maintenance:

a. Annually, hoods are checked by an external vendor contracted by the Laboratory. A service record sticker is placed on the hood by the vendor documenting the recertification. The annual recertification document is also maintained by the laboratory.

b. The prefilter and HEPA filters are replaced on an as-needed basis when proper airflow is not being met. If airflow performance is in question, check the airflow with an anemometer. Take a measurement approximately 200 mm from the filter face within the cabinet. The airflow should be between 0.35 and 0.5 m/s (70 to 100 LFM). If the airflow value falls below this level, the fan speed can be increased to the high setting. If this does not bring the airflow within the specified limits, the prefilter should be changed and repeat the airflow check with the anemometer. If the airflow value is still below the recommended level, replace the HEPA filter and check the airflow again. If after replacing both filters and the airflow is still below the recommended flow rate, contact a service provider.

Chemical Fume Hood

1. The Labconco filtered fume hood enclosure is used to prepare liquid blood samples and to protect workers when using potentially dangerous chemicals and aerosols. These safety checks may be conducted in-house or by an approved vendor contracted by the laboratory.

2. Cleaning:

1. Clean the hood on a per use basis.

3. Maintenance:

1. Annually, the hood is checked by an external vendor contracted by the Laboratory. A service record sticker is placed on the hoods by the vendor documenting the recertification. Documentation of the annual recertification is also maintained by the laboratory.

2. The filter is replaced as needed when proper airflow is not being met.

3. If an issue with the performance of the hood is detected or suspected prior to the annual scheduled maintenance the airflow should be checked by measuring the face velocity of air drawn through the sash opening with an anemometer using the procedure below.

4. **Monitoring Airflow:**

1. Using an anemometer, measure the face velocity with the sash down in the working position. A minimum of three readings taken across the working opening should average $\geq$100 LFM at maximum fan speed.

2. If the average reading is $\leq$100 LFM, change the pre-filter and re-check the airflow rate. If the average reading is still $\leq$100 LFM, the carbon filter likely needs to be changed. If the average reading is still $\leq$100 LFM, contact the hood vendor for service. See materials and equipment below for filter ordering information. Label the hood with the date of filter(s) change.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 08/26/2019	**NUMBER:** BIO.5.QAQC.25 - Pipettes and Robotics: Maintenance and Calibration
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ASCLD-LAB: DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Pipettes and Robotics: Maintenance and Calibration	

I. **Procedures for the Maintenance and Performance Checks of Pipettes QAS 10.2.1.8, Qiagen EZ-1 Robots, Nimbus Liquid Handling Robots, and the Versa 1100 QAS 10.2.1.6.**

A. **Pipettes**

1. The Biology unit maintains an inventory of pipettes that are used in the laboratory for testing. Each pipette is calibrated annually by the manufacturer, Ranin. Each pipette must meet the manufacturer's tolerance for calibration to be considered passing. The calibration and maintenance certificates for each pipette are retained in the Biology Unit's Calibration and Maintenance Log.

B. **Qiagen EZ-1 Robots**

1. Materials

   a. Qiagen BioRobot EZ-1
   b. EZ-1 DNA Investigator Card v1.0
   c. DNA Investigator Kit cartridges (Cat. No. 952034)

2. Routine Maintenance

   a. Prior to the first run of the day and after completing each run, the piercing unit should be cleaned using a lint-free tissue dampened with 70% ethanol. To access the piercing unit, select option 3 (Clean Piercing Unit) from the Instrument Dialog display.

   b. The cleanup of the EZ1 robot should be performed at the end of each run. This consists of wiping the workstation tray, worktable and its racks with 70% ethanol followed by deionized water. Wipe the O-rings of the tip adapters, if dirty, with a Kimwipe. **Important: Never use bleach on the EZ1 Robots.**

3. Semiannual Maintenance

   a. Greasing the O-rings is needed to maintain good contact between tip adapters and filter tips, and to also prevent liquid from leaking from the tips. Lightly grease the O-rings of the pipette unit using the supplied silicone lubricant. Apply a small amount of silicon grease to gloved fingertips, then transfer the grease to the surface of the O-rings and use a tissue to wipe off any excess on the O-rings and tip adapters. **Note:** Excess grease can affect the performance of the EZ1 Robots. Record the routine maintenance on the Inspection Record (BIO.5.QAQCF.04).

4. Performance Checks **(QAS 10.2.1.6)**:

   a. The EZ-1 robots are considered critical instruments and will be performance checked annually by the vendor, per **QAS 10.2.1.6.**

   b. If the instrument should undergo repair, calibration, or a service by the vendor a performance check will be conducted **(QAS 10.4.1.2)**. The performance check will be conducted using NIST-traceable samples or previously characterized samples. The performance is verified when an adequate amount of human DNA suitable for typing procedures is quantified using the qPCR procedure. If any sample does not show adequately recovered human DNA, the test will be repeated. If the robotic extraction fails a second performance check, the instrument will be removed from service until inspected by a service engineer from the manufacturer. The instrument must pass a performance check prior to being returned to service.

   c. Documentation of all performance checks are maintained electronically on the Biology Unit's network folder and/or as a hardcopy with the instrument maintenance log.

5. References:

   a. Qiagen BioRobot EZ 1 User Manual January 2003
   b. Supplementary Protocol MA31 Nov-06 at www1.qiagen.com/literature/protocols/pdf/MA31.pdf
   c. Supplementary Protocol MA32 Nov-06 at www1.qiagen.com/literature/protocols/pdf/MA32.pdf

C. **Qiagen EZ-1 Advanced XL Robots**

1. Materials

   a. Qiagen BioRobot EZ-1 Advanced XL
   b. EZ-1 Advanced XL DNA Investigator Flip Cap Card
   c. DNA Investigator Kit cartridges (Cat. No. 952034)

2. Routine Maintenance

   a. Prior to the first run of the day and after completing each run, the piercing unit should be cleaned using a lint-free tissue dampened with 70% ethanol. To access the piercing unit, press "2-Man" to select the manual function, then select option 3 (Clean Piercing Unit) from the Instrument Dialog display.

   b. The cleanup of the EZ1 XL robot should be performed at the end of each run. This consists of wiping the workstation tray, worktable and racks with 70% ethanol followed by deionized water. Wipe the O-rings of the tip adapters, if dirty, with a Kimwipe. **Important: Never use bleach on the EZ1 Robots.**

3. Semiannual Maintenance

   a. Greasing the O-rings is needed to maintain good contact between tip adapters and filter tips, and prevent liquid from leaking from the tips. Lightly grease the O-rings of the pipette unit using the supplied silicone lubricant. Apply a small amount of silicon grease to gloved fingertips or alternatively, to the end of a filtered-tip. Transfer the grease to the surface of the O-rings and evenly distribute the silicon. Use a tissue to wipe off any excess grease on the O-rings and tip adapters. Note: Excess grease can affect the performance of the EZ1 XL Robots. Record the routine maintenance on the Inspection Record (BIO.5.QAQCF.04).

4. UV Decontamination: Ensure that the EZ1 XL's door is closed. In the main menu, press "1-UV" to select the UV light function. Use the number keys "0" through "9" to set the duration of the decontamination time to 30 minutes (Note: The minimum time is 20 minutes and the maximum time is 60 minutes). Press "START" to switch on the UV lamp. After UV decontamination is finished, the main menu appears.

5. Performance Checks **(QAS 10.2.1.6)**:

   a. The EZ-1XL robots are considered critical instruments and will be performance checked annually by the vendor, per **QAS 10.2.1.6.**

   b. If the instrument should undergo repair, calibration, or service, a performance check will be conducted after **(QAS 10.4.1.2)**. The performance check is conducted using NIST-traceable samples or previously characterized samples. The performance is verified when an adequate amount of human DNA suitable for typing procedures is quantified using the qPCR procedure. If any sample does not show adequately recovered human DNA, the test will be repeated. If the robotic extraction fails a second performance check, the instrument will be removed from service until inspected by a service engineer from the manufacturer. The instrument must pass a performance check prior to being returned to service.

   c. Documentation of all the performance checks are maintained electronically on the Biology Unit's network folder and/or as a hardcopy with the instrument maintenance log.

6. References:

   a. Qiagen EZ1 Advanced XL User Manual May 2009.

D. **Versa 1100**

1. Materials

   a. Versa 1100 with Versaware Software v3.6.72
   b. Deionized water
   c. Microcide SQ Broad Spectrum Disinfectant

2. Routine Maintenance: Before each run perform the following

a. Inspect the tubing for the reagent drop reagents for crystallization or potential contaminants

b. Clean the deck with Microcide

c. Dispose of tip waste

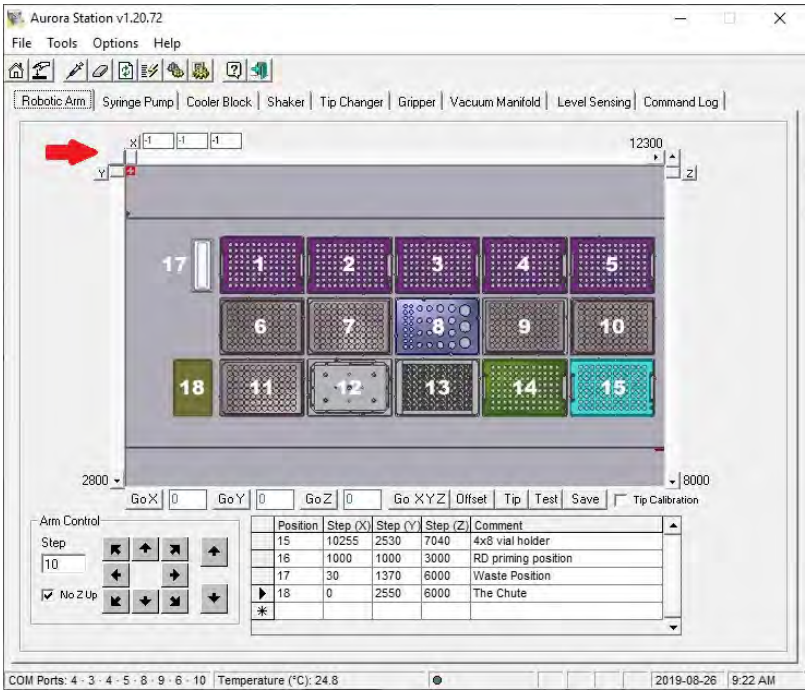
3. The following Maintenance should be performed every four months

a. The volume check and calibration

i. **Calibration of Syringe Pumps**

a. Open Aurora Station by selecting **Tools > Aurora Station** from the Menu bar.

b. Initialize the robotic arm by pressing the button between the X and Y axes.

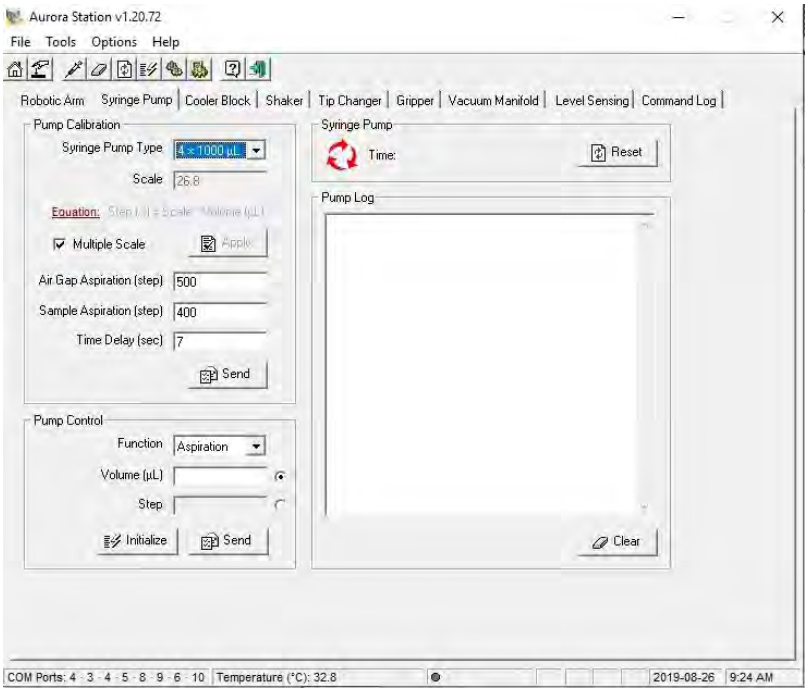


c. Manually place a tip on the pipette closest to the opening. Use the 50uL tip for calibrations below 50uL and the 1000uL tips for larger volumes.

d. Switch to the **Syringe Pump** tab from the Aurora Station Main Menu.

e. Select **4 x 1000uL** in the Syringe Pump Type and Click **Initialize.**

f. Open the calibration data table by clicking the dropper icon 

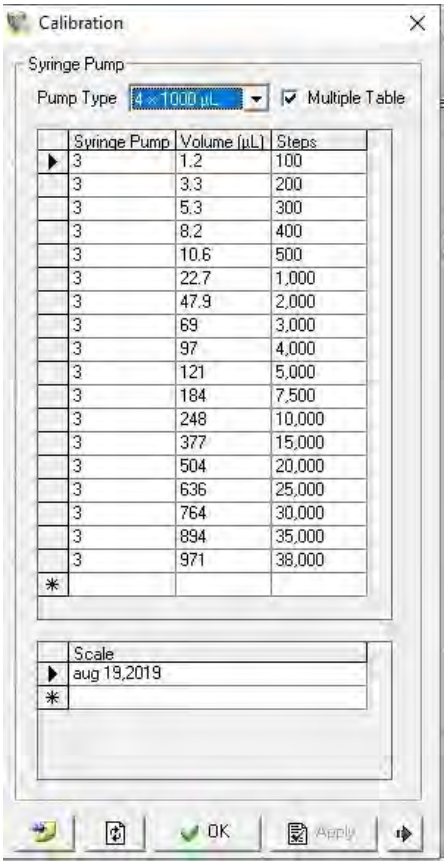


g. In the Volume Pump Calibration window add "1000" for Air Gap Aspiration and "100" steps in the Sample Aspiration window. Keep the Time Delay at 7 seconds.

h. Click **Send**. The instrument will draw in an air gap and delay for 7 seconds. During the 7 seconds, place a tube of sterile water under the tip. After the 7 seconds, the instrument will aspirate 100 steps worth of volume. A second 7 second delay will occur. Place a pre-tared weigh boat under the pipette. A volume of water will be dispensed into the weigh boat. One microliter weighs one milligram. Weigh the boat to confirm that the volume is correct.

i. If the volume is not correct, replace the old value with the new weight value in the calibration table. Click **Apply** to save the volume.

j. Open the calibration data table by clicking the dropper icon



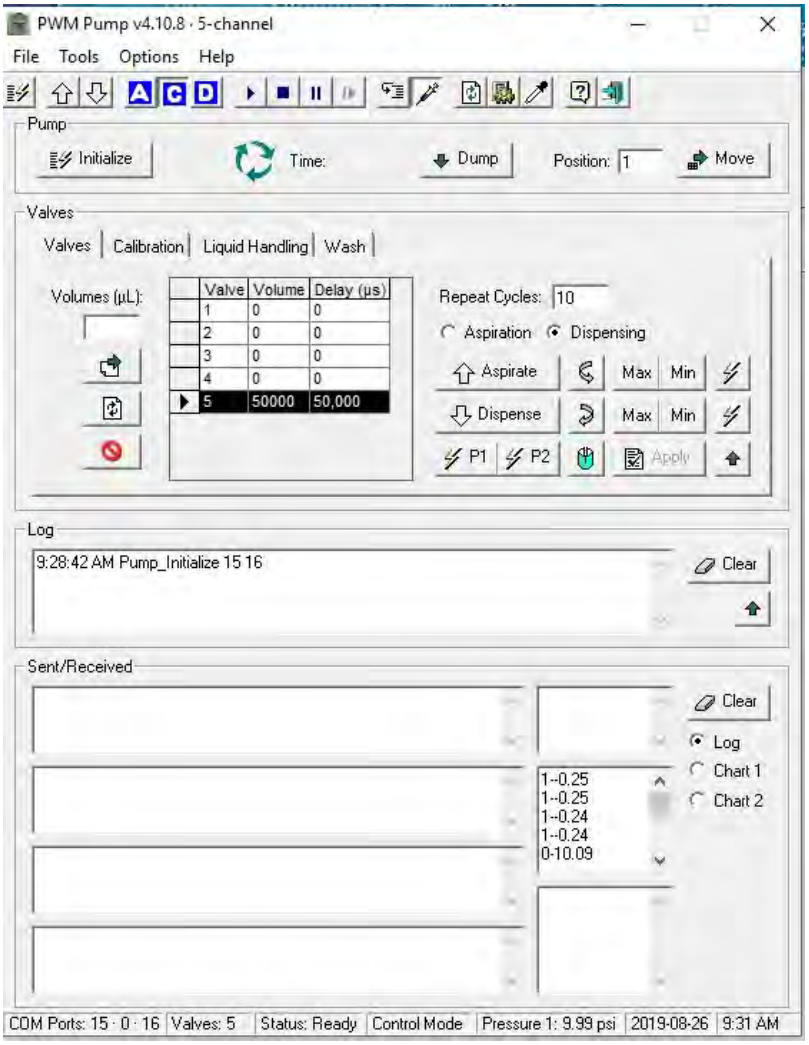
k. Using the same process as above, check the whole range of steps from 200 to 38,000.

l. Enter the date of the new calibration under Scale.

ii. **Reagent Drop Calibration**

a. Select **Tool > Aurora PWM** Pump from the Menu Bar

b. In the PWM Pump Window click on the "**C**" button to switch to pump control mode.



c. Initialize the pump using the **Initialize** button.

d. Ensure that "Dispensing" is selected

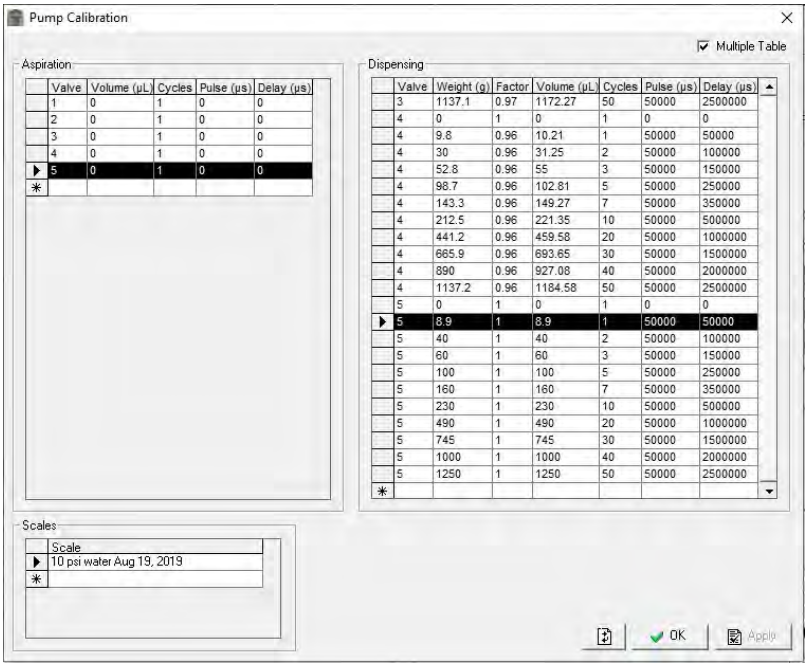
e. Click the **syringe** button  which switches the pump into pulse mode of calibration in micro-seconds (us).

f. Enter 50,000 into volumes window and click the  button.

g. Type in "0" for all other values.

h. Highlight the valve of interest for calibration.

i. Open the calibration data table by clicking the **dropper** icon  .



j. Select the correct valve under the Aspiration section

k. Click on the first row where the Valve is "2" on the Pump Calibration window. Ensure that the valve "2" row is also selected in the PWM Pump window. The Repeat Cycles listed on PWM Pump must match the Cycles listed in the row selected in the Pump Calibration window.

l. Place a pre-tared weigh boat under the reagent drop pins and click **Dispense**.

m. Weigh the boat and add the new weight/volume in the table.

n. Using the same process as above check the volume for each cycle of valves 2 and 5.

b. Clean the exterior with a 10% bleach solution and water.

4. Annual Maintenance

a. Annually, check the computer hard drive for errors and optimize using system tools:

i. Complete a Disk Cleanup and Disk Defragmentation by selecting from the PC Start Menu (**All Programs > Accessories > System Tools > Disk Cleanup or Disk Defragmenter.**)

ii. Record the disk cleanup and defragmentation on the Inspection Records (BIO.5.QAQCF.04 & BIO.5.QAQCF.03).

b. **Annual Performance Check (QAS 10.2.1.6):**

i. The Versa 1100 Liquid Handling Robot is considered a critical instrument and will undergo an annual performance check by the vendor, per **QAS 10.2.1.6**.

ii. Records of the vendor's performance check will be maintained in the instrument maintenance log and/or electronically on the Biology Unit's network folder.

c. Performance Checks after repair, service, calibration **(QAS 10.4.1.2)**:

i. Should the instrument undergo repair, calibration, or service the robot will be performance checked after. **(QAS 10.4.2.1).**

ii. The in-house performance check entails using NIST-traceable samples containing both non-sperm and sperm DNA. The sample will be differentially digested on the Versa robot along with a reagent blank. The sample will be taken through the DNA testing process and an adequate amount of DNA should be obtained, and the correct profiles must be obtained with minimal to no carryover of non-sperm DNA in the sperm fraction.

iii. If the results fall outside these limits, the check will be repeated once. If the second test fails, the instrument will be removed from service and the manufacturer will be contacted for service.

iv. Documentation of the performance check is maintained in the instrument maintenance log and/or electronically on the Biology Unit's network folder.

5. References:

a. Operation Manual Versa 1100

E. **Hamilton Nimbus Liquid Handling Robot**

1. Materials
   a. Hamilton Nimbus Liquid Handling Robot
   b. Nimbus Maintenance program
   c. Deionized water
   d. Microcide SQ Broad Spectrum Disinfectant

2. Weekly Maintenance: Open the **Nimbus Maintenance** program from the toolbox icon on the Desktop. Select **Weekly** under Maintenance Type, then click **Run Maintenance.** Perform the requested onscreen tasks in sequence and check off upon completion.

3. **Clean deck and carriers.**

4. **Check condition of carriers and other devices.**

5. **Empty and clean Tip Waste/ Liquid Waste.** Perform as needed. Access the waste container area by moving the gantry by hand to the left. Remove and empty the tip waste bin, and return it to the deck. Verify waste bin is seated properly back into position before continuing.

6. **Clean each channel:** stop disk, o-ring, and tip eject sleeve. Using Kimwipes moistened with deionized water, wipe down the tip eject sleeve (the black outer casing) of the pipette head for each channel.



7. Gently pull up on each channel's tip eject sleeve to access the o-ring and proceed to wipe the o-ring and stop disk. The stop disk is the very bottom part of the pipette head.



8. **Clean the side covers**

9. **Check the tightness of the pipette channels.** Ensure the Nimbus is powered on and remove the tip eject plate from the waste block for the remaining tasks. Click **Continue** to allow the software to perform this task.

10. **Check the cLLD** With tip eject plate still removed, click **Continue** to allow software to perform this check. When complete, replace tip eject plate on the waste block and click **OK**. Close out of the weekly maintenance, and finally, **Close** out of the channel maintenance.

11. Annual Maintenance

    a. Annually, back-up critical files, check the computer hard drive for errors and optimize using system tools:

        i. Back-up critical files and Log on as administrator.

        ii. Complete a Disk Cleanup and Disk Defragmentation by selecting from the PC Start Menu (**All Programs > Accessories > System Tools > Disk Cleanup or Disk Defragmenter.**)

    b. Record the disk cleanup and defragmentation on the Inspection Records (BIO.5.QAQCF.04 & BIO.5.QAQCF.03).

12. Annual Performance Check **(QAS 10.2.1.6)**:

    a. The Nimbus Liquid Handling Robot is considered a critical instrument and will undergo an annual performance check by the vendor, per **QAS 10.2.1.6**.

    b. Records of the vendor's performance check will be maintained in the instrument maintenance log and/or electronically on the Biology Unit's network folder.

13. Performance Checks after repair, service, calibration **(QAS 10.4.1.2)**:

    a. Should the instrument undergo repair, calibration, or service the robot will be performance checked after. **(QAS 10.4.2.1).**

    b. The in-house performance check entails using a set of previously extracted samples (or NIST-traceable reference samples) that will be set up by the robot in a checkerboard formation with blanks staggered between each sample. This Nimbus prepared plate will be quantified using a qPCR assay. Performance of the system is considered verified when the following results are returned:

        i. Suitable qPCR calibration values are obtained from the expected wells.

        ii. The DNA concentrations pipetted by the Nimbus robot are comparable to previous quantified samples pipetted by the robot and/or hand pipetted results.

        iii. If the results fall outside these limits, the check will be repeated once. If the second test fails, the instrument will be removed from service and the manufacturer will be contacted for service.

    c. Documentation of the performance check is maintained in the instrument maintenance log and/or electronically on the Biology Unit's network folder.

14. References:

a. Hamilton Robotics NIMBUS Enclosed Version Operator's Manual June 2016

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:**04/05/2019	**NUMBER:** BIO.5.QAQC.26 - Thermal Cycler Maintenance and Performance Verification
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** 6.4 **DNA QA Standards:**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Thermal Cycler Maintenance and Performance Verification	

I. **Procedure for the Maintenance and Performance Verification of the ABI 7500 Real Time PCR Instrument and ProFlex PCR System. QAS 10.2.1.3 and QAS 10.2.1.4**

II. **ABI 7500 with HID Real-Time PCR Analysis Software**

1. References:

   a. Applied Biosystems 7300/7500/7500 Fast Real-Time PCR System Installation and Maintenance Guide (07/06 Rev. E)
   b. PowerQuant™ System Technical Manual (TMD047 3/15)

2. Materials:

   a. Applied Biosystems 7500 Real Time PCR System
   b. HID Real-Time PCR Analysis Software Version 1.2
   c. 96-well optical plates (Cat number 4306737)
   d. MicroAmp optical adhesive film (Cat number 4311971)
   e. 7500 Real Time System Spectral Calibration Kit (Cat number 4349180)
   f. PowerQuant™ Calibration Kit (Cat. #DS1221)

3. Routine Maintenance:

   a. **Cleaning**: The 96-well sample block may be inspected prior to runs. Follow the directions for Thermal Cycler Well Inspection found in the ABI 7500 Installation and Maintenance guide (pp. 112-117).

   b. **Function Test**: Operation of the system hardware interfaces may be assessed prior to the run. This includes USB, CCD, Filter Wheel, Shutter, Lamp, and Thermal Cycler. Test the functions of these computer and hardware interfaces by running the diagnostic test in the HID Real-Time PCR Analysis Software: go to **Instrument > Function Test>All Tests.** This will give a Pass/Fail result for each component.

4. Monthly Maintenance:

   a. Prepare a new Background Calibration document in the HID software. Go to **Instrument>Instrument Maintenance Manager**, select **Background** from the left panel, and click the **"Start Calibration"** button. Follow the on-screen prompts and record its completion on the Inspection Record Form for the PCR Amplification Room BIO.5.QAQCF.03.

5. Semiannual Maintenance:

   a. Annually the laboratory performs the ROI, optical, and pure dye calibrations on the 7500. These calibration checks are also be performed by the vendor once a year, with approximately six months between the vendor and laboratory performed maintenance.

   b. **Instructions**: Go to **Instrument>Instrument Maintenance Manager**, select the respective calibration from the left panel in succession: **ROI, Background, Optical,** and **Dye(s)**, and click the **"Start Calibration"** button. Follow the on-screen prompts for each calibration for both system and custom dyes. Refer to the PowerQuant™ System Technical Manual (pp. 5-15) for pure dye calibration information and instructions. Document these actions on the Inspection Record Form BIO.5.QAQCF.03.

   c. Check the computer hard drive for errors and optimize using system tools:

      i. Back-up critical files and log in as "Administrator." Perform a Disk Cleanup and Disk Defragmentation by navigating to **Start Menu**>**All Programs > Accessories > System Tools > Disk Cleanup** or **Disk Defragmenter**.

ii. Record the the disk cleanup and defragmentation on the Inspection Record Form for the PCR Amplification Room BIO.5.QAQCF.03.

6. Annual Performance Check **(QAS 10.1.2.4)**:

   a. The 7500 instruments are considered critical instruments and must undergo an annual performance check, per **QAS 10.2.1.4.** The 7500 instruments are performance checked by an Applied Biosystems service engineer. The performance check includes a check of the background, ROI, optical, pure dye spectral calibrations, and temperature verification. Documentation of the performance check are maintained in the maintenance log located next to the instrument and/or electronically in the Biology Unit's network folder.

7. Performance Check following Service, or Repair **(QAS 10.4.1.4)**:

   a. A performance check is performed following repair or service.

   b. The performance check uses NIST-traceable samples or previously characterized samples. These samples are quantified on the serviced 7500 and the results are compared to instrument data generated prior to the service call. The data must show appropriate amplification in every well as indicated by the Internal Positive Control and each sample should provide appropriate quantitative information respective to the source sample. That is, a known male DNA sample is expected to provide both male and total human DNA results, a known female DNA sample is expected to provide only a total human DNA result, and both must be suitable for later PCR typing procedures.

8. Any additional 7500 instrument purchased must undergo a performance verification prior to use with casework samples. **QAS 10.4**

9. Records

   a. Records of performance checks are maintained electronically on the Biology Unit's network folder or in hard copy form with the instrument.

III. **ProFlex PCR System**

1. References:

   a. ProFlex™ PCR System User Guide Installation, Use, and Maintenance User Guide (P/N MAN0007697 Rev. A.0)
   b. Multiprobe Temperature Verification Kit User Guide (P/N 4460108 Rev. A 10/10)

2. Materials:

   a. VeriFlex™ 96-Well Temperature Verification Kit (TVK) for 0.2mL Veriti System, 9 channel (Cat. #4377669)
   b. USB flash drive

3. Annual Performance Check **(QAS 10.2.1.3)**: Annually the ProFlex Thermal Cyclers undergo a performance check consisting of the following tests:

   a. **System Performance, Self Verification Test.** This feature is used to check the instrument hardware which includes testing the block, heated cover, and other components.

      i. From the Home screen, touch **Settings**.

      ii. Select **Maintenance & Services.**

      iii. Select **Self Verification Test.**

      iv. Select **Start Test**.

      v. The test may take up to 10 minutes. When the test is complete, results are displayed in a report.

      vi. Plug a USB flash drive into the front port of the ProFlex PCR System. Select **Export** to transfer the test report to a USB drive.

      vii. Print a copy of the report and add it to the Thermal Cycler Maintenance binder in the PCR room.

   b. **Block Verification Test**

      i. From the Home screen, touch **Settings.**

ii. Select **Maintenance & Services.**

iii. Select **Block Verification Test.**

iv. Select **Verify Block Temperature.**

v. There are three test types to choose from:

a. **Heated Cover**

b. **Temperature Verification**

c. **Temperature Non-Uniformity**.

vi. Choose a test to perform and then touch **Next**.

vii. Connect the TVK.

a. Connect the free end of the ribbon cable from the multiprobe module to the input connector port on the digital thermometer.

b. Connect the round 8-pin DIN receptacle end of the communication cable to the thermometer communication port.

c. Connect the other end of the communication cable (9-pin) to the USB adapter unit, and plug the USB end into the port in the back of the instrument.

d. When placing the multiprobe module onto the sample block in the position specified by the on-screen prompts, ensure that the ribbon cable leads straight out from the module and lies flat.

e. Close the heated cover and pull down the lever.

f. Turn the digital thermometer on and allow it to start up.

g. **Heated Cover Test:** This test determines if the heated cover holds temperature at 105 ± 3ºC.

1. Place the multiprobe module in the center of the sample block so that the middle 2 zones are covered.

2. Close the heated cover and touch **Start Test.**

3. The test takes approximately 6 minutes to complete.

4. At the end of the test, the screen will show if the heated cover test passed or failed.

5. Touch **Export** to save the test report to a USB drive.

6. Print a copy of the report and add it to the Thermal Cycler Maintenance binder in the PCR room.

h. **Temperature Verification Test:** This checks the temperature of the sample block against the specifications for temperature accuracy. It does this by measuring sample well temperatures at two set points, 45ºC and 85ºC. To pass the test, the six sample testing zones must be within ±0.25 ºC of the set points.

1. Follow the prompts on the screen, making sure to move the multiprobe module to the next testing zone after each reading, with three readings in all.

Sample Testing Zones	Well Position of Probe Tip #1
1 & 2 (leftmost)	A1
3 & 4 (center)	A5
5 & 6 (rightmost)	A9

2. Each reading may take approximately 15-30 minutes for each testing zone.

3. At the end of the test, the results are displayed and if the test passed or failed.

4. Select **Export** to transfer the test report to a USB drive.

5. Print a copy of the report and add it to the Thermal Cycler Maintenance binder in the PCR room.

i. **Temperature Non-Uniformity Test (TNU):** This checks the temperature uniformity of the sample block by measuring temperatures at 24 well locations. To pass the test, all six sample testing zones must be within ± 0.5ºC of each set point temperature (95ºC and 60ºC) no later than 30 seconds after the set point temperature is changed.

1. Follow the prompts on the screen, making sure to move the multiprobe module to the next testing zone after each reading, with three readings in all. Use the same testing zones as listed above under Temperature Verification Test.

2. Each testing zone reading takes approximately 10 minutes to complete.

3. At the end of the test, the results are displayed and whether the test passed or failed.

4. Touch **Export** to save the test report to a USB drive.

5. Print a copy of the report and add it to the Thermal Cycler Maintenance binder in the PCR room.

c. **Cycle Performance Test:** Checks the cycle performance of the instrument.

i. From the Home screen, touch **Settings.**

ii. Select **Maintenance & Services.**

iii. Select **Block Verification Test.**

iv. Select **Verify Cycle Performance.**

v. Follow the screen prompt to insert an empty plate onto the sample block.

vi. Close the heated cover and lever and touch **Start Test.** The test takes around 10 minutes to complete.

vii. At the end of the test, the screen will display the results.

viii. Touch **Export** to save the test report to a USB drive.

ix. Print a copy of the report and place it into the Thermal Cycler Maintenance binder in the PCR room.

d. If the instrument fails any of these tests, repeat the test one more time. If the instrument fails again, remove the instrument from service and have the instrument serviced by a qualified service engineer.

4. Performance Check Following Service or Repair (QAS 10.4.1.4):

a. NIST-traceable samples or any previously characterized samples may be used to performance check a thermal cycler that has undergone service or repair. The performance check monitors for appropriate amplification of human DNA using standard conditions for a current PCR typing kit and the resulting data id compared to previously amplified samples. Performance is verified when all loci within the typing kit provide adequate typing signal and all typing results are correctly called. If any of these elements fail, the test may be repeated once. If the instrument fails the second performance check, the thermal cycler is to be removed from service until inspected and re-qualified for use by a service engineer. Results of performance checks are maintained in the Biology Unit's network folder and/or in hard copy form with the instrument maintenance log.

5. Any additional ProFlex thermal cycler purchased must undergo a performance verification prior to use with casework samples. **QAS 10.4**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Biology Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** BIO.5.QAQC.27 - Capillary Electrophoresis Genetic Analyzer Quality Control Checks
	RELATED ORDERS:	
APPROVED BY: Dawn Romano, Tony Nguyen & Debbie McKillop	**ANAB:** 6.4 **DNA QA Standards**	
CHAPTER: Quality Assurance/Quality Control	**SUBJECT:** Capillary Electrophoresis Genetic Analyzer Quality Control Checks	

I. **Procedures for the Maintenance and Performance Verification of the 3500 Capillary Electrophoresis/Genetic Analyzer Instrument. QAS 10.2.1.5 and 10.2.1.7**

1. References:
    1. Applied Biosystems 3500/3500xL Genetic Analyzer User Guide (PN 4476988A 5/12)
    2. 3500 and 3500xL Genetic Analyzers Quick Reference Card (PN 4401662)
    3. 3500 and 3500xL Genetic Analyzer with Data Collection Software 3 Quick Reference (Pub no. 100026299 Rev. A)

2. Materials:
    1. AB 3500 Genetic Analyzer
    2. Dell computer with 3500 Series Data Collection Software 3
    3. 3500 Capillary Array (8 cap. 36cm uncoated)
    4. Anode Buffer, 3500 Series
    5. Cathode Buffer, 3500 Series
    6. Cathode buffer container septa
    7. POP-4 Polymer for 3500/3500XL Genetic Analyzers
    8. Conditioning Reagent, 3500 Series
    9. Kimwipes
    10. Water: ultrapure, deionized
    11. 30cc syringe

3. Routine Maintenance:
    1. General maintenance of the AB 3500 Genetic Analyzer is scheduled through the Data Collection Software. Additional instrument upkeep will rely on the analyst being vigilant in maintaining a clean environment and spotting any anomalies within the hardware. The “Maintenance Notifications” section of the Dashboard displays scheduled tasks for the analyst to perform. Click the green checkmark to indicate the task as completed.

    2. To access the Maintenance Wizards menu from the Dashboard screen, click the "Wizards" button located on the top right.

Maintenance Task	Frequency
Click the Refresh button to check consumable status on the Dashboard.	Routinely and before each run
Check that the ABC and CBC fluid levels are at the fill line.	Routinely and before each run
Check for bubbles in the pump block and channels. Use the Remove Bubble wizard to remove all bubbles when necessary.	Before each run
Ensure that the plate assemblies have been properly assembled. Holes of the plate retainer must align with the holes the septa.	Before each run
Visually inspect the loading-end header to ensure the capillary tips are not crushed or damaged.	Before each run
Clean any surfaces of dried residue, spilled buffer or dust.	Routinely and before each run
Check for leaks and dried residue around the buffer pin, check valve, and array locking lever. Contact techical support if leaks persist.	Routinely and before each run
Replace the polymer pouch using the Replenish Polymer wizard. (The POP-4 pouch is stable for 14 days after installation on the instrument.)	Biweekly or as needed

Run the Wash Pump and Channels wizard with the Conditioning Reagent pouch. (Ideally, perform this before installing a new POP-4 pouch.)	Biweekly or as needed
Replace the ABC and/or CBC and click Refresh to update status on the Dashboard. (The buffers are stable for 14 days after installation on the instrument.)	Biweekly or as needed
Flush the pump trap using the 30cc syringe and deionized water at a slow and steady rate (~10mL/min). Empty the overflow container when done.	Biweekly
Use a lab wipe or sterile swab with deionized water to clean the anode buffer cup pin-valve assembly.	Biweekly
Restart the computer and instrument.	Weekly
Replace the CBC septa.	Monthly or as needed
Clean the autosampler.	Monthly or as needed
Clean the drip tray.	Monthly or as needed
Change the capillary array. Use the Install Capillary Array wizard. Follow with a Spatial and Spectral calibration.	As needed
Remove dried polymer from the capillary tips with a lab wipe and deionized water.	As needed
Computer and archival maintenance (see below)	Semiannually

Semiannual Maintenance

1. Check the computer hard drive for errors and optimize using system tools:
    1. Back-up critical files and Log on as administrator. Complete a Disk Cleanup and the Disk Defragmenter by selecting from the PC Start Menu (**All Programs > Accessories > System Tools > Disk Cleanup or Disk Defragmenter**).

2. Check the database space:
    1. In the tree pane of the Data Collection Software, select GA Instruments>Database Manager check the database status section. The Data Collection software will prompt the user when it is 70-75% full.
    2. If there is insufficient space, ensure that a copy of each run is on the laboratory's internal network drive, delete the sample file data from the hard drive and empty the contents of the Recycle Bin.
    3. Record the quarterly maintenance on the PCR Inspection record form (BIO.5.QAQCF.03).

Performance Check

1. The AB 3500 is considered a critical instrument and will undergo an annual performance check, per QAS 10.2.1.7.
2. If the instrument should undergo a substantial move, repair, calibration, or service by a vendor, a performance check will be conducted after (QAS 10.4.1.3).
3. Should the software associated with the instrument undergo a significant change/upgrade, a performance check will be performed.
4. The performance check will use amplified product produced either from a NIST-traceable sample set, any previously characterized samples, or from amplification controls/internal size standards for comparison. The samples will be analyzed according to standard operating protocol using the current analysis software. The performance check must show that expected typing results were obtained and that the relative signal intensity did not significantly change when compared to either prior performance check data or to data prior to the repair, service or the move.
5. A record of the performance check will be maintained on the Biology Unit’s network folder and/or in hardcopy form with the instrument log.

Preventative Maintenance

1. Service is provided annually by the vendor. A copy of the Field Service Report is stored with the CE maintenance log located next the instrument and/or electronically on the Biology Unit's network folder.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 10/17/2018	**NUMBER:** CLER.CRIM.01 - Daily operations
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ANAB:**	
CHAPTER: Operations	**SUBJECT:** Daily Operations	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 11/20/19	**NUMBER:** CLER.CRIM.02 - Creating a New Case & Logging Evidence
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ANAB:**	
CHAPTER: Requests for Service and Evidence	**SUBJECT:** Creating a New Case & Logging Evidence	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 06/06/2018	**NUMBER:** CLER.CRIM.03 - Agency Case Format
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Requests for Service and Evidence	**SUBJECT:** Agency Case Format	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 06/06/2018	**NUMBER:** CLER.CRIM.04 - Receiving and Handling of Evidence
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Requests for Service and Evidence	**SUBJECT:** Receiving and Handling of Evidence	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 12/28/2017	**NUMBER:** CLER.CRIM.06 - Returning evidence
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Requests for Service and Evidence	**SUBJECT:** Returning evidence	

[redacted]

C

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 7/20/2015	**NUMBER:** CLER.CRIM.07 - Confidential Cases
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop and Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Requests for Service and Evidence	**SUBJECT:** Confidential and Restricted Cases	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 09/25/2019	**NUMBER:** CLER.CRIM.08 - Distribution of Reports
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ANAB:**	
CHAPTER: Case File	**SUBJECT:** Distribution of Reports	

I. Policy: ARIES is considered the initial distribution for laboratory reports for all agencies. Agencies not able to obtain reports via ARIES will receive their reports by alternate methods.

A. Most laboratory reports are distributed electronically via ARIES. Reportrs are available to agencies and the District Attorney's Office within 24 hours after they have been administratively reviewed.

1. Agencies not able to receive reports via ARIES will receive their reports by mail, email or fax. See CLER.DAT.13 for a list of agencies that currently have access to Crime Lab reports via ARIES.

2. When copies of reports are released after the initial distribution (for non-ARIES distribution) the date and name of the agency receiving the report must be recorded in the test record.

3. Non-ARIES distribution will be documented using the LIMS Activity Log. The date and agency receiving the report must be recorded.

B. Confidential Reports

1. Physical copies of confidential reports should be placed in a manila envelope and stamped "confidential." This alerts the clerical staff of the urgency & confidentiality of the report.

2. Electronic copies are kept in LIMS. Sufficient notes should be kept in the Case Synopsis. A case message should be added to alert users in any tab that the case information is confidential.

3. The initial release of reports can be prepared by a designated clerical staff member, or by the supervisor of the unit. The copies are usually placed into an addressed envelope and sealed. The envelope will be distributed to the requester or to a representative from the requesting agency.

4. If multiple requests exist, each individually completed report should be placed in a manila envelope. (Same as steps 1 and 2).

5. Confidential reports are filed according to QA.07.

C. Release of Rush Reports

1. Requests may be considered for **"rush" analysis** if there is a pending court date (**court rush**) or a need to keep a suspect in-custody (**investigative rush**). When entering the request, enter this information in the ***Notes*** section of the request. This information can also be displayed in the **Case Message** box, which will appear on every screen. Additional information such as the requester's name and email address, phone number, and fax numbers for sending the final report to can be added to either field.

2. Rush analysis may require emailing or faxing the final report to the requesting party, i.e. the investigating officer or District Attorney.

3. The method of release, the name of the recipient, name or initials of the staff member releasing the reports, and the date will be documented in the case record. (Example: Request 001 provided via email to Detective Smith by CM 9.25.18). This can be done by added a note in the Case Synopsis under the Case Info tab in LIMS.

4. Release rush reports as soon as possible as they are time sensitive.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 09/26/2019	**NUMBER:** CLER.CRIM.09 - Filing
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ANAB:**	
CHAPTER: Case File	**SUBJECT:** Filing	

I. [redacted]

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 05/26/2017	**NUMBER:** CLER.CRIM.10 - Subpoenas
	RELATED ORDERS: FSD.45	
APPROVED BY: Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Court	**SUBJECT:** Subpoenas	

I. Policy: The following procedures will be followed for subpoena acceptance and distribution.

A. General

1. Subpoenas are generally sent to the Criminalistics Lab via fax or email. The subpoenas are received into the SummitLab e-mail in box or paper copies are placed in the subpoenas to be served file.
2. Prior to subpoena service or rejection, consult the applicable unit calendars for staff availability.
3. Associated lab report numbers are required for all personally served subpoenas. If not indicated on subpoena, lab report numbers can be researched in LIMS by cross-referencing the agency with case file number, or defendant name. If information does not match, the subpoena must be rejected.
   a. Paper subpoenas will be scanned into a .pdf format, so they can be electronically stamped and returned.
   b. The subpoena is then opened in Adobe and an information "stamp" is added electronically. This will allow for the addition of pertinent information to the pdf which is sent back to the DA's office. An electronic copy of the rejected subpoena will be kept on the shared drive, until after the trial date on the subpoena.
      i. To set up Adobe Pro for use of electronic "stamps"
         1. Run Adobe Pro
         2. Click the Comments toolbar.
         3. Click on the stamp icon with the pull-down menu triangle next to it.
            Step 1 to 3 need to be done once for each login on each computer. They will create the proper folders for steps 4 through 6.
         4. Open explorer to:
            C:\Users\XXXXUSERXXXX\AppData\Roaming\Adobe\Acrobat\11.0\Stamps\
            NOTE: replace XXXXUSERXXXX with your login name
         5. Open explorer to: G:\SupSvcsBur\Glacier Forensic Services\LAB\MUIR\Declarations
         6. Copy the stamp .pdf files in the declarations folder to the stamps folder. (At this time there are 3).
            Steps 4 through 6 will set up the stamp definitions for each login.
      ii. To set up Adobe Pro as the default:
         1. Right click on any document and choose "Open with"
         2. Click "Choose Default Program" from list
         3. Click on "Adobe Acrobat Pro"
         4. Check box "Always use this selected program to open this kind of file"
      iii. To use the electronic "stamp":
         1. Open the document you want to stamp in Adobe Acrobat Pro (do not use Reader).
         2. Click the Comments toolbar.
         3. Click on the stamp icon with the pull-down menu triangle next to it.
         4. Select the stamp you want to use from the previews.
         5. Click on the document where you want the stamp to appear.
         6. If there are any form fields in the stamp to fill in, Adobe will prompt you for those values.

B. Preliminary Hearing/Trial

1. For electronic subpoenas, a copy may be emailed directly to the criminalist at or near the time of receipt. The date and time of the email that is forwarded will be considered the service date. A proof of service is not required by our DA's office.
2. If criminalist is unavailable, an electronic stamp may be added to the pdf through Adobe. Indicate dates criminalist will be unavailable and reason (i.e. training or pre-approved time off). Return the electronic version of the subpoena to DA's Office, retaining a copy in the Summit Lab mailbox until after the trial date on the subpoena.
3. To Serve a Declaration in Outlook
    a. Navigate to SummitLab Inbox
    b. Open Subpoena Email
    c. Open attachment in Adobe Pro
        i. Click "Comment"
        ii. Click "Stamp Picture"
        iii. Click "CCC Subpoena Return Stamp Extended"
        iv. Click Cancel for the Identity Set Up
        v. Place the stamp on the pdf and click for placement of electronic stamp
            1. The following will pop up
                1. Begin Date
                2. End Date
                3. Analyst's Name
4. Saving electronic declarations or rejections:
    a. Save in Summit Lab Mailbox
        i. Choose Declarations folder
        ii. Change file name to : criminalist last name.subpoena date.defendant last name
5. Faxing electronic declarations or rejections:
    a. Choose File
    b. Click Print
        i. Choose Printer "Fax Via Copier"
    c. Click Print
        i. Type Recipient's Name (Located on subpoena)
        ii. Fax Number (Located on subpoena)
        iii. Click "OK" to send

C. Juvenile

1. Subpoenas for Juvenile hearings are served as noted above for trials.

D. Business Records

1. Business Records testimonies are done by a qualified criminalist currently working in the same section as the unavailable criminalist.
2. Alternately, an **Official Record** testimony can be provided by the Supervisor or Manager as Custodian of Records.

E. Public Defender/Private Attorney

1. Public defender/private attorney subpoenas are expedited. Determine if the criminalist has already been subpoenaed for the case by the District Attorney. If so, inform criminalist. Subpoena will automatically be served.

2. Frequently, public defender/private attorney subpoenas do not indicate the associated lab report number. This must be determined before serving the subpoena. This information is obtained by calling the public defender subpoenaing the criminalist.

3. The individual serving the subpoena must sign and date the Proof of Service, and send the Proof of Service back to the public defender's or private attorney's office.

4. The subpoena is delivered to the criminalist by scanning it into a pdf and emailing it to them.

5. If the subpoena is rejected or requires a declaraion, it will be scanned into a pdf and saved in the Summit Lab mailbox declaration folder.

F. Grand Jury Subpoenas

1. These subpoenas are also expedited. If the criminalist is available and the associated lab report numbers are provided, the subpoena can be served. The individual serving must date and sign the Proof of Service, and return the Proof of Service via inter-office mail or via FAX to the appropriate DA.

2. A copy of the subpoena and proof of service is delivered to the criminalist by scanning into a pdf and emailing it to them.

3. If the subpoena is rejected or requires a declaration, it will be scanned into a pdf and kept electronically in the Summit Lab mailbox declaration folder

G. Subpoenas for Former Employees

1. The laboratory is not responsible for the court appearance of former employees. If the laboratory has the contact information, it is provided to the attorney sending the subpoena

2. Should the laboratory receive a subpoena for a former employee for whom contact information is not available, the subpoena is returned to the DA's office. A declaration is sent to the DA's office and retained in the Summit lab mailbox declaration folder.

H. Miscellaneous:

1. Should a criminalist be summoned for **jury duty**, the subpoena is returned to the DA with a declaration indicating this. Subpoenas are rejected only for the obligatory date or dates indicated on the jury summons. The criminalist informs the lab of the status of this obligation.

2. Prior to requesting **vacation time** off, a criminalist will check his/her subpoenas that have already accepted. If there are accepted subpoenas for the requested vacation dates, it is the criminalist's responsibility to clear these subpoenas with the DA.

3. Should a criminalist be scheduled for **training** after subpoenas have been accepted for the training dates, the subpoena clerk will return the subpoenas to the DA, including a declaration to this effect. Criminalists will be responsible to check all accepted subpoenas for that date range and send them back to the clerks to issue declarations.

4. Electronic subpoenas will be delivered via e-mail to analysts as close to time of receipt as possible. Paper subpoenas may be delivered to criminalists via scan to pdf and then e-mail.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 10/17/2018	**NUMBER:** CLER.CRIM.11 - Discoveries
	RELATED ORDERS: FSD.45	
APPROVED BY: Debbie McKillop	**ANAB:**	
CHAPTER: Release of Information	**SUBJECT:** Discoveries	

I. Policy: The laboratory complies with all legitimate Discovery and Subpoena Duces Tecum requests. These requests typically pertain to documents related to the analysis of samples or records kept in the normal course of Laboratory business. Please see the Division Manual (FSD.45) for more information on handling discoveries and Subpoena Duces Tecum.

A. Basic and Extensive Discoveries: All criminal discoveries are routed to the Forensic Services Division via the District Attorney's Office. Discoveries for Civil, SDT's or other official government/governing agency such as requests from state licensing boards are **not** routed via the DA's office however the defined tracking procedure must be followed.

1. A basic discovery is a pre-set discovery packet. A basic discovery is typically comprised of a copy of the report and notes.
2. An extensive discovery is not a pre-set package. It may be a request for more detailed documentation than the basic discovery packages. This may include a copy of the chain of custody for the evidence, instrument maintenance and calibration logs.
3. If a discovery is requested by a Public Defender or Defense Counsel, advise these parties to submit their request to the DA's office.
    a. The DA's office will review all discovery requests for relevance.
4. Discoveries are requested and completed for the District Attorney's office. The DA's Office will disseminate copies to the entitled parties.
5. Discovery requests are typically received as a FAX or email.
    a. The clerical staff will open a discovery request in LIMS, scan and attach the request letter.
    b. The official lab report and case notes will be scanned into LIMS.
    c. The clerical staff will notify the unit supervisor or designee that a discovery request has been initiated.
    d. When provided with sufficient notice and staffing levels permit, discoveries should be completed by the expected due date.
    e. Lab staff will compile the requested records, only if the lab is capable of providing such documents.
        i. Documents may be added to LIMS as images. These images can be marked "Send To iResults", and then will appear on ARIES, where the District Attorney can retrieve this information.
        ii. Documents, data, photos, etc. may also be compiled on a CD/DVD.
    f. Lab staff will draft complete and admin review the requests.
6. Most discovery requests will be made available electronically through ARIES for the District Attorney to retrieve the records. ARIES has a 24 hour delay, after the request is Administrative Reviewed in LIMS, before the records will be accessible to be retrieved by the District Attorneys.
    a. Staff may also email, FAX or mail completed discovery materials to the DA's Office.
    b. Note: ARIES can NOT be used to distribute discovery materials associated with a restricted or confidential case.
7. If ARIES can not be used to release documents, or if materials are not amenable to be uploaded in LIMS (such as CD/DVDs), they may be released to an individual.
    a. A receipt of released items must be obtained and imaged into the discovery request.

i. For physical reports, the receipt should be filed as an administrative document with the original report.

ii. For electronic reports, the receipt should be scanned as a Case Attachment. For documents kept outside of LIMS (such as CD/DVDs) a note should be added to the Case Synopsis under the Case Info tab.

8. The original discovery request letter is filed with the original lab report as an **"administrative document".** The lab number, date and initials are written on upper right-hand corner of request letter. For electronic report and notes, the letter is scanned as a Case Attachment.

9. Clerical staff will attach the following to the case file as administrative documentation. If they can be scanned, they can be added as a Case Attachment. Physical files kept outside of LIMS (such as a CD or DVD) should be noted and the location described in the Case Synopsis under the Case Info tab.

   a. **The original discovery request letter**

   b. **The receipt for discovery materials (if applicable)**

   c. **Electronic data saved on CD/DVD**

   d. Documents NOT part of the report and notes, **unless they were:**

      i. Uploaded as images to LIMS

B. **Discoveries for Official Governing Agencies**

1. Discoveries may also be requested by official governing/governmental agencies (i.e. state licensing boards). These requests must be received in writing on official letter head. In this case only a copy of the report will be released to the requester. Note: Any requests that are extensive may be sent to County Counsel for review prior to releasing records.

   a. A discovery request will be open in LIMS and a copy of the report will be imaged.

   b. Staff will review the report, draft complete and admin review the request.

   c. The clerical staff will send a copy of the report and the request letter to the requesting agency.

   d. The request letter will be uploaded to the case in LIMS as a Case Attachment. If a physical file exists, it will also be filed with the original physical case record.

C. **Subpoena Duces Tecum (SDT) in Criminal Case**

1. The Subpoena Duces Tecum will be handled and fee will be charged, by Records Unit, in compliance the CCCSO policy 1.05.68 on SDT. In criminal cases, the laboratory will not turn over the records to defense even if defense counsel requests them in a Subpoena Duces Tecum. The laboratory may turn over records to the clerk of court when coordinated by the District Attorney's office.

   a. If the laboratory is the participating or investigating agency in the case (if the laboratory has been involved in the analysis of the case) then the defense should get the case related records through the discovery process.

   b. If presented with an SDT, forward to the unit supervisor or designee involved, who will then contact the DA's office.

D. **Subpoena Duces Tecum (SDT) in Civil Cases and Court Appearances**

1. Refer to CLER.DAT.12

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 06/10/2019	**NUMBER:** CLER.CRIM.12 - Ordering Supplies
	RELATED ORDERS: FSD.30	
APPROVED BY: Debbie McKillop and Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Purchasing	**SUBJECT:** Ordering Supplies	

I. Policy: An individual with budget authority, typically the Chief or a Forensic Manager, will review, approve and authorize the purchase of supplies and services.

A. Supplies are ordered on an "as needed" basis.

1. The Laboratory has two types of supplies.
   a. Office Supplies
   b. Laboratory "Unit" Supplies

B. Office and Unit supplies are placed on the “Order Requests Spreadsheet”.

1. The following information is entered:
   a. Vendor Name (For Unit Supplies)
   b. Date
   c. Requestor
   d. Item Number
   e. Quantity
   f. Unit
   g. Price per Unit
   h. Item Description

C. Preparing Orders from the "Order Requests Spreadsheet"

1. The clerical staff will create orders per vendor.
2. The orders are submitted for approval.
3. Orders are approved by a Manager or Chief.

[redacted]

D. The Biology Unit (Unit Supplies)

1. The Biology Unit uses a database of supplies and vendors to generate orders.
   a. The orders are submitted for approval.
   b. Orders are approved by a Manager or the Chief.

E. Placing Orders

1. Prior to placing an order, verify the vendor information, such as vendor name, purchase order (PO) number, account number, address, telephone number or buyer identification number. If using the general order form, the vendor information is located on the top portion.
2. When placing an order ensure the transaction details are documented, such as your initials and date, the name of the vendor representative and the order confirmation number. Procurement card orders follow a standardized process and are tracked using appropriate county forms.
3. The confirmation number is considered the tracking number.

F. Ordering using Procurement Card

1. Order requests including detailed information are submitted to the Chief for review. Email is the preferred method for placing requests using the procurement card process. For tracking purposes, the email should include the requesting staff, supervisor, manager and authorized Forensic Services Division (FSD) Clerk. For ordering purposes, the authorized clerk is individually assigned a county credit card.
2. Upon approval from the Chief, orders may be placed by the authorized FSD clerk using the procurement card process.
    a. A credit card authorization form is generated by the clerk and signed by the Chief.
    b. The clerk places the order and retains the credit card authorization form.
    c. Upon receipt of the items and verification against the packing slip, the clerk reconciles the order against the credit card statement. The clerk is responsible for maintaining a transaction log with copies of all receipts and documentation of purchases each month.
    d. The clerk forwards the purchasing documents to the designated Department's Fiscal Unit account clerk.
    e. The single purchase limit is $2,000.00 and the 30-day purchase limit is $10,000.

G. Purchase Orders with Select Vendors (Supplies & Services)

1. A Purchase Order (PO) may be generated for vendors that the laboratory uses on a routine bases for supplies or maintenance services or for single purchases. A vendor may request a copy of the PO, which can be accessed on the County Website in the following manner:
    a. Go to the County **Intranet** website
    b. Under Departments and Offices select Public Works
    c. Click on Purchasing Services
    d. Click on Department Blanket Purchase Order List
    e. Under Department, select Sheriff-Coroner, you may click on include archived list
    f. Select sort list by vendor name or other options - Click View List
    g. Click on the vendor's Purchase Order Number to view and print/export the PO details.

H. Back Orders

1. When back ordered items are encountered, document the expected delivery date (if known) and notify the requesting unit or person.

I. Receiving Orders

1. The contents of all orders must be inventoried using the packing slip.
2. The packing slip must be initialed, dated and indicate the results of the inventory.
3. If the items received need verification, an individual from the ordering unit must initial and date the packing slip.
4. If a discrepancy is identified, the Unit Supervisor or Manager must be notified.
5. If multiple packages of the same item are received, they may be marked for inventory control using the convention: 1 of X, 2 of X, 3 of X and so forth (X being the total number of packages).

J. Record Retention - Orders, Packing Slips/Receipts and Invoices

1. The Clerical staff maintain a record of the orders placed along with the packing slips/receipts and invoices received. The records are maintained in the Clerical Section vendor binder (current year only) and electronically in the Clerical Unit folder.
2. To ensure accurate and timely payment, the designated Department's Fiscal Unit account clerk will receive the ordering documents/forms, original packing slips/receipts and invoices. Orders designated to Org 2557 will be noted on the ordering document and invoice.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 07/21/15	**NUMBER:** CLER.CRIM.14 - Payroll
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop and Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Administrative	**SUBJECT:** Payroll	

I. Policy: The Criminalistics Laboratory clerical staff is responsible for the collection and transmittal of payroll forms to the payroll unit.

A. Signatures

1. The Absence Report Forms (ARFs) are typically approved and signed by the supervisor of the unit. Once approved they should be placed in the black payroll bin located in Clerical section. It is the responsibility of clerical staff to place approved absences on the appropriate calendar. ARFs must be signed by the forensic manager or chief prior to transmittal.

2. ARFs pertaining to the Forensic Manager must be submitted to the Chief for approval and signed prior to transmittal.

B. Family Medical Leave (FMLA), Worker's Compensation, or LC233

1. Ensure the indication box is checked on ARFs submitted for medical related absences. Supervisors must initial in the provided space, as indicated on the form. Generally employees will have discussed the circumstances with their supervisor, and if additional paperwork or medical documentation is needed, it can be forwarded to Sheriff's Office Administration.

C. Submitting Payroll Forms

1. Payroll forms are submitted to the payroll clerk on a weekly basis or more frequently, if possible. All payroll forms should be placed in transmittal envelopes.

2. Payroll forms and cards are typically hand delivered, but also may go through county mail.

   a. The payroll clerk for the Forensic Services Division is located in the Administration building (651 Pine Street, 6th floor, Martinez).

3. Faxing or emailing the forms may become necessary to expedite timely processing. Payroll closing dates are published and sent to all Office of the Sheriff Department employees, via email.

D. Overtime cards

1. Overtime is usually pre-authorized, and overtime cards are typically approved and signed by the unit supervisor or Forensic Manager.

2. Ensure the overtime card is complete. Check that proper information is recorded, including: name, employee number, hours, dates, signatures, and org number. The overtime card is a two part form, the bottom page is the employee's copy. If not separated by supervisor, the payroll clerk will distribute the employee's copy.

E. Miscellaneous

1. Maintaining a adequate supply of payroll forms is a function of the clerical staff. ARFs and Overtime Cards are stored in the supply carriage. Inform a supervisor and/or clerical staff when the supply is low. Since these are multi-part NCR forms printing via the Contra Costa County Print & Mail Services Department can take several weeks.

2. Single part payroll forms and other payroll related forms are available on the "So_ admin" or "So_comm1" server in the "Forms" folder.

3. Any questions regarding forms should be directed to the payroll clerk.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 07/20/2015	**NUMBER:** CLER.CRIM.15 - Telephone Calls
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop and Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Miscellaneous	**SUBJECT:** Telephone Calls	

I. Policy: Telephone calls to the Criminalistics Laboratory can be for different purposes. Understanding the nature of the call is crucial for proper handling and routing.

A. General Greeting

1. When answering the telephone you should always state the name of the facility as well as your name.
   a. Good morning Crime Lab, this is _____
2. When multiple telephone lines are ringing, place the caller(s) on hold, by letting them know:
   a. Good afternoon Crime Lab, I have a call ahead of yours, can you please hold?
   b. Once you return to the call that was once placed on hold, thank them for being patient and proceed with the call by asking them how you can assist them.

B. Proposition 115 calls

1. Proposition 115 (Prop 115) enables Criminalists to testify telephonically for Preliminary Hearings. Officers call to speak with the Criminalist, asking a series of questions regarding the analysis. The information on the questionnaire is then used by the testifying officer as "hearsay" to testify on the lab findings.
2. Prop 115 calls require retrieving the original report from the file cabinet. An **Out Card** is completed and inserted in place of the original report. The Out Card is completed by indicating the date, lab report number, and initials of the person to whom the report is relinquished.
3. The analyst is given the original report and notes before speaking with the officer. After the Prop 115 is completed, the analyst places the original report in the refile bin located in the clerical section. The clerical staff will then refile the original report into the filing cabinet and remove the out card.
4. Occasionally officers will call for Prop 115 testimony while the Criminalist is out of the office. Regardless of the reason for the Criminalist's absence the officer must be accommodated when the Prelim is about to commence. The clerical staff must explain that the Criminalist is unavailable, and instruct the officer to inform the DA. The DA must decide if the officer will do an **Official Record** with the Supervisor or Manager as **Custodian of Records**. When available, the supervisor who administratively reviewed the report will do the **Official Record**.

C. Court Calls

1. District Attorneys (DAs) call Criminalists prior to trial dates in order to discuss the case with their subpoenaed witness in preparation for trial. The DA will also be calling to initiate the report preparation with the Laboratory clerical staff. The clerical staff will ask the DAs questions to set up the case for court.
2. Once this information is obtained, the clerical staff pulls the original report and inserts an Out card in its place, then the Criminalist can speak with the DA.
3. After discussing the case with the DA, the Criminalist will return the case file to the clerical staff for copying and refiling.
4. **Telephone logs** are completed by the Criminalist for purposes of recording the pertinent information discussed over the phone. When a telephone log is completed, it is attached to the report as an administrative document. Subsequent related calls will be recorded on a new log. The telephone log should contain the lab number, Criminalist's initials, date of communication and who they communicated with.

D. General Telephone Instructions

1. District Attorneys and most agencies are able to access lab reports via ARIES. **Lab results are never given out over the phone by clerical staff.**
2. Refer calls regarding Drug Alcohol and Toxicology analyses to that section.

3. Calls regarding Coroner's Autopsy Reports are referred to the Coroner's office.

4. The laboratory does not provide information to private citizens/suspects. Refer these requests to the involved agency or District Attorney's Office.

E. Transferring Calls

1. Telephone calls are transferred by depressing the **Tran** button while caller is on the line. Immediately after, enter **5 and four digit extension** of lab location or individual to whom call is being transferred to. For 313 prefix enter **3 and the four digit extension**. Complete transfer by hanging up the phone. If the phone call is being transferred to a party outside of the facility you must enter the the full telephone number; and area code if the call is not local, then hang up.

2. Currently, there's a Department telephone roster located [redacted]

[redacted]

F. Paging

1. Go to **Features** on the telephone, hit **4 # # 200**. You will hear a slight beeping sound. Pick up the telephone receiver and begin to speak. This allows you to page throughout the facility. Paging is only used when necessary, such as crime scenes or emergency instances.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 7/21/2015	**NUMBER:** CLER.CRIM.16 - Petty Cash
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop and Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Miscellaneous	**SUBJECT:** Petty Cash	

I. Policy: The following procedure will be followed for Petty Cash.

A. The Criminalistics laboratory is allotted $150.00 in the petty cash fund. This fund is used by the laboratory staff to make small purchases which cannot exceed $25 including tax. The petty cash is held by the Crime Lab Petty Cash Custodian.

1. For each disbursement made, the staff member must turn in a receipt indicating the amount to be reimbursed. These receipts are photocopied and the original is attached to the *Demand and Cash Disbursement Voucher* and placed in the petty cash file folder. If a receipt is not available, a receipt must be typed up.
2. The person requesting reimbursement must sign their name, enter their Org#, a description of the item purchased and the purchase amount on the form entitled *Demand and Cash Disbursement Voucher.* In some instances money can be given when a purchase needs to be made. No more than $25 should be given and a receipt must be obtained and the remaining change should go back into the petty cash fund.
3. The petty cash fund will be replenished when the remaining balance is under $50.00.

B. Steps for the petty cash fund replenishment:

1. Add up the receipt items on the voucher, enter the total, sign and date the *Demand and Cash Disbursement Voucher* form.
2. The receipts should be in date order and paper clipped to the *Demand and Cash Disbursement Voucher.*
3. A photocopy of the voucher and receipts will be maintained in chronological order for our records in the petty cash file folder .
4. Staple the original receipts to the original *Demand and Disbursement Voucher.* (This will go to Fiscal)
5. Contact the petty cash account clerk in the Office of the Sheriff Fiscal Unit to replenish the petty cash fund. The the petty cash account clerk check demand and receipts to ensure accuracy.
6. Once the paperwork is checked for accuracy a check will be issued in the name of the Crime Lab Petty Cash Custodian.

C. Currently, checks are cashed at West America Bank. The bank will ask to see identification when the check is endorsed. It is best to ask for small bills and change. The money will be put in the cash box and placed in a secure location. A new voucher should be started.

D. Petty cash should be counted periodically to ensure there is enough money on hand.

E. The auditor's office may periodically audit the petty cash box. If there is an overage, a memo needs to be written to our account clerk advising them of our overage with the amount noted.

1. Ask the account clerk to deposit the overage into the fund [redacted] The description should read *unidentifiable overage.*
2. Attached is a copy of a petty cash overage memo.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 12/23/2014	**NUMBER:** CLER.CRIM.17
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Miscellaneous	**SUBJECT:** Mail	

I. Policy: Opening mail on a daily basis is a function of the laboratory clerical staff.

A. Inter-office mail

1. Inter-office mail is received from the multiple Departments/Divisions within Contra Costa County and the Office of the Sheriff. These documents are contained in inter-office transmittal envelopes.
2. Inter-office mail may contain subpoenas, request forms, job announcements, and payroll documents, etc.

B. U.S. Mail

1. U.S. mail is received from various postal carriers.
2. U.S. mail may contain checks, bills, discovery requests, and periodicals, etc.
    a. Periodicals are to be date stamped, the table of contexts is photocopied and routed to staff. *(See Library procedures)*
3. Payment/checks received are date stamped and delivered to the account clerk at the Forensic Services Division, Fiscal Unit.

C. Proficiencies

1. When proficiency tests are received, the packaging and paperwork are date stamped.
    a. Start a chain of custody sticker.
    b. Log in the sample to reflect the description contained on the paperwork.
    c. Follow any special instructions regarding storage of evidence, as indicated "to be frozen" or stored in a dry location, etc.
    d. E-mail the Forensic Manager or Supervisor regarding the receipt of proficiency test.

D. Incoming and Outgoing Mail

1. The mail bins located in the reception area of the laboratory are labelled: Incoming, Outgoing and Outgoing Transmittal. Curriers place the mail in the "Incoming" bin. Laboratory staff place mail in the Outgoing and Outgoing Transmittal bins.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 07/20/2015	**NUMBER:** CLER.CRIM.18 - Library
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop	**ASCLD-LAB:** ASCLD-LAB Supplemental 2011 5.2.7	
CHAPTER: Miscellaneous	**SUBJECT:** Library	

1.

I. Policy: The Criminalistics Section library is a resource available to staff. Staff are encouraged to remain current with forensic publications.

A. Journals and Magazines

1. When new literature (Journals and Magazines) arrive, they should be date stamped.
   a. The table of contents should be copied and attached to a route slip for pertinent staff members.
   b. Completed route slips will be returned to clerical staff and placed in the "Routed Journal" binder, which is located in the library.
2. All journals and magazines have a designated section in the library.
   a. Magazines are disposed after a year.

B. Entering Books in the Library Database

1. When a new book arrives, it should be stamped with the "Contra Costa County Criminalistics Laboratory Library" stamp. All information relating to the book should be entered in the Library Database. The Library database is located on the G drive, in the Lab Folder.
2. New books should be routed to all staff members or as determined by the Forensic Manager. A route slip should be filled out and attached to the book.
3. When the route slip has been circulated to pertinent staff, make a copy of the table of contents and file it in the "Routed Book" binder, located in the Library.

II. Assigned Locations

A. Place the book in its assigned location according to the Library spreadsheet. All literature is divided up by disciplines, i.e Latent, Firearms, Biology, etc.

III. Checking Out Literature from Library

A. An out-card should be filled out as a place holder when checking out literature from the library. Once the literature is returned the out-card is removed.

IV. Literature Rack

A. The literature rack is used for the most recent publications. Magazines and journals are placed on the rack for a month, and a copy is distributed via route slip. Magazines and journals are then filed in the Library.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 6/22/2016	**NUMBER:** CLER.CRIM.19 - Laundry Procedures
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop, Danielle Roberts and Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Miscellaneous	**SUBJECT:** Laundry Procedures	

I. Policy: The following procedure will be followed for laboratory laundry.

A. G&K Services is our current service provider for laundering of laboratory coats and towels. Soiled laundry is collected in the hamper located in the Chemical Store Room, and picked up on a weekly basis. A tally sheet is used by staff to account for the laboratory coats and towels deposited into the laundry bag/hamper awaiting pick-up. A tally sheet is started each week after pick-up and maintained with the hamper.

1. Laundry soiled with potential bio-hazards, e.g. blood, will be placed in a red dissolvable bag and secured prior to being placed in the laundry hamper.

    a. Red dissolvable bags will be supplied by G&K.

2. Each laboratory coat or towel deposited into the hamper will be noted on the tally sheet. Ensure that the tally sheet accurately reflects the items being sent for launder.

3. The G&K representative conducting the weekly pick-up will need a signature (typically on a hand held device) in order to generate a laundry receipt. The soiled laboratory coats being released, as well as, the clean coats being received will be recorded on the G&K laundry spread sheet. The individual making the entry will initial and date the spread sheet.

4. Remove the outgoing laundry bag from the hamper and place a new plastic bag in the hamper. Never touch soiled laundry with bare hands, always wear gloves.

5. Incoming laboratory coats and towels are placed in the wardrobe closet located in the Crime Scene area.

6. If new laboratory coats need to be ordered, notify the G&K representative. Typically three coats are ordered for each staff member. Provide G&K with the style, size and name.

7. If laboratory coats are no longer needed and are being returned, notify the G&K representative to cancel the account for that staff member. For billing purposes, it is important to return all laboratory coats. (However, if a missing coat is later found, notify the G&K representative and the account will receive a credit).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Criminalistics Clerical Manual	**REVISION DATE:** 2/07/14	**NUMBER:** CLER.CRIM.20
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop and Kim Willey	**ASCLD-LAB:**	
CHAPTER:	**SUBJECT:** Reference Blood Evidence Kit Assembly	

I. Reference Blood Evidence Kit (RBEK) Assembly

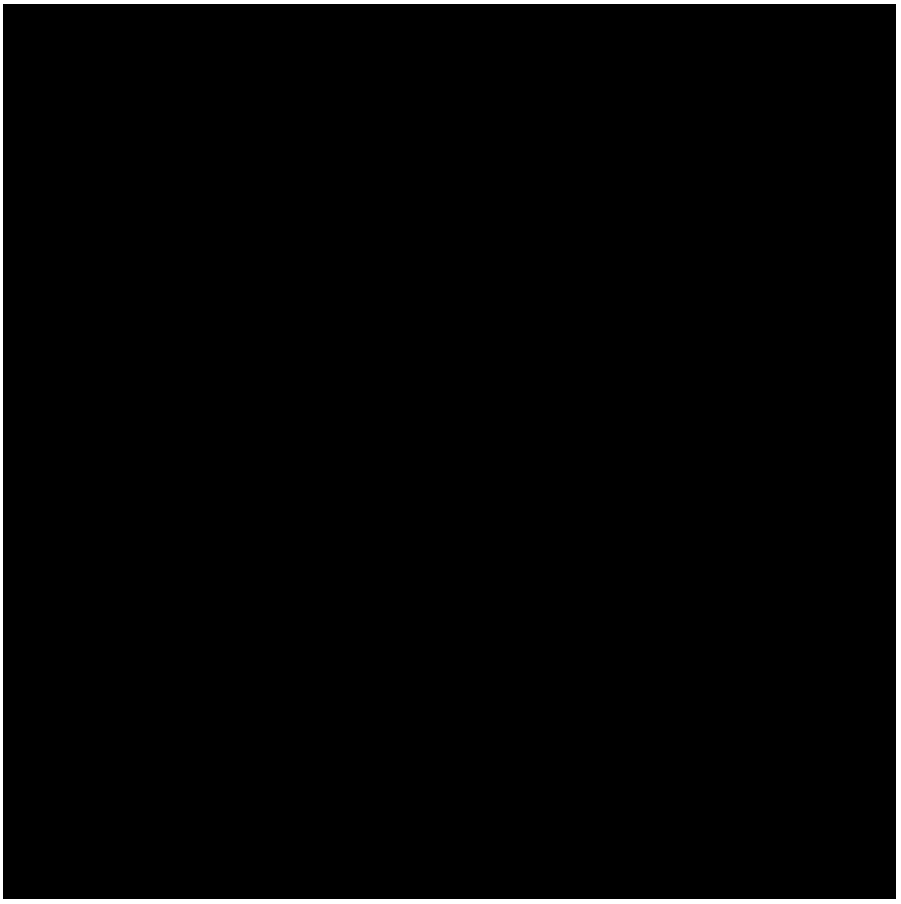
A. **Materials:** (Generally 100 kits are assembled using the following materials or equivalent)

1. Whatman FTA mini-cards (100/box): Tritech Forensics # BODPA-FTA-2
2. White Pillow Boxes (250/pkg): ULINE #S-13402W
3. Pre-printed RBEK envelopes (500/order): General Services Division (GSD) Print and Mail
4. Zip-Top plastic bags: 10x12 inch used to contain assembled kits
5. Labels:
    a. Return address labels: Avery 5267
        i. Print required number of return address labels (template 5167), font; Tahoma, size; 9, with the following information:
            1. Kit Assembly date: X/XX/XXXX and your initials.
            2. FTA Card Lot: xxxxxx. Use the lot # printed on the FTA card and not on the box containing the cards. (Each box of cards is it's own separate lot #).
    b. Small, removable adhesive labels (used to secure RBEK envelope flap)

B. **Kit Assembly:**

1. Wear gloves, lab coat and mask.
2. Clean assembly area with 10% bleach solution and dry.
3. Place clean butcher paper on the work surface.
4. Place a return address-sized label on the back side of each RBEK envelope at the bottom; leave room to add another COC if necessary.
5. Tuck one FTA card into a pillow box and place this assembly inside a RBEK envelope.
6. Place a small removable label across the envelope flap to secure the envelope.
7. Place 25 assembled RBEKs inside a 10x12 inch zip-top bag.
8. Store kit materials and assembled kits indoors at controlled room temperature and humidity.
9. Provide assembled RBEKs to the Coroner's Office, as needed.

Note: The pre-printed instructions on the RBEK need to be corrected to reflect the use of pillow boxes instead of pouches with desiccant. A label which captures the correct information must be placed over the pre-printed instructions on the front of the RBEK. See yellow highlighted area in image below. The "Fix-it" labels can be found at G:\Serology\Forms & Logs\RBEK. Continue to correct the RBEK envelopes until the supply of kit envelopes has been consumed.



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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION CRIMINALISTICS CLERICAL MANUAL	**REVISION DATE:** 05/31/2016	**NUMBER:** CLER.CRIM.21 - Non-Conforming Work
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Non-Conforming Work	

I. **Policy: Non-conforming work includes any aspect of testing or work product that does not conform to laboratory policies, procedures or the agreed requirements of the customer. When non-conforming work is encountered in the Clerical Unit, action is taken to address the non-conformity or quality issue.**

A. The appropriate corrective action taken is based on the type of non-conformity, the magnitude/scope of the problem, and whether the non-conformity was isolated or repetitive. When clerical staff become aware of non-conforming work they should notify their Supervisor/Manager. See FSD.15 for more information about the evaluation of non-conforming work.

1. **Corrective Action (Most Significant)**: Action taken to address a significant technical or quality issue. The non-conformity requires documentation of the corrective action per Division policy and procedure. See FSD.15 for more information.

2. **Level 2 Non-Conformity**: These incidents do not cause immediate concern for the quality system but may have an isolated effect, tend to be individual events, and are addressed on a case-by-case basis. These non-conformities have the potential to be re-mediated.

a. Level 2 non-conformities may include but are not limited to:

i. Not following current published Clerical or Division policies and procedures.

ii. Repeated Level 1 errors.

iii. Transcriptional or spelling corrections made by clerical unit that require an amendment after the release of a report.

b. Documentation of a Level 2 non-conformity will be maintained within the unit and will be evaluated by the Supervisor/Manager. The documentation should include, as applicable:

i. Describe the quality issue. What is the problem (error or non-conformity)?

ii. An explanation of how the quality issue occurred. Why did it happen?

iii. An explanation of the action taken to correct or improve the quality issue. What was done to correct the problem?

iv. An evaluation of the impact (if any) on casework, equipment, etc. How significant is the problem?

v. Notes for any monitoring or follow-up. Was the correction effective?

3. **Level 1 (Least Significant):** These incidents are unlikely to reoccur, are not systemic, and do not affect the fundamental reliability of the work product.

a. Level 1 non-conformities may include, but are not limited to:

i. Grammatical or Typographical Errors: spelling/grammar mistake in report or notes, or wrong agency case number or requestor in LIMS.

ii. Correction of Chain of Custody: Location or date corrections are caught prior to release of the report.

iii. Missing initials/date on evidence.

b. When brought to the clerk's attention, this type of non-conformity is typically corrected immediately by the clerk. A record of the correction may be captured by the clerk's initials/date as outlined in Division Policy FSD.42 and FSD.43.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol, & Toxicology Clerical Manual	**REVISION DATE:** 03/13/2019	**NUMBER:** CLER.DAT.01 - Receiving Evidence
	RELATED ORDERS: FSD.35 Evidence Handling	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Evidence Receipts	**SUBJECT:** Receiving Evidence	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 8/13/2019	**NUMBER:** CLER.DAT.02 - Logging in Evidence
	RELATED ORDERS: QA.04 - Amending Reports	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Logging in Evidence	**SUBJECT:** Logging in Evidence	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 12/27/2018	**NUMBER:** CLER.DAT.03 - Logging in Coroner's Evidence
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Logging in Coroner Evidence and Imaging into LIMS	**SUBJECT:** Logging in Coroner's Evidence	

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Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Drugs, Alcohol & Toxicology** **Clerical Manual**	**REVISION DATE:** 03/13/2019	**NUMBER:** CLER.DAT.04 - Logging in Confidential Cases
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Confidential and Restricted Cases	**SUBJECT:** Confidential and Restricted Cases	

[redacted]

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Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Drugs, Alcohol & Toxicology Clerical Manual**	**REVISION DATE:** 06/06/2018	**NUMBER:** CLER.DAT.05 - Agency Case Numbers
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Logging in Evidence-Agency Case Number Formats	**SUBJECT:** Agency Case Numbers	

I. Policy: The Agency Case Numbers are logged into LIMS under the following format:

A. Refer to CLER.CRIM.03 for agency case formats.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 03/13/2019	**NUMBER:** CLER.DAT.06 - Returning Evidence and Evidence Transfers
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Returning Evidence	**SUBJECT:** Returning Evidence and Evidence Transfers	

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 12/09/2016	**NUMBER:** CLER.DAT.07 - Subpoenas
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Subpoenas	**SUBJECT:** Subpoenas	

I. Policy: The following procedures will be followed for subpoena acceptance and distribution.

A. General

1. Subpoenas are generally sent to the Drug, Alcohol and Toxicology Lab via fax or email. The subpoenas are received into the MuirLab e-mail in box or paper copies are placed in the incoming subpoena tray.
2. Prior to subpoena service or rejection, consult the **Muircalendar** for staff availability.
3. Associated lab report numbers are required for all personally served subpoenas. If not indicated on subpoena, lab report numbers can be researched in LIMS by cross-referencing the agency with case file number, or defendant name. If information does not match, the subpoena must be rejected.
    a. Paper subpoenas will be scanned into a .pdf format, so they can be electronically stamped and returned.
    b. The subpoena is then opened in Adobe and an information "stamp" is added electronically. This will allow for the addition of pertinent information to the pdf which is sent back to the DA's office. An electronic copy of the rejected subpoena will be kept on the shared drive, until after the trial date on the subpoena.
        i. To set up Adobe Pro for use of electronic "stamps"
            1. Run Adobe Pro
            2. Click the Comments toolbar.
            3. Click on the stamp icon with the pull-down menu triangle next to it.
            Step 1 to 3 need to be done once for each login on each computer. They will create the proper folders for steps 4 through 6.
            4. Open explorer to:
            C:\Users\XXXXUSERXXXX\AppData\Roaming\Adobe\Acrobat\11.0\Stamps\
            NOTE: replace XXXXUSERXXXX with your login name
            5. Open explorer to: L:\LAB\MUIR\Declarations\
            6. Copy the stamp .pdf files in the declarations folder to the stamps folder. (At this time there are 4 of them).
            Steps 4 through 6 will set up the stamp definitions for each login.
        ii. To set up Adobe Pro as the default:
            1. Right click on any document and choose "Open with"
            2. Click "Choose Default Program" from list
            3. Click on "Adobe Acrobat Pro"
            4. Check box "Always use this selected program to open this kind of file"
        iii. To use the electronic "stamp":
            1. Open the document you want to stamp in Adobe Acrobat Pro (do not use Reader).
            2. Click the Comments toolbar.
            3. Click on the stamp icon with the pull-down menu triangle next to it.
            4. Select the stamp you want to use from the previews.
            5. Click on the document where you want the stamp to appear.

6. If there are any form fields in the stamp to fill in, Adobe will prompt you for those values.

B. Preliminary Hearing

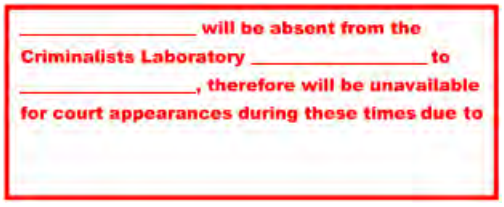
1. For electronic subpoenas, a copy may be emailed directly to the criminalist at or near the time of receipt. The date and time of the email that is forwarded will be considered the service date. A proof of service is not required by our DA's office.
2. If criminalist is unavailable, electronically stamp "**BUSINESS RECORDS**" and return the subpoena to DA's Office. The subpoena is not signed or date stamped. For reference purposes, a copy of these rejected subpoenas are retained electronically saved on the shared drive until after the hearing date on the subpoena. Electronic images of the served subpoenas are made available to the criminalists.



3. An **Official Record** testimony can be provided by the Supervisor, Manager or designee as Custodian of Records.
4. Alternately, the Business Records testimony is done by a qualified criminalist.

C. Trial

1. If criminalist is available, serve subpoena as noted above.
2. If criminalist is unavailable, an electronic stamp may be added to the pdf through Adobe. Indicate dates criminalist will be unavailable and reason (i.e. training or pre-approved time off). Return the electronic version of the subpoena to DA's Office, retaining a copy on the shared drive until after the trial date on the subpoena.



3. To Serve a Declaration in Outlook
    a. Navigate to MuirLab Inbox
    b. Open Subpoena Email
    c. Open attachment in Adobe Pro
        i. Click "Comment"
        ii. Click "Stamp Picture"
        iii. Click "CCC Subpoena Return Stamp Extended"
        iv. Click Cancel for the Identity Set Up
        v. Place the stamp on the pdf and click for placement of electronic stamp
            1. The following will pop up
                1. Begin Date
                2. End Date
                3. Analyst's Name
4. Saving electronic declarations or rejections:
    a. Save on L/Lab/Muir/Declaration
        i. Choose appropriate analyst name
        ii. Change file name to : Suspect's last name, Year, Month, Day

5. Faxing electronic declarations or rejections:
    a. Choose File
    b. Click Print
        i. Choose Printer "Fax Via Copier"
    c. Click Print
        i. Type Recipient's Name (Located on subpoena)
        ii. Fax Number (Located on subpoena)
        iii. Click "OK" to send

D. Juvenile

1. Subpoenas for Juvenile hearings are served as noted above for trials.

E. Public Defender/Private Attorney

1. Public defender/private attorney subpoenas are expedited. Determine if the criminalist has already been subpoenaed for the case by the District Attorney. If so, inform criminalist. Subpoena will automatically be served.
2. Frequently, public defender/private attorney subpoenas do not indicate the associated lab report number. This must be determined before serving the subpoena. This information is obtained by calling the public defender subpoenaing the criminalist.
3. The individual serving the subpoena must sign and date the Proof of Service, and send the Proof of Service back to the public defender's or private attorney's office.
4. The subpoena, along with a copy of the associated lab report, is delivered to the criminalist by placing it in their In Box as soon as possible.
5. If the subpoena is rejected or requires a declaraion, it will be scanned into a pdf and kept electronically on the shared drive.

F. Grand Jury Subpoenas

1. These subpoenas are also expedited. If the criminalist is available and the associated lab report numbers are provided, the subpoena can be served. The individual serving must date and sign the Proof of Service, and return the Proof of Service via inter-office mail or via FAX to the appropriate DA.
2. A copy of the subpoena and proof of service, along with a copy of the associated lab report, is delivered to the criminalist by placing in their In Box as soon as possible.
3. If the subpoena is rejected or requires a declaration, it will be scanned into a pdf and kept electronically on the shared drive.

G. Breath /Draeger Subpoenas

1. These terms are interchangeable. In lieu of submitting a blood sample, the suspect in these cases has provided a breath sample by blowing into a Draeger Alcotest instrument to determine the Breath Alcohol Concentration.
2. Testimony for jury trials on these cases is done on a rotational basis, in date order. The **breath case rotation chart** is kept on the attendance board in the clerical area. The criminalist who is next up to testify will be the criminalist with the oldest date.
3. As these subpoenas are not for a particular criminalist, and the lab is always able to provide an expert for testimony, these subpoenas may not be retained on file.

H. Subpoenas for Former Employees

1. The laboratory is not responsible for the court appearance of former employees. If the laboratory has the contact information, it is provided to the attorney sending the subpoena.
2. The laboratory maintains contact information for former employees only if they are currently employed by other government/law enforcement agency or have signed a contract with the DA's office to testify on their own casework upon retirement. This information is on file in the subpoena drawer.
    a. Should the subpoena be for a former employee who does not meet the above requirements, the subpoena is returned to the DA. A declaration is included stating that the employee no longer works for the Crime Lab. The DA's office may consult with the laboratory Supervisor/Manager to discuss the course of action to be taken in such cases.

I. Miscellaneous:

1. Should a criminalist be summoned for **jury duty**, the subpoena is returned to the DA with a declaration indicating this. Subpoenas are rejected only for the obligatory date or dates indicated on the jury summons. The criminalist informs the lab of the status of this obligation.

2. Prior to requesting **vacation time** off, a criminalist will check his/her subpoenas that have already accepted. If there are accepted subpoenas for the requested vacation dates, it is the criminalist's responsibility to clear these subpoenas with the DA.

3. Should a criminalist be scheduled for **training** after subpoenas have been accepted for the training dates, the subpoena clerk will return the subpoenas to the DA, including a declaration to this effect. Criminalists will be responsible to check all accepted subpoenas for that date range and send them back to the clerks to issue declarations.

4. Electronic subpoenas will be delivered via e-mail to analysts as soon as they are accepted. Paper subpoenas may be delivered to criminalists via their in-box.

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 03/13/2019	**NUMBER:** CLER.DAT.08 - Telephone Calls
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Telephone Calls	**SUBJECT:** Telephone Calls	

I. Policy: Telephone calls to the Muir Lab can be many and quite varied. Understanding the nature of the call is crucial to proper handling and routing. The following represents some of the more common types of phone calls received at the Drug, Alcohol and Toxicology Lab.

A. Proposition 115 calls

1. Proposition 115 (Prop 115) enables Criminalists to testify telephonically for Preliminary Hearings. Officers call to speak with the Criminalist, asking a series of questions regarding the analysis. The information on the questionnaire is then used by the testifying officer as "hearsay" to testify on the lab findings.

2. Prop 115 calls require retrieving the original report, notes and other related documentation.

   a. For physical copies, retrieve them from the file cabinet. An **Out card** is completed and inserted in place of the original report. The Out card is completed by indicating the date, lab report number, and initials of the person to whom the report is relinquished.

   b. For electronic copies, retrieve them from LIMS. The report can be printed or viewed by selecting "Print Final Report" from the request menu. The notes can be printed or viewed in the attachments tab as a .pdf request image. The image will be labeled "Worksheet" with the lab number after it. Other documentation will be included in the case images (also under the attachments tab) or mentioned in the "Case Info" report (under the case info tab). See CLER.DAT.16.

3. The analyst is paged and summoned to the front office, in order to reference the original report and notes while speaking with the officer. The analyst places the original report in the filing tray when Prop 115 questionnaire is completed. The clerical staff returns the original report to the filing cabinet and removes the out card.

4. If the analyst is located at the Summit Lab when the request for the Prop 115 is requested then:

   a. Obtain a name and telephone number of the caller, and tell them that someone will call them back for the Prop 115.

   b. Immediately call the analyst and let them know that they have a Prop 115.

   c. Scan the report and email it to the analyst with the caller contact information.

   d. If the person at Summit is unavailable, then a qualified analyst will do an Official Record.

      i. The original caller should be contacted to let them know an Official Record will be needed.

5. Occasionally officers will call for Prop 115 testimony while the Criminalist is out of the office. Regardless of the reason for the Criminalist's absence, the officer must be accommodated when the Prelim is about to commence. The clerical staff must explain the reason for the Criminalist's absence, and instruct the officer to inform the DA. The DA must decide if the officer will do an **Official Record** with the Supervisor or Manager as **Custodian of Records**. If so, the DA provides the officer with a different, longer questionnaire. Typically the supervisor who administratively reviewed the report will do the Official Record, however any qualified Criminalist may also do an Official Record if the supervisor is unavailable. Alternately, the DA and the defense could **stipulate** to the analysis. In such a case, testimony from lab staff would not be needed.

B. Court Calls

1. District Attorneys call Criminalists prior to trial dates, in order to discuss the case with their subpoenaed witness in preparation for trial. The DA will also be calling to initiate the report preparation with the Drug, Alcohol and Toxicology Lab clerical staff. The clerical staff asks the DA a series of questions from the **Court Questions** interview sheet. The questions include information the analyst will need to know when speaking with the DA. See attached example of Court Questions form.

2. Once this information is obtained, the Criminalist can be summoned to the front office to speak with the DA. The clerical staff pulls the original report, notes and other documentation. The Court Questions form is clipped to the report and the packet is given to the Criminalist.

    a. If they exist as physical copies, complete an Out card and insert it in place.

    b. If they exist as electronic copies, retrieve them from LIMS. The report can be printed by selecting "Print Final Report" from the request menu. The notes can be printed from the attachments tab as a .pdf request image. The image will be labeled "Worksheet" with the lab number after it. Other documentation will be included in the case images (also under the attachments tab) or mentioned in the "Case Info" report (under the case info tab). See CLER.DAT.16.

3. After discussing the case with the DA, the Criminalist will return the packet to the clerical staff to complete the report preparation for court. For physical copies, report preparation includes photocopying the original report before filing it away. The report copy or electronic printout from LIMS is stamped with the **Copy stamp**. **Telephone logs** are completed by the Criminalist for purposes of recording the pertinent information discussed over the phone. If a telephone log was completed, clip the original log to the report. Subsequent related calls will be recorded on a log. The telephone log should have the Lab number, Criminalist's initials and date of communication.

    a. For physical copies, this original log will be filed at the end of the original report as an administrative document.

    b. For electronic copies, the log will be scanned as a case image (i.e. ADM-01). A "Log--Communication" case activity can be created to direct attention to the scanned case image. See CLER.DAT.16.

4. Finally, chain of custody for the related evidence on the case is printed and attached to the copy of the report and notes. The packet is then placed in the **rack** at the front desk. The rack is a queue for pending court cases and phone calls regarding particular cases. Prior to leaving for court, the Criminalist will retrieve the packet from the rack.

5. District Attorneys also call to initiate report preparation and speak with a witness on **Breath Alcohol** cases. These are cases where the suspect has given a breath sample by blowing into the Draeger Alcotest instrument to determine **Breath Alcohol Concentration**.

    a. The clerical staff obtains the required information from the DA by referring to, and completing the Court Questions form. The completed form is given to an Alcohol unit staff member to print the breath report. When discussing the case with the DA, the Criminalist refers to this report. The Criminalist will take the breath report to court.

    b. After the breath report is printed the Criminalist will need to speak with the DA regarding the case, so the clerical staff must arrange either for the DA to call back to speak with a Criminalist at a specific time, or determine the DA's availability for the Criminalist to return the call. As with a lab report, the DA must discuss the breath report with the designated witness.

    c. Jury trial testimony for breath cases is done on a rotational basis, in date order. Refer to the **Breath Alcohol rotation list** posted on the attendance board. Inform the particular Criminalist up next on the rotation, there is a pending case. Relay all DA telephone instructions to the Criminalist.

6. In order to minimize time spent in a witness room waiting to testify, the Criminalist, as an expert, is one of the last people to testify at a jury trial. Therefore, it is always requested that the DA call back after the jury is picked and all other witnesses have testified, or about an hour before the Criminalist is needed to testify. This enables the Criminalist to plan accordingly, completing any open casework, and allowing for sufficient travel time to court.

C. General Telephone Instructions

1. District Attorneys and most agencies are able to access lab reports via AIRES. The results are available on ARIES 24 hours after the report has been administratively reviewed. Should an officer, DA, Public Defender, or even a Judge call requesting a lab report, the report is faxed to the requesting person. Since it is usually not possible to verify the identity of the caller, **lab results are never given out over the phone**.

2. Occasionally relatives of decedents will call to discuss lab results on **Coroner cases**. These calls are always referred to the Coroner's office. The pathologist is responsible for determining cause of death and communicating this information to family members.

3. **Private citizens/suspects** requesting lab results are referred to the arresting agency's records unit for this information. Should the case be Contra Costa Sheriff's Office or contract city case, the caller can be referred to CCSO Records. Alternatively, the individual can be referred to either the District Attorney's office or the Public Defender's office should a private attorney not be retained. The lab does not provide this information.

4. **District attorneys** often call to discuss cases with Criminalists. Most of the calls are related to a specific lab report and analyst. In the event the DA does not have a lab report, ask for the suspect's name. Run a name search in LIMS to be sure there is no associated lab report with a specific Criminalist to whom the call should be directed.

D. Transferring Calls

1. Telephone calls are transferred by depressing the **Trns** button while caller is on the line. Immediately after, enter the four digit extension of lab location or individual to whom call is being transferred. If the county number is out side the building, then dial 8- (last number of the prefix)- and four digit extension. (i.e. 8-5-1600). Complete transfer by hanging up phone. Currently, G:\Dept Phone List is the location where the most recent phone lists are stored.

E. Paging

1. Picking up the telephone receiver and depressing the star (*) button initiates the page. For telephone paging purposes, the lab is divided into sections.

2. Dial 31 for paging into the drug section, 32 for the alcohol section, 33 for the east or Sheriff's Aide area of Toxicology lab, and 34 for the west or Criminalist area of Toxicology lab.

3. Once the beep is heard, speak into the phone, calling the name of the person to be paged.

4. Relay the message in a normal, speaking voice. After the person responds, disconnect by hanging up the phone.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 7/22/2015	**NUMBER:** CLER.DAT.09 - Access Supply Ordering Database
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts and Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Access Supply Ordering Database	**SUBJECT:** Access Supply Ordering Database	

I. Policy: The following are instructions for the Access Supply Order Database

A. Introduction This database was created to speed up the regular laboratory consumable supply ordering process in the Drug Alcohol and Toxicology Section. It will help automate and track purchases.

B. Starting Out
When the ordering database starts up, the main switchboard will be visible (Fig. 1). This main menu will allow you to access the regular functions of the database. As it becomes necessary, additional functions can be added to the system.

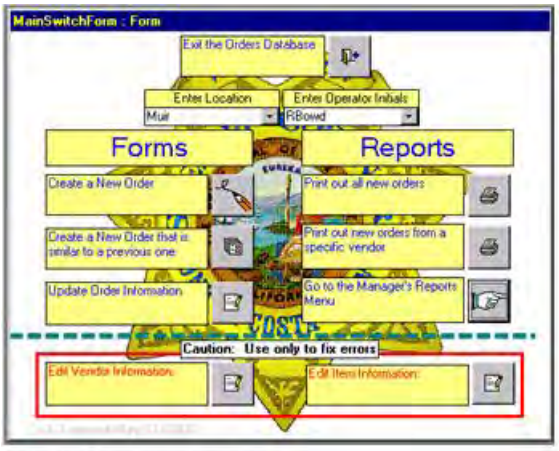

FIG. 1: MAIN SWITCHBOARD

C. Choose a Location
The database tracks where each order originated. This will help the Account Clerk with billing. The queries in the database will filter out any orders that do not originate with your lab. Because all the subsequent screens are based on the location, it is best to choose the lab location as soon as the database starts up. Most buttons will not open up the subsequent screen if the location has not been filled in.

Enter the location information by choosing the lab name from the "ENTER LOCATION" combo-box located just beneath the EXIT button.

If orders are not appearing in subsequent queries, it could be because the location entered for that order is incorrect.

D. Choose Your Initials
Similarly, the database tracks whoever entered or ordered each item. If there are any questions about the transaction, then that person can be asked about it later.

Enter your initials by choosing them from the "ENTER OPERATOR INITIALS" combo-box located just beneath the EXIT button.

E. Description of Main Menu
The main menu is divided into two columns: forms and reports.

Forms will help with the entry of order information. The forms create, edit, and update orders. The forms will only allow certain information to be edited so that orders will not be accidentally changed or deleted. Use care when entering data-it is harder to fix an error after the form is closed.

The reports will create order invoices to print. There is also a button to take you to less frequently used reports on the Manager's Reports Screen.

There are two items below the green dotted line. These two items are for inspecting the order information if something has gone wrong. These forms do not have write protections on the data, so be careful when changing data on these screens.

The exit button at the top of the screen closes the database and Access.

F. Starting an Order

Push the button labeled "CREATE A NEW ORDER" (it has a graphic of a pencil drawing). This button will bring up a new order entry form (Fig. 2).



FIG. 2: NEW ORDER FORM

There are two buttons on the lower left-hand side of the screen marked "CHOOSE ITEM" and "CREATE NEW ITEM".

G. Choose an Item

Use the "CHOOSE ITEM" button to order an item that is already in the database. This will bring up a form to choose an existing item from the database list (Fig. 3).



FIG.3: CHOOSE ITEMS FORM

The Choose Items Form is only for reviewing and choosing an item already in the database. Therefore, none of the information on this form can be changed.

Items can be sorted "BY NAME" or "BY CATALOG" number. By default, the items are listed "BY NAME" in alphabetical order. Choose an item by clicking the "BY ITEM NAME" pick-list and clicking on the correct item, or by typing in the first couple of letters. When the correct item name is displayed on the pick-list press ENTER on the keyboard. The catalog and vendor information will be displayed in the blanks to the right.

An item can also be browsed by catalog number. Click the "BY CATALOG" button. Choose a number from the "BY CATALOG #" pick-list, and then press ENTER. The full item information will be displayed to the right.

If you cannot find the right item, click the "CANCEL" button. This will return you to the previous screen. You may have to create a new item.

If the correct item information is displayed to the right, click the "CHOOSE ITEM" button. This will fill in the correct information on the previous screen.

H. Create an Item

If an item has never been ordered using the database, it will have to be entered. On the order entry form, click the "CREATE NEW ITEM" button. This will bring up a screen that will allow you to enter all the item information for a new product (Fig. 4).

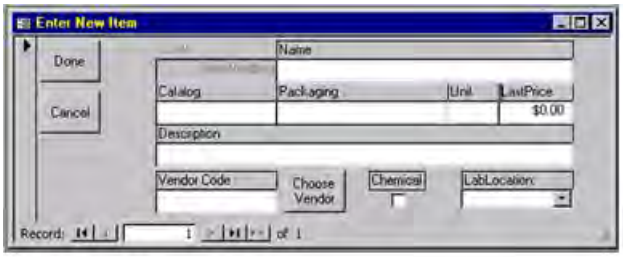

FIG. 4: CREATE NEW ITEM

The "ICODE" blank is greyed-out. This number is automatically assigned by the database and cannot be changed. Fill in the rest of the item information. The "CHEMICAL" checkbox is to show that the ordered item is a chemical. This is used to track items in the SDS part of the database. Be sure to fill in the "LAB LOCATION" blank so the list of items will be filtered correctly on future orders. When all the blanks are filled, click the "CHOOSE VENDOR" button. This will bring up a form (Fig. 5) that will allow you to choose the vendor by an alphabetical pick-list of the vendor code (an abbreviated form of the vendor name).

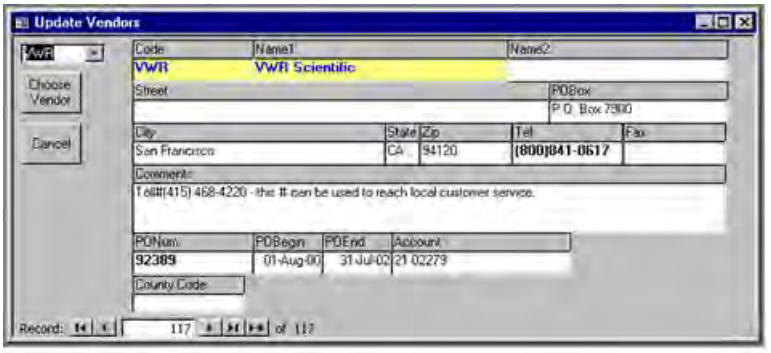

FIG. 5: CHOOSE VENDOR FORM

Select the vendor code from the pick-list, or type the first few letters into the pick-list. Press ENTER on the keyboard when the correct vendor name is selected. The full vendor information will be displayed to the right.

If the displayed vendor information is correct, click the "CHOOSE VENDOR" button. The vendor code will be copied onto the order entry form.

You may click the "CANCEL" button at any time to return to the previous order entry form.

I. Org Number

When a valid item has been selected, enter the rest of the information on the Order Entry Form. The Org Number can be filled in by pressing the "CHOOSE ORG NUMBER" button. This will bring up the Org Number Form (Fig. 6).

Percentages and valid Org numbers can be selected from the pick-lists at the top:

1. Fill in the percentage of the first Org number.
2. Left-click on the first pick-list or press TAB on the keyboard to move the cursor there.
3. Generally, 100% is used.
4. Select the correct Org Number from the pull-down menu, if applicable.
5. If necessary, tab over to the second and third percentage blanks and pick-lists to split the order amongst several Org Numbers.

   Alternatively, frequently used splits of Org Number can be selected from the shortcut buttons on the lower half of the form.

   The form will automatically paste the numbers into the blank below. When the correct Org Numbers are filled in click on the "DONE" button. This will fill the Org Number into the Order Entry Form.

   You may click the "CANCEL" button to return to the Order Entry Form without changing the Org Number.

J. Completing the Order

All the white blanks should be filled in (Number, Price, Group, Subaccount, Org Number, and comment). The

greyed-out date boxes are for reference only and cannot be changed in this screen.

Double-check the information on the screen. If everything is correct click the "DONE" button. The order information will automatically be saved. If there are any problems, edit the information prior to clicking the "DONE" button. It is much easier to change the order information on this form than it is to edit the information in other parts of the database.

You may click the "CANCEL" button to return to the main menu without saving the order information. Creating a Similar Order

K. Creating a Similar Order

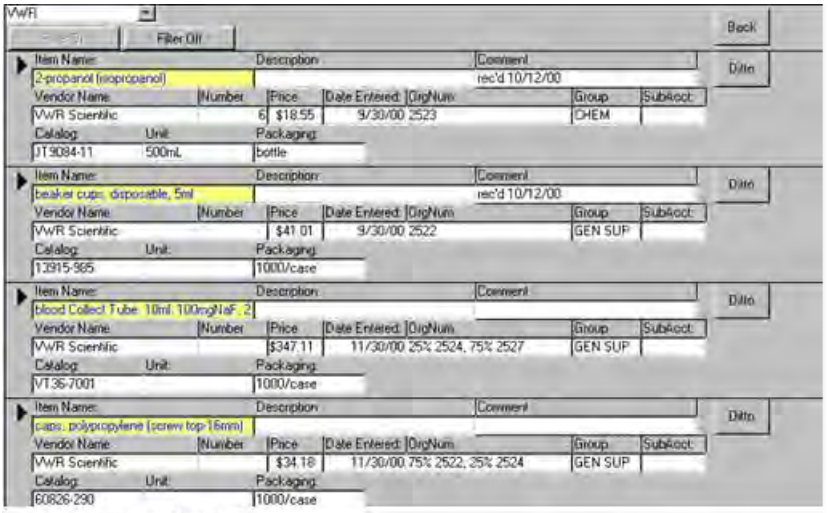

FIG. 7: SIMILAR ORDER FORM

Some items are ordered in similar quantities, or in regular intervals. To create a new order that is similar to one already in the database, click the button labeled: "CREATE A NEW ORDER THAT IS SIMILAR TO A PREVIOUS ONE" (it has a picture of repeating screens).

This button will bring up a form with previously ordered items (Fig. 7). The most recent orders are listed first. The orders can be filtered by vendor code. To do this, select a vendor code from the pick-list in the upper left-hand corner of the screen. Then click the "FILTER ON" button. This will display only the order records from the vendor selected in the pick-list.

Click the "FILTER OFF" button to see all the records from all vendors.

Use the scrollbar to the right of the screen to view the recent orders. When you see a similar order click the "DITTO" button. This will copy the old order information to a new record and allow you to make changes (see "Starting an Order", above).

L. Printing an Order

After the order information is entered, an invoice must be generated and signed by a Manager or the Chief (Debbie McKillop, Danielle Roberts or Pam Hofsass). From the main menu, click on either the "PRINT OUT ALL NEW ORDERS" button or the "PRINT OUT NEW ORDERS FROM A SPECIFIC VENDOR" button. Both of these buttons will bring up a form with two calendars (Fig. 8). Select the starting date by clicking on the top calendar. Select the ending date by clicking on the bottom calendar. Both dates will be displayed in the middle of the form in the blanks labeled "FROM" and "TO".

If you selected the "PRINT OUT NEW ORDERS FROM A SPECIFIC VENDOR" button, then select a vendor code from the pick-list just above the date ranges.

When the correct date range (and vendor) are displayed click the "GENERATE REPORT" button (or click the "CANCEL" button to return to the main menu). This will show the report in the print preview format. If the preview looks correct, then press the button that looks like a printer located just below the Edit menu (Fig. 9). If there is a problem, click the "CLOSE" button located on the same toolbar.



FIG. 9: PRINT AND CLOSE BUTTON

If there are no orders for the indicated date range (and vendor), a message box will appear stating that there is no information to print. You will be returned to the main menu.

M. Updating an Order

After an order is signed, the database should be kept up-to-date with current information. Use the "UPDATE ORDER INFORMATION" button from the main menu to enter this information.

The Update Orders Form will open showing the most recent orders first (Fig. 10). The orders can be filtered by vendor code (see "Creating a Similar Order", above).

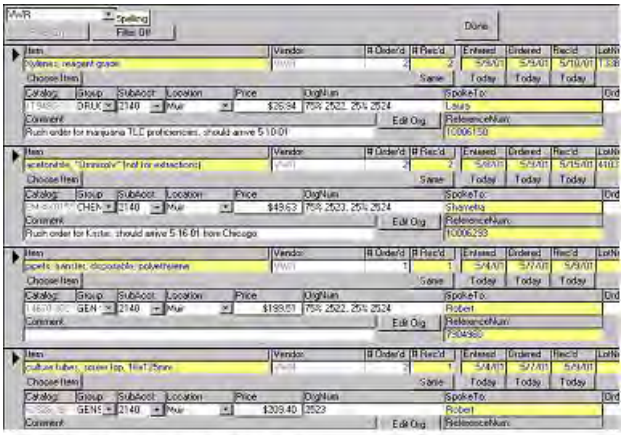

FIG. 10: UPDATE ORDERS FORM

If the order information was entered incorrectly, the following information can be changed on this form:

- To change the item that is ordered, click the "CHOOSE ITEM" button just below the yellow item name blank.
- To change the Org Number, click the "EDIT ORG" button just below the Org Number blank.
- "GROUP", "SUB ACCOUNT", and "LOCATION" can all be changed by choosing the proper response from their respective pick-lists.

When an item is ordered by telephone, the "PRICE", date "ORDERED", "SPOKE TO", and "REFERENCE NUM" number blanks should be updated. Click the "TODAY" button just below the date "ORDERED" blank to fill in the current date. If a date is already filled in, the button will not erase the previous data. The old date must be erased first, or changed manually.

N. Receiving an Order

When the item is actually received by the lab, more information should be updated. The Verified and Received Dates BOTH need to be updated. To receive the same number of items as were ordered click the "SAME" button just below the "RECEIVED" blank. If the received and ordered amounts differ, fill in the correct amount manually in the "RECEIVED" blank, and enter the reason into the "COMMENT" blank. If the item is a chemical, fill in the "LOTNUM" blank with the lot or batch number. This will aide in chemical inventory and SDS logs later.

When the order information is updated to your satisfaction, push the "DONE" button to return to the main menu.

NOTE: If you use the record navigation buttons at the very bottom of the screen, be aware of where the cursor is located. The record at the top of the screen is not necessarily the record being edited.

O. Exiting the Database

Click the "EXIT THE ORDERS DATABASE" button at the top of the main menu. This will close the database and exit out of Access.

P. Editing Item and Vendor Information

The two buttons at the bottom of the main menu are for changing mistakes in the database. Clicking on them will bring up forms similar to the "Choose Vendor" Form or the "Choose Item" Form (see above). Unlike the previously mentioned forms, all the fields can be changed. Do NOT use the edit features unless the database has errors. Use the "BACK" button to return to the main menu if you accidentally accessed these forms.

Q. Manager's Reports Menu

This button will open up a second menu of less frequently used reports and manager's information screens (Fig. 11).

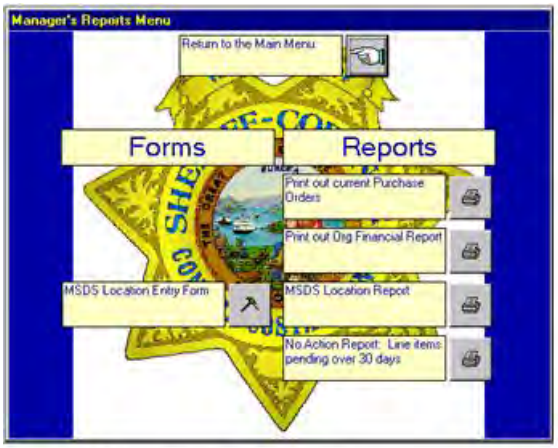

FIG. 11: MANAGER'S REPORTS MENU

R. Current Purchase Orders

The button labeled "PRINT OUT CURRENT PURCHASE ORDERS" will open a screen to choose the lab location. Only a single location can be checked. If none of the locations is checked, then the report will print out all vendors that have not been assigned a location. When the "GENERATE" button is pressed, a preview of the current PO list for the checked location will be shown on the screen. If you want to print out the list, click the print button (the same as in the print order form: Fig. 9). Click the "CLOSE" button to return to the main menu.

S. Financial Report

The "PRINT OUT ORG FINANCIAL REPORT" button will open up a new screen to select the date range. It is similar to the one used to select the date of the order form (Fig. 8). When a date range has been selected, press the "GENERATE REPORT" button. A report summarizing the estimated spending for each org is shown. The report is also broken down by each sub-account within the org.

T. No Action Report

The "NO ACTION REPORT" button will preview a report of all the items that have been entered into the database (older than 30 days) that have not been received. This report is useful for finding items that have been "forgotten" on back order, or that arrived, but were never updated properly.

U. SDS Location Entry Form

This button opens up a screen to list all the areas that a certain chemical item is used. There is a single set of location information for each item in the database (although, if multiple items exist like different sizes, or vendors, then location information will have to be filled out for each one). Blanks are also provided for entering comments or CAS numbers. SDS Location Report This button opens up a form to choose a location. When a location is checked, and the "GENERATE" button is pushed, a report is created listing all of the chemicals used at that particular location.

V. Creating Backup Databases

Before entering the monthly order into the database, create a backup of the most recently used database and save it to the "BACKUPS" folder. This will ensure that a correct and functional copy of the database is always available. To create a copy, right click the "SUPPLYOR" icon in the MUIR ORDERING DATABASES folder and select COPY. Open the BACKUPS folder and select PASTE. Rename the backup database "BACKUP 'DATE' SUPPLYOR". For example, a backup created on January 1, 2000 would be named "Backup 1-1-2000 Supplyor".
Keep back up copies saved in the Backup folder for 3-6 months before discarding.

W. Troubleshooting

Note: The following procedures are briefly explained in order to fix commonly occurring database errors. The procedure for fixing these errors, however, involves opening up database tables, or editing unprotected forms. Do not attempt the changes unless you are familiar with Access and have a handy backup of the database.

Q. An order that was just entered does not appear in subsequent screens.
A. The order editing screens filter out any orders that are not from the current location marked on the main menu screen. Manually check the location of the order using the ORDERS TABLE in the database

Q. I cannot find the ORDERS TABLE listed above.
A. The database window is hidden to prevent accidental changes. Pull down the WINDOW menu. Click UNHIDE. Select "SUPPLY ORDERS: DATABASE"

Q. New orders will not print out.

A. First, check the location as above. Also, the report will only print out orders that have an "ENTERED" date, but not an "ORDERED" or "RECEIVED" date. Delete the "ORDERED" or "RECEIVED" dates out of the ORDERS TABLE in the database and try to print again.

Q. An item (or vendor) in the database keeps appearing with the wrong information (price, packaging, etc.).
A. Edit the items by using the button marked "EDIT ITEM INFORMATION" (or "EDIT VENDOR INFORMATION").
NOTE: Items should only be edited if the original information was entered incorrectly. If the item information was valid, but has changed (i.e. at one time the item came in packs of 3, but now the company sells only packs of 6), a copy of the old information should be left in the database. Create a new item record with the updated information, and mark the old record as outdated. If the outdated checkmark is set to true, it will remain in the database so that the old orders will print correctly, however, it will not appear in queries for selecting items for new orders.

Q. An item on the printed order report does not show a sub account number or shows the wrong one.
A. Edit the order by pressing the button marked "UPDATE ORDER INFORMATION" on the main menu screen. Change the "SUBACCT" blank to reflect the correct information.

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 02/06/2018	**NUMBER:** CLER.DAT.11 - Creating/Replacing Cards for Operators
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Creating/Replacing Cards for Operators	**SUBJECT:** Creating/Replacing Cards for Operators	

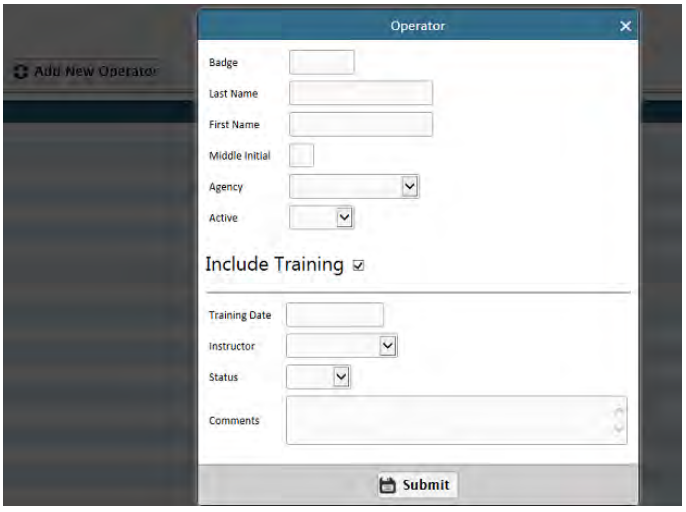
I. Policy: The following are instructions for the Intoximeters Operator Entry Database.

A. **The Intoximeters online database contains the dates of training sessions, names of instructors, and names of trained officers.**

1. The database is located at http://soweb/Muirlab

B. **Instructions for entering trained operators:**

1. Sign into the database. Click the "Intoximeters" button.
2. Select the Operator tab from the menu located at the top of the screen.
3. Click "Add new operator" and a new window will pop up. Enter the operator's name and badge number, and select the agency from the drop down list.



4. Select "Yes" from the "Active" drop down list.
5. Check the box for "Include Training".
6. Input the training date, and select the instructor from the drop down list.
7. Select "Pass" from the "Status" drop down list.
8. Click the "Submit" button to save.

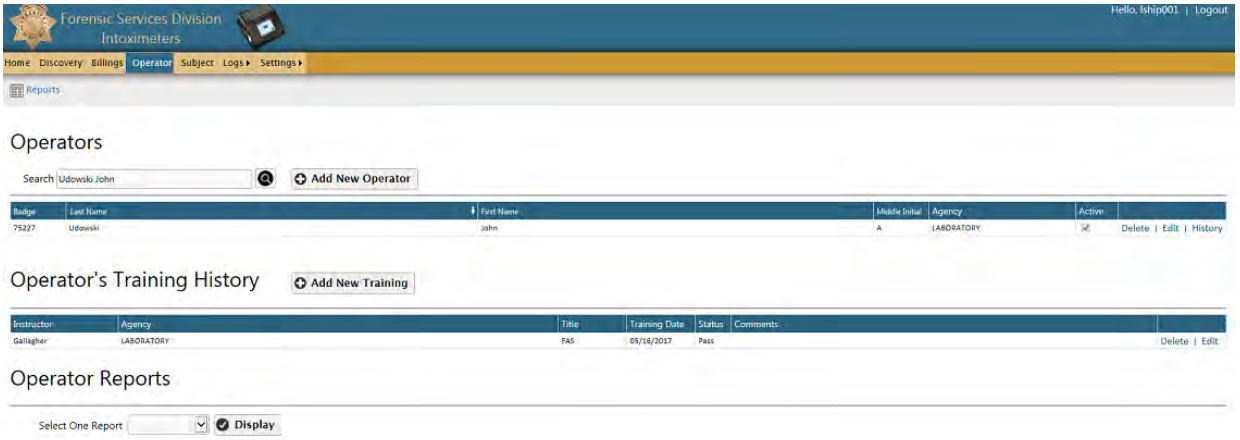
C. **Instructions for printing a single operator card:**

1. Search for an existing operator by using the search box under the Operator tab.
   a. To search for an existing operator, the operator's first and last name are necessary. The operator's badge number and agency are helpful in order to distinguish between multiple operators with the same name.
2. Enter the operator's first name, last name, or both first and last name. Click the magnifying glass button, or press the enter key on the keyboard.
   a. A partial first or last name search can be used if the complete name is not known.
      i. For example: "Udow" will yield the result "Udowski John".
   b. If entering both the first and last names, they must be entered with the last name typed in first, with no comma between the names. Any other format will yield no results.
      i. For example: "Udowski John" not "Udowski, John" or "John Udowski"
      ii. Searching by the operator's badge number or agency will yield no results.
      iii. If the search yields multiple results, compare the operator's agency and badge number to the results to locate the correct operator.



3. Once the operator's entry has been located, click on the "history" link at the far right of the entry.

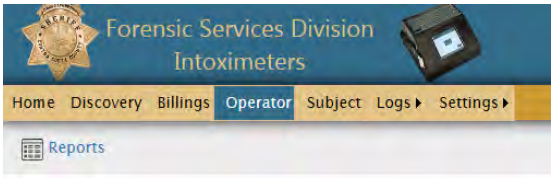
4. Under "operator reports" select "card label" from the drop down list, and click the "display" button.



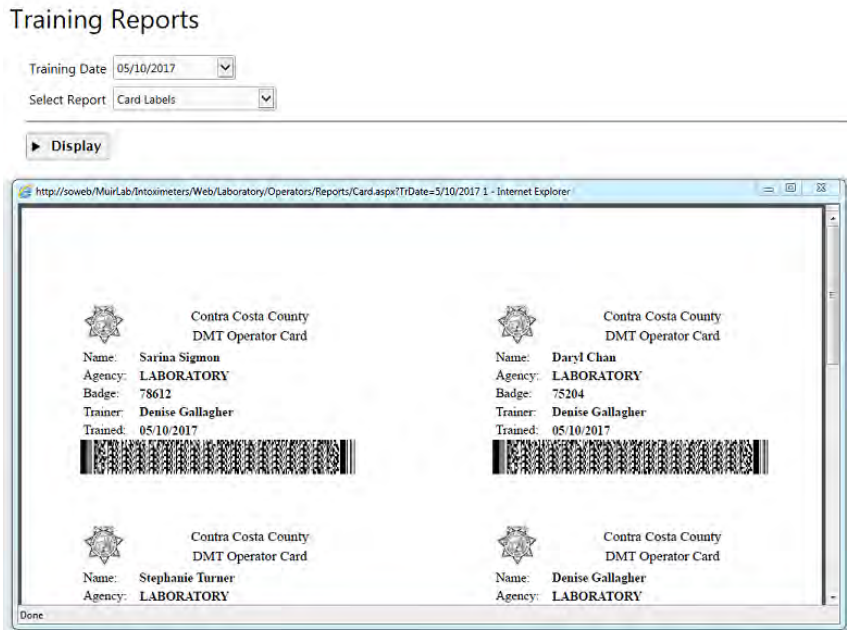
5. Click the "print file" button. Print the card onto ID badge stock #43879.
6. To print the accompanying agency letter, select "agency letter" from the "Operator Reports" drop down list. Click "display" then the "print file button", and print onto letterhead. Agency letters must be signed by the Forensic Manager.
7. To print the accompanying agency address label, select "mailing label" from the "Operator Reports" drop down list. Click "display" then the "print file" button, and print onto standard address
labels (For example Avery 5960).

D. **Instructions for printing operator cards for an entire class:**

1. Under the Operator tab, click the "reports" link.



2. Select the training date from the drop down list.
3. Select "card labels" from the report drop down list and click the "display" button.



4. Click the "print file" button and print cards (ID badge stock # 43879).
5. To print the accompanying agency letters, agency address labels, or class roster, leave the same training date selected in the drop down list.
   a. Choose the report from the "Select Report" drop down list, click "display" then the "print file" button.
      i. Mailing labels should be printed onto standard address labels, such as Avery 5960.
      ii. Agency letters must be printed onto Sheriff's Department letterhead and signed by the Forensic Manager.

E. **Instructions for laminating operator cards:**

1. Operator cards should be inserted into credit card sized laminator pouch with a thickness of 7 millimeters, then placed inside a carrier sleeve before sending through the laminator.
2. The small laminator is permanently set to the correct temperature, and can laminate one card at a time using a small carrier sleeve.
3. The large laminator needs to be set to a temperature of 130 C, and can laminate up to eight cards at a time using a large carrier sleeve.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 08/13/2019	**NUMBER:** CLER.DAT.12 - Discoveries and Subpoena Duces Tecum
	RELATED ORDERS: FSD.45, CCCSO 1.06.71, CCCSO 1.05.68, FSDF.10	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Discoveries	**SUBJECT:** Discoveries and Subpoena Duces Tecum	

I. Policy: The laboratory complies with all legitimate Discovery and Subpoena Duces Tecum requests. These requests typically pertain to documents related to the analysis of samples or records kept in the normal course of Laboratory business. Please see the Division Manual (FSD.45) for more information on handling discoveries and Subpoena Duces Tecum.

A. Basic and Extensive Discoveries: All criminal discoveries are routed to the Forensic Services Division via the District Attorney's Office. The discoveries for the DMV hearings, Civil SDT's , DMV Admin *per se* SDTs or other official government agency requests (Such as State Licensing Bodies) are not routed via the DA's office.

1. A basic discovery is a pre-set discovery packet. A basic blood discovery is typically comprised of a copy of the report and notes, a copy of the chain of custody for the evidence, instrument maintenance and calibration logs. A basic breath discovery consists of the breath test card, instrument calibration and maintenance records and the operator's certification.

2. An extensive discovery is not a pre-set package. It may be a request for more detailed documentation than the basic discovery packages. See the Blood and Breath Alcohol Technical Unit Manuals for more information about a basic and extensive discovery for alcohol analysis.

3. The requesting party or the suspect's defense counsel, may send a written request to the District Attorney's office.

   a. The DA's office will review all discovery requests for relevance.

   b. The DA's office will then FAX an Investigations Request Form to the Drug, Alcohol and Toxicology Section with the request.

4. If the discovery is requested by a Public Defender, forward the request to the DA's office and advise the Public Defender to submit the request via the DA's office.

5. Basic discoveries are also requested and completed for the District Attorney's office.

6. Discovery requests are typically received as a FAX, email, or by US mail. The original report, along with request letter are scanned into LIMS and a discovery request is opened and logged in LIMS.

7. The paperwork is delivered to the Staff member or the Technical Unit that needs to complete the discovery. An analyst will compile the records and add them as images into LIMS. Analysts will draft complete and admin review the requests.

8. The discoveries are routinely logged in and processed in date order.

9. Lab staff will upload the records into LIMS, draft-complete, and admin review the discovery request. Images in the discovery request that have been marked "Send To iResults" will appear on ARIES where the District Attorney can retrieve them.

10. Most discovery requests will be made available electronically through ARIES for the District Attorney to retrieve the records. ARIES has a 24 hour delay, after the request is Administrative Reviewed in LIMS, before the records will be accessible to be retrieved by the District Attorneys.

11. Alternately, if the documents are needed as a "Rush", or the records are not amenable to be uploaded in LIMS, the person approving the discovery will return the packet to the front office by placing in Completed Discoveries filing tray, for further processing by the clerical staff.

    a. The clerical staff may FAX or e-mail the documents to the requester's attention at the District Attorneys office.

    b. If faxing or e-mailing documents to requester, a copy of the requesting letter for the attorney's reference is included.

    c. Records not amenable to electronic distribution may be placed on a CD/DVD for pick-up, and this release of records must be documented in LIMS. Create a "Log--Discovery" Case Activity in LIMS about the

existence and description of the physical file and its location. See CLER.DAT.16.

12. Discoveries may also be requested by Official Governmental Agencies (i.e. State Licensing Boards). These requests must be received in writing on official letter head. In this case only a copy of the report will be released to the requester. Note: Any requests that are extensive may be sent to County Council for review prior to releasing records.

    a. A discovery request will be open in LIMS.

    b. Staff will review report, draft-complete and admin-review the request. The hard copies will then be given back to the clerical staff .

    c. A copy of the report and the request will be sent to the requester.

    d. The original request will be attached as an administrative document to the original case record.

        i. For physical files, this can be done as a hard copy.

        ii. For electronic files, this is scanned as a request image in LIMS .

13. When staffing levels permit, discoveries are completed within ten days of initial receipt to the Lab or the due date indicated on the request, whichever is the later date.

14. The original discovery request letter is filed with the original lab report as **"administrative documents".** The lab number, date and initials are written on upper right-hand corner of the request letter. For electronic reports it will be imaged into the Case Attachments (e.g. ADM-01)

15. Clerical staff attaches the following to the case file as administrative documentation:

    a. **The original discovery request**

    b. Any documents that are NOT part of the report and notes, **only** if**:**

        i. the records are not in LIMS. If the records are uploaded as images in LIMS they need NOT be filed with the case file.

        ii. any electronic data that is saved on the CD/DVD**.** Create a "Log--Discovery" Case Activity in LIMS to describe the documents and its location.

B. **Subpoena Duces Tecum (SDT) in Criminal case:**

1. The Subpoena Duces Tecum will be handled and fee will be charged, by Records Unit, in compliance the CCCSO policy 1.05.68 on SDT. In criminal cases, the laboratory will not turn over the records to defense even if defense counsel indicates that in the subpoena Duces Tecum. The laboratory may turn over record to the clerk of court when coordinated by the District Attorney's office

    a. If the laboratory is the participating or investigating agency in the case (if the laboratory has been involved in the analysis of the case) then the defense should get the case related records through the discovery process. Accept the SDT and give to the unit involved.

    b. Unit involved will contact the DA's office and follow up

2. **Non-extensive criminal SDT.** A non-extensive SDT would be considered the report and notes/chain of custody of laboratory analysis or a routine Draeger/ Intoximeters DMT discovery on breath case. These are most commonly received for the Alcohol Unit related cases

    a. Date stamp the SDT upon receipt. Response time for criminal SDT is 15 days from the date of receipt

    b. The clerical staff will give the SDT to the proper unit to complete.

    c. The unit will complete the SDT as well as a Notification and Compliance form FSDF.10 .

    d. The unit will then send the completed SDT along with the completed Notification and Compliance form to the Supervisor or Manager of the Records Unit.

    e. The unit also prepares a hard copy of the SDT and places it in an envelope addressed to the "Court Clerk".

    f. The unit then gives the envelope to the clerical staff.

    g. The clerical staff will mail the envelope to the "Court Clerk".

3. **Extensive Criminal SDT**

    a. Date stamp the SDT upon receipt. Response time for criminal SDT is 15 days from the date of receipt.

b. For Criminal SDT, provide the SDT to individual or Unit involved and they will contact the District Attorney's office to discuss the relevance and possibly request a motion to quash.

c. The laboratory staff will comply with the advice and direction provided by the DA's office or the County Counsel's office.

d. The unit will complete the SDT as well as a Notification and Compliance form .

e. The unit then sends the completed SDT along with the completed Notification and Compliance form to the Supervisor or Manager of the Records Unit .

f. For Criminal SDT, the unit also prepares a hard copy of the SDT and places it in an envelope addressed to the "Court Clerk".

g. The unit then gives the envelope to the clerical staff.

h. The clerical staff will mail the envelope to the "Court Clerk".

4. **Civil SDT for records:**

a. Date stamp the SDT upon receipt. Response time for SDT is 15 days from the date of receipt

b. For Civil SDT, provide the SDT to Manager/Supervisor may contact the County Counsel for advice or possibly request to quash the SDT. See FSD.45 for more details on sending the records and collection of fees.

c. The civil SDT for records is mostly for Admin *Per Se* hearings at Department of Motor Vehicles (DMV) and are related to driving under the influence cases. The records provided will be "basic discovery material". See BA.36 & BRA.15 for the more information about alcohol related discoveries.

i. The request for Admin Per Se DMV hearing may also be received as a discovery request directly from the defense counsel. These discoveries are not routed via the DA's office, like the criminal discovery requests.

ii. The proper DMV SDT form (DS 3000 or equivalent) must be submitted for the laboratory to comply. Lab staff will advise the requesting party to submit the discovery request with the proper DMV SDT form when any other written discovery request is submitted for a DMV hearing. See BA.36 for more information.

d. The SDT is provided to Alcohol Unit to comply and provide the records

e. Alcohol Unit will complete the discovery and give the records to the clerical staff.

f. The clerical staff will send those records to DMV and/or the attorney per the instruction written on the Admin *Per Se* SDT discovery request.

g. A copy of the records may also also be sent to Supervising Hearing Officer at DMV.

5. **Civil SDT for Court appearance:**

a. These SDTs are to be directed to the Civil Unit.

b. The Civil Unit will collect the money required Department Policy.

c. The Civil Unit will then send the SDT documents to the Muir Laboratory for completion (the Civil Unit will hold the money).

d. There should be 5 days between the time the Crime Lab receives the SDT documents and the court date. The clerical staff should check the compliance date and scheduled court date to ensure the appropriate time window.

e. The staff will complete the documents sent by Civil after the court date to record their appearance or non appearance.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 10/3/2019	**NUMBER:** CLER.DAT.13 - Distribution of Reports
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Case File	**SUBJECT:** Distribution of Reports	

I. Policy: Once administratively reviewed, final reports are available for distribution. See FSD.43 for the report distribution policy.

A. Laboratory reports are routinely provided to the requesting (Primary) agency and the District Attorney's Office via the Automated Regional Information Exchange System (ARIES).

1. For Primary agencies that do NOT have access to ARIES, the original distribution will consist of sending a copy of the report.

   a. For physical or electronic copies: Create a "Log--Report Distribution (Non-ARIES Agency)" Case Activity in LIMS with the distribution information. See CLER.DAT.16.

   b. Reports must be copied or scanned for distribution by US Mail, Fax or Email to CHP Offices or agencies that do not have access to ARIES.

2. The following is a list of Agencies that have access to lab reports in ARIES (as of 7/24/18). Any agency that is not listed must have an Non-ARIES distribution.

   a. Contra Costa County, Office of the Sheriff
   Contra Costa County, District Attorney
   Contra Costa County, Probation Department
   Richmond Police
   Walnut Creek Police
   Pittsburg Police
   Concord Police
   El Cerrito Police
   Antioch Police
   Kensington Police
   Pleasant Hill Police
   Moraga Police
   San Pablo Police
   Hercules Police
   East Bay Regional Parks District
   Clayton Police
   BART Police
   Community College District
   Brentwood Police
   Danville Police
   Martinez Police
   Oakley Police
   Pinole Police
   San Ramon Police
   CHP-Martinez
   Contra Costa County, Superior Court
   Orinda PD
   Lafayette Police
   Contra Costa Fire District
   Contra Costa County, Coroner's Office

3. For agencies that cannot receive the report via ARIES because the case is confidential, restricted or prior to ARIES publication (Pre-ARIES) then these cases will be released outside of ARIES and documented. See CLER.DAT.16 for "Log--Report Distribution (ARIES Agency: CRPAR)" (Confidential/Restricted and Pre-ARIES Release) Case Activities in LIMS for electronic reports.

4. For agencies that receive a report AFTER the ARIES distribution per request or statute, for example: Department of Motor Vehicles (DMV), follow FSD.43 for copies of reports released after the ARIES distribution. See CLER.DAT.16 for "Log--Report Distribution (Non-ARIES Agency)" Case Activities in LIMS for electronic reports.

    a. Alcohol reports with 23152 and 23153 CVC (California Vehicle Code) offense codes are copied and mailed to the DMV.

    b. All toxicology reports with 23152 and 23153 CVC offense codes are copied and mailed to the DMV.

    c. Coroner reports are not distributed to the DMV.

B. Confidential and Restricted Reports

1. If they are physical copies, these reports should come to the copy table with the red flag stickers still attached. This alerts the clerical staff of the urgency/confidentiality of the report. If electronic only, the clerks will run a LIMS crystal report to identify any reports that need to be distributed.

2. If multiple requests are pending for the case, do not seal original report. Hold original report, pending completion of all requests.

3. Confidential and restricted reports are not distributed via ARIES. They may be picked-up by or mailed to the designated individual via U.S. or inter-office mail.

4. Follow the policies and procedures in FSD.43 and QA.07 for appropriate acceptance, logging-in, marking, and sealing confidential and restricted reports. For electronic only copies, Case Activities can be made in LIMS. See CLER.DAT.16.

5. Include the confidentiality or restricted warning to the Case Message in LIMS. Under the Case Info Tab right-click in the white-space between the header information and the synopsis field. Select "Message and Synopsis". Text added to the Synopsis will show up under the Case Info tab. Text added to the Message will show up in a red box visible in all case tabs in LIMS. The highly visible case message will highlight the confidential/restricted nature of the case.

C. Faxing/Emailing Rush Reports

1. Solid dose drug cases and alcohol cases may be considered for **"rush" analysis** if there is a pending court date (**court rush**) or need to keep a suspect in-custody (**investigative rush**). When entering the request, enter this information in the Notes section, along with the requestor's name and pertinent phone/fax numbers for sending the final report.

2. Any "rush" analysis usually requires emailing/faxing the final report to the requesting party, i.e. the investigating officer or District Attorney.

3. For physical or electronic copies, document date and agency in the case activities "Log--Report Distribution (ARIES Agency: CRPAR)" (Confidential/Restricted and Pre-ARIES Release) in LIMS. See CLER.DAT.16.

4. Fax or email reports as soon as possible, as they are time sensitive. Most fax numbers are programmed into the fax machine.

    a. If pending court date is greater than 24 hours, then the requester will be directed to get their report on ARIES.

D. Multiple Requests or Amendments

1. Frequently reports have more than one request. This will occur if there are multiple suspects on a case, or if more than one type of analysis is requested on the same individual. i.e. alcohol analysis on a blood sample, and toxicology analysis on a urine sample.

2. When filing reports with multiple requests, file the most recent request on the top. i.e. 10-123-2 will be filed on top of 10-123-1.

3. When filing reports with amendments, the amendment will be on top followed by the amendment notification followed by the original request.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 03/28/2012	**NUMBER:** CLER.DAT.14
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB:**	
CHAPTER: Payroll	**SUBJECT:** Payroll	

I. Policy: The Drugs, Alcohol and Toxicology Lab clerical staff is responsible for the collection and transmittal of payroll forms to the payroll unit in the Admin building. Payroll forms primarily include Absence Report forms (ARF), Overtime cards (OT), and FMLA forms.

A. The forms are approved and signed by the supervisor or manager. The approving supervisor will deliver to the front office for proper routing.

B. The clerical staff must check forms for proper signatures, dates, and general completion.

C. Time off requests should have day/hour agreement. For example, if personnel request 5 vacation days, 40 hours should be listed on the form.

D. Payroll forms

1. Payroll forms are submitted to the payroll clerk via inter-office mail. All payroll forms should preferably be placed in the blue payroll transmittals. When additional transmittals are needed, request these from the payroll clerk, via email. If blue payroll transmittals are not available, send them in regular inter-office mail transmittals.

2. The **payroll clerk** for Forensic Services Division is **Joyce Buendia**. Her information is as follows:

   a. 651 Pine Street, 6th floor

   b. Martinez, CA 94553

   c. Phone: 925-335-1525

   d. Fax: 925-335-1551

   e. Email: jbuen@so.cccounty.us

3. Mailing payroll forms to the payroll clerk on a weekly basis has been the practice at Muir lab. However, at the end of each month, more frequent mailings may be required in order to ensure payroll is posted before the cut-off dates. Faxing or emailing the forms may become necessary to further expedite their timely processing. Payroll closing dates are published and sent to all Sheriff's Department employees, via email.

E. Absence Report forms

1. Once an approved ARF is submitted to front office from a supervisor, the Muircalendar must be updated to reflect the employee time off.

2. Separate the ARF for distribution. The top white copy is submitted to the payroll clerk. The pink copy with the supervisor's signature is returned to the employee. These are placed in the employee's In box. The goldenrod and yellow copy can be shredded.

3. ARFs pertaining to the Forensic Manager must be submitted to the Chief for approval and signature prior to distribution.

F. FMLA forms

1. These forms are for time off under the **Family Medical Leave Act**. They are completed by a doctor, and must be submitted to the administrative assistant handling FMLA leaves at Sheriff's Admin within 15 days of the qualifying event/medical appointment. Generally the employee will have discussed the circumstances with the supervisor, and the supervisor will fax the form to the appropriate person, prior to completion by a doctor.

2. Once the medical professional has completed the form, it will be faxed to the administrative assistant handling FMLA. The original form is sent to the payroll clerk with the corresponding ARF. If there will be a delay in getting the FMLA form from the attending physician, the ARF is submitted, with a comment in the FMLA Section, that the form will be sent upon completion.

G. Overtime cards

1. These cards are also approved by a supervisor and delivered to the front office. An **Org** number, for purposes of charging the overtime hours, must be selected. The org number choices are listed on the top of the form.

2. Completeness checking regarding this form would include checking for proper hours, dates, signatures, and org numbers. The overtime card is a two part form. The bottom copy is the employee copy. If not already separated by supervisor, distribute copy to employee.

H. Miscellaneous

1. Maintaining adequate supply of payroll forms is also a function of the clerical staff. Absence Report Forms and Overtime cards are stored in the supply room. As these forms are multi-part, NCR forms, they must be ordered from the C.C. County Print & Mail Department. Since printing the forms can take several weeks, inform the supervisor when supply is low.

2. Most of the single part payroll forms are available on the G Drive, in the "Group on Admin" folder, under "Forms."

3. Muir lab also maintains a small supply of some of the more commonly used forms in a drawer in the file cabinet under the copy table.

4. Any questions regarding forms should be directed to the payroll clerk.

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 08/03/2017	**NUMBER:** CLER.DAT.15 - Mail
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Mail	**SUBJECT:** Mail	

I. Policy: Opening daily mail is a function of the Laboratory clerical staff.

A. Inter-office mail

1. Subpoenas which are received by inter-office mail are placed in the incoming subpoena tray.
2. Mail from the Criminalistics Lab or Sheriff's Property can also be received through inter-office mail. This mail will primarily be addressed to the Forensic Services Division Chief or Manager, and distributed accordingly.
3. Inter-office mail is also received from other Contra Costa County departments, including the District Attorney's office and Public Defender's office. These can be subpoenas, discovery requests, etc.
    a. Any U.S. Mail forwarded to the Laboratory will be date stamped and initialed upon receipt at the Laboratory.

B. U.S. Mail

1. U.S. mail is comprised of a variety of things such as checks, bills, periodicals, discovery requests, etc.
2. Payment checks and invoices that are received will be date stamped and initialed then placed in the hanging mail depository in the clerical area for the account clerk.
3. Any Discovery requests, SDTs, or Evidence Transfer requests will be date stamped and initialed on the envelope **and** the first page of the paperwork.

C. Proficiencies

1. When proficiency samples are received, **date stamp and initial the first page of the paperwork contained inside the package**. Start a chain of custody sticker.
2. Follow any special instruction regarding storage of evidence, "to be refrigerated", as indicated.
3. E-mail notification to the Forensic Manager/Supervisor regarding the receipt of proficiency samples.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 10/3/2019	**NUMBER:** CLER.DAT.16 - Filing
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Filing	**SUBJECT:** Filing	

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION DRUGS, ALCOHOL & TOXICOLOGY CLERICAL CLERICAL MANUAL	**REVISION DATE:** 09/21/2017	**NUMBER:** CLER.DAT.17 - Non-Conforming Work
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Non-Conforming Work	

I. Policy: Non-conforming work includes any aspect of testing or work product that does not conform to laboratory policies, procedures or the agreed requirements of the customer. When non-conforming work is encountered in the Clerical Unit, action is taken to address the non-conformity or quality issue.

A. The appropriate corrective action taken is based on the type of non-conformity, the magnitude/scope of the problem, and whether the non-conformity was isolated or repetitive. When clerical staff become aware of non-conforming work they should notify their Supervisor/Manager. See FSD.15 for more information about the evaluation of non-conforming work.

1. **QAC-1 or Level 1 Corrective Action (Most Significant)**: Action taken to address a significant technical or quality issue. The non-conformity requires documentation of the corrective action per Division policy and procedure. See FSD.15 for more information.

2. **QAC-2 or Level 2 Non-Conformity**: These incidents do not cause immediate concern for the quality system but may have an isolated effect, tend to be individual events, and are addressed on a case-by-case basis. These non-conformities have the potential to be re-mediated.

   a. Level 2 non-conformities may include but are not limited to:

      i. Not following current published Clerical or Division policies and procedures.

      ii. Repeated Level 3 errors.

      iii. Transcriptional or spelling corrections made by clerical unit that require an amendment after the release of a report.

   b. Documentation of a Level 2 non-conformity will be maintained within the unit and will be evaluated by the Supervisor/Manager. The documentation should include, as applicable:

      i. Describe the quality issue. What is the problem (error or non-conformity)?

      ii. An explanation of how the quality issue occurred. Why did it happen?

      iii. An explanation of the action taken to correct or improve the quality issue. What was done to correct the problem?

      iv. An evaluation of the impact (if any) on casework, equipment, etc. How significant is the problem?

      v. Notes for any monitoring or follow-up. Was the correction effective?

3. **QAC-3 or Level 3 Non-Conformity (Least Significant):** These incidents are unlikely to reoccur, are not systemic, and do not affect the fundamental reliability of the work product.

   a. Level 3 non-conformities may include, but are not limited to:

      i. Grammatical or Typographical Errors: spelling/grammar mistake in report or notes, or wrong agency case number or requestor in LIMS.

      ii. Correction of Chain of Custody: Location or date corrections are caught prior to release of the report.

      iii. Missing initials/date on evidence.

   b. When brought to the clerk's attention, this type of non-conformity is typically corrected immediately by the clerk. A record of the correction may be captured by the clerk's initials/date as outlined in Division Policy FSD.42 and FSD.43.

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Drugs, Alcohol & Toxicology Clerical Manual	**REVISION DATE:** 6/22/2016	**NUMBER:** CLER.DAT.18 - Laundry Procedures
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts, Debbie McKillop and Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Miscellaneous	**SUBJECT:** Laundry Procedures	

I. Policy: The following procedure will be followed for laundry.

A. G&K Services currently holds our contract for the laundering of lab coats. Soiled laboratory laundry is collected in the plastic hamper located in the Store Room. Any lab coats that are soiled with blood will be placed in a red bag (supplied by G&K) and tied then placed in the plastic hamper. Soiled laundry is picked up on a weekly basis.

1. When collecting soiled laundry from the hamper for pick-up, ensure that the Lab Coat Log accurately reflects the coats that were sent for launder.
2. The G&K representative will pick up the laundry, and the laboratory staff giving the laundry to G&K personnel will sign G&K 's receipt (typically on a hand held device). The lab coats being released as well as the clean lab coats being received will be recorded on the Lab Coat Log. The individual making the entry will sign the log.
3. Remove the outgoing laundry bag from the plastic bag in the Store Room. Never touch soiled laundry with bare hands always wear gloves.
4. The incoming coats are placed in the wardrobe closet located in the Store Room.
5. If lab coats need to be ordered, notify the G&K representative. You will need to supply the staff member's lab coat size and name. Typically three coats are ordered for each staff member.
6. If a staff member retires or leaves the laboratory, collect their lab coats and notify the G&K representative that the coats are being returned and to cancel the account in that name. For billing purposes, it is important to return all lab coats. If a lab coat is missing but later found, notify the G&K representative and the account will receive a credit.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 10/01/2019	**NUMBER:** CE.01 - Comparative Evidence Services
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Comparative Evidence Services	

I. POLICY The Comparative Evidence Unit provides the following services as listed below. This detailed list for each service is not all inclusive, but is representative of what the Unit can perform. Work is only performed by Unit personnel with an active request in LIMS. Any work outside the scope of the typical tasks listed below requires Unit Supervisor approval.

A. Ballistic Imaging. Uses the IBISTRAX-HD3D system, a networked database that contain images of test-fired cartridge cases and cartridge cases from crime scenes.

1. Determine the minimum number of firearms present at a scene based on class characteristics.
2. Determining if a particular firearm is associated with other shooting incidents.
3. Determining if one shooting scene is related to other shooting scenes.

B. Function testing of a firearm. Performed by test-firing the firearm when possible.

1. Determining if a firearm is operational.
2. Determining if a firearm has been altered.
3. Determining if a firearm fires in fully automatic mode (machine gun).
4. Determining if a firearm is an "Assault Weapon" as defined by California State law.

C. Make and model determination.

1. Determining the caliber (or cartridge), construction, and manufacturer/marketer of a particular bullet or cartridge case and the general class characteristics of the rifling impressions or cycle of fire/action marks.
2. Determining the minimum number of firearms present at a scene based on class characteristics.
3. Determining a list of firearms that could have fired a particular bullet and/or cartridge case based on the markings left on the evidence.

D. Firearms comparisons.

1. Determining if evidence bullets and cartridge cases were fired from a particular firearm.

2. Determining if evidence bullets or cartridge cases from one scene were fired from the same firearm as bullets or cartridge cases from another scene.

3. Determining the number of firearms present at a particular shooting incident.

4. Determining if unfired cartridges were worked through the action of a particular firearm.

5. Determining if fired cartridge cases or unfired cartridges were cycled through a magazine.

E. Presumptive firearms comparisons

1. Determining if evidence bullets and cartridge cases were likely fired from a particular firearm.

2. Determining if evidence bullets or cartridge cases from one scene were likely fired from the same firearm as bullets or cartridge cases from another scene.

3. Determining the number of firearms likely present at a particular shooting incident.

F. Serial number restorations.

1. Restoring obliterated or altered markings on a firearm.

G. Sound suppressor determination.

1. Determining if a device is a sound suppressor or silencer as defined by California State law.

2. Determining whether a suppressor has been used on a firearm.

H. Distance determination.

1. Determining the muzzle-to-target distance of a gunshot.

2. Evaluating evidence for the presence of smokeless powder particles.

I. Toolmark comparisons.

1. Determining if a particular tool is responsible for leaving marks on an item.

J. Footwear and tire print comparisons.

1. Determining if a particular shoe/tire made an impression.

2. Determining a list of possible shoes/tires that could have made an impression.

K. De-rusting (may be performed under the Ballistic Imaging or Function services).

1. Uses non-destructive chemicals (Evapo-Rust) to remove rust from firearms. Often used to unload rusted firearms.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 12/05/2016	**NUMBER:** CE.02 - Firearms Safety
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Firearms Safety	

I. POLICY The Comparative Evidence Unit handles many firearms in the course of examinations. Because of this the following firearms safety laws will be strictly adhered to in addition to SAF.32

A. **The First Law of Gun Safety - The Gun is always loaded.**

1. Every time you handle a firearm treat it as if it were loaded. This means control the muzzle so it points in a safe direction. Do not point the gun at others or at yourself, this includes your feet. Inspect the gun to visually confirm for yourself that the gun is not loaded. Check the action, the chamber(s), the barrel, and any magazines to ensure that they are not loaded. If you are not familiar with a particular gun have someone experienced show you how it works. Even if you just handled the gun, if you pick it up check it again. When giving the gun to another personshow them that the gun is safe. When receiving the gun from another check that the gun is safe. This redundancy will establish good habits and confirm that the gun is unloaded.

B. **The Second Law of Gun Safety - Never point a gun at something you're not prepared to destroy.**

1. The best way to handle a gun is to imagine that it is loaded, that it functions perfectly, and at any moment the gun could fire. Since you are prepared for the gun to discharge it should always be pointing in a safe direction. Never allow the muzzle to sweep over yourself or someone else. Do not point the gun at any other objects that you do not want to destroy. Then if a negligent or accidental discharge does occur, it will impact in a safe area and nothing disastrous will occur.

C. **The Third Law of Gun Safety - Keep your finger off the trigger until your sights are on target.**

1. Keep your finger outside the trigger guard until your sights are on target and you are preparing to fire. Most negligent discharges occur when the trigger is pulled before the person was prepared to fire. This occurs when the finger is placed on the trigger during reloading, holstering, drawing, movement, or when trying to clear a jam. To isolate the trigger finger from the other muscles in your hand is very difficult when they all want to contract together to hold the gun firmly. This is especially difficult under stress and anxiety. Therefore, the finger should not touch the trigger until the instant you are prepared to fire. This holds true even in a legitimate self-defense situation.

D. **The Fourth Law of Gun Safety - Always be sure of your target and what is behind it.**

1. Bullets can penetrate lots of things, many of which may surprise you. Identify your target before firing. If you are not sure of your target, don't fire. Just as important is what is behind your target. Make sure you have a safe impact area behind your target to stop the bullet. Bullets can travel a long way after penetrating a target. Bullets can also deflect and ricochet at amazing angles. By identifying your target and knowing what is behind it accidents will be avoided.

E. Every attempt will be made to handle firearms to preserve any evidence that may be present (finger prints, trace, biological materials); however evidence considerations will not take precedence over safety. Safety is the primary concern when handling firearms.

F. No firearm will be loaded with live ammunition while in the laboratory, except when it is about to be test fired at an appropriate location; the firearm must be pointed in a safe direction when loading prior to test firing. Dummy cartridges will be used to check function and chambering. It may be necessary to use primed cartridge cases, with no powder or bullet, to check chambers of unknown firearms. At no time will unfired ammunition be used.

G. The basic procedure for rendering a firearm safe is as follows:

1. Point the muzzle of the firearm in a safe direction.
2. Keep your finger off the trigger and outside the trigger guard at all times throughout the clearing/unloading process.
3. Remove any sources of ammunition.
4. Remove any cartridges from the chamber(s) by opening the action or cycling the action several times, if applicable.
5. Visually and physically inspect the chamber to confirm the firearm is unloaded.

H. Terminology

1. Accidental Discharge - occurs as a result of a mechanical failure of the firearm mechanism. The failure could be the result of age, corrosion, abuse, alterations, or wear. The mechanical failure leads to the firearm firing with no other outside influence.
2. Negligent Discharge - occurs as the result of operator error. The discharge could be the result of the operator unintentionally pressing the trigger, careless manipulation, or unfamiliarity with the firearm.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** CE.03 - Evidence Handling
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Comparative Evidence Manual	**SUBJECT:** Evidence Handling	

I. POLICY The Comparative Evidence Unit follows the policies for Evidence Handling as listed in the Division manual with the following additions and/or clarifications. All evidence will be handled and stored in a way that will minimize the possibility of loss, degradation, contamination, and deleterious change.

A. **Receiving Loaded Firearms**. Occasionally an inoperable and potentially loaded firearm will have to be submitted to the laboratory. The following steps need to be followed to submit a loaded firearm:

1. The agency must contact the laboratory and notify the clerks that a loaded firearm needs to be submitted (prior to bringing it to the laboratory).
2. The supervisor of the Comparative Evidence Unit or an experienced analyst from the Comparative Evidence Unit will be notified that a loaded gun is being submitted.
3. The container should be clearly marked that the firearm is loaded.
4. When arriving at the Laboratory, the Comparative Evidence Unit will be notified. An analyst from the Comparative Evidence will sign the physical chain of custody and take custody of the firearm.
5. The analyst will render the firearm safe. If it is necessary to disassemble the firearm, it will be taken to the Firearms area to be rendered safe.
6. The analyst will take notes on the actions taken to render the firearm safe if the actions involve more than simple manipulation of the firearm and magazine to verify the firearm is unloaded. These notes will be attached to the examination request.
7. Once rendered safe, the firearm will be placed into storage to be logged in as normal evidence. If the firearm was loaded, the supervisor shall be notified.
8. The analyst will complete the unloaded label.

B. **Marking Evidence**. The Comparative Evidence Unit follows FSD.35 with the following clarifications because marking firearms evidence is not always feasible. Ink can be used for temporary identification.

1. To identify a firearm the following information is necessary: the make, model, cartridge the firearm is chambered for, and the serial number. This is a unique identifier for that firearm. This information will be recorded in notes and reports and is sufficient to identify a particular weapon.

a. Firearms should not be scribed or have permanent markings placed on them. Adhesive labels or ink is recommended.

2. Evidence bullets and cartridge cases are small and have markings on them that are valuable for identification. These items, as well as firearms that do not have serial numbers, will have the required information marked on their proximal container.

C. **Batch Processing of Firearms**. Firearms may be batched for efficiently processing multiple ballistic imaging requests at the same time. When firearms are processed in a batch, the analyst shall document in the case record their verification that the unique information on the firearm (e.g. lab number and item number, serial number, etc.) matches that same unique information on the container prior to final packaging.

D. **Contamination Prevention**. At the request of the agency or when evidence preservation may be necessary, potential biological stains, contact DNA, and/or trace material will be collected prior to handling. See CE.08.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 12/12/2018	**NUMBER:** CE.04 - Test Records, Test Reports, and Conclusions
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Test Records, Test Reports, and Conclusions	

I. POLICY The Comparative Evidence Unit adheres to the polices of the Division Manual in regards to Test Records and Test Reports with the following additions and clarifications:

A. Test Records

1. A case file in the Comparative Evidence Unit will be comprised of the administrative and technical records applicable to a particular case.
2. NIBIN Leads may be maintained in the case file or stored electronically in the LIMS Imaging module. In 2018, NIBIN Leads will be communicated to the customer with a Ballistic Lead report.
3. Communication records may be maintained in the case file or stored electronically in LIMS.
4. The date and identity of individuals making and recording observations in LIMS is maintained electronically through the LIMS audit trail.
    a. All Comparative Evidence Unit staff have the ability to view the audit trail in LIMS.
5. The technical review worksheet, CEF.14, will be used to assist with technical and administrative review on all non-ballistic imaging and non-abbreviated function tests. This form will be included in the notes or uploaded to LIMS.

B. Changes to Test Records

1. The unit adheres to division policy with the following clarifications.
2. A portion of the technical review worksheet, CEF.14, will be used to document the rejection of any observation, data, or test result.

C. General Conclusions. The Comparative Evidence Unit adheres to the Association of Firearms and Toolmark Examiners (AFTE) Range of Conclusions and Theory of Identification as it relates to firearm/toolmark comparisons with the addition of Quantitative Consecutive Matching Striae (QCMS) and photographs for documentation. The test report will communicate the basis for all conclusions, including inconclusive conclusions.

1. AFTE Range of Conclusions

a. IDENTIFICATIONS - Agreement of a combination of individual characteristics and all discernible class characteristics where the extent of agreement exceeds that which can occur in the comparison of toolmarks made by different tools and is consistent with the agreement demonstrated by toolmarks known to have been produced by the same tool.

b. INCONCLUSIVE -

i. Some agreement of individual characteristics and all discernible class characteristics, but insufficient for an identification.

ii. Agreement of all discernible class characteristics without agreement or disagreement of individual characteristics due to an absence, insufficiency, or lack of reproducibility.

iii. Agreement of all discernible class characteristics and disagreement of individual characteristics, but insufficient for an exclusion.

c. ELIMINATION - Significant disagreement of discernible class characteristics and/or individual characteristics.

d. UNSUITABLE - Unsuitable for microscopic examination.

2. AFTE Theory of Identification

a. The theory of identification as it pertains to the comparison of toolmarks enables opinions of common origin to be made when the unique surface contours of two toolmarks are in "sufficient agreement."

b. This "sufficient agreement" is related to the significant duplication of random toolmarks as evidenced by the correspondence of a pattern or combination of patterns of surface contours. Significance is determined by the comparative examination of two or more sets of surface contour patterns comprised of individual peaks, ridges and furrows. Specifically, the relative height or depth, width, curvature and spatial relationship of the individual peaks, ridges and furrows within one set of surface contours are defined and compared to the corresponding features in the second set of surface contours. Agreement is significant when the agreement in individual characteristics exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool. The statement that "sufficient agreement" exists between two toolmarks means that the agreement of individual characteristics is of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility.

c. Currently the interpretation of individualization/identification is subjective in nature, founded on scientific principles and based on the examiner's training and experience.

d. The Comparative Evidence Unit uses both the traditional pattern matching approach along with QCMS as identification criteria to document comparisons. Casework will also be documented with representative digital images of the comparisons being conducted. The examiner should report the objective observations that support the findings of the toolmark examinations and should be conservative when reporting the significance of these observations. This allows the examiner to explain their reasoning for reaching

the conclusions they have. These conclusions are based on a specific comparison of individual characteristics, having eliminated any possibility of subclass influence.

3. Terminology

   a. Pattern matching in toolmark comparison: The visual comparative examination of the topographical features (a configuration of a surface including its relief and the position of its man-made features) of two different toolmarks. These topographical features consist of individual peaks, ridges and furrows. Specifically, the relative height or depth, width, curvature and the spatial relationship of these features are defined for one toolmark and are then compared to the corresponding topographical features in the other toolmark. The consecutiveness of striae is an important topographical comparative feature. The comparison process is a combination of applied skill and science. The applied skill portion is the ability of an examiner to recognize agreement between patterns. This depends on an examiner's cognitive ability. This ability is acquired as an examiner uses his or her training and experience viewing the relative correspondence of known matching and non-matching toolmarks to build up an awareness of uniqueness. Although an examiner that uses pattern matching alone is unlikely to be able to pinpoint a specific number of points of correspondence as an identification threshold, he or she can recognize when the agreement present in any given comparison, whether it be striated or impressed, exceeds maximum known non-match agreement. When it does, a positive identification, to the practical exclusion of other tools, can be made. The scientific portion of the pattern match comparison is the validated premise that unique tool working surfaces leave toolmarks that can establish an identification.

   b. Consecutive Striae: Parallel, side by side, contour variations within a striated toolmark.

   c. Consecutive Matching Striae (CMS): Contour variations, within two different striated toolmarks, which, when compared microscopically, line up exactly with one another without a break or dissimilarity in-between.

   d. Quantitative CMS (QCMS): A numerical tabulation of CMS runs. Typically, the number of matching CMS is designated by a number, followed by the letter x (e.g. 2x, 3x, 4x, etc…). Examiners in this laboratory, who locate potential matching striated toolmark areas through pattern matching, have chosen to numerically tabulate the quantity of CMS in these areas and use these tabulations as a way to describe the extent of matching CMS in any given striated toolmark comparison. These numerical counts are then compared to the results of empirical research involving tabulations of CMS in both known matching and known non-matching toolmarks. Toolmark identifications are made when the tabulated CMS runs exceed the thresholds established by empirical research. The application of QCMS criteria is not a different method than pattern matching, but is merely a quantitative way to describe the extent of striated pattern matching agreement. The use of QCMS criteria is simply an extension of traditional pattern matching.

      i. QCMS Identification Criteria: A numerical standard used when making a quantitative assessment of matching CMS in a comparison of a test striated toolmark with a questioned striated toolmark. The amount of matching CMS is compared to an empirically determined numerical

threshold, which is greater than the best know non-match quantitative CMS value. When the best KNM value is exceeded, a positive toolmark identification can be made with confidence.

1. In three dimensional toolmarks when at least two different groups of at least three consecutive matching striae appear in the same relative position, or one group of six consecutive matching striae are in agreement in an evidence toolmark compared to a test toolmark.

2. In two dimensional toolmarks when at least two groups of at least five consecutive matching striae appear in the same relative position, or one group of eight consecutive matching striae are in agreement in an evidence toolmark compared to a test toolmark.

3. To apply QCMS criteria, the influence of sub-class characteristics must be eliminated.

e. Known non-matching toolmarks (KNM): Toolmarks know to have been made by different tools, or made by the same tool but deliberately placed in a non-matching position.

f. Maximum Known Non-matching Agreement in Striated Toolmarks: (a) For pattern matching alone, the ability of an examiner to recall the best agreement either personally observed, or that has been observed by others in the profession by rigorous studies, or (b) for examiners who quantitate CMS, this is a numerical way to describe the best known non-matching agreement that has either been personally observed, or has been observed by other in the profession by rigorous studies.

g. The Comparative Evidence Unit adheres to the definitions of specific firearms terms as listed in the AFTE Glossary.

4. Strength of Opinions Expressed in the Identification of Toolmarks

a. The positive identification of a *toolmark* is made to the practical, not absolute, exclusion of all other *toolmarks.* The reason why the identification is not (or identifications are not) absolute is because it will never be possible to examine all firearms or tools in the world, a prerequisite to making an absolute identification. The conclusion that “sufficient agreement” exists between two toolmarks (test and questioned) for identification means that the likelihood another tool could have made the questioned toolmark(s) in this case is so remote as to be considered a practical impossibility.

b. The phrase “practical impossibility”, which currently cannot be expressed in mathematical terms, describes an event which empirical testing and experience indicates will not occur under any conceivably relevant conditions. In the context of firearm and toolmark identification, “practical impossibility” means that based on 1) extensive empirical research and validation studies, and 2) the cumulative results of training and casework examinations that have either been performed, peer reviewed, or published in peer-reviewed forensic journals, no firearms or tools other than those identified are capable of producing marks exhibiting sufficient agreement for identification.

i. If something is impossible, it is thought to be incapable of being done, attained, fulfilled, or occurring. The opposite is true for things that are

thought to be possible.

ii. If some course of action or result is practical, it means that it is not theoretical, and that it has been shown to occur through practical experience.

iii. A practical impossibility means that through empirical research, validation studies, and practical experience, it has been shown that some course of action or result is thought to be incapable of occurring.

iv. While some courses of action or results may be thought to be theoretically possible, empirical research, validation studies, and practical experience combined has the ability to conclusively demonstrate that these courses of action or results are not possible, from a practical point of view.

5. Strength of Opinions Expressed in the Exclusion of Toolmarks

a. Class characteristic-based exclusion: A source exclusion can only be expressed as a certainty if it is physically impossible that the items came from the same source based on an incompatibility in class characteristics.

b. Individual characteristics-based exclusion: If the class characteristics are compatible or possibly compatible, source exclusion is only justified if it is the examiner's opinion that there are demonstrable differences in individual and/or subclass characteristics such that the excluded toolmarks fall outside the demonstrable range of variability of marks produced by the questioned source tool.

6. Strength of Opinions Expressed for Inconclusive Toolmarks

a. The examiner must report which sub-category of inconclusive result is reached and the basis.

i. For example, the comparison revealed significant agreement of the individual characteristics, but insufficient for an identification. The submitted pistol may have fired the submitted cartridge case.

b. Refer to 2d above, for additional information on the range of inconclusive results.

D. Steps Taken to Reduce Confirmation and Contextual Bias

1. Verification

a. Verifiers should not be told the original examiner's conclusion(s). The original examiner should only describe contextual information (e.g. test fire on the left stage, questioned evidence on the right). See CE.11, CE.12, and CE.18.

b. Analysts should consider requesting verifications on examinations that do not require it (e.g. class eliminations).

c. Analysts should position items on the microscope in a manner that does not indicate their conclusion before requesting verification.

2. Case Information

a. Analysts will not be provided police reports for non-ballistic imaging casework. If an analyst has a relevant question that may be answered by reference to a police report, the unit supervisor or another analyst will obtain

what is considered task-relevant information and share only this with the analyst.

b. Analysts should do what they can to limit their exposure to case-specific task-irrelevant information until after they have completed their examination.

E. Presumptive Comparisons

1. An examiner may make a presumptive determination on whether items were fired in the same firearm based on the individual characteristics.

a. These determinations require documentation of the area examined and at least one photograph of the area used as the basis for the presumptive determination.

b. These determinations are limited in nature so that the Unit can quickly provide investigative information to the submitting agency and District Attorney's Office.

i. The extent of comparison does not reach the "sufficient agreement" threshold described in the AFTE Theory of Identification.

ii. The evidence must be resubmitted for a full identification examination before an examiner may testify to a positive identification as described above.

c. A report issued based on a presumptive comparison will use a different LIMS service type along with different report language to clearly differentiate a presumptive identification from a full identification.

F. Documentation of Conclusions.

1. The following should be used to document the basis for comparison conclusions:

a. Record the class and individual characteristics used to reach the conclusion.

b. If QCMS is used, representative CMS should be noted to document whether the comparison meets or exceeds the QCMS criteria for identification.

c. Any photographs taken to document and support the conclusion should be referenced. Clearly identify the items depicted in each photograph.

d. The Comparison Worksheet should be used for this documentation.

e. It is up to the examiner's discretion as to the amount of documentation needed to support any conclusions of highly repetitive examinations of large numbers of similar evidence items.

2. For all casework, the examiner will document the observations that support their conclusions, opinions, or interpretations in the test record. Reported opinions, conclusions, and interpretations will be properly qualified and supported by the test record.

G. Evidence may need to be used for test firing. The notes will indicate that evidence was used for test firing and its disposition (typically with the original evidence submission).

H. Abbreviations can be used if they are common, defined, or in CE.05.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 12/03/2019	**NUMBER:** CE.05 - Abbreviation List
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Abbreviation List	

I. The following abbreviations are approved for use in notes in the Comparative Evidence Unit.

⊥- perpendicular to (orthogonal)
÷ - divided
// - parallel
- number
-, (-) - negative
+, ⊕, (+) - positive
@ - at
#X - times magnification (e.g. 10X, etc.)
ADD'L - additional
AL - auxiliary lens
AMT - amount
APP - apparent, appears
AR or A/R - admin review
ASSUM - assuming
AVE - avenue, average
AVG - average
B/C - because
BET - between
BK, BLK - black
BLVD - boulevard
BPB - brown paper bag
BR, BRN - brown
B/W - between
C - contact
CAPT - captain
CB or CDBD - cardboard box or cardboard
CCME - clasp-closed manila envelope
CCSE - clasp-closed soil envelope
CD - compact disk

CE - coin envelope
CHAR - characteristics
CIR - circle
CMDR - commander
COLL - collected
COMP - comparison
CONS - conservative
CONT, CONTG, C¯- containing
CONT, CONT'D - continued
CPL - corporal
CORR - corresponding
CRIT - criteria
(D) - deceased
D/I: dated and initialed
DEF - defined
DEMO - demonstrate
DES - designated
DESC - description
DET - determine(d) or detective
DI H_20 - deionized water
DIAM. - diameter
DIFF - different
DIS - distance or distance determination request
DK - dark
DVD - digital video disk
ENV - envelope
EtOH - ethanol
EVAL - evaluate
EVID, EVI - evidence
EX - example or exhibit
EXAM - examination
EXT - exterior
FCC - fired cartridge case
FIG - figure
FP or FPS - fingerprint(s)
FUN - function or function request
GRN - green
HSPB - heat-sealed plastic bag
HT - height
ID or IDE - identification or identification request
IFO - in front of
IMG - image
INCL -includes, included
INFO - information

INT - interior
INV - Investigator
IR - infrared
L - left
LAT - lateral(ly)
LF - left front
LIC - license
LP - latent print(s)
LR - left rear
LT - left, light, lieutenant
M/P - marked in part
MAG - magazine or magnification
MAN - manila
MAN ENV - manila envelope
MAT - material
ME - manila envelope
MEAS - measures, measured
MeOH - methanol
Micro - Microscopic
MISC - miscellaneous
MKS - marks
MMD - make/model determination
MS - microscope
N/A - not applicable
N/C - not collected
NEG - negative
NFE - not further examined
NNCTC - NIBIN National Correlation and Training Center
NTS - not tape sealed
OBS - observed, observation
OFC - Officer
OIS - Officer-Involved Shooting
ORTHO - orthogonal
OTO - on top of
P, PG - page
P/U - pick-up
PASS - passenger
PD - police department
PHOTO, PHOTO'D - photograph(s), photographed
PKG'D, PKGED - packaged
PB - paper bag
PLM - polarizing light microscope (microscopy)
PLPB - press-lock plastic bag

POS - positive or position
POSS - possible
POT - potentially
PROB - probably
PT - point
Q - questioned
QUANT - quantity
R, RT - right
RAC - randomly acquired characteristic
RD - road
REC, RECD, RECV'D - received
RECON - reconstruction
REF - reference
REL - relative
RPT, REPT - report
RESEM - resembles or resembling
RF - right front
RGT - reagent
RR - right rear
RXN - reaction
(S) - suspect
SAMP - sample
SEM - scanning electron microscope (microscopy)
SER - serial number or serial number request
SGT - sergeant
SIG - significant
SIR - shooting incident reconstruction
SM - small
SOL'N - solution
SS - stainless steel
STEREO - stereomicroscope
SUFF - sufficient
SUS, SUSP - suspect
T - test
TCBPB - tape-closed brown paper bag
TCME - tape-closed manila envelope
TF - test fire
THRU - through
TR or T/R - technical review
TS or T/S - tape-sealed
TSBPB - tape-sealed brown paper bag
TSCB - tape-sealed cardboard box
TSCE - tape-sealed coin envelope
TSME - tape-sealed manila envelope

TSSB - tape-sealed slide box
TSSE - tape-sealed soil envelope
UNK - unknown
UV - ultraviolet
(V) - victim
VEH - vehicle
VIC - victim
VIN - vehicle identification number
VIS - visual
VS - versus
W/ - with
W/I - within
W/O - without
WHT - white
WKSHT - worksheet
XFER - transfer
XR - cross-reference
XTALINE - crystalline
YEL - yellow
ZLPB, ZPLB - ziplock plastic bag

II. General Firearms Abbreviations

2D - two dimensional
3D - three dimensional
AFTE - Association of Firearm and Tool Mark Examiners
B - bullet; submachine gun/machine pistol
BBL - barrel
BF - breechface
BFM - breechface marks
BP - black powder
BUL - bullet
C - rifle-shotgun combination
CAC - California Association of Criminalists
CAL - caliber
CAP - capacity
CART, CTG - Cartridge
CC - cartridge case
CCI - CCI/Speer
CF - centerfire
CFRL - centerfire rimless
CH, CHAM - chamber
CMS - consecutive matching striae
CONV - conventional

Cu - copper
CYL - cylinder
DA or D/A - double action
D + S - double and single action
DAO - double action only
DTO - dithiooximide
EJ, EJR - ejector
EJC - ejector cutout
EJP - ejection port
ELIM - elimination
EXC - extractor cutout
EX, EXT - extractor
EXTOR - extractor override mark
F - fire
FA, F/A - firearm
FED - Federal
FP - firing pin
FPA - firing pin aperture
FPAS - firing pin aperture shear mark
FPI - firing pin impression
FRAG - fragment
FPD - firing pin drag mark
FR - feed ramp
GA - gauge
G, GM, GRM - grams
GEA - groove engraved area
GI, G/IMP, GIMP - groove impression
GMB - Glock Marking Barrel
GP - gunpowder
GR, GRN, GN - grains
GRC - General Rifling Characteristics File
GSR - gunshot residue
GSW - gunshot wound
HB - heavy barrel
HEMI - hemispherical
H&K - Heckler & Koch
H&R - Harrington and Richardson
HOR - Hornady
HS - headstamp
IBIS - Integrated Ballistics Identification System
ID - identification
IDABLE - identifiable
IMP - impression

INC - inconclusive
INDIV - individual
L - left
LEA - land engraved area
L&G - lands (L) & grooves (G)
LBS - pounds
LC - Long Colt
LI, L/IMP, LIMP - land impression
LR - long rifle
MA - machine gun
MAG - magnum, magazine
MFG - manufacturer
MGT - Modified Griess Test
MIM - Metal Injection Molding
MK - Mark
MKTED - marketed
M&P - Military & Police
NaRh - sodium rhodizonate
NSA - no significant agreement
Ni - nickel
NIBIN - National Integrated Ballistic Information Network
OBLIT - obliterated
O/C - o'clock
O-Tol - Ortho Tolidine
OR - over ride
PARA - Parabellum
Pb - Lead
PD - derringer
PI - semiautomatic pistol
POLY or P - polygonal
POS - positive
PR - revolver
PS - single-shot pistol
PX - pistol, four or more barrels
QCMS - quantitative consecutive matching striae
R - rifle (general) or right
RA - automatic/select-fire rifle
RB - bolt-action rifle
RC - carbine
RCFP - rimless center fire pistol
REM - Remington
RI - semiautomatic rifle
RL - lever-action rifle

RP - pump-action rifle
R-P - Remington Peters (Remington)
RF - rimfire
RR - revolving-action rifle
RS - single-shot rifle
S - shotgun (general) or safe
SA or S/A - single action
SB - bolt-action shotgun
S&B - Sellier & Bellot
S/C - subclass
SE - double-barrel shotgun
SI - semiautomatic shotgun
SIG - Sig Sauer; SIGARMS
SMG - submachine gun
SP - pump-action shotgun
SPL - special
S/N, SER. # - serial number
SNR - serial number restoration
SR - revolving-action shotgun
SS - single-shot shotgun
S&W - Smith & Wesson
T, TF - test or test fire
TM - toolmark
TP - trigger pull
UMC - Union Metallic Cartridge Co. (Remington)
UR - under rim
USM - unknown striated mark
WBY - Weatherby
WIN - Winchester

III. Bullet/Cartridge Construction Names

AB - AccuBond (Nosler)
B - bonded
BB - bevel base
BP - Bronze Point
BST- Ballistic Tip (Nosler)
BstST - Ballistic Silver Tip (Nosler, Winchester)
BT - boat tail
BW - brass wash
CB - cupped base
CL - Core-Lokt (Remington)
CW - copper wash
DEWC - double ended wad cutter

DPX - Deep Penetrating X (Cor-Bon)
DS - Deep Shok (Federal)
FB - flat base
FMJ - full metal jacket
FN - flat nose
FP - flat point
FPJ - full profile jacket
FR - flat recessed
FS - Fail Safe
GB - Golden Bullet (Remington)
GC - gas check
GD - Gold Dot (Speer)
GS - Grand Slam (Speer)
HB - hollow base
HC - hollow cavity
HMR - Honady Magnum Rimfire
HP - hollow point
HPJ - High Performance Jacket "Golden Saber" (Remington)
HPTNT - Hollow Point Explosive
HS - Hydra Shok (Federal)
IB - InterBond (Hornady)
IL - InterLock (Hornady)
IRREG - irregular
J or JAC - jacketed
JHP - jacketed hollow point
JSP - jacketed soft point
L - lead
LHBWC - lead hollow base wad cutter
LRN - lead round nose
LSWC - lead semi-wad cutter
LSWCHP - lead semi-wad cutter hollow point
LWC - lead wad cutter
MC - metal case
MT - Mag Tip (Speer)
NE - Nitro Express
P - pointed / plated
PAR - Partition
PL - Power-Lokt (Remington)
PP - Power-Point (Winchester)
PSP - pointed soft point
RB - round base
RBT - rebated boat tail
RL - rimless

RN - round nose
S - solid
SBT - spitzer boat tail
SF - StarFire (Eldorado)
SIL - silhouette
SJ - short jacket
SMP - semi-pointed
SP - soft point / spire point
SPT/Z - spitzer
SSPT - semi-spitzer
SST - Super Shock Tipped (Hornady)
ST - Silver Tip (Winchester)
STHP - silver tip hollow point (Winchester)
SWC - semi-wad cutter
SWCHP - semi-wad cutter hollow point
SX - Super Explosive (Hornady)
SXT - Supreme Expansion "Black Talon" (Winchester)
T - Ranger "T" series (Winchester)
TB - Trophy Bonded (Federal)
TBT - Trophy Bonded Tipped (Federal)
TBSS - Trophy Bonded Sledgehammer Solid (Federal)
TC - truncated cone
TMJ - total metal jacket (CCI/Speer)
TSX - Tripleshock X-bullet (Barnes)
TTSX - Tipped Tripleshock bullet (Barnes)
WC - wad cutter
WCF - Winchester Center Fire
WRF - Winchester Rim Fire
WRM - Winchester Rimfire Magnum
WSM - Winchester Short Magnum
WSSM - Winchester Super Short Magnum
WSUM - Winchester Short Ultra Magnum
WT - weight
X - X bullet (Barnes)
XTP - Extreme Terminal Performance (Hornady)

IV. Serial Number Reagents

AFC - Acidic Ferric Chloride
CC - Cupric Chloride
DR - Davis' Reagent
FC - Ferric Chloride
FR - Fry's Reagent
GR - Griffin's Reagent

HA - Hydrochloric Acid
NA - Nitric Acid
PH - Potassium Hydroxide
PNA - Phosphoric/Nitric Acid
SH - Sodium Hydroxide
TR - Turner's Reagent

Comparison Criteria

(+) - sufficient agreement for ID
(-) - negative, sufficient disagreement for elimination
(+/-) - some agreement, but insufficient for ID
(-/+) - some disagreement, but insufficient for elimination
(?) - inconclusive, no agreement or disagreement
#X - number of consecutive matching striae

QCMS 3D Criteria - 2 different groups of 3X CMS, or one group of 6X CMS agreement or better.

QCMS 2D Criteria - 2 different groups of 5X CMS, or one group of 8X CMS agreement or better.

***Note: Abbreviations in this list are shown using all capital letters for readability; in practice, for most abbreviated words, lowercase letters may be used. The use of slashes, apostrophes, hyphens, periods, or the addition of a plural "s" is optional and constitutes acceptable variations of the above abbreviations. This list is not all-inclusive of many standardized, widely-accepted abbreviations which may also be used in examination documentation (e.g. mm, " for inch, ATF). While multiple terms may have the same abbreviation, the context will dictate the appropriate meaning.**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 06/12/2019	**NUMBER:** CE.06 - Quality Assurance
	RELATED ORDERS: FSD.18 Administrative Review, FSD.17 Technical Review	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB: 6.4, 6.6**	
CHAPTER: Comparative Evidence	**SUBJECT:** Quality Assurance	

I. POLICY The Comparative Evidence Unit adheres to the Quality Assurance policies in the Division Manual with the following additions and clarifications:

A. Non-conforming work. When non-conforming work is encountered in the Comparative Evidence Unit, action is taken to address the non-conformity. Non-conforming work is an undesirable incident or problem encountered in casework, proficiency testing, or testimony. The level of corrective action taken for any non-conformity is dependent on the type of incident or problem and its severity. In general, the greater the severity or its substantive nature, the higher the level of corrective action taken. The appropriate QA Action-Correction (QAC) taken is based on the type of non-conformity, its magnitude or scope, and whether it is a single event or repetitive.

1. **QAC-1 (most significant)**: discrepancies or incidents that raise immediate concern regarding the overall quality of the Unit's work product or the competency of an examiner. These non-conformities rise to the level of significant concern for the quality system or a systemic problem within the Unit.

   a. Quality system non-conformities include, but are not limited to:

      i. Erroneous or falsified tests, results, conclusions, records, or testimony

      ii. Improper or deliberate misuse of reagents, methods, equipment, or evidence

      iii. Audit findings

      iv. Unsuccessful proficiency test

      v. Repeated QAC-2 errors

   b. Division policy describes the level of documentation taken to address a corrective action. See FSD.15, QA.18, FSDF.06, FSD.44 for more information about the evaluation of significance, required elements of a corrective action, documentation, and retention of corrective action records.

2. **QAC-2 (somewhat significant)**: These discrepancies or incidents are not serious enough to cause immediate concern for the quality system or the Unit's overall work product, but do have an isolated affect on the work product, tend to be individual events, and are addressed on a case-by-case basis. These non-conformities are typically detected prior to the release of results and conclusions and have the potential to be remediated.

   a. QAC-2 incidents include, but are not limited to:

i. Improper use of controls, reagents, methods, or equipment when it is demonstrated their use did not impact the quality of work or validity of the result

ii. Lack of documentation for conclusions

iii. Repeated QAC-3 errors

b. The documentation of a QAC-2 non-conformity will be documented in LIMS. The documentation should include, as applicable:

i. A brief summary of the event, dates of analysis, lab/batch #, equipment identifier, etc.

ii. Any trouble-shooting or investigation

iii. The actions taken to correct the non-conformity

iv. Any other pertinent information or follow-up required

3. **QAC-3 (least significant):** Discrepancies or incidents that 1) do not affect the significance of a conclusion, a reported test result, or the integrity of the quality system, 2) are unlikely to recur, 3) are not systemic, and 4) do not affect the fundamental reliability of the work product.

a. Examples of a QAC-3 non-conformity include, but are not limited to:

i. Transcription errors

ii. Grammatical or typographical errors

iii. Omission errors

b. When brought to the examiner's attention, this type of non-conformity is typically corrected immediately by the examiner. A record of the correction is captured when the examiner initials and/or dates the correction as outlined in policy (Test Record FSD.42 and Test Reports FSD.43).

B. Rejection of observations or data. The Comparative Evidence Unit adheres to division policy regarding the rejection of observations, data, and results with the following clarification:

1. An analyst may reject their own observation or data (photographs) during the course of performing casework and not retain the photograph(s) if the rejection is documented in the test record with their initials and the date.

C. Reference collections. The Comparative Evidence Unit maintains the following reference collections:

1. The Firearms Reference Collection contains different types of firearms to be used for reference of general operation, placement/configuration of markings (serial numbers), training, and for replacement parts necessary to test fire an evidence firearm that has missing or damaged parts. The Firearms Reference Collection is housed in a locked room with limited access within the laboratory.

2. The General Rifling Characteristics File (GRC) is an database created and maintained by the FBI. It is used to sort through class characteristics of firearms to narrow down potential guns that could have fired evidence bullets and cartridge cases.

D. Firearms Reference Collection inventory. The Unit will maintain an electronic inventory of the laboratory's firearms collection.

1. Firearms Index Number

    a. Each firearm in the collection is assigned a unique firearm index number.

    b. The index number for firearms will consist of the Federal Bureau of Investigation National Crime Information Center code for the type of firearm, followed by the caliber or cartridge designation, and then followed by a three digit number. For instance PI-9x19-001 indicates a semiautomatic pistol, 9x19mm parabellum, number 001.

2. Description of the Inventory

    a. The master inventory for the firearms collection is maintained on the shared network drive.

    b. The following information for each firearm is contained in the inventory:

        i. Make (manufacturer)

        ii. Model

        iii. Caliber

        iv. Serial number

        v. Firearm index number

        vi. Any applicable notes

3. Updating the Inventory

    a. Each time that a new firearm is added to the collection, the Comparative Evidence Unit will update the inventory.

    b. A staff member will place the index number on the new firearm and add the required information to the inventory.

    c. A new copy of the inventory will be printed for the armory as needed.

4. Checking Firearms out of the Collection

    a. Firearms may be checked out from the collection at any time by members of the Comparative Evidence Unit for use in the laboratory, for test firing in conjunction with their casework, or for training.

    b. When firearms are checked out from the collection by staff members for more than an hour, it must be noted on the check out board (dry erase white board) in the armory. The board must indicate the staff member removing the firearm, the firearm index number, and the date of removal.

        i. If more than a few firearms are checked out by members of the Comparative Evidence Unit, a written log may be used.

        ii. When checking out a large number of firearms for a firearms safety presentation outside of the laboratory, an abbreviated inventory exists on the shared network drive with pre-selected firearms for this presentation. This inventory must be completed when checking the

firearms out, prior to leaving the outside location, and upon return of the firearms to the collection. Upon final inventory, the printed inventory sheets will be maintained by the Supervisor.

c. Firearms may be checked out by other members of the Contra Costa Office of the Sheriff for reference, training, or as visual aids for presentations. Permission must first be obtained from the Comparative Evidence Unit Supervisor or the Forensic Manager. The Firearms Reference Collection Checkout Log will be filled out with the appropriate information (including the firearm(s) checked out, and the signatures of the person checking the firearms out, from whom, and the date). When the firearm(s) are returned, the information on that transaction page will be completed (date returned, returned by, and who received them and placed them back into the collection).

i. The Firearms Reference Collection Checkout Log will be kept in the armory.

5. Annual Inventory

a. Annually, a staff member designated by the Comparative Evidence Unit Supervisor will physically inventory the firearms collection. Any firearms which cannot be located will be reported immediately to the Comparative Evidence Supervisor. The Supervisor will investigate to determine if the firearm(s) in question can be located. If a firearm cannot be located, the Chief and Manager will be notified immediately. The Chief, Manager, and Supervisor will determine what action will be taken.

b. The printed inventory used for the periodic inventory will be maintained by the Supervisor.

E. Equipment and Software that can influence test results

1. Equipment

a. A list of equipment and significant software dedicated to the Comparative Evidence Unit is maintained electronically. The list is updated when new equipment is acquired and when equipment is permanently removed from service.

b. Equipment in the inventory list is identified through a combination of asset number or serial number, manufacturer, model number, and description. Further designations may be used.

c. Equipment that provides unsatisfactory results will be removed from service and labeled with an "out of service" sign until the problem has been resolved.

d. Copies of manufacturer user manuals are maintained electronically in the unit's network folder, in PowerDMS, or on hard copy by the equipment.

e. Equipment in CE does not require intermediate checks due to appropriate calibration intervals, the infrequent use of equipment, the stability of the equipment, and the concurrent check of all equipment when conducting casework

i. The comparison microscopes and the stereomicroscopes will have annual cleaning and preventative maintenance performed by an approved vendor.

ii. The magnification of both sides of the comparison microscopes will be checked annually, typically after their annual cleaning and inspection. They will also be checked any time the microscopes are moved or if something else happens that could alter their calibration.

iii. A stage micrometer is placed on both stages and the magnification is checked as follows for the following comparison microscopes:

1. Leica DMC: at each click stop position of the zoom objectives
2. Leica FSC: with each objective except 0.4x
3. Projectina VisionX: at all magnifications above 6.0x.
4. No significant deviation should be observed when done in this manner. Deviation is defined as significant when it exceeds the width of the lines on the scales being used. If significant deviation is observed, a microscope will not be used for casework until it is evaluated by an outside vendor and it successfully passes a magnification check.
5. The diopter adjustment on the eyepieces of both microscopes should be in the neutral position when checking magnification.

f. Any measurement devices used for critical measurements (e.g. Hott Rods for measurement of sawed-off shotgun barrels) will be calibrated by an ISO 17025 vendor. Other non-critical measurements may be performed with a standard ruler, tape measure, or digital caliper.

g. When an instrument is used for evidence on a case, the specific instrument will be noted in the test record

2. Software

a. A list of significant software for the Comparative Evidence Unit is maintained electronically with the name of the software and identifying information (serial number, firmware version, etc.)

b. No software processes are considered critical.

3. Information on services that may affect the quality of tests

a. Calibration and maintenance will be performed by laboratory staff or outside service technicians.

b. Vendors are selected based on one or more of the following criteria:

i. Calibration services are provided by a vendor with ISO 17025 accreditation

ii. Calibration services are provided by the manufacturer of the equipment

iii. The laboratory has a prior history of satisfactory service with the vendor

c. Rice Lake is the Laboratory's approved vendor for calibration of the steel ruler, Hott Rods, calipers, scales, trigger pull weights, and Leica Disto. Mircotech Solutions is the approved vendor for microscope maintenance.

d. Evaluation of services will be performed by the Unit Supervisor or analysts in one or more of the following ways:

   i. Reviewing the vendor's accreditation scope document to ensure the calibration being requested is within the capability of the vendor

   ii. Performing a performance check after service

   iii. Reviewing certificates provided for other equipment

e. The unit will communicate to the vendor the requirements for the calibration/service being provided. This may be done through:

   i. A service contract

   ii. A quote for services to be provided

   iii. A letter outlining the requirements for service.

f. Acceptance of services will be conducted by the unit supervisor through a review of the calibration paperwork and certificates provided by the calibration vendor. If a calibration or service is not adequate for the unit's needs, the vendor will be contacted and a subsequent service/calibration may need to be performed.

4. Maintenance/Service Records and Intervals

a. Records of service, repair, and calibration, along with any performance checks, are maintained by the unit. The records are accessible for review by all analysts.

b. The equipment in the Comparative Evidence requiring calibration is listed below.

Equipment	Interval	Specifica ons for Calibra on Lab	Calibra on requirements	Intermediate checks
Calipers	Annual	Rice Lake: ISO 17025:2005 accredited by A2LA ILAC-MRA. Calipers listed on scope (dimensional measurement)	Manufacturer's tolerance	None
Digital scales	Annual	Rice Lake: comparison to NIST-certified weights.	Manufacturer's tolerance	None
Steel Ruler	Annual	Rice Lake: ISO 17025:2005 accredited by A2LA ILAC-MRA. Ruler listed on scope (dimensional measurement)	Manufacturer's tolerance	None
Hott Rods	Annual	Rice Lake: ISO 17025:2005 accredited by A2LA ILAC-MRA. Hott Rod listed on scope (dimensional measurement)	Manufacturer's tolerance	None

Trigger pull weights	Annual	Rice Lake: ISO 17025:2005 accredited by A2LA ILAC-MRA. Mass Standards listed on scope (dimensional measurement)	Manufacturer's tolerance	None
Leica Disto	Annual	Rice Lake: ISO 17025:2005 accredited by A2LA ILAC-MRA. Disto listed on scope (dimensional measurement)	Manufacturer's tolerance	None

c. The digital camera (Canon 80D) and Phase One used in shoe/tire casework is considered equipment that could affect the quality of tests. No calibration is required because the cameras are checked concurrent with casework.

F. Reagents and Supplies

1. Selection and Evaluation

a. Vendors will be evaluated on an initial and on-going basis to ensure suitability for use in testing on one or more of the following criteria:

i. The vendor's product is specified by the technical procedures

ii. The vendor supplies a certificate of analysis specifying the grade (e.g. molecular grade)

iii. The vendor provides products that are forensic grade, pre-sterilized, or DNA free (e.g. sterile swabs).

iv. The laboratory has a prior history of satisfactory service with the vendor.

b. Typical vendors include, but are not limited to:

i. SIGMA, Sirchie, Lynn Peavey, Safariland, Forensic Source, CSI Forensic Supply, Rice Lake, Canyon Sports, Big 5 Sporting Goods, and City Arms.

c. Evaluations can be conducted by:

i. Reviewing the certificate of analysis

ii. Reviewing the product's shipping documents

iii. Checking the product's performance through QC testing or validation

2. Ordering

a. Orders may be placed by any member of the Comparative Evidence Unit.

b. Any requirements for externally provided supplies will be communicated to the vendor through the Unit's purchasing documents

i. This may include the item description, catalog number, and any specifications the Unit requires.

1. Chemicals should be laboratory grade or higher.

2. Proprietary preparations by the same name containing the same or similar chemicals are typically suitable (e.g. magnaflux).

3. Commonly used chemicals are listed in CE.12.

c. The staff member forwards the order to someone with budget authority to obtain final approval to place the order.

d. The completed order will be forwarded to the Clerical Unit for record keeping.

3. Receiving

a. The individual placing an order will typically receive the supplies. The packaging form should be signed and dated by the individual receiving the order.

b. If the order does not conform to the Unit's requirements or if the correct product was not received, the Supervisor will be notified and the vendor will be contacted.

c. Commercial ammunition is of sufficient quality that it is assumed to be appropriate for use in casework. Any issues from laboratory-supplied ammunition will be documented in the case notes and reported to the Supervisor.

d. The signed packaging slip should be forwarded to the Clerical Unit.

4. Storage

a. Reagents will be stored based on their chemical properties; no other supplies require special storage.

5. General

a. Supplies that may affect the quality of a test include the chemicals, chemical preparations, ammunition, and equipment listed above.

b. The Comparative Evidence Unit does not have any supplies that are considered critical.

6. Reagents:

a. The Comparative Evidence Unit will maintain a Reagent Log for all reagents, including sodium rhodizonate (which is made up fresh before every use). The log will include the traceability information for all reagents (name, date, chemicals used, and manufacturer lot number). The laboratory's lot number (the preparer's initials and date of preparation of the reagent) will be noted in the test record when all reagents are used, except for sodium rhodizonate.

i. Sodium rhodizonate reagent is used to test for the presence of lead. The reagent has a shelf life on the order of 20 minutes and may have to be made several times during one examination. It will be tested with a blank and positive control during the examination and the results of these tests will be documented in the test record and in the Reagent Log.

b. Serial Number Restoration reagents do not expire and require no special storage requirements. Fresh reagents will be made when they are consumed.

The reagents are tested concurrent with each use by placing drops of them on the appropriate metals and observing the presence or absence of effervescence. Effervescence demonstrates that the reagent is performing properly. The reaction will be documented in the test record for that particular case and their use in the Reagent Log.

c. Reagents for Distance Determination examinations should be made up fresh each time they are used due to their short life span, except for the buffers and acetic acid. Photographic paper treated with the reagents for the Modified Griess Test can be stored in sealed plastic ziplock bags for extended periods of time if kept out of direct light. The reagents, treated paper, and buffers are tested at the time they are used and full documentation of the testing and validity of them will be placed into the test record for that particular case and the Reagent Log.

d. Reagents that are prepared and used for research or training should be labeled Research or Training on the bottle and are not to be used in casework. These reagents will be listed in the Reagent Log as well.

G. Administrative and Technical Review

1. The Comparative Evidence Unit will technically and administratively review all case reports and notifications.

   a. For Ballistic Imaging and Ballistic Leads, the administrative review milestone in LIMS documents completion of both technical and administrative review.

2. Technical review can be handled by any analyst authorized to perform technical review.

   a. The technical reviewer will evaluate the case notes and test report to ensure the reported conclusions are reasonable and supported by sufficient scientific data.

3. Administrative review can be handled by any analyst authorized to perform administrative review. When possible, it is preferable to have the administrative review performed by a different qualified analyst than the technical reviewer.

4. The administrative reviewer will evaluate the test record for the areas listed in FSD.18 Administrative Review. The technical reviewer will evaluate the test record for the areas listed in FSD.17 Technical Review. Additional areas for review during technical and administrative review include, but are not limited to, the following:

   a. Conformance to division and unit policy

   b. Test record requirements

   c. Accurate transfer of data from the notes to the report

   d. Presence of accurate audit trail data

   e. Documentation of the basis for the reported conclusion

   f. The verifying analyst's signature or initials (or electronic equivalent) and date as applicable

   g. Verification that when a secondary examination (e.g. presumptive blood testing, ballistic imaging entry, etc.) is performed by an individual other than

the assigned analyst, the second individual's signature or initials (or secure electronic equivalent) and date are present in the test record on the page(s) representing the second individual's examination.

H. Itemization

A. The Comparative Evidence Unit may define a Submission containing only a firearm and its magazine as a single item of evidence. Any other items in the submission require itemization at the second level per FSD.38.

I. Conditions Requiring Work to be Halted

1. If the the Unit begins an examination but finds abnormal conditions that impact the Unit's ability to complete the work, the customer will be contacted or notified to resolve the situation. Examples include:

a. If a firearm is chambered in an unusual cartridge for which the laboratory does not have the ammunition.

b. If a serial number restoration could only be performed through permanent damage to the evidence.

J. Subcontracting

1. The Unit subcontracts with ATF's NIBIN National Correlation and Training Center (NNCTC) to perform correlation of NIBIN entries. The unit supervisor will maintain records that document their approval of the laboratory's use of their results.

K. Sampling

1. The Unit does not perform sampling because all items are typically tested. If any items are not tested, the report will clearly delineate what items were and were not tested.

L. Use of References

1. Reference books, journal articles, headstamp guides, online resources, and other references may be used for research when conducting casework.

a. Caution should be exercised when relying on online information. For example, information obtained from the manufacturer's website would be considered reliable while information located on an independently-run blog may require additional research.

2. A copy of the information (e.g. page from Cartridges of the World) or notation referencing the information (e.g. Smith & Wesson's website, accessed on [date]) should be incorporated into the notes.

3. The analyst and their technical reviewer must agree on the reliability of the information used in casework.

4. Any unverifiable information that impacts the conclusions in the report will be appropriately qualified.

M. Proficiency Testing

1. The CE Unit adheres to FSD.23 with the following clarifications. All inconclusive results or unexpected results will require documentation of action but not necessarily corrective action. An appropriate investigation will be conducted to determine if the issues were caused by the samples provided by the manufacturer, the test design, or

other factors. The analyst will complete another proficiency test to meet annual testing requirements.

N. Validations

1. An analyst in the CE Unit may perform validations and performance verifications commensurate with their authorization to perform casework.

O. Assuring the Quality of Tests

1. The Unit monitors the validity of results through a variety of methods, including:
    a. Annual policy review
    b. Use of quality controls in serial number restoration and distance determination casework
    c. Annual calibration of equipment
    d. Use of calibrated equipment
    e. Verification
    f. Technical and Administrative Review
    g. Proficiency testing
    h. Intralaboratory comparisons
    i. Functional checks of equipment
    j. Intermediate check of equipment
2. Each of these methods has its own interval of monitoring under its separate policy. Refer to the individual policies for the intervals.
3. If any issues are noted from the monitoring, the Supervisor will evaluate the magnitude and scope of the issue and take action. This action may documented in a quality action, updating policy or procedures, or within the test record.
4. To detect trends, data from quality actions can be reviewed.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 04/10/2017	**NUMBER:** CE.07 - Case Request Prioritization
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Case Request Prioritization	

I. POLICY The Comparative Evidence unit strives for timely examination of submitted evidence, especially the timely entry of cartridge cases into ballistic databases. Multiple LIMS requests may be opened to perform the requested work.

A. Casework is prioritized by:

1. Homicide cases in which the crime has
   a. just recently occurred and
   b. a suspect has not been identified or is still outstanding and
   c. the firearms examination has the potential to provide investigative leads towards the identification of a suspect.
2. Examinations of weapons from officers in officer-involved incidents.
3. Homicide investigations where investigators need examination results to take a suspect into custody.
4. Examinations done in order to meet a trial date.
5. Investigators need the firearms examination to further the investigation. These cases will be prioritized as follows:
   a. Homicides
   b. Sexual Assaults
   c. Other person's crimes and property crimes will be evaluated on a case by case basis.
6. Requests without any urgent investigative or court needs submitted by investigators or district attorneys will be prioritized as follows:
   a. Homicides
   b. Sexual Assaults
   c. General person's crimes (i.e. 211 PC) and property crimes (i.e. 459 PC) will be evaluated on a case by case basis.

B. The above list is generally followed when assigning priority of cases, but the laboratory reserves the right to reassign priorities based on evaluation of the request and staffing.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 09/04/2019	**NUMBER:** CE.08 - Preliminary Examinations
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Preliminary Examinations	

I. POLICY Prior to significant handling of cartridge cases and firearms, the evidence must be evaluated for trace and biological evidence. Appropriate personal protective equipment (lab coat, gloves, and mask) shall be worn dependent on the type of examination. All examinations for trace or biological evidence will be conducted in a manner to prevent contamination. Collection of possible contact DNA or biological evidence will be performed in a controlled environment.

A. Trace and Biological Evidence Examination and Collection of Possible Contact DNA.

1. Surface preparation

a. When preparing to swab evidence for possible contact DNA, the swabbing area and any items used during the examination must be cleaned with a bleach solution. Clean butcher paper or absorbent pads must be placed on the surface and be changed as appropriate to prevent cross contamination.

2. Trace evidence

a. Examine the item for trace evidence. If trace evidence is found, document the trace evidence with notes or photographs as appropriate.

b. Collect the trace evidence and package appropriately.

3. Biological evidence

a. Document the appearance and location with notes, photographs, and sketches as appropriate.

i. If blood spatter is found on the exterior surfaces of a gun, document the spatter with sketches and/or photographs.

ii. Examine the barrel for spatter, which may be present around the crown and in the bore. Document spatter in the bore with photographs using a borescope, if possible. Measure the distance the spatter traveled in the bore, if possible.

b. Collect possible biological stains using swabs. See swabbing procedure under section 4 below.

i. Document the location of sample and control swab collection in the case notes. Possible biological tissue should be removed from the surface of a weapon and placed in a sterile vial or envelope and stored frozen.

ii. The swabs should be packaged in a soil envelope to dry prior to being stored frozen. Package samples and controls separately.

c. Presumptive tests for blood may be conducted depending on the nature of the examination request. Refer to FSD.43 for policy requirements.

4. Contact DNA swabs

a. Wear proper PPE (e.g. lab coat, gloves, and mask) to prevent possible contamination of the evidence. Change gloves between handling different items of evidence.

b. Moisten the swab(s) using sterile water.

c. Rub the swab(s) rigorously over the target area. Optimally, use the entire surface area of the swab to collect as much material for potential biological testing.

d. If necessary, for non-porous surfaces, use a dry swab to collect the residual moisture from the target area.

e. For stained areas, a substrate control may be collected. Repeat the above procedure on a visually unstained area.

i. A substrate control is not necessary when evidence collection is for contact DNA.

f. Record in the case notes the lot number of the sterile water that was used.

g. Package the swab in a properly labeled evidence envelope and allow it to dry completely.

h. Collect swabs from different areas of a gun separately. At a minimum, collect swabs from the following areas:

i. Trigger and interior of trigger guard

ii. Grips

1. At times using two (simultaneous) swabs will be necessary depending on how textured the grip is or how saturated and torn the swab becomes during collection.

iii. Slide including the front sight tip

i. Other areas should be swabbed if commonly handled by the operator (e.g. magazine, charging handle, forestock, etc.).

j. Swabs from different items or locations must be packaged separately.

k. If collecting contact DNA swabs from cartridges or fired cartridge cases, collect one wet and one dry swab from each group of cartridges or cartridge cases based on class characteristics. For large groups of cartridges or cartridge cases (over 10), multiple pairs of wet and dry swabs may be needed. Package the swabs from a single group together in one envelope.

l. Follow all evidence itemization procedures in QA.09.

B. Firearms. All safety procedures will be followed when handling firearms and ammunition. The following should be documented on worksheets or notes, though some examinations

may take place prior to the firearm being submitted to the laboratory.

1. General Information--applicable to all firearms.

    a. Determine if the firearm is unloaded and render it safe if necessary. If the firearm is found to be loaded, notify the Unit Supervisor and Manager immediately after unloading it.

    b. Determine the type of firearm.

    c. Determine make, model, chamber, and serial number of the firearm. Record any discrepancies from secondary serial numbers and the serial number.

    d. Determine if the firearm is safe to fire.

        i. Check to ensure the bore and chamber are clear and free from damage, wear, alterations, or obstructions that could affect safety.

    e. Determine the number of lands and grooves, direction of twist, and the type of rifling (conventional or polygonal).

    f. Document any ammunition packaged with the firearm.

    g. Record the type of magazine and its stated capacity.

        i. If requested or if examining an officer's firearm, determine the magazine capacity using the magazine loading tool (if compatible) and unfired cartridges.

        ii. Count the number of cartridges as they are loaded into the magazine and then count the number of cartridges as they are removed.

        iii. A second analyst will perform a secondary check on the magazine capacity. This may be accomplished through confirming the magazine is unable to accept any more cartridges and counting the number of cartridges used by the primary analyst.

            1. If taking handwritten notes, the second analyst will initial and date the notes to document this secondary review.

            2. If using electronic notes, the initials of the second analyst may be added to the test record by either analyst.

    h. The stated capacity of the magazine may be reported in the evidence description field in LIMS. Stated capacity should be reported when it is greater than 10.

        i. Stated capacity means either manufacturing markings on the magazine that explicitly state the capacity or the highest number stamped on the magazine that is associated with an inspection hole. If unclear, no stated capacity should be reported.

    i. If tested, the capacity should be included in the body of the report.

    j. A non-metallic dowel may be used to depress the follower to determine whether or not a limiter is present (e.g. AR 30-round magazines).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 12/12/2018	**NUMBER:** CE.09 - Function Testing and Test Firing
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Function Testing and Test Firing	

I. POLICY Prior to test firing, firearms will be examined to determine that they are in normal, safe operating condition. All aspects of the firearm's mechanism will be examined prior to test firing.

A. **Safety**. The four laws of firearms safety specified in Comparative Evidence Manual policy CE.02 shall be adhered to when function testing and test firing firearms. These additional rules will also be enforced when test firing:

1. Safety glasses and hearing protection will always be worn when test firing.
2. Test firing will always be conducted in groups of two or more. The primary person will be the shooter and the additional person(s) will be observer(s).
3. Observers are responsible for keeping the area around the shooter clear and to help if a malfunction or accident occurs.
4. Only load the firearm when you are ready to test fire.
5. Make sure the firearm is pointed into the capture device or down range when loading and unloading.
6. If a malfunction occurs, immediately stop firing and take action to render the firearm safe. If a misfire occurs, wait at least ten seconds before checking the firearm.
7. If an accident occurs, get help for the injured party, render the firearm safe, and immediately notify a supervisor.

B. **Function testing of a firearm**

1. Check to make sure the firearm is unloaded by visually and physically inspecting the chamber.
2. All preliminary examinations should have been completed. See CE.08.
3. Measure the length of the barrel and the overall length of the firearm. See CE.34 for when to use NIST-traceable equipment.
4. Run a clean patch down the bore to collect residues, if appropriate. If the patch is examined, then it must be itemized and treated as evidence.
5. Determine the type of action of the firearm.
6. Check for broken firing pins, then dry fire the firearm in single-action and double-action modes, if applicable. Check the books in the library or on the internet for

references on particular firearms if more information is needed. In order to make sure that firearms feed and operate mechanically, dummy cartridges may be used.

7. Document the functionality of safeties and controls.
8. Revolvers:
    a. Record the number of chambers in the cylinder.
    b. Check hammer in all positions.
    c. Make sure all safeties, including transfer bars, half cocks, etc. are working properly.
    d. Check the front of cylinder for chamber flares or halos and damage that may cause markings on fired bullets.
    e. Check for correlation of fired cartridge cases with halos. Check each chamber for powder residue.
    f. Check for the direction of rotation of the cylinder and that the cylinder lines up and locks in alignment with the barrel.
9. Semiautomatics:
    a. Cycle slide. Check if the firing pin is broken. Confirm that the disconnector is working, if applicable.
    b. Record the extractor and ejector configuration.
    c. Record the types of marks on the breechface and the firing pin shape and finish if an identification examination is likely.
        i. Note any vestiges of headstamp information that may remain on the breechface.
10. Rifles and Shotguns:
    a. Check bolt opening and closing. Check the disconnector in semiautomatics to make sure it is functioning properly. Check all safeties.
    b. Cycle levers to see if they operate.
    c. Check if magazine feeds properly and if there is a magazine plug.
11. Determine the trigger pull(s) of the firearm.
    a. Trigger pull weights
        i. Verify that the firearm is unloaded.
        ii. Position the barrel of the firearm vertically, with the muzzle pointed at the ceiling and the barrel perpendicular to the floor. Hold the firearm in the same position for all tests.
        iii. Begin at an estimated weight.
        iv. Rest the weighted base on a flat surface and place the elbow of the bar on the trigger where the shooter's index finger would typically rest.
            1. Ensure any trigger safety is deactivated with the placement of the bar.

v. Gently raise the firearm upwards until the weighted base is no longer supported by the flat surface. If the weight does not release the sear, add weight until the trigger-sear connection releases.

vi. Repeat to see if the weight will release the sear reliably. Remove a quarter pound to verify that you have the minimum weight that will release the sear.

vii. Step vi should be repeated a minimum of five times to find the minimum trigger pull.

viii. Record the weight.

b. The trigger pull weight should only be included in the test report upon specific request from the customer.

c. A qualitative assessment (e.g. "normal," "light," etc.) may be appropriate depending on case circumstances (e.g. determination of functionality for a case-enhancement such as a drug charge). Qualitative assessments will not be included in the test report.

12. Make casts of the barrel, chamber, gripping surface of the extractor, and breechface if appropriate for a pending identification request..

a. Use a solvent-soaked patch to clean the area being cast.

b. Label the non-silicone side of a piece of siliconized paper with appropriate case information.

c. Apply Forensic Sil or Mikrosil to the area being cast.

d. Place label paper (silicone side) against the exposed casting material.

e. Once the cast has set, carefully remove the cast from the firearm.

f. The cast should be retained with the test fires, but it can be packaged separately if used for training or reference.

13. Once it is determined that the firearm is safe, it can be test fired.

C. **Selecting and preparing the proper ammunition for test firing.**

1. In most cases, test firing using unaltered, live ammunition is the most appropriate method. Exceptions include, but are not limited to, the following:

a. When a firearm is deemed unsafe to test fire using live ammunition, but the function test firing needs to be performed. Primed cases can be used. Safety is the overriding concern.

2. Selection of cartridges to be test fired may include many variables

a. All firearms submitted to the laboratory will be test fired with additional ammunition for ballistic imaging.

b. If ammunition is submitted with the firearm, test firing that ammunition or similar ammunition may be done if any comparison examination has been requested. This is done to provide the best possible exemplars for the comparison (if the submitted ammunition is similar to the questioned fired components). Before testing firing submitted ammunition, the case should be

evaluated to see if the ammunition would be needed for distance determination purposes.

c. If a questioned bullet or cartridge case is also submitted, then ammunition of the same type as the bullet or cartridge case should be test fired as well.

d. In cases where no ammunition is submitted or no questioned bullets or cartridge cases have been submitted, then only the laboratory-supplied ammunition for ballistic imaging will be test fired.

3. Preparing the ammunition for test firing

a. The test firings should be numbered by scribing on the bullet ogive and cartridge case. Ink can be used to help see the marks.

b. An index mark should be scribed at the 12 o'clock position and a mark may be placed at the same orientation on the base of the cartridge case so proper orientation of the index mark can be made.

c. Minimally, two cartridges of each type of ammunition in question should be prepared. Additional test fires may be created as appropriate.

d. Record the selection and preparation of the cartridges to be test fired (e.g. filling the nose of hollow point bullets with glue) on a Firearms Worksheet.

4. Downloading ammunition

a. On occasion it may be necessary to download ammunition so the bullet can be recovered without damage or to allow a high-powered rifle to be fired into the water tank without damaging the tank. The procedure for downloading ammunition is as follows:

i. The cartridge to be downloaded must first have the bullet cleanly removed by using a kinetic bullet puller.

ii. The powder from the cartridge case is recovered and measured on a digital scale.

iii. About two thirds of the powder is returned to the cartridge case.

iv. Cotton is fluffed and used to fill the empty space left by the missing powder.

v. The bullet is carefully replaced and returned to its normal position in the case by pushing or gently tapping with a hammer.

vi. Mark the cartridge for test firing as above.

vii. Care should be taken during test firing to ensure a misfire does not occur and that the firearm is not fired again if a bullet gets stuck in the barrel.

viii. If the recovered bullet is damaged, another cartridge can be downloaded using about half the powder charge.

ix. Never use less than half the normal powder charge since unsafe pressure levels could occur.

D. **Test firing the firearm**

1. All safety rules will be followed when test firing.

2. CyberNational Bullet Recovery System (Water tank).

    a. In most casework instances, the bullet and cartridge cases need to be recovered during test firing. The CyberNational bullet recovery system is suited for this purpose.

    b. The tank is located inside the Firearms Section at Summit next to the Firearms Reference Collection room. The tank should be kept filled with water to a level about even with the bottom of the internal shooting port opening and a half inch above the skimmer while the water is flowing.

    c. Prior to test firing into the tank, the power on the Operators Panel will be turned on. The lid will be raised to view inside the tank to ensure that water is flowing through the filtration system, that no projectiles or fragments are present in the tank, and so that the side basket can be placed into position.

    d. The red Moisture Migration Plug will be removed from the blower unit. This allows the air inside the tank to be sucked through the HEPA filtration system. The door to the room will be shut. The lid will be lowered. The blower will be turned on. Note: When the blower is on, the water filtration system will stop. (See CyberNational Operating Guide for more complete details on system). The system is now ready to be fired into.

    e. The shooter and observer(s) will relocate to the front of the bullet recovery system. With safety glasses and hearing protection on, the shooter will point the firearm into the tank through the shooting port, and then load the firearm. The observer gives the all clear signal after confirming the shooter is in a safe firing position. The shooter then fires their shots directly into the water, being careful to not strike the sides or bottom of the tank.

        i. This is a good time to make sure the safety works with live ammunition.

        ii. Make sure both single and double action modes are tested.

        iii. During firing, never move the firearm out of the tank or move it from a forward, slightly downward-pointing position.

    f. On completion of firing, the chamber is checked to ensure all of the rounds were fired. Wait a few seconds for the air to clear out in the tank before turning off the blower. Water flow should start again.

    g. Open the lid and retrieve the test fired bullets with the vacuum retrieval wand. The side basket and air hose assist in retrieval. The side basket is to be stored outside of the water tank between test firings to minimize corrosion.

    h. Replace the Moisture Migration Plug. Scan the bottom one last time to locate any missed fragments. Close the lid to the tank and turn off the power.

    i. During test firing firearms may become wet from the water tank. These firearms should be dried and then sprayed with WD-40 to displace water and prevent rusting.

    j. All handguns using standard ammunition are safe to fire into the water tank. Rifles up to 30 carbine caliber and velocity below 2000 feet per second (FPS) can be fired into the tank without downloading. Rifles exceeding 2000 FPS may be downloaded to keep the bullets from fragmenting if needed. No armor

piercing ammunition is allowed in the water recovery tank. The system is rated to handle .50 BMG cartridges.

k. The system should be powered up and the water filtration run 3-4 hours daily during regular business hours. This keeps the system primed and the water clean.

l. The water level and chemicals should be checked weekly. The system should be drained annually and the interior cleaned before refilling. Refer to the Operating Guide for specifics on these operations.

3. Snail trap at Suite C (2099 Arnold Industrial Way, Concord)

a. The Snail trap is located in the covered parking stall and may be used to test fire firearms when recovery of the projectile is not needed.

b. Ensure the trap is positioned with an appropriate backdrop for safety. A ballistic vest should be worn by the shooter.

c. Prior to test firing, Property (925-646-5877) and Concord P.D. (925-671-3220) will be notified about the use of the trap and the expected number of shots.

4. Test firing at the Sheriff's Range (12000 Marsh Creek Road, Clayton)

a. A number of examinations may necessitate test firing at the range. For example, shotguns, automatic weapons, ricochet cases, ejection patterns, or test patterns created for distance determinations will be done at the range.

b. Use of the range is detailed in the Sheriff's Office Policy and Procedures Manual (1.07.34) Firearms Range Use Regulations.

c. There may be a rare situation that requires a firearm deemed unsafe to be fired with unaltered, live ammunition. In this situation, a remote firing device (Ransom Rest or vise) will be used and the firearm will be fired when all persons are safely behind a barrier. This will be done at the Sheriff's Range.

5. Canyon Sports Range (887 Howe Road Suite F, Martinez)

a. The range may also be used for casework where recovery of bullets is not needed. Contact staff at Canyon Sports for permission to use their range.

6. If testing is performed at any location other than the laboratory, the test report must indicate where the testing was performed. See FSD.43.

7. Recovery of test-fired components

a. At the completion of the test firing, the test-fired bullets and cartridge cases should be placed into a manila envelope marked with identifying information.

b. Test fires for ballistic imaging purposes will be handled according to CE.16. Test fires for identification purposes will generally be itemized and packaged with the firearm.

E. **Assault Weapons**

1. The Unit is occasionally asked to determine whether a firearm meets the California Penal Code definition of an assault weapon. Analysts determine whether a firearm possesses the design characteristics as listed in the Penal Code. AFTE definitions

and ATF interpretations of design features are used by the unit in making this determination.

F. **Function testing of zip guns**

1. The Unit is occasionally asked to examine zip guns. Zip guns will be examined using the same procedures listed above and in CE.08.

2. Test firing is not required for zip guns unless necessitated by case circumstances. If needed, test firing with primed cartridge cases is the preferred method as safety is the overarching concern.

G. **Function testing of non-firearms**

A. The Unit is occasionally asked to examine pellet guns, BB guns, and other non-firearms. These items will be examined using the same procedures listed above and in CE.08 to document the submitted item, its ability to function, its overall appearance, whether or not it is capable of firing conventional centerfire or rimfire ammunition, and other design characteristics. Trigger pull determinations are not required unless specifically requested or if appropriate based on the evidence.

B. Test firing may be appropriate for pellet or BB guns and, if so, will be conducted using the water tank.

C. Manufacturer information, if available, should be included in the case notes for these items and, if appropriate, in the test report.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 10/01/2018	**NUMBER:** CE.10 - Make and Model Determinations
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Make and Model Determinations	

I. POLICY In many investigations, only fired ammunition components are recovered. The examination of expended bullets or cartridge cases recovered as evidence can result in the generation of a list of guns that could have been used to fire them. Occasionally an image of a firearm may be evaluated to determine the make and model of the depicted firearm.

A. Equipment. The stereoscope is typically used (with direct and oblique light) to sort fired components based on class characteristics. A comparison microscope should be used when examining multiple groups of similarly-marked items based on class characteristics (e.g. eight Remington 40 S&W cartridge cases and nine Winchester 40 S&W cartridge cases).

B. Fired Bullets. Determine the caliber of submitted bullets and, if needed, the potential firearms that could have been used to fire them. A bullet worksheet can be used to document the following examinations. The weight and measured diameter of fired bullets will not be included in the report; if determined, the nominal caliber will be included in the test report.

1. Prior to examination, the bullets should be examined for trace and biological materials. See CE.08. If necessary, the biological material should be collected.

   a. The bullet can be cleaned in a solution of water and Tergazyme or similar detergent if necessary to remove biological material and render the bullet safe to handle.

   b. Cotton swabs or a soft bristle toothbrush can be used to gently remove biological materials.

2. Note any damage to the bullet (nose, base, side) and type (abrasion, dent, fragment, impressions) along with any evidence of ricochet.

3. Determine the caliber.

   a. Measure the diameter of the base (or the least deformed area close to the base) with calipers for an approximation of the nominal caliber.

   b. If bullets are badly deformed, the following formula can be used to determine the diameter (D).

      i. (Land impression width + Groove impression width) x (#Land & Groove impressions) / Pi = D

      For example: If groove impressions measure 0.105" and land

impressions measure 0.115" and there are five land and groove impressions, then using the formula:
[(0.105 +0 .115) x 5] / Pi = 0.350"

c. If the bullet is deformed or flattened, a rough approximation of the diameter may be determined by measuring the narrowest area near the base and the widest area near the base and averaging them.

d. Some bullets may be so deformed that only an approximation of the diameter may be made, if even possible.

4. Determine the weight.

a. Weigh the bullet on a balance and record the weight in grains. The differences in nominal caliber can often be determined by weight (1 gram = 15.432 grains).

b. If the bullet is fragmented and material is obviously missing, weigh the fragments or partial bullet and note that material appears to be missing.

c. Exercise caution when potentially dealing with bullet cores where the jacket is missing, since lead bullet cores can have a similar appearance to plain lead bullets with rifling impressions.

5. Determine the bullet type.

a. Note the bullet composition (plain lead, copper jacketed lead, brass jacketed lead, copper washed, etc.) and the bullet shape (semi-wadcutter, jacketed hollow point, full metal jacket, etc.).

b. Note construction (open base, flat point, round nose, etc.), cannelures, crimp grooves, or lube grooves. The distance between the cannelures, lube grooves, crimp grooves, and base can be measured.

c. Note any color codes or markings (military ammunition).

6. Determine the direction of twist, the number of land and groove impressions, and if the rifling is conventional or polygonal.

a. Count the number of land and groove impressions. If not possible, several options can help determine the number of land and groove impressions:

i. Search the land and groove impression measurements in the General Rifling Characteristics (GRC) File , or

ii. Use the formula provided for determining caliber (3.b. above), but solve for the number of land and groove impressions. Using the previous example:

(3.14 x .35") / (.105 + .115) = 4.99 or 5

iii. This is an estimate of the number of land and groove impressions and is only as accurate as the measurements.

b. The direction of twist can be determined if the bullet's land impressions slant towards the left (left-hand twist) or towards the right (right-hand twist).

c. If a bullet is badly distorted or has very shallow angled rifling, the direction of twist can be determined by determining which edge of the land impression is the driving edge. If the driving edge is on the right side of the land impression

when viewed from the base, the bullet has a right-hand twist. If the driving edge is on the left side of the land impression when viewed from the base, the bullet has a left-hand twist.

7. Measure the land and groove impression widths when needed; if a bullet has common rifling (e.g. 6R), measuring the land and groove impression widths is at the discretion of the analyst.

    a. Place the bullet on one stage of a comparison microscope with a micro ruler marked in five thousandths of an inch on the other stage. Align the land and groove impressions on the scope, each of them at top-dead-center when being measured, and take the measurements of all discernible land and groove impressions. All measurements are made between the shoulders of the land impressions to the nearest thousandth of an inch.

8. The General Rifling Characteristics (GRC) File.

    a. The GRC File is an electronic database, maintained by the FBI, of firearm class characteristics prepared by measuring fired bullets. In addition, the database includes cartridge case, firing pin, and breech face data. The latest version of the GRC File is periodically mailed to the laboratory by the FBI. The GRC File is available on the shared network drive.

    b. Enter class characteristics, such as the number of lands and grooves, the direction of twist, and the range of widths for the land and groove impressions, into the search fields for the database.

        i. Incorporating a variance of ± .005" to the range of land and groove impression measurements is good practice when a relatively wide range is observed on fired bullets.

        ii. Incorporating a variance of ± .005" to the average is good practice when a relatively narrow range is observed on fired bullets.

        iii. Using the above variance accounts for deformity of bullets, variations in widths due to wear of the barrel or tooling used to rifle it, poor obturation, and other factors.

        iv. If, based on the appearance of the rifling impressions, there appears to have been good engagement of the bullet with the rifling and the land and groove impression measurements are very consistent around the bullet, then it may be appropriate to not incorporate an additional variance to the range of measurements before searching the GRC database.

    c. The database will provide a list of the possible firearms based on the search criteria. The list generated is limited to the firearms included in the database and is therefore not all inclusive. Any reported information derived from the GRC File should be accompanied by a statement advising that the results are not all inclusive.

C. Fired Cartridge Cases. Determine the cartridge and the potential firearms that could have been used to fire it. A cartridge case worksheet can be used to document the following examinations:

1. Determine the cartridge chambering.

a. Determine the case composition (e.g. brass, nickel-plated brass, steel, aluminum, etc.) and primer composition (e.g. brass, nickel-plated brass).

b. Determine the case type (center fire, rimfire, or shotshell) and case body shape (straight rimmed, bottleneck rimless, tapered rimmed, bottleneck belted, etc.).

c. Examine the headstamp. Most commercial manufacturers imprint the chambering on the cartridge case head as part of the headstamp.

d. For any unknown caliber ammunition, such as military ammunition and some foreign ammunition, use the following steps to determine the chambering.

i. Measure the case mouth inside diameter for a rough estimate of the caliber.

ii. Measure all dimensions of the case (length, case mouth, case rim, case body, shoulder width, length to shoulder, etc.).

iii. Reference the measurements to a book, such as Cartridges of the World or Ammo & Ballistics.

iv. Any reloading manual, other firearms reference books, most ballistic software programs, and many internet sites have cartridge dimension data as well.

v. Comparing the questioned cartridge case directly to a known cartridge case can also help to identify it.

2. Determine the cartridge manufacturer or marketer. Many companies have other companies manufacture cartridge cases for them and then imprint it with their headstamp.

a. Examine the headstamp. Most commercial manufacturers imprint their names or symbol on the cartridge case head as part of the headstamp.

b. Military and many foreign manufacturers do not follow this practice so other means may need to be used. The symbols and codes used in the headstamps can be referenced in a book, such as Cartridges of the World or Cartridge Headstamp Guide.

c. The Association of Firearm and Toolmark Examiners (AFTE) website has an online headstamp guide for use by members. There are also several software programs and internet sites with this information that may be accessed.

3. Determine the class characteristics of the firearm that was used to fire the cartridge case by recording the following, if present:

a. The shape, size, and location of the firing pin impression and firing pin aperture including firing pin aperture shear.

b. The shape and form of breechface marks.

c. The shape, size, and location of the ejector mark.

d. The shape, size, and location of the extractor mark.

e. The shape, size, and location of the ejector and extractor cutouts.

f. Any magazine marks.

g. The shape and size of revolver chamber edge chamfer and star-extractor marks.

h. The presence of a firing pin drag mark, caused by either recoil-operated semiautomatics or the opening of top-break revolvers.

i. Any other chambering or action marks. These include slide override marks on cartridge rims, ejection port marks, loaded chamber indicator marks, feed ramp marks, and damage or wear in chambers impressed into cartridge cases.

j. These marks can be documented via sketching on a cartridge case worksheet and used to narrow down the type of guns from which a cartridge case was fired.

i. Some firearms leave unique marks that can identify the firearm used (e.g. Glock and SWD firing pin impressions).

ii. The Evofinder database and the 9mm and .380 Auto Matrixes can help to narrow down lists of potential firearms.

iii. The GRC file contains information with respect to firing pin type, ejector and extractor position, and breechface striae type. Entering the information into the query screen will generate potential firearms.

iv. The combination of a fired cartridge case and a fired bullet may narrow down a list of guns more than either can alone.

D. Class Eliminations

1. Source exclusions can only be expressed as a certainty if it is physically impossible that the items came from the same source based on an incompatibility in class characteristics.

a. For example, Glock-type vs. hemispherical firing pin impressions, right-hand vs. left-hand rifling, striated vs. granular breechface marks.

2. Differences potentially due to primer hardness, normal variability due to test firing, or intentional alterations should be considered when reaching an exclusion based on class characteristics.

E. Reporting the Examination Results

1. In general, when a make and model determination is requested, two questions are asked: "What kind of ammunition was used?" and "What type of gun was used to fire the questioned bullets and/or cartridge cases?"

a. The report should answer these questions. The cartridge and manufacturer should be indicated, though this can be done through the evidence inventory containing the headstamps. The second question is usually addressed by indicating the nominal caliber, the number of land and groove impressions, and the direction of twist. A list of potential firearms may be included in the report as needed.

2. The report should indicate the minimum number of firearms that could have been used to fire the items based on class characteristics. As needed, a "limited universe"

statement may be used. For example, "if the bullets are related to the cartridge cases, then the following firearms could have fired them."

F. Examination of Images

1. Occasionally, analysts will be asked to examine an image or video to determine if any manufacturer information can be determined from the depicted firearm. Any analyst authorized to perform function testing casework may conduct this analysis. Analysts may compare manufacturer design characteristics observed in the image with firearms from the reference collection or from other sources. The comparison of these manufacturer design characteristics provides the basis for an opinion on the manufacturer of the firearm in the image.

    a. Observations may be made on non-manufactured marks (e.g. scribed marks or damage) present in the image or video but conclusions should rarely be provided about whether the image or video contains a specific firearm because image artifacts may impact conclusions.

2. A statement should be included that the firearm may be a replica firearm as appropriate.

3. Submitted images or videos will be treated as evidence per FSD.42.01.

4. Any enhancements, other than brightness, contrast, and cropping, will be performed by the Digital Evidence Unit under a separate request.

5. The analyst can not offer an opinion on the authenticity of the image or video.

6. Images used to form conclusions should be included in the report by uploading an image to the LIMS imaging module and renaming it to begin with “REP”.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 05/01/2018	**NUMBER:** CE.11 - Firearms Identification Examinations
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Firearms Identification Examinations	

I. POLICY Firearms Identification is the scientific process of determining 1) whether or not questioned bullets and/or cartridge cases were fired in the same known or unknown firearm; and 2) whether or not unfired cartridges were worked through the action of a particular firearm.

A. Initial Documentation. The firearm, if submitted, along with fired bullets and cartridge cases shall be described in the notes or worksheets prior to comparison.

1. This documentation includes the evaluation of the unknown item(s) to identify characteristics suitable for comparison prior to comparison to the known item.

2. This examination may include an assessment for potential subclass influence and identification potential.

a. This documentation may be accomplished with notes, sketches, photographs, or a combination these methods.

i. The following are examples of this process: noting a well-striated firing pin aperture shear mark, small impressed marks with a random appearance in the firing pin impression, fine striae in a land impression, a relatively smooth breechface, etc.

b. Nothing in this section prevents an analyst from later examining areas not evaluated at the initial documentation stage, should it be necessary.

B. Evaluation of Ammunition and Firearm

1. Determine the type of ammunition appropriate for test-firing. For comparison purposes, the same ammunition as that in question, or as close as can be obtained, should be used in test firing.

a. This may require test firing the ammunition that was submitted with the firearm.

b. If no ammunition is submitted with the firearm, laboratory-supplied ammunition that is as close as possible to the submitted questioned ammunition components should be used.

c. At least three test-fired bullets and cartridge cases should be obtained for comparison; however, two may suffice, depending on the availability of the

optimal ammunition and the reproducibility of the firearm's individual characteristics.

2. An evaluation of the tool working surfaces of the firearm shall be performed to determine if microscopic defects, apparent intentional alterations, or subclass characteristics from the manufacturing process are present. Based on this examination, any potential subclass influences on these surfaces shall be noted in the examination record. The individualization potential should also be noted.

    a. Examine the bore with a borescope, stereomicroscope, or by casting it.

        i. Determine how the rifling was produced (broach, button, hammer forging, etc…) if possible. Any subclass influence in barrels can be dependent on how the barrel was rifled.

        ii. Look for any damage, corrosion, or areas of obvious wear which may eliminate subclass influence.

        iii. Subclass marks are typically fine or coarse marks that run parallel to the rifling and run almost the entire length of the barrel without change or disruption.

        iv. In a broached or cut rifled barrel, the lands typically have no subclass influence, but there may be residual subclass characteristics in the grooves. Button and hammer forged barrels usually do not have any subclass characteristics.

        v. Be aware of heavy fouling, including powder residues, metal fouling from copper jackets, and the leading from lead bullets. This can cover up machining marks and cause differences in the individual characteristics observed on fired components.

    b. Examine the breechface, firing pin, extractor, ejector, and other areas that bullets or cartridge cases could contact. A borescope or stereomicroscope can assist with the examination.

        i. Breechfaces and firing pins formed by end mills and lathes can have concentric rings that need to be evaluated since they may be a source of subclass influence. Defects between and on the rings can help to eliminate subclass influence from the comparison.

    c. Make casts of the barrel, breechface, or other areas with Forensic Sil or Mikrosil to help evaluate the working surfaces of these tools, if needed.

    d. If it is determined that subclass characteristics are present in the toomarks being compared, the individual microscopic defects that were used to support the identification shall be noted in the examination record.

3. Initial Examination of Questioned Bullets and Cartridge cases.

    a. The questioned items should be examined and grouped according to similar class characteristics using a stereomicroscope.

    b. Once it has been determined that all class characteristics are similar for a group of questioned items (caliber, number of lands and grooves, direction of twist, widths of lands and grooves for bullets; and firing pin shape, breechface marks, ejector and extractor orientation for cartridge cases), and that an elimination based on differences in class characteristics is not possible, the questioned bullets and cartridge cases can be microscopically compared.

C. Microscopic Comparison of Bullets

1. The test-fired bullets shall be compared in a systematic manner. This is done in order to 1) assess them for individual characteristics and 2) to evaluate the reproducibility of the individual characteristics observed.

    a. Once a set of test-fired bullets has been examined, and a conclusion as to the reproducibility of individual characteristic agreement has been made and any QCMS runs noted, representative photographs must be taken of those specific areas to document the the quality and quantity of agreement.

        i. The number of photographs taken to document agreement is at the discretion of the examiner, based on the quality and quantity of the agreement observed.

        ii. It is recommended that some low-power photographs be taken for orientation, as well as close-up photographs taken at appropriate magnifications to show detail well.

    b. The quality and quantity of the agreement and reproducibility of the test-fired bullets shall be documented in the notes. One of the test-fired bullets should be chosen as the representative known specimen to be used for comparison to the questioned bullets. Any and all of the test-fired bullets can be used for comparison to the questioned bullets if needed.

        i. It is possible to have test fired bullets with very poor reproducibility of individual characteristics. Some of the factors that cause this are detailed in section 2. c., below.

2. The questioned bullets shall be compared in a systematic manner.

    a. Once each questioned bullet has been compared to the test-fired bullets and a conclusion as to the quality and quantity of individual characteristic agreement has been made and any QCMS runs noted, representative photographs must be taken of those specific areas to document the agreement in those areas used to make the conclusion.

        i. The number of photographs taken to document agreement is at the discretion of the examiner, based on the quality and quantity of the agreement observed. Multiple photographs of different areas of agreement on a set of bullets may be needed.

        ii. If all the questioned bullets in a series exhibit a similar level of agreement with the test-fired bullet(s), only representative photographs of one of the questioned bullet comparisons needs to be photographed.

        iii. If no agreement is found, or disagreement is observed, photographs demonstrating the differences between the bullets are appropriate. The non-agreement or disagreement shall also be documented in the notes to support a result of inconclusive or elimination.

    b. The final conclusions reached from the comparisons shall be documented in the notes. Refer to CE.04 for details.

    c. The following factors can influence the appearance of the rifling impressions left on fired bullets and, consequently, the comparison results.

        i. Damage or wear to the firearm

ii. Bullet composition and velocity

iii. Chamber to barrel alignment (especially in revolvers)

iv. Leading and fouling of the barrel

v. Damage to the bullet causing deformation, distortion, or elimination of individual characteristics

vi. Lack of obturation of the bullet in the barrel resulting from loose fit and random bullet to barrel contact resulting in irregular rifling impressions on the bullet

vii. Poor manufacturing of the barrel

viii. Corrosion

d. In cases where no agreement or disagreement is observed, investigating the circumstances that might cause this to occur need to be considered. The following reasons can account for this:

i. Any of the factors in 2. c. i-viii above.

ii. Significant changes to the firearm from the time the questioned bullet(s) was/were fired to the time the firearm was collected.

iii. The bullets were fired from different guns.

3. Comparing questioned bullets without a suspected firearm.

a. On occasion, evidence from the same or multiple scenes may be submitted without a firearm to determine if the evidence was all fired from the same gun.

b. This comparison is performed in the same manner as the comparisons above, except no test fires are available for comparison.

c. Conclusions may reflect whether or not all the bullets were fired from the same unknown gun. Caution must be exercised in eliminating the possibility of subclass influences when a gun is not available for examination.

D. Microscopic Comparison of Cartridge Cases

1. The test-fired cartridge cases shall be compared in a systematic manner. This is done in order to 1) assess them for individual characteristics and 2) to evaluate the reproducibility of the individual characteristics observed.

a. Cartridge cases present many potential areas with identifying marks, including: the head, the rim, and the case body. All areas should be evaluated for individual characteristics. The types of marks that are commonly encountered on fired cartridge cases from semiautomatic firearms include:

i. Firing pin impressions

ii. Firing pin drag marks

iii. Breechface marks

iv. Chamber marks

v. Firing pin aperture marks

vi. Ejector marks

vii. Extractor marks

viii. Extractor or ejector cutout marks

ix. Cycling or chambering marks

x. Magazine marks

xi. Anvil marks (rimfire firearms only)

b. Examine the marks resulting from firing of the cartridge, such as the firing pin impression, breechface marks, chamber marks, and firing pin aperture marks.

i. Cycling marks, such as the ejector mark, extractor mark, any cutout marks, chambering marks, and magazine marks can also be examined; however, they may not be the result of firing, but from merely being cycled through the action of a firearm, especially if there are multiple sets of these marks present.

ii. Keep in mind that the presence of multiple extractor. ejector, cycling, or magazine marks on a single cartridge case may be a sign of either the original cartridge having been cycled through the same or different firearms(s) multiple times or of the cartridge case possibly being from a reloaded cartridge.

iii. Class characteristics can help sort groups of cartridge cases fired from multiple firearms into distinct groups for comparison.

iv. Use the appropriate magnification required for the area being examined.

c. Once a set of test-fired cartridge cases has been examined, and a conclusion as to the reproducibility of individual characteristic agreement has been made and any QCMS runs noted (if applicable), representative photographs must be taken of those specific areas to document the the quality and quantity of agreement.

i. The number of photographs taken to document agreement is at the discretion of the examiner, based on the quality and quantity of the agreement observed.

ii. It is recommended that some low-power photographs be taken for orientation, as well as close-up photographs taken at whatever magnification is needed to show detail well.

d. The quality and quantity of the agreement and reproducibility of the test-fired cartridge cases shall be documented in the notes. One of the test-fired cartridge cases should be chosen as the representative known specimen to be used for comparison to the questioned cartridge cases. Any and all of the test-fired cartridge cases may be used for comparison to the questioned cartridge cases if needed.

i. It is possible to have test fired cartidge cases with very poor reproducibility of individual characteristics. Some of the factors that cause this are detailed in section 2. g., below.

2. The questioned cartridge cases shall be compared in a systematic manner.

   a. Once each questioned cartridge case has been compared to the test-fired cartridge cases and a conclusion as to the quality and quantity of individual characteristic agreement has been made and representative QCMS runs noted (if applicable), representative photographs must be taken of those specific areas to document the agreement in those areas used to make the conclusion.

      i. The number of photographs taken to document agreement is at the discretion of the examiner, based on the quality and quantity of the agreement observed. Multiple photographs of different areas of agreement on a set of cartridge cases may be needed.

      ii. If all the questioned cartridge cases in a series exhibit a similar level of agreement with the test-fired cartridge cases (e.g., Glock-type firing pin aperture shear marks), only representative photographs of one of the questioned bullet comparisons needs to be photographed, as long as all of the represented comparisons and conclusions were made using the same type of marks depicted in the photograph(s) .

      iii. If no agreement is found, or disagreement is observed, photographs demonstrating the differences between the cartridge cases are appropriate. The non-agreement or disagreement shall also be documented in the notes to support a result of inconclusive or elimination.

   b. The conclusions reached from the comparisons shall be documented in the notes. Refer to CE.04 for details.

   c. The following marks may reproduce but may consist mostly of toolmarks that are not unique (subclass characteristics). The careful documentation of wear and defects that may exist within these marks may be used to individualize them.

      i. Circular marks on firing pins due to lathing or milling

      ii. Parallel breechface marks due to broaching

      iii. Circular breechface marks due to milling

      iv. Mold marks from metal injection molding (MIM)

   d. The following factors can influence the marks left on cartridge cases and consequently the comparison results:

      i. Hardness of the cartridge case or primer material

      ii. Differences in pressure when fired due to variations in quantity and type of propellant in cartridge

      iii. Alteration of the weapon due to wear, corrosion, and damage

      iv. Operating condition of the firearm

      v. Cleanliness of firearm (fouling build-up)

      vi. Poor quality manufacturing of the firearm

      vii. The orientation of the firearm when it is fired

e. In cases where no agreement or disagreement is observed, the circumstances that might cause this to occur need to be taken into account. Some of the factors to consider are:

i. Any of the factors in 2. d. i-vii above.

ii. The possibility that significant changes to the firearm may have occurred between the time the questioned evidence was fired to the time the firearm was examined.

iii. The cartridge cases were fired from different guns.

3. Comparing questioned cartridge cases without a suspected firearm.

a. Evidence from the same scene or multiple scenes may be submitted without a firearm to determine if the evidence was fired from the same gun.

b. This comparison is performed in the same manner as the comparisons above, except no test-fires are available for comparison.

c. Conclusions may reflect whether or not all cartridge cases were fired from the same unknown gun. Caution must be exercised in eliminating the possibility of subclass influences when a gun is not available for examination.

4. Comparing unfired questioned ammunition to other unfired ammunition or to test fires or questioned cartridge cases.

a. It is possible to compare the cycling marks present on an unfired cartridge that has been cycled through the action of a firearm to other unfired ammunition or to test-fired or questioned cartridge cases.

b. These comparisons are conducted as above, except that only those marks produced during the cycling of a cartridge through the action without firing it would be compared (i.e., magazine marks, chambering marks, ejector marks, extractor marks).

c. Keep in mind that many of these cycling marks can be faint. The action of manually cycling a cartridge through a firearm may leave marks, but these marks are often not as distinct as those created from firing. This is due to the higher energy of the action during firing.

E. Microscopic Comparison of a Questioned Bullet to a Questioned Cartridge Case

1. In some instances, it is possible to compare the axial straited marks that may be left on a bullet from the crimped/compressed mouth of the cartridge case it was originally loaded in to a questioned cartridge case in order to determine if they were once a single cartridge.

a. This type of comparison is only conducted in unusual instances and the potential probative value of the examination relative to the case circumstances should be considered before proceeding.

2. These comparisons are conducted as above, except that the axial striations on the questioned bullet are compared to striated test marks taken from the mouth of the questioned cartridge case.

a. Test marks can usually be created by using a thin piece of sheet lead wrapped around a wooden dowel, which is then inserted into the cartridge case and withdrawn while scraping it against the edges of the case mouth.

F. Presumptive Identification

1. The same examination steps listed above should be abbreviated for a presumptive identification because the analyst is not fully evaluating whether "sufficient agreement" for identification exists between two items of firearm-produced toolmark evidence. The analyst shall evaluate the individual characteristics present on the items and determine if they indicate that the items were likely fired in the same firearm. Case documentation for Presumptive Identification cases differs from full Identification cases as follows:

    a. At a minimum, a cartridge case and/or bullet worksheet shall be completed.

    b. If a firearm is submitted, an abbreviated safety inspection is sufficient for determining if the firearm is safe to fire for the purpose of producing test fires for comparison.

    c. A comparison worksheet should be used.

    d. At least one photograph shall be used to document the microscopic agreement observed between the compared items. Photodocumentation shall otherwise conform to the requirements described above.

    e. Presumptive Identification cases resulting in a presumptive identification are subject to the same Verification, Technical Review, and Administrative Review procedures as full Identification cases.

2. A Presumptive Identification request can be converted to a full Identification request depending on the quality of the evidence submitted and the needs of the requester. The following are examples of casework unsuitable for Presumptive Identification:

    a. Evidentiary items requiring an extensive evaluation for subclass characteristics.

    b. Poorly-marked evidentiary items, such as cartridge cases or bullets, or firearms that mark test-fired components poorly.

    c. Cases requested for a pending trial.

3. Eliminations are not permitted under the Presumptive Identification service to avoid confusion between a presumptive identification and a definitive elimination. Eliminations shall be reported in a separate Identification request if needed (a related sub-request is recommended).

    a. When multiple groups exist with a positive association within one case, the correlating negative association is not considered an elimination.

G. Verification of Comparisons

1. All cases with comparison conclusions shall be verified by another qualified examiner except as noted in 2. below. This verification process does not mean the second examiner will examine each comparison made by the original examiner in a particular case; the second examiner may verify representative comparisons as determined by the original examiner (e.g. if the same conclusion is rendered by the original examiner regarding multiple items based on the same type of toolmark with good reproducibility). Verifiers shall initial and date the photographs that represent those areas directly viewed to arrive at their conclusion. The verifier should perform the Technical Review of the report and notes when finished.

a. Verification for Identification requests shall be done as contemporaneously as possible to the original examiner performing their examination. Observing the evidence on the microscope is required.

    i. Presumptive identification cases must also be verified. Verification for presumptive identification cases may be conducted via photograph(s).

b. The verifier should not be told of the original examiner's conclusion. The original examiner should only describe contextual information (e.g. test fire on the left stage, questioned evidence on the right).

c. The verifier must reach the same conclusion as the examiner. Any differences in opinion should try to be resolved by the examiner and verifier. The Comparative Evidence Supervisor can arbitrate situations where agreement cannot be reached. The supervisor can decide in favor of either conclusion or send the evidence to another laboratory for arbitration if needed.

2. Eliminations based on differences in class characteristics shall be technically reviewed, but do not need to be verified. Photograph-based verification of class eliminations are permitted. Eliminations based on differences in individual characteristics as well as all identifications and inconclusive results shall be subjected to the verification process.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 06/13/2019	**NUMBER:** CE.12 - Serial Number Restoration
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Serial Number Restoration	

I. POLICY Submitted firearms may have obliterated serial number(s). The California Penal Code mandates that each local law enforcement agencies establish a plan for restoring obliterated serial numbers. The Comparative Evidence Unit will provide serial number restoration services to all client agencies.

A. Serial Number Restoration.

1. When a serial number is stamped into the metal frame of a firearm, the greatest deformation to the crystalline structure occurs nearest the bottom of the impression. All serial number restoration procedures are based on the principle that the deformed metal (strained crystalline structure) immediately below the stamping has higher density than the surrounding metal.

2. A variety of methods are available to restore an obliterated stamping.

   a. These methods include magnetic particle inspection, chemical etching, grinding and polishing, and locating hidden or secondary serial numbers. The type of metal containing the obliterated serial number dictates what methods are used.

3. Most obliteration attempts are intended to make the serial number difficult to see, but do not completely destroy its presence. On occasion the entire area where the strained crystalline structure was located is removed or destroyed and no restoration is possible.

4. Serial numbers inscribed with lasers or chemicals are usually not conducive to recovery.

B. Restoration Procedure. The ATF Firearm Serial Number Structure Guide (on the shared network drive) or a firearm of the same or similar make and model in the Firearms Reference Collection may provide the structure, the style of characters, and the orientation of the serial number.

1. Examine the firearm to see if the serial number is located in more than one location. Document the obliterated area with photographs.

2. This may involve some disassembly of the firearm to observe hidden serial numbers. Take care in dismantling the firearm to ensure that this procedure does not alter the operating condition of the firearm.

3. Examine the firearm to see if a partial serial number is visible. Use a magnifying glass or stereomicroscope as needed.

4. Clean the obliterated area. Remove anything that may be covering the serial number such as paint.

5. Use a magnet to determine whether the obliterated area is magnetic.

6. If the obliterated area is not magnetic, go to step 7. If the obliterated area is magnetic, Magnaflux can be used prior to etching. Magnaflux is a magnetic particle inspection process applicable to ferrous based metals.

    a. Lightly sand the obliterated area.

        i. Sometimes lightly sanding the obliterated area will reveal the serial number and no other work will be required.

    b. Place a magnet or the contour probe on the firearm (typically behind the area in question) so that the opposing poles are on each end of the obliterated area. Horseshoe magnets of various sizes and strengths are available. When using the contour probe, plug the probe into a power source. Start on AC current; DC current may also be used if no results are observed with the AC current. Push and hold the red button on the probe to send current through the metal.

    c. Apply a light coating of Magnaflux to the obliterated area using a disposable pipette.

    d. Tilt the firearm back and forth to see if any serial number characters appear.

    e. Take photographs of any restored characters.

7. If the serial number cannot be restored using Magnaflux, polish the area with sandpaper or a rotary tool. The surface should be carefully polished to a very smooth finish (i.e. mirror-like).

    a. Choose the coarseness of the sandpaper based on the quality of the obliterated area. If there are fine scratches or the serial number is partially visible, there is no need to begin with the coarsest grit available.

    b. Do not sand or polish the area of the serial number too deep or too long as it could be completely removed.

8. Use chemical etching to help make the serial number visible. Remember to use personal protective equipment (lab coat, gloves, and safety glasses).

    a. Pour a small amount of etchant into a beaker. Use swabs and disposable pipettes for the application of etchants. Do not use etching reagents directly from the stock bottle.

        i. Use an appropriate reagent for the metal in question. Record the lot number in the case notes.

        ii. Metals include four groups: stainless steels, carbon steels, aluminum alloys, and zinc alloys (pot metal).

        iii. See reagents section below for details on which reagents are appropriate for which metals.

        iv. Always begin the etching process with the weakest etchant and work up in strength. The etchant can also be diluted with water.

v. Carefully apply etchant onto the area in question. Light rubbing with a swab can be helpful, but the etchant should be allowed to sit on the area and react.

vi. Effervescence should be observed after application of the reagent if it is working properly; this must be documented in the notes.

b. Clean off the old etchant and reapply fresh etchant when necessary.

c. Inspect the area between each application. Use magnification if needed.

9. The obliterated area may be cleansed with acetone or water after each application of etchant, and before the application of a different etchant. The obliterated area may be repolished and etched several times. Magnaflux may be used at any time during the etching process to enhance the results if the area is magnetic.

a. Beware: Ferrous metals rust quickly when exposed to water.

10. Keep notes regarding the characters, partial characters, and sequence of appearance of characters during the examination. Take photographs of these observations during the examination.

11. If the examination is conducted over several days, cover the obliterated area with nail polish or clean thoroughly to keep the area from rusting over night.

12. Record the steps of the restoration, including partial and full characters seen after each step in case a character is removed during subsequent steps.

13. After the restoration attempt is finished, photograph the restored area with a scale.

14. Document the use of each reagent in the Reagent Log as prescribed by CE.06.

15. Apply a light coat of clear nail polish to the area to preserve it.

C. Verification

1. All serial number restorations shall be verified, except in circumstances where restoration is impossible (e.g. the plate that contains the serial number has been removed).

2. The verifier should not be told of the original examiner's conclusion. The original examiner should only describe contextual information (e.g. six characters).

3. The verifier must reach the same conclusion as the examiner. Any differences in opinion should be resolved by the examiner and verifier, if possible.. The Comparative Evidence Supervisor can arbitrate situations where agreement cannot be reached. The supervisor can decide in favor of either conclusion or consult additional examiners.

D. Reagents.

1. Chemical Etchants. The following is a list of etchants and the types of metals they should be used on.

a. Ferrous Metals (Steels, Magnetic) - Fry's Reagent, Turner's Reagent, 25% Nitric acid, Davis Reagent, Griffin's Reagent (stainless steel).

b. Non-Ferrous Metals (Aluminum, Non-Magnetic) - Ferric Chloride, Cupric Chloride, Acidic Ferric Chloride, 10% Potassium Hydroxide, 10% Hydrochloric acid, 10% Sodium Hydroxide.

c. Pot Metal (Zinc, Non-Magnetic) - Phosphoric acid/Nitric acid, 10 % Hydrochloric acid, and 10% Potassium Hydroxide.

2. Reagent Preparation. Always add acid to water when preparing reagents. All reagent preparation should take place in a fume hood. Use care when handling strong acids, bases and hazardous chemicals. Document the preparation of all reagents in the Reagent Log.

Fry's Reagent	90g cupric chloride ($CuCl_2$) 120ml hydrochloric acid (HCl) 100ml distilled water
Turner's Reagent	2.5g cupric chloride ($CuCl_2$) 40ml hydrochloric acid (HCl) 25ml ethyl alcohol 30ml distilled water
25% Nitric acid	25ml nitric acid (HNO_3) 75ml distilled water
Davis' Reagent	5g cupric chloride ($CuCl_2$) 50ml hydrochloric acid (HCl) 50ml distilled water
Griffin's Reagent	30g cupric chloride ($CuCl_2$) 30ml hydrochloric acid (HCl) 120ml methanol (MeOH) 30ml distilled water
Ferric Chloride	25g ferric chloride ($FeCl_3$) 100ml distilled water
Cupric Chloride	5g cupric chloride ($CuCl_2$) 3ml nitric acid (HNO_3) 100ml distilled water
Acidic Ferric Chloride	25g ferric chloride ($FeCl_3$) 25ml hydrochloride acid (HCl) 100ml distilled water
10% Potassium Hydroxide	10ml potassium hydroxide (KOH) 90ml distilled water
10% Hydrochloric acid	10ml hydrochloric acid (HCl) 90ml distilled water
10% Sodium Hydroxide	10ml sodium hydroxide (NaOH) 90ml distilled water
10% Nitric acid (Zinc Alloy B)	10ml nitric acid (HNO_3) 90ml distilled water
Phosphoric/Nitric acid (Zinc Alloy A)	98ml 85% phosphoric acid (H_3PO_4) 2ml nitric acid ($HNO_{3)}$

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 2/8/2018	**NUMBER:** CE.13 - Sound Suppressor Examinations
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Sound Suppressor Examinations	

I. POLICY Sound Suppressors or "silencers" are submitted to the laboratory to determine if the device meets the definition of a sound suppressor by design.

A. General Information

1. A silencer, according to section 17210 of the California Penal Code, is any device or attachment of any kind designed, used or intended for use in silencing, diminishing, or muffling the report of a firearm. The term "silencer" also includes any combination of parts, designed or redesigned and intended for use in assembling a silencer or fabricating a silencer and any part intended only for use in such assembly or fabrication. The preferred term for a silencer is "sound suppressor".

2. Sound suppressors are designed to reduce the muzzle blast, which is the primary source of noise in the discharge of a firearm. A sound suppressor works by controlling the expansion and release of gases, typically through the use of a series of chambers or baffles. A sound suppressor may also include design elements to cool the gases, which lowers the pressure and volume of the gas. Some sound suppressor designs also include sound dampening material. These functions are used in both commercial and improvised sound suppressors.

3. The initial laboratory examination will be to determine if the device is commercial or improvised. Commercial silencers will typically be narrow cylinders with internal baffles and absorbing material such as steel wool. The device may be threaded so that it screws onto the end of a threaded barrel. The sound suppressor may also be permanently attached to the barrel. In such cases the barrel may be ported or drilled and the expansion chamber fits as a shroud over the barrel and may be filled with sound absorbing materials.

4. Improvised sound suppressors may use materials such as beverage containers, lawn mower mufflers, and other items. Since these devices may have little modification, it may be difficult to identify them as sound suppressors. Likely modifications to most improvised sound suppressors include a point of attachment, the use of filler material, and the presence of a bullet exit hole at the end of the device.

B. General Examination.

1. The device should be examined and photographs should be taken to document its appearance and condition.

2. The muzzle, breech end, and interior should be examined to see if evidence is present that indicates the device was used on a firearm. The following items may be present:
    a. Partially burnt smokeless powder particles.
    b. Soot from smokeless powder combustion.
    c. Lead or copper transfer from bullets.
3. Gunshot residue may also be collected for subsequent testing.
4. Determine if the suspected suppressor is a commercial or improvised device. This can usually be determined by the presence and quality of manufacturing marks or the use of commonly available materials.
5. Determine if the device has the construction or parts of a typical sound suppressor. Books in the library can be used for reference. The following items may be present:
    a. Expansion chambers to capture heated gases.
    b. Internal baffles to slow down and cool gases.
    c. Packing material to absorb heat, or slow down and cool gases.
    d. Ports or holes in the barrel or sound suppressor that redirect gases into the sound suppressor.
    e. Baffles typically made of rubber that keeps gases inside the device.
    f. A mechanism to attach the device to a firearm.
6. If possible, disassemble the sound suppressor to show the internal parts and construction. Do not disassemble the sound suppressor if the disassembly may render it inoperable. Commercial devices are usually easy to disassemble. Improvised devices may be difficult to disassemble without rendering them inoperable. Photographs of the disassembled device should be taken for documentation.
7. The digital X-ray machine at the Coroner's Office can be used to document the internal construction of commercial or improvised sound suppressors that cannot be disassembled.
8. If test firing through the device is needed, check the interior for obstructions before test firing.
    a. All safety rules will be followed when examining and test-firing suppressors.
9. If a firearm is submitted with the sound suppressor, they should be assembled to ensure that the device aligns with the barrel of the firearm.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 11/06/2019	**NUMBER:** CE.14 - Distance Determination
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Distance Determination	

I. POLICY Distance determination examinations rely on gunshot residues that are ejected from the barrel of a firearm when it is shot. The distance between the muzzle and a target may be important in an investigation.

A. General Information.

1. Gunshot residue (GSR) consists of smokeless powder particles, soot, and condensed metallic vapors. GSR generally travels in a cone-shaped pattern from the muzzle when a firearm is discharged. The vapors are projected as a cloud that may have the same diameter at more than one distance from the muzzle. GSR is usually deposited at close ranges.

2. Gunshot residue patterns generally increase in diameter and decrease in density with increasing range. GSR patterns can be used to determine muzzle to target distance. The evidence pattern should be duplicated and bracketed with test patterns. The maximum distance of detectable gunshot residue can also be determined.

3. Clothing and skin are the most likely targets for a distance determination, but sheetrock, wood, paper, and other materials may also be examined.

B. General Examination.

1. The area in question should be examined for bullet holes and gunshot residue. Use a stereomicroscope as necessary. A description of any damage and gunshot residue along with their locations will be recorded in the notes. Photographs should be taken for documentation.

a. Suspected holes in a garment should be examined. They may have a clean cut or torn, ragged appearance. Factors to consider include:

i. Bullet wipe on the margin of the hole.

ii. Searing or melting of the fabric or fibers in or around the hole.

iii. Soot and smoke around the periphery of the hole.

iv. Particles of partially burnt or unburnt smokeless powder on or embedded in the weave of the fabric.

v. Pieces of lead, copper, or other material from a projectile.

b. Suspected bullet holes in a person's body should also be examined. In addition to the above factors, the following factors should be considered:

i. Tattooing - when the particles of smokeless powder embed themselves in the skin.

ii. Stippling - when the particles of smokeless powder strike the skin, but do not embed. They leave red marks on the skin.

2. All gunshot residue patterns should be examined and documented with photographs including a scale. Some garments may have blood stains that may conceal the GSR pattern.

   a. The size, density, and components of the gunshot residue deposit should be described in the examiner's notes.

      i. Presence of sooting.

      ii. Presence of scorching or searing. This includes melted fabric or burns on the skin.

      iii. Visible smokeless powder particles.

      iv. Visible lead, copper or other bullet material fragments.

3. Infrared photographs or imaging shall be used to distinguish gunshot residue patterns unless mitigating circumstances exist. Images taken with infrared equipment creates contrast between GSR patterns and dark colored clothing. Monochrome images taken with infrared filters turn dark dyes and blood into lighter shades of gray while leaving GSR patterns dark.

   a. Items may be photographed using a digital camera approved for such use and the appropriate lens filter(s).

   b. High intensity lamps may be used for lighting.

4. Another method for enhanced visualization of the smokeless powder pattern is called, "pinning". Use the stereomicroscope to locate GSR particles. It may be necessary to look into the weave of the fabric to locate imbedded particles.

   a. Place the garment on a sheet of cardboard as a backing. Using colored stickpins that contrast in color to the garment, mark the location of each powder grain.

   b. This technique is useful when marking the location of only a few powder grains on a garment. Different colored stickpins can be used to distinguish between different or overlapping patterns.

   c. The shape and size of the pattern should be described in the notes and photographs can be taken for documentation.

5. In many cases, the enhanced pattern is now ready for direct comparison to test patterns produced with a suspect firearm and ammunition without any chemical enhancement. See below for test pattern preparation.

6. In cases where the type of firearm has been identified but was not recovered, test patterns can be produced with the same make and model of firearm obtained from the laboratory reference collection.

7. In a case where the type and caliber of the firearm is not known, general conclusions can be made about the distance from the firearm to the target. However, the

examiner should proceed with caution and use conservative ranges based on his or her experience with this type of evidence and reference materials.

8. In a case where the presence of GSR is important, general conclusions can be made about the presence of smokeless powder particles based on their appearance, morphology, and susceptibility to being burned.

    a. The laboratory does not have the ability to examine for GSR particles based on their elemental composition, but can sample an item for GSR particles for subsequent elemental analysis by an outside laboratory as needed.

9. Lead test kits may be used to test for the presence of lead.

10. If appropriate, a representative gun powder particle may be burned in the fume hood to confirm that it is ignitable.

C. Making Test Patterns.

1. Test patterns are produced for direct comparison to the questioned pattern.

    a. The same firearm and ammunition should be used if available.

    b. White cotton or cotton and polyester blend cloth targets, usually 6, 12, or 18 inches wide are fastened to clean cardboard backs. GSR patterns are easily observed on the white cloth.

        i. Cardboard targets from the Sheriff's Range may be used to hang the targets; however, clean cardboard should be used as the backing so no contamination from the range occurs.

    c. The targets are shot with the firearm and ammunition combination in question at several known distances.

        i. Typical distances are hard contact, loose contact, 1, 3, 6, 9, 12, 15, 18, 24, 36, 48, 60, and 72 inches. Other distances can be used as necessary and distances can be omitted if appropriate.

        ii. At a minimum, create patterns that are bigger, smaller, and similar in appearance as the evidence pattern. This is known as "bracketing".

        iii. Establishing the maximum range that gunshot residues can be detected may be useful. This requires bracketing out to a distance where no residues, other than bullet wipe, are visible on the target.

    d. Each target is hung on a target stand.

    e. Position the appropriate approximate distance for the firearm using the Leica Disto held parallel to the bore and even with the muzzle. The Leica Disto will not be placed in front of the muzzle at any time. Once the appropriate distance is set, the shooter loads a single cartridge and secures the firearm in a Ransom rest or Manfrotto Variable Friction Magic Arm.

    f. The observer takes and records a final measurement with the Leica Disto held parallel to the bore and even with the muzzle. This measurement should be within 0.25 inches of the targeted distance.

        i. The use of the device is to hold the firearm in place while the muzzle-to-target distance is measured; the shooter should have a good grip on the firearm to control recoil.

g. The shooter test fires the firearm, using good shooting techniques to control recoil and not relying on the device to control recoil. All firearm safety rules will be followed. This does not apply when using the Ransom Rest.

h. The test patterns are packaged and transported back to the laboratory for direct comparison. The patterns should be interleaved with clean pieces of paper or cardboard to preven cross-contamination of the patterns.

i. Not all conditions will be known for testing, including environmental conditions and exact positions of the target, firearm, or people involved.

2. Comparison-quality photographs of the test patterns should be taken with a scale to document the patterns. The photographs may be used for comparison.

a. Describe and record the size, density, and components of the gunshot residue test patterns in the notes.

3. For the most part, white cotton or cotton blend fabric will work for most test patterns. A special occasion could arise where target material with similar properties (leather or suede) needs to be used.

a. If possible try to purchase a similar fabric with similar properties to use as the test pattern material. Several test shots should be made into the fabric to demonstrate that the purchased fabric can produce patterns similar to the pattern observed on the evidence garment.

b. If the material is not available and the attorneys in the case and the Firearms Supervisor agree, then the actual garment can be used for test patterns. This should only be in very rare cases.

D. Comparison.

1. The known test patterns may be compared directly to the questioned pattern prior to chemical enhancement.

2. Compare the size, density, and components of the GSR patterns between the test targets and the questioned item.

a. The components are soot, smoke (vaporous residues), searing or scorching, and smokeless powder particle distribution.

3. Bracket the questioned pattern with a smaller and a bigger test pattern. There should be a test pattern that is similar in size, density, and components to the questioned pattern. For example, with a 6-inch evidence pattern the 3-inch test pattern is smaller; the 12-inch test pattern is bigger, while the 6-inch test pattern is similar.

4. Chemical enhancement can also be done to the evidence and test patterns to gain additional information. Chemical enhancement procedures are listed below.

5. Photographs of injuries can be compared to test patterns if accurate photographs including a scale are available.

E. Chemical Enhancement.

1. The evidence and test targets can be chemically processed for the presence of nitrites and lead residues. We use the Modified Griess test and the Sodium Rhodizonate test to develop these patterns.

a. The location of the bullet holes and other landmarks should be marked on the test papers for orientation prior to testing.

b. Comparison-quality photographs should be taken to document the tests.

c. The same tests should be performed on both the evidence item and the test targets.

2. The Modified Griess test for nitrite compounds. Chemical reagent descriptions and preparation instructions are listed in section G.

a. Modified Griess test for porous surfaces:

i. Add a drop of acetic acid onto a sodium nitrite swab and mark the corner of the treated paper with the swab. Use this mark to determine if the treated paper is reacting to nitrites.

ii. Place the test pattern or evidence questioned-side down onto the treated surface (emulsion side) of the treated paper. Cover the test pattern or evidence with cheesecloth soaked in 15% acetic acid.

iii. Apply heat with an iron. The acetic acid steam will transfer the nitrites to the treated paper and produce an orange-colored pattern.

b. Modified Griess test for thick or non-porous surfaces:

i. Moisten the treated paper with the acetic acid, place the test pattern or evidence questioned side down onto the treated paper and apply heat with an iron to the back of the treated paper.

ii. Be careful not to make the papers too saturated with acetic acid because the patterns may be distorted.

iii. Be careful with the iron so that the item being tested does not burn or melt.

3. The Sodium rhodizonate test for lead. Chemical reagent descriptions and preparation instructions are listed in section G.

a. Sodium rhodizonate transfer method. The transfer method is most useful on dark colored or bloodstained items.

i. Place a mark with a known lead item on a piece of filter paper prior to moistening it with acetic acid.

ii. Place the moistened filter paper onto the test pattern or evidence.

iii. Place a sheet of dry filter paper on the moistened filter paper and apply heat with an iron

iv. Remove the filter papers and spray the acetic acid moistened filter paper with the sodium rhodizonate solution.

v. Lead, barium, and strontium reacting with the sodium rhodizonate will produce a pink to red color. This color lasts a few minutes and then begins to fade.

vi. Document the reaction with notes and photographs.

vii. The moistened filter paper may be sprayed with a tartrate buffer solution to reduce the background discoloration.

viii. The moistened paper may be sprayed with 5% HCl to confirm the presence of lead. The pink to red color will change to a purple and blue color if lead is present.

ix. Photographs should be taken soon after spraying to document the test.

x. The moistened filter paper can also be sprayed with a one step buffer and fixer solution of potassium chloride and HCl. This reduces the background orange color and turns the pink to red color to purple and blue.

b. Sodium rhodizonate direct method. The direct method can be used when testing light-colored clothing or non-porous items such as sheet metal, glass, or plastic.

i. Place a mark with a known lead standard on a piece of filter paper and spray the filter paper with the sodium rhodizonate solution to test the reagents.

ii. Spray the item in question with the sodium rhodizonate solution.

iii. Spray the item with the buffer-fixer solutions as needed.

iv. Document the tests with notes and photographs. Photograph immediately to document the result before chromophoric reactions fade.

4. Comparison of chemically enhanced patterns.

a. The chemically developed patterns should be compared to the evidence.

b. If the test patterns to not sufficiently bracket the evidence pattern, more test patterns may be made and chemically enhanced.

F. Conclusions.

1. Care must be taken when reporting conclusions for distance determinations. Many variables and factors need to be considered when making a conclusion.

a. Weather may disturb GSR. Strong wind may blow GSR particles away. Rain may wash away nitrites.

b. GSR can be unintentionally removed from evidence. Paramedics performing CPR or cutting garments may knock GSR off. Handling of evidence or the passage of time between the shooting and the evidence collection may cause GSR to fall off of the evidence.

c. Clothing saturated with blood or other chemicals can interfere with chemical tests.

d. Intervening objects, including folds in clothing, between the muzzle and the target can cause obstructed patterns.

e. Multiple shots may create multiple GSR patterns

f. The surface may not be conducive to the deposition of gunshot residue.

g. The evidence may have a curved or irregular surface that may distort the GSR pattern .

h. The shooter or target may have been moving while the GSR was deposited.

i. Photographs or other records of GSR patterns submitted for comparison may be inadequate.

j. The gun or correct ammunition is not available.

2. Other factors to consider when interpreting results.

a. Signs of damage on the evidence from muzzle blast for contact, near contact, or close range shots.

b. The maximum range at which soot or smoke can be deposited.

c. The maximum range at which smokeless powder particles or lead particles can be deposited.

3. Range of muzzle-to-target distance.

a. The conclusion should be reported as a range of distances - the closest possible distance the shot could have occurred to the farthest possible distance the shot could have occurred.

b. The range should include the most likely or most similar created target distance.

c. Stipulations or conditions should be noted in the conclusion such as:

i. Given no intervening objects.

ii. Given dissimilar ammunition.

iii. Not knowing the positioning of the subjects.

d. The range of conclusions can be stated as below:

i. Contact or near contact.

ii. 1 inch to x inches, where x could be any number greater than 1.

iii. Beyond x inches, where x is the maximum distance gunshot residues can be deposited.

iv. Unable to determine range because no residues were found, the evidence was incomplete, or the information derived from the evidence was inconsistent.

e. When no gun or ammunition is submitted, the distance may be generally reported as contact, close, greater than a few feet or beyond a range at which deposits would be expected. This report should also state that a more precise determination could be made with the actual weapon and ammunition.

4. Example Conclusions. Below is a list of examples of possible conclusions.

a. Hole with gunshot residue pattern:

"When the gun was fired, the muzzle-to-shirt distance was between 6 and 18 inches assuming no loss of gunshot residue or intervening objects".

"When the gun was fired, the muzzle was in contact or nearly in contact with the sweatshirt."

"When the gun was fired, the muzzle-to-face distance was between 1 and 6 inches, assuming no loss of gunshot residue or intervening objects."

b. Hole with bullet wipe only or evidence with no detectable residues:

"When the gun was fired the muzzle to shirt distance was a distance greater than 4 feet. At 4 feet and beyond no residue was found on the test targets. This conclusion assumes no loss of gunshot residue or intervening objects."

G. Chemical Reagent Preparation.

1. Good laboratory practice dictates the use of appropriate precautions to prevent inhalation, ingestion, or skin contact with chemicals, whether in the preparation or use of reagents and test media. Ventilation, protective gloves, and hand washing are definitely recommended. Storage of prepared chemicals and test media should be such that no outside contamination or inter-contamination is possible. Storage containers should be kept sealed until the contents are needed.

2. Directions for reagent preparation are listed below. Weights and volumes may be scaled as necessary.

3. Modified Griess Reagents and treated paper.

a. Treated paper for Modified Griess tests.

i. Mix 0.5 g of sulfanilic acid in 100 ml of distilled water.

ii. Mix 0.28 g of alpha-naphthol in 100 ml of methanol.

iii. Combine equal volumes of the above solutions.

iv. Pour the combined solution into a non-reactive tray. Briefly submerge sheets of glossy photographic ink jet paper into the solution.

v. Set the sheets aside to dry on a clean, uncontaminated surface.

vi. Place the remaining solution in a sealed storage container.

vii. The paper can be stored in a sealed plastic bag.

b. Nitrite test swabs.

i. Mix 0.6 g of sodium nitrite in 100 ml of distilled water.

ii. Soak the cotton-tipped ends of the swabs in the solution. About 100 swabs can be soaked in this solution.

iii. After the swabs are dry they should be stored in a sealed container.

c. 15% acetic acid solution.

i. Mix 150 ml of glacial acetic acid with 850 ml of distilled water.

ii. Store in a sealed container.

4. Sodium rhodizonate reagents.

a. Sodium rhodizonate solution.

i. Prepare a saturated solution of sodium rhodizonate in distilled water.

ii. The solution is saturated if slight sediment is seen on the bottom of the beaker after stirring with a stirring rod.

iii. Make only enough solution for immediate use and do not store the solution. The solution degrades within one hour.

b. Tartrate buffer solution (pH 2.8).

i. Dissolve 1.9 g of sodium bitartrate and 1.5 g of tartaric acid in 100 ml of distilled water.

ii. Use a hot plate and magnetic stirrer to mix the solution in a reasonable period of time.

iii. Store the solution in a sealed container. Contaminated containers, contaminated water, or containers left open may lead to a cloudy solution. While a cloudy solution do not interfere with the specificity or reliability of the test, they do may clog the reagent spraying equipment.

c. 5% hydrochloric acid solution.

i. Combine 5 ml of concentrated hydrochloric acid with 95 ml of distilled water. Remember to gently pour the acid into the water to preclude potential spattering of undiluted acid.

ii. Store the solution in a sealed bottle.

d. Potassium chloride with hydrochloric acid buffer and fixer solution.

i. Dissolve 0.75 g of potassium chloride in 50 ml of distilled water.

ii. Mix 5 ml of hydrochloric acid in 295 ml of distilled water. Remember to add the acid to the water.

iii. Mix 25 ml of the potassium chloride solution and 67ml of the hydrochloric acid solution to make a buffer solution with pH 1.0.

iv. Store the solution in a sealed container.

5. Reagent References:

Dillon, J., The Modified Greiss Test: A Chemically Specific Chromophoric Test For Nitrite Compounds in Shotgun Residues, AFTE Journal, Vol. 22, No. 3, July 1990, pages 243-250.

Dillon, J., The Sodium Rhodizonate Test: A Chemically specific Chromophoric Test for Lead in Gunshot Residues, AFTE Journal, Vol. 22, No. 3, July 1990, pages 251-256.

Dillon, J., A Protocol for Gunshot Residue Examinations in Muzzle-To-Target Distance Determinations, AFTE Journal, Vol. 22, No. 3, July 1990, pages 257 - 274.

Nichols, R. Gunshot Proximity Testing: A Comprehensive Primer in the Background, Variables and Examination of Issues Regarding Muzzle-to-Target

Distance Determinations, AFTE Journal, Vol. 36, No. 3, Summer 2004, pages 184-203.

Schous, C., A Sequence of Chemically Specific Chromophoric Tests for Nitirite Compounds, Copper, and Lead in Gunshot Residues, AFTE Journal, Vol. 31 No. 1, Winter 1999, pg. 3-8.

H. Shotgun Pellet Patterns. Due to the dispersion of pellets in flight, the shot pattern can be used in distance determinations for shotguns. Other than the pellet pattern interpretation the rest of the examination is performed as above.

1. Examine the shot pattern in the garment, victim, wall, or other evidence items and determine:
    a. The presence or absence of gunshot residue, sooting, shot pellets, shotshell components, and buffer material.
        i. Components can be wads, shotcups,
        ii. Buffer material is typically small pieces or plastic used to fill space between the pellets in the shot shell.
        iii. Pellets may be made of lead, steel, bismuth, tungsten, and other materials.
    b. Dimensions of the pattern.
        i. The diameter of the circular pattern represented by the evidence if the shot was fired perpendicularly into a flat surface.
        ii. Effects from intervening objects.
2. Fire test patterns at clean white paper at known distances to establish relationship between shot pattern diameter and muzzle-to-target distance.
    a. A minimum of three patterns are needed for bracketing, one the size of the evidence pattern, one larger and one smaller.
    b. Use the shotgun and ammunition in question.
3. Use the test pattern diameter vs. muzzle to target distance to determine the distance the evidence pattern was fired. The error can be up to 30% unless multiple shots are fired at each distance to establish the variation in pattern diameter and density.
4. An optional test pattern could be fired at the established range with the target rotated to the angle of entry into the victim, wall, etc.
5. An old rule of thumb is that pellet patterns spread one inch for every one yard they travel when fired from a cylinder bore shotgun. Due to the range of chokes and the variety of new shotcups and loading techniques now available, this general rule can be misleading. Test firing is the best way to make a determination.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 09/09/2019	**NUMBER:** CE.16 - Ballistic Imaging
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Ballistic Imaging	

I. POLICY The Integrated Ballistic Identification System (IBISTRAX-HD3D) via the National Integrated Ballistic Information Network (NIBIN) allows the Comparative Evidence Unit to compare firearms evidence from many different cases.

A. Background

1. IBISTRAX-HD3D is a digitized computer database and acquisition platform for the firing pin impressions, breechface marks, and ejector marks found on cartridge cases. Acquired items are added to the database and every new acquisition is correlated against items previously entered into the database.

2. IBISTRAX-HD3D functions on NIBIN and allows the laboratory to search for potential associations within and outside of the county. If needed, a national search or out-of-state search can be performed. The images are correlated by servers at ATF (Bureau of Alcohol, Tobacco, Firearms and Explosives) and may be reviewed by the NIBIN National Correlation and Training Center (NNCTC) or the laboratory. The NNCTC is responsible for notifying the agency of any NIBIN Leads located by the NNCTC through notification emails.

B. Ballistic Imaging Requests

1. All firearms evidence submitted to the lab will be entered into IBISTRAX-HD3D if suitable.

   a. Examples of non-suitable firearms include: revolvers, derringers, shotguns, and rifles other than .223 Remington (5.56mm, or compatible) and 7.62x39mm caliber. Exceptions may be made by the unit supervisor, a manager, or the Chief.

   b. IBISTRAX-HD3D does not support bullet entry.

2. The examiner will determine if the evidence can and should be entered into IBISTRAX-HD3D based on several factors:

   a. Safety and functioning of the firearm.

   b. Extent of damage or corrosion to cartridge cases. Undamaged cartridge cases are preferred for entry.

   c. Rarity or uniqueness of the firearm or ammunition.

3. All firearms submitted for Ballistic Imaging will follow policy CE.03.

4. Cartridge cases will be sorted into groups based on an evaluation of class characteristics.

    a. The stereoscope is typically used (with direct and oblique light) to sort fired components. A comparison microscope with oblique light should be used when examining multiple groups of similarly-marked items based on class characteristics (e.g. eight Remington 40 S&W cartridge cases and nine Winchester 40 S&W cartridge cases) or when the markings are not straightforward.

        i. If needed, another analyst may be consulted to confirm the grouping based on class characteristics.

    b. The class characteristics evaluated will be recorded with photographs, notes, and/or worksheets to document the characteristics used for sorting.

5. An abbreviated safety inspection will be performed on submitted firearms. Trigger pull measurements do not need to be taken.

    a. At least two test fires will be collected and treated as evidence. These test fires will generally be maintained in the laboratory to expedite follow-up identification requests.

C. Operation

1. IBISTRAX-HD3D operations

    a. Refer to the latest edition (INSCE.05) of the BRASSTRAX and MATCHPOINT Training Guides from Ultra Electronics / Forensic Technology for specific information on operating the IBISTRAX-HD3D system.

D. Data Entry -- Clarification of standard NIBIN procedures specific to the Contra Costa County Sheriff Forensic Services Division

1. Case identification codes: "CCC" followed by the laboratory case number including request suffix (if applicable). The Contra Costa County Crime Laboratory has been assigned "CCC" as its database location code.

    a. For example, laboratory case # 07-123-1 would be entered as "CCC07-00123-1".

2. Exhibit identification codes: "EX" followed by a dash and the item number.

    a. For example, a fired cartridge case, item #12 would be entered as "EX-12".

3. Test-fire identification codes: "TF" followed by the test fire number followed by a / and the agency or lab item number, or vice versa.

    a. For example, a test-fired cartridge case #1 from a firearm (item #3) would be entered as "TF1/3" or EX-3/TF-1.

4. All other information is entered according to the latest acquisition protocol.

    a. INSCE.04 is the latest guide for acquisition.

    b. The key orientation guideline is to orient the firing pin drag mark at 3 o'clock (if present).

i. If no firing pin drag mark is present, orient the ejector mark in the northern hemisphere. If there is no ejector mark, orient the extractor mark in the southern hemisphere.

c. The next orientation guidelines are to orient parallel breechface marks horizonally, arched breechface marks with the peaks upwards, and cross-hatched lines to intersect diagonally.

5. Correlation reviews:

a. The NNCTC will typically perform NIBIN correlations and will notify the laboratory and the agency of any NIBIN Leads. If the NNCTC generates a NIBIN Lead, the laboratory is not required to review it.

b. If the laboratory performs the correlation, the examiner will compare images from the correlation list to the acquired item. If images with similar marks are found such that the primary examiner feels a NIBIN Lead is justified, a criminalist trained in identifications will review the images and document their agreement with the primary examiner's conclusion on the printout showing the two items.

i. The extent of the correlation review by an examiner is the top 30 candidates using rank sort. The candidate list for any correlation done by the laboratory will be included in the case notes.

c. The submitting agency will decide if an identification is needed to confirm the Lead. The lab may request the identification be performed under exigent circumstances.

d. Upon confirmation by traditional optical microscopy, the Lead will be marked as a confirmed match in the database.

6. The evidence is returned to the submitting agency as described in Division Policy.

E. IBISTRAX-HD3D Training and Competency

1. IBISTRAX-HD3D training may be provided by Ultra Electronics Forensic Technology, Alcohol, Tobacco and Firearms (ATF), or other qualified personnel.

a. The trainer provides hands-on practical training with a sufficient number of samples to enter into IBISTRAX-HD3D. The training they provide is required for all users of the IBISTRAX-HD3D system. After successful completion of the training, the user is provided a certificate to document the successful completion of training.

b. The laboratory will use this training and these provided tests as the competency test (test of sufficient unknowns and test of knowledge) for IBISTRAX-HD3D. The training and tests will be documented in LIMS.

F. Reports

1. A Ballistic Imaging report will be produced for every case submitted for entry, whether as a stand-alone report or as part of another report. A separate Ballistic Lead notification will document any NIBIN Leads located by the NNCTC. If the laboratory performs the correlation, the results may be included in a single report or with a separate Ballistic Lead notification.

a. The NNCTC NIBIN Lead documentation will be incorporated as part of the notes for Ballistic Lead notifications.

b. The submitting agency will need to submit an identification request if they want the NIBIN Lead confirmed.

2. The report will include the extent of the database searched (e.g. Zone 4), the frequency of searches, and the duration of the search.

G. Individual Characteristic Database (ICD): IBISTRAX-HD3D is an ICD and images in the database are treated as reference material.

1. All images are uniquely identified, based on case number, item number, and test-fire number if applicable.

2. The test-fired cartridge cases imaged by IBISTRAX-HD3D are treated as evidence.

3. All images are protected from loss, cross transfer, contamination, and deleterious changes. Periodic backups of the hard drives storing the database and the procedures for handling and packaging of the test fires assist in this protection.

4. Access to the images is controlled and only those individuals using the IBISTRAX-HD3D will have authorization to access them. IBISTRAX-HD3D operates on a secure network that is managed by ATF. It requires a password to access.

H. Removal of entry

1. Upon specific request from an agency, the laboratory may remove an entry from the database. The laboratory will issue a report that the entry was removed.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 04/24/2019	**NUMBER:** CE.17 - Toolmark Comparisons
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Toolmark Comparisons	

I. POLICY Tools and items with toolmarks may be submitted to the laboratory to determine if a specific tool was responsible for creating the toolmarks.

A. Toolmark Comparisons.

1. General Information.

a. Evidence will usually consist of an object with a toolmark or a cast of a toolmark and a suspected tool. All trace evidence collection and latent fingerprint processing should be completed prior to toolmark examination.

b. Note: Never place a tool in contact with a toolmark as this may permanently change the tool and toolmark.

c. Firearms comparisons are a subset of toolmark comparisons and the overall procedures are similar.

d. Limitations.

i. Suspected tools should be obtained as soon as possible after the evidence toolmark was made. The working surfaces of the tools change through use or alteration and thus the toolmarks made with that tool will change.

ii. Tools and toolmarks can be damaged by rust or corrosion. Therefore, evidence should be collected as soon as possible and stored properly to minimize rust or corrosion.

2. Initial documentation. The tool, if submitted, along with the questioned toolmarks shall be described in the notes or worksheets prior to comparison.

a. This documentation includes the evaluation of the unknown item(s) to identify characteristics suitable for comparison prior to comparison to the known item.

b. This examination may include an assessment of class characteristics, potential subclass influence, and/or potential for identification.

i. This documentation may be accomplished with notes, sketches, photographs, or a combination of these methods.

1. The following are examples of this process: noting a well-striated, linear toolmark approximately 1/4-inch wide with well-defined margins; two sets of parallel, tooth-like impressions with a cross-hatched texture on opposing sides of the same evidence item; a cut lock shackle with a cut area having a tented profile, with one exposed surface having a uniformly striated appearance and the other having a partially straited and partially irregular appearance.

ii. Nothing in this section prevents an analyst from later examining areas not evaluated at the initial documentation stage, should it be necessary.

3. Comparison procedure.

a. Document the condition of the evidence as received. Record the presence or absence of trace evidence using notes, sketches and/or photographs. Collect and package any trace evidence that is present either on the evidence toolmarks or the submitted tools.

b. Mark the evidence or proximal container with permanent identification. Do not deface evidence and do not alter the toolmarks or the working surfaces of the tools.

c. Examine the evidence toolmarks and determine:

i. If there is sufficient individual detail present for comparison and possible identification purposes.

ii. The class characteristics of tools that may have been used including:

1. Single bladed, opposed jaws, impact, etc.

2. Length and width of blades

3. Number and shape of teeth

iii. Are the toolmarks the result of compression, motion producing striations, or both?

iv. Document details of the toolmark using notes, sketches and/or photographs.

d. Examine the submitted tool and determine the following (Record your findings using notes, sketches and/or photographs):

i. The class characteristics of the tool.

ii. The presence or absence of subclass characteristics.

iii. If the tool produces unique toolmarks.

iv. If there is evidence as to how the tool was used.

v. If the tool has any damage to the working edges.

vi. If there is any evidence of which surface on the tool was the working surface.

vii. If there are physical limitations that require the tools to be used in a certain manner, thus eliminating some tools or restricting which part of

the tool could make the marks.

viii. How the tool was used can help with reconstruction. For example, from what side was the fence cut?

ix. How was the tool manufactured? Manufacturing processes determine possibilities of uniqueness. Cast tools made from the same mold may make similar toolmarks unless the working surface has enough damage to make it unique. Hand finishing of the working surface may make tools unique. Grinding, filing, sanding of the working surface may make tools unique.

e. Make test marks.

i. If the class characteristics of the tool and the toolmark agree, make testmarks in a soft material like lead.

ii. The goal is to prepare a representative testmark without changing the features of the tool. The test material may eventually need to be as hard as the questioned material in order to produce a representative toolmark. In these cases, the test materials of progressive hardness should be tried until satisfactory test marks are obtained. Retain all test marks made with hard material since testing with this material may alter the tool working surface. Keep a record of the sequence of the test marks made (T-1, T-2, etc) and document how each test series was prepared. Place adequate identification marks on all test marks.

iii. Forensic Sil or Mikrosil casts of the toolmark and testmarks may be used for comparison when necessary. Conditions that could lead to this are:

1. The object with the working surface or toolmark is too big to fit on the stage of the microscope or is too big to collect.

2. The working surface or toolmark is in a place that cannot be examined easily.

3. The original marks are on a surface that is too reflective to resolve good detail when viewed through the microscope with direct lighting.

1. Mark the casts to match the series of test marks they replicate (T-1, T-2, etc.) and place adequate identification marks on each cast.

iv. Use precautions when creating test marks. Tools can be heavy and have sharp edges. Follow safety procedures when producing test marks.

f. Compare the toolmarks.

i. Compare the test marks to each other to determine if the toolmarks are reproducible. Note which part of the tool was the working surface used, the orientation of the tool to the working surface, and the direction of force used on the tool.

ii. Compare the test toolmarks with the evidence marks.

iii. Consider making a sketch of the orientation of the questioned and test marks, or casts made of them, relative to the stages of the comparison microscope. This helps keep track of which comparisons have been made.

iv. Take low and high power photographs of any matching detail.

v. Count consecutive matching striae (CMS) runs, if applicable, and record these in the notes.

vi. Record whether the toolmarks appear to be two or three-dimensional as it pertains to the quantitative consecutive matching striae (QCMS) criteria.

4. Conclusions.

a. Conclusions should follow the same convention already discussed in Section CE.04 Case Documentation and Conclusions.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 09/10/2019	**NUMBER:** CE.18 - Footwear and Tire Print Comparisons
	RELATED ORDERS:	
APPROVED BY: Eric Collins, Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Footwear and Tire Print Comparisons	

I. POLICY Questioned footwear and tire impressions can be compared to known shoes and tires to determine if they are associated.

A. Introduction

1. Footwear and tires act like tools when they leave impressions in or on other materials. Because the treaded surfaces of shoes or tires are subject to wear and damage, they may contain unique features that may be observed in impressions on materials that they come into contact with. This is the basis for footwear and tire print comparisons.

B. Materials and Equipment (unless specified in this document, refer to manufacturer's instructions or CS.10 for procedures for use)

1. Assorted powders including, but not limited to, fingerprint powders.
2. Media for making test impressions and overlays for comparison, including adhesive lifters (e.g, Handiprint paper) and transparency sheets (including roller transport clean-up film)
3. Photocopier or computer scanner
4. Camera
5. Measuring equipment (drafting dividers, rulers)
6. Simple magnifying lens
7. Adobe Photoshop
8. Reference data (*Tread Design Guide*, online sources)

C. Footwear and Tire Impression or Print Examination Procedure

1. Evaluation

a. Evidence shall be documented and described in the case notes.

b. If photographs are taken by the examiner for comparison purposes, they should include a scale and pertinent case information.

c. When photographs of footwear or tire tread evidence are submitted, they should be evaluated to determine the limitations of any comparison. Generally, they should be enlarged to 1:1 scale if suitable for comparison.

d. The nature of the surface material upon which the print or impression was produced should be determined, if possible.

e. When appropriate, trace evidence from footwear or tires should be documented, preserved, and collected for analysis.

2. Digital Enhancement

a. Adobe Photoshop

i. Adobe Photoshop is a software program used to resize or superimpose images of footwear or tire impressions for comparison, to annotate digital images, and to prepare images for demonstrative purposes (e.g., examination notes, court displays). Digital image enhancements include any process that changes the brightness, contrast, or color of any area of an image. The term "digital enhancement" does not include changes to images that do not alter the content or do not increase visibility.

1. The following examples are common uses of Photoshop that require general documentation.

1. Cropping

2. Annotations

2. When image enhancements are made in Photoshop, screenshots of the final settings of each filter will be recorded in the technical record. The technical record should include all settings so that a different examiner with the same level of training can reproduce the enhancements. Enhancements will be made to a working copy only. The following are examples of enhancements that can be done in Photoshop that need to be documented in the technical record:

1. Contrast/brightness adjustments

2. Rotating

3. Inverting or changing the color appearance of an image

4. Diminishing/eliminating background colors or patterns to improve visualization of a impression

5. Re-scaling images to natural size (1:1)

1. There are a few techniques for using Photoshop to re-scale an image to 1:1 by using a scale depicted in the image for reference. Any such technique may be used, as long as an acceptable resolution of potential individual characteristics is retained and the depicted scale in the final image is checked with a comparable real-world scale prior to use for comparison.

3. The use of Photoshop to perform any enhancements described above requires identifying the use of Photoshop as a method in the report.

1. Example language: "I enhanced the brightness and contrast of the submitted evidence images using Adobe Photoshop's Curves and Smart Sharpen filters and scaled them to natural size (1:1 scale) using Photoshop's Scale tool."

4. Planned maintenance and intermediate checks are not necessary to ensure the performance of this equipment.

3. Comparison

a. Prior to comparison of the unknown to the known, the unknown shall be evaluated to identify characteristics suitable for comparison.

i. This evaluation may be accomplished with notes, sketches, photographs, or a combination of these methods.

1. The evaluation process need only assess the quality of the questioned print(s) or impression(s) and potential areas of use for comparison; every discernible class and individual characteristic present in the unknown does not need to be individually inventoried and evaluated.

2. For clear and well-defined questioned print(s) or impression(s), the evaluation process may be documented with a simple statement in the notes regarding the overall quality and detail present.

3. Nothing in this section prevents an analyst from later examining areas not evaluated at the initial evaluation and documentation stage or even changing their initial analysis, should it be necessary, as long as any such changes are documented.

b. Class characteristics of the evidence print or impression are compared to the known shoe or tire.

i. If class characteristics are in agreement and the evidence print or impression has sufficient detail, then individual characteristics can be evaluated and compared.

ii. When making initial examinations, the examiner should be aware that additional wear of the exemplar shoe or tire may have occurred since the evidence was made. The addition wear may result in alterations of the class and individual characteristics of that shoe or tire.

iii. Test prints and impressions are used for comparison to evidence prints or impressions.

c. Individual characteristics - examiners should use their training and knowledge of manufacturing methods toward evaluating marks for their individuality.

d. A number of useful techniques are available for the preparation of test prints, including:

i. The sole of a shoe is coated with latent fingerprint powder (using a fingerprint brush) or inked (using a roller). A test print is then produced by pressing the sole onto paper or a transparent sheet. If

needed, clear acrylic lacquer spray may be used to preserve test prints. Roller transport film and adhesive Handiprint paper may also be used.

1. Roller Transport Clean-Up Film/Handiprint Technique for Making Test Footwear Impressions
    1. Roller transport film is a clear photographic film used to clean photographic equipment. Although supplies of this material are now becoming scarce due to the demise of the photographic film industry, it offers the advantage of producing a very clear transparency (with no cover sheet) and an excellent recording of fine detail in test impressions.
        1. Lightly dust the sole of the test shoe with fingerprint powder.
        2. Place a sheet of butcher paper on floor, followed by a towel and another sheet of paper.
        3. Get a sheet of roller transport film moderately wet with water using the sponge side of a window squeegee.
        4. Wipe off the excess water with the rubber side of the squeegee.
        5. Place the film (wet side up) on the top sheet of paper on the floor.
        6. Wearing the shoe, step onto the film to make a test print.
            1. Both static and rolled prints may need to be made.
        7. Immediately make a second test print onto a sheet of white adhesive Handiprint paper.
            1. Use a rubber fingerprint roller to press the Handiprint paper onto the entire surface of the shoe shoe before removing.
            2. After removing Handiprint paper from shoe, apply a clear cover sheet over the test impression. Use the fingerprint roller as the cover sheet is applied to minimize the entrapment of air bubbles between the two sheets.
        8. Label the test impressions with lab number, date collected, analyst's initials, which shoe (left or right), and how impressions were made (e.g., static or rolled).
        9. The Handiprint test print will usually be darker than the one made with roller transport film.

ii. Tire test prints should be made with the tires on the vehicle whenever possible. Roll the entire circumference of the inked or powdered tire over a suitable media (e.g. paper, transparent sheets, foam board, or cardboard) on a smooth, hard surface.

iii. If the evidence print is in the form of an electrostatic dust print lift or recovered using adhesive lifters, the examiner may make test prints using the electrostatic print lifter or adhesive lifters.

iv. It is helpful to make multiple sets of test prints with varying densities of pigment (light and dark) for comparison with the questioned print(s).

e. If a transparency or photograph is used, the examiner should compare it to the original item to ensure accuracy. Scales should be included whenever possible.

f. Test impressions may be produced by making an impression of the evidence footwear or tire into a similar medium as the questioned print. Casts of the test impressions may then be prepared.

g. Both test and evidence prints and impressions should be photographed using appropriate lighting. A scale and appropriate case information should be included in the photograph.

D. Interpretation

1. Intercompare test prints and impressions for reproducibility of class and individual characteristics prior to comparing evidence prints and impressions.

2. Document significant similarities and differences using appropriate notes, sketches, and photographs.

3. Transparent overlays are often beneficial when comparing test and evidence impressions. Due to differences in surfaces and preparation, the alignment of all features may not be possible. Differences need to be identified and explained before reaching a conclusion.

4. Evaluate the significance of similarities or differences in the class and individual characteristics between the evidence and test prints or impressions.

5. Distinguish between class and individual characteristics before rendering any conclusions regarding an identification, inclusion, or elimination. Some class characteristics to be considered are: tread pattern, wear, size of the pattern elements, and overall size. Some individual characteristics to be considered include the location, orientation, shape, and apparent randomness of any post-manufacture defects.

a. The most important aspects to the evaluation of individual characteristics are the clarity and uniqueness of the mark.

6. Conclusions.

a. These conclusions do not have exact requirements. The examiner must use his or her training and experience to determine the significance of agreement or disagreement that is present between the evidence print and the suspect footwear. The basis for the final conclusion will be documented in the test record and the report.

b. The appropriate qualification to the significance of the association will be included in the report.

c. The Scientific Working Group for Shoeprint and Tire Tread Evidence (SWGTREAD) range of conclusions may be used:

i. Lacks sufficient detail

1. No comparison was conducted: the examiner determined there were no discernible questioned footwear/tire impressions or features present. This opinion applies when there is insufficient detail to conduct any comparison.

1. In the opinion of the examiner, an impression was either not present or the impression lacked sufficient detail for any comparison.

2. A comparison was conducted: the examiner determined that there was insufficient detail in the questioned impression for a meaningful conclusion. This opinion only applies to the known footwear or tire that was examined and does not necessarily preclude future examinations with other known footwear or tires.

1. In the opinion of the examiner, the impression lacked sufficient detail for a meaningful conclusion regarding the particular known footwear outsole or tire tread.

ii. Exclusion

i. This is the highest degree of non-association expressed in footwear and tire impression examinations. Sufficient differences were noted in the comparison of class and/or randomly acquired characteristics between the questioned impression and the known footwear or tire.

i. In the opinion of the examiner, the particular known footwear or tire was not the source of, and did not make, the impression.

iii. Indications of non-association

i. The questioned impression exhibits dissimilarities when compared to the known footwear or tire; however, the details or features were not sufficiently clear to permit an exclusion.

i. In the opinion of the examiner, dissimilarities between the questioned impression and the known footwear or tire indicated non-association; however, the details or features were not sufficient to permit an exclusion.

iv. Limited association of class characteristics

i. Some similar class characteristics were present; however, there were significant limiting factors in the questioned impression that did not permit a stronger association between the questioned impression and the known footwear or tire. These factors may include but were not limited to: insufficient detail, lack of scale,

improper position of scale, improper photographic techniques, distortion or significant lengths of time between the date of the occurrence and when the footwear or tires were recovered that could account for a different degree of general wear. No confirmable differences were observed that could exclude the footwear or tire.

i. In the opinion of the examiner, factors (such as those listed above) have limited the conclusion to a general association of some class characteristics. Other footwear or tires with the same class characteristics observed in the impression are included in the population of possible sources.

v. Association of class characteristics

i. The class characteristics of both design and physical size must correspond between the questioned impression and the known footwear or tire. Correspondence of general wear may also be present.

i. In the opinion of the examiner, the known footwear or tire is a possible source of the questioned impression and therefore could have produced the impression. Other footwear or tires with the same class characteristics observed in the impression are included in the population of possible sources.

vi. High degree of association

i. The questioned impression and known footwear or tire must correspond in the class characteristics of design, physical size, and general wear. For this degree of association there must also exist: (1) wear that, by virtue of its specific location, degree and orientation make it unusual and/or (2) one or more randomly acquired characteristics.

i. In the opinion of the examiner, the characteristics observed exhibit strong associations between the questioned impression and known footwear or tire; however, the quality and/or quantity were insufficient for an identification. Other footwear or tires with the same class characteristics observed in the impression are included in the population of possible sources only if they display the same wear and/or randomly acquired characteristics observed in the questioned impression.

vii. Identification

i. This is the highest degree of association expressed by a footwear and tire impression examiner. The questioned impression and the known footwear or tire share agreement of class and randomly acquired characteristics of sufficient quality and quantity.

ii. In the opinion of the examiner, the particular known footwear or tire was the source of, and made, the questioned impression.

Another item of footwear or tire being the source of the impression is considered a practical impossibility

7. Verification of Conclusions

a. All conclusions with comparison conclusions shall be verified by another qualified examiner except for eliminations based on class characteristics. The verifier will initial and date the test record to document their agreement with the original examiner's conclusion.

b. Verification should be done as contemporaneously as possible to the original examiner performing their examination.

c. The verifier should not be told of the original examiner's conclusion. The original examiner should only provide the verifier with contextual information (e.g., identity of items being compared).

d. The verifier must reach the same conclusion as the examiner. Any differences in opinion should try to be resolved by the examiner and verifier. The Comparative Evidence Supervisor can arbitrate situations where agreement cannot be reached. The supervisor can decide in favor of either conclusion or send the evidence to another laboratory for arbitration if needed.

E. Class Characteristic Database Searches (Make/Model Determination)

1. Footwear

a. The tread designs of many shoes are proprietary to a particular footwear manufacturer/marketer and the resultant footwear impression may be readily recognizable as such, either based on the examiner's personal knowledge or trademarks that have been incorporated into the tread design itself. In some cases, the manufacturer/marketer may be easily determined, but the specific style of shoe is to be determined. Although some subscription-based forensic databases for footwear tread designs are available (see below), there are also numerous other resources that may be used to search for the manufacturer/marketer associated with a particular footwear impression from a crime scene, including:

i. Internet resources (e.g., Google image search, collector websites)

1. Some footwear brands and styles (e.g. Nike Air Jordan) are highly sought after by collectors, and therefore a great amount of information about these shoes (including photographs of the tread design, release date, colorways, etc.) can often be found on various websites.

ii. Shoe stores

1. Sometimes useful information can be gained by visiting local shoe stores and directly observing the tread patterns associated with their current stock of shoes on display.

iii. Direct contact with manufacturer/marketer

1. Some manufacturers, such as Nike, employ a representative to act as a liaison for law enforcement agencies due to frequent problems with their products being counterfeited. These representatives can provide a wealth of information regarding a

questioned shoe impression, including production and distribution details.

iv. Electronic databases (e.g., Foster + Freeman's SICAR) may also be used to conduct a search, as available.

v. The resource used must be clearly documented in the notes.

b. Any potential candidates reported on the basis of a preliminary search of reference guides or databases (without confirmation by the manufacturer) must be reported with a statement which indicates that the results are not all-inclusive of every shoe manufactured and any suspected shoe should be submitted for examination.

2. Tires

a. Tread Design Guide

i. The primary resource for conducting searches of tire tread designs is the *Tread Design Guide*, published by Tire Guides, Inc. These guides are published annually and consist of a compilation of thousands of photographs of tread designs subdivided into passenger, light truck, medium and large truck, off-road, agricultural, ATV and motorcycle, and retread sections.

1. The photographs of the tires in the *Tread Design Guide* are provided to the publisher by the various manufacturers each year and represent about 95% to 98% of the tires available on the market.

2. Approximately 400 to 500 new tire designs are placed into the *Tread Design Guide* each year.

3. Photographs of tread designs featured in prior years that are no longer being manufactured are removed from the *Tread Design Guide* in subsequent years.

ii. Using the printed editions of the *Tread Design Guide* to search for a tire impression recovered from a crime scene involves visually searching, page-by-page, every photograph contained in each annual edition until a likely candidate is found.

1. Since the *Tread Design Guide* is published annually, when searching for a tread design a decision must be made regarding which year's guide will be used to begin the search.

1. Based on a crime scene impression alone, the examiner will not likely know if the vehicle that made the impression was new or old and thus would not know if it was equipped with original equipment tires or replacement tires.

2. Some tire designs are made for many years and thus appear over and over again in each year's edition, while other tires are only made for one year and only appear in that single year's edition.

3. The choice of what year to begin the search with should be well reasoned based on the circumstances of the case.

For example, if the crime occurred in 2017, then the search could begin with the 2017 guide or earlier years. If the search is being conducted relative to a cold case that occurred several years prior, then only guides from the year of the crime and earlier would need to be searched.

4. Searching for a tire design through the *Tread Design Guide* is a procedure that often requires searching several years' editions before finally locating an appropriate candidate.

2. Since the *Tread Design Guide* includes more than one category of vehicle (e.g., passenger, light truck, medium truck, etc.), a decision must be made for which category to search first, even though it is not usually known what type of vehicle made the scene impression.

    1. Most vehicles involved in a crime are either passenger vehicles or light trucks.

    2. The size of the impression, any available track measurements, and even possibly witness information, may provide clues as to which category should be searched first.

3. From the crime scene impression, select a primary feature, such as the number of circumferential grooves, as well as a couple of secondary features that appear to be the most reliable for the search.

    1. When using a photographed tire impression from a crime scene to conduct the search, it is helpful to reverse the image so the design features will appear in the same orientation as the tire photographs in the *Tread Design Guide*.

    2. A secondary feature might be something as obvious and simple as an angled transverse groove or the features of the center rib.

    3. As the section is searched, tires that do not contain the primary feature can be skimmed over; when tires containing the primary feature are found, the secondary features can be used to further narrow down the choice of potential candidates.

    4. As tires wear down, their design features change. Be aware of this possibility and take it into consideration when selecting the primary and secondary features for the search. Try to select features that are less likely to change as the tire wears (i.e., larger design elements of the tread pattern). Try to avoid smaller features, such as sipes and transverse grooves, which may have an altered appearance from when the tire was new.

    5. If a tire is found in the *Tread Design Guide* that is almost an exact match but contains minor differences, contacting

the company who makes the similar tire may help determine if the tire is theirs. If it is not, the company representative may be aware of whose design it is.

b. Tread Assistant

i. *Tread Assistant* is a searchable electronic database (published on a CD-ROM) of the *Tread Design Guides* for the years 1990-2010. Although it is no longer updated or supported by Tire Guides, Inc., *Tread Assistant* is still a useful search tool for tread design data for the years it covers and can be used to supplement searches conducted for other years using the printed guides.

ii. The database provides ways to search for specific tire designs based on the category of tire (e.g., passenger, light truck, etc.), the number of circumferential grooves, (0 to 8), and other criteria.

iii. Since the database contains several years worth of designs, all of these years are being searched simultaneously, saving considerable effort over searching the printed guides for these years.

c. OEM Tire Size Guide

i. The *OEM* [Original Equipment Manufacturer] *Tire Size Guide*, published by Tire Guides, Inc., was first published in 1996 and provides information regarding tire brands and sizes used as original equipment on new vehicles.

1. Each year's edition covers vehicles for the present year and approximately 10 years prior as well.

2. This resource also provides an index of tire sizes and what vehicles used those sizes.

3. The *OEM Guide* also includes a section that lists vehicles by model year and then lists the brands and lines of tires as well as the sizes that were used on each new car or truck.

4. Under certain circumstances, it may be possible to cross-reference the informatuion obtained from the *Tread Design Guide* with the *OEM Guide* in order to determine what specific make and model of vehicle likely made a tire impression from a crime scene.

d. The *Tire Design Guide, Tread Assistant,* and *OEM Tire Size Guide* should always be considered as guides only, thus any information should be confirmed with the respective tire company or vehicle's manufacturer, depending on case circumstances. The resource used must be clearly documented in the notes.

i. Any potential candidates reported on the basis of a preliminary search of reference guides or databases (without confirmation by the manufacturer) must be reported with a statement which indicates that the results are not all-inclusive of every tire manufactured and any suspected tire should be submitted for examination.

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 06/14/2019	**NUMBER:** CE.34 - Uncertainty of Measurement
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ABAB: 7.6**	
CHAPTER: Uncertainty	**SUBJECT:** Uncertainty of Measurement	

I. Policy: The Comparative Evidence Unit has assessed the estimated uncertainty for the firearm length standards, trigger pull determinations, and distance determinations.

A. The uncertainty for reported overall and barrel length measurements is indicated in the *Uncertainty Budget for Reported Overall Firearm Lengths* (UM.06), the *Uncertainty Budget for Reported Barrel Lengths* (UM.07), the *Uncertainty Budget for Trigger Pulls* (UM.08), and the *Uncertainty Budget for Distance Determinations* (UM.09).

B. The Comparative Evidence Unit has attempted to identify all components of uncertainty associated with measuring overall firearm length, barrel length, trigger pulls, and distance determinations to make a reasonable estimation of uncertainty.

1. The overall length or barrel length needs to be included in the test report when the overall length or barrel length is requested or when the analyst chooses to report it. The trigger pull is only required to be included in the test report if requested by the submitting agency. Distance determination uncertainty is required to be in the test report whenever test panels are created.

2. All reported measurements will include the uncertainty and coverage probability.

3. Fractions used in reported results will be expressed with the lowest common denominator. The calculated uncertainty for the steel ruler is ± 0.155 inches; the reported value will be rounded up and reported as ± 1/4 inch. The calculated uncertainty for the Hott Rod is ± 0.103 inches; the reported value will be rounded up and reported as ± 1/8 inch. (See CE.35 for the uncertainty calculations.) The calculated uncertainty for trigger pulls is ± 0.490 pounds; the reported value will be rounded up and reported as ± 1/2 pound. The calculated uncertainty for Leica Disto is ± 0.121 inches; the reported value will be rounded up and reported as ± 1/8 inch. For example:

   a. "The rifle was determined to have an overall length of 25 3/16 inches ± 1/4 inch with coverage probability of approximately 95%."

   b. "The rifle was determined to have a barrel length of 15 7/16 inches ± 1/8 inch with coverage probability of approximately 95%."

   c. "The single-action trigger pull was determined to be 4 1/2 pounds ± 1/2 pound with coverage probability of approximately 95%."

   d. "All test fire distances have an estimation of uncertainty of ± 1/8 inch with a coverage probability of approximately 95%."

   e. "Test panels were created at distances of [list of values] ± 1/8 inch with a coverage probability of approximately 95%."

4. The legal thresholds are defined in the Penal Code as:

a. Rifle: 16 inch barrel and 26 inch overall length,

b. Shotgun: 18 inch barrel and 26 inch overall length,

c. Assault weapon: 30 inch overall length.

5. When overall and barrel length measurements are within the uncertainty of measurement of the legal threshold, a conclusion regarding the item's legality will not be reported.

C. Measurement uncertainty is defined as:

1. The variability attributed to a quantitative measurement result based on the information known about the measurement method.

2. The technical use of the word "uncertainty" indicates a level of confidence in the result or the test being performed or the measurement.

3. The uncertainty of a measured value is an interval around that value such that any repetition of the measurement will produce a new result that lies within this interval. This uncertainty interval is assigned by the experimenter following established principles of uncertainty estimation.

4. The laboratory has attempted to take into account the extent to which the following factors contribute to the accuracy, reliability, and total uncertainty of length measurements in the uncertainty budget.

a. Human Factors

b. Accommodation and Environmental Conditions

c. Test and Calibration Methods and Validation

d. Equipment

e. Handling of Test and Calibration Items

5. Sampling is not applicable to examinations performed by the Comparative Evidence Unit.

D. The Unit evaluated the uncertainty associated with weighing bullets on digital scales as one observation in the qualitative determination of caliber. The uncertainty of measurement of this process was determined to not significantly contribute to the determined value.

II. Estimated Measurement Uncertainty Budgets

A. Elements of Traceability

1. **An unbroken chain of comparisons**: An unbroken chain of comparisons that is traceable from the measurement result in the laboratory back to national (NIST) or international (SI) primary standards.

a. See "Traceability of Firearm Length Standards" flow chart at the bottom of this document for how these standards are traced back to NIST.

2. **Measurement uncertainty**: The measurement uncertainty for each step of the traceability chain must be calculated and reported so that an overall uncertainty may be estimated.

a. See the uncertainty budgets (UM.06, UM.07, UM.08, and UM.09), which take into account all estimated uncertainty at each step along the traceability chains.

b. Standard scientific rounding is used in the calculation of measurement uncertainty. The CE unit may further round for clarity in the report as described above.

3. **Documentation**: Each step of the chain must be performed according to documented procedures, and the results must be documented.

    a. See Laboratory records for documentation. The reference for each element or line item in the uncertainty budget has been given.

4. **Competence**: The laboratory performing steps in the chain must supply evidence of technical competence (e.g., ISO/IEC 17025 accreditation).

    a. Rice Lake is the Laboratory-approved external vendor for calibration, is ISO/IEC 17025 accredited by A2LA.

5. **Reference to SI units**: Where possible, the chain of comparisons must end at the primary standards for the realization of the SI units.

    a. Rice Lake is the Laboratory-approved external vendor for calibration, has established traceability to the appropriate SI units.

6. **Re-calibration at appropriate intervals**: Calibration must be repeated at appropriate intervals depending on the uncertainty required.

    a. The CE Unit has established annual calibration checks. (See CE.06.)

    b. The uncertainty budgets will be evaluated after annual calibrations to verify that the uncertainty associated with the equipment has not significantly changed.

7. **Measurement Assurance**: Validates and verifies elements 1 through 6 above

    a. The Laboratory will periodically check, before each use, the physical condition of the length standards for any damage that may affect measurement reliability. If any negative condition exists, the unit supervisor must be notified.

    b. The measurement standards will be stored in their factory containers when not being used. This includes when transporting the standards for calibration.

    c. The Laboratory will maintain the calibrations records for the standards.

    d. If new equipment or staff are added then the Estimated Uncertainty will be recalculated to reflect the additions.

B. **NIST 8-step approach to estimating uncertainty**

1. **Specify the measurement process**

Overall Firearm Length: The distance between the planes perpendicular to the axis of the bore of the two most distal points at either end of a firearm, measured parallel to the axis of the bore. This measurement includes any permanently attached accessories and is measured using a steel ruler with the firearm lying on a horizontal surface. See *Uncertainty of Measurement: Overall Firearm Length & Barrel Length* policy (CE.35) for the procedure.

Firearm Barrel Length: The length of the barrel (to include the length of the chamber on pistols, rifles, and shotguns) is measured using a Hott Rod™ inserted in the bore. See *Uncertainty of Measurement: Overall Firearm Length & Barrel Length* policy (CE.35) for the procedure.

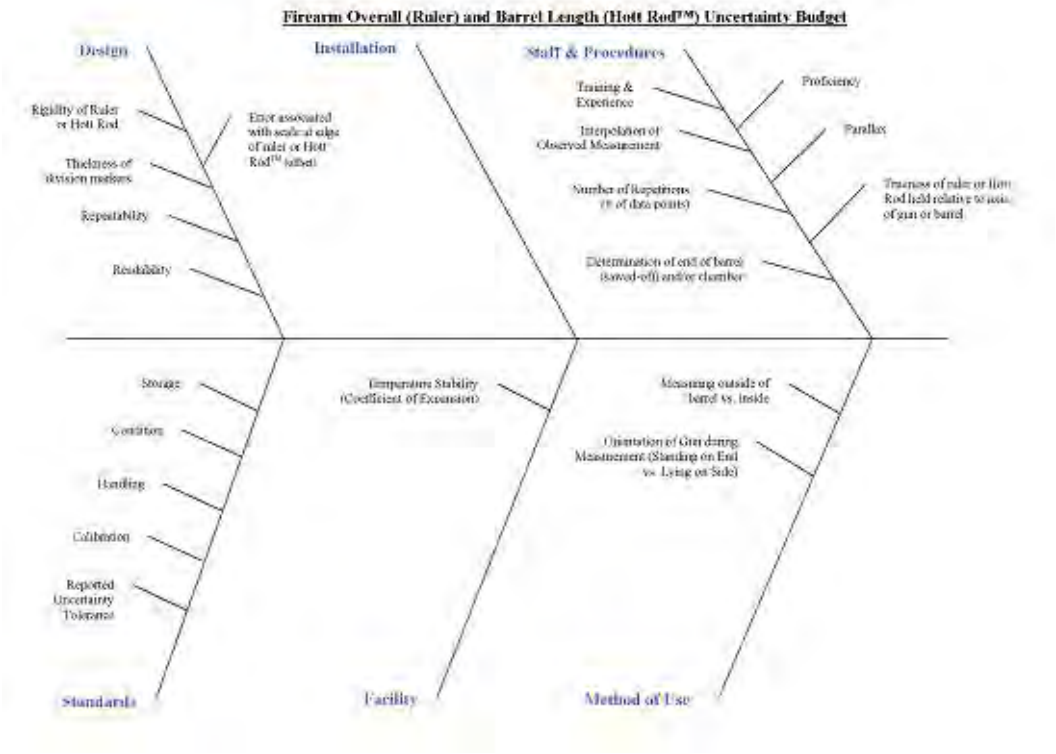
Trigger Pull: The amount of force which must be applied to the trigger of a firearm to cause sear release. See *Function Testing and Test Firing* policy (CE.09) for the procedure.

Distance Determination: The distance between the muzzle and the test target. See *Distance Determination* policy (CE.14) for the procedure.

2. **Identify and characterize the uncertainty sources**

   a. The Laboratory used a "fishbone" diagram (see below) and brainstorming techniques to identify possible sources of error.

   b.



3. **Quantify uncertainty measurements**

   a. The Laboratory uses "inches" and "pounds" for the estimated measurement uncertainty SI units.

4. **Convert factors to standard uncertainties**

   a. The Laboratory converted factors to standard uncertainties, one standard deviation equivalent, based on the distribution (normal or rectangular distribution) and multiplier of the "source of " data.

5. **Calculate combined standard uncertainties**

   a. The Laboratory uses the "root sum square" equation.

6. **Expand the uncertainty by "k"**

   a. The coverage factor is the multiplier used to establish the confidence level reported.

   b. The Laboratory uses a coverage factor of k=2 (approximately 95%)

7. **Evaluate the expanded uncertainty**

   a. The Laboratory evaluated the data and used Pareto charts to help visualize the significance of the contributing sources of uncertainty. The Laboratory plans to

reevaluate the budget on an on-going, periodic basis or when there is a significant change in the measurement process or instruments.

8. **Report the uncertainty**

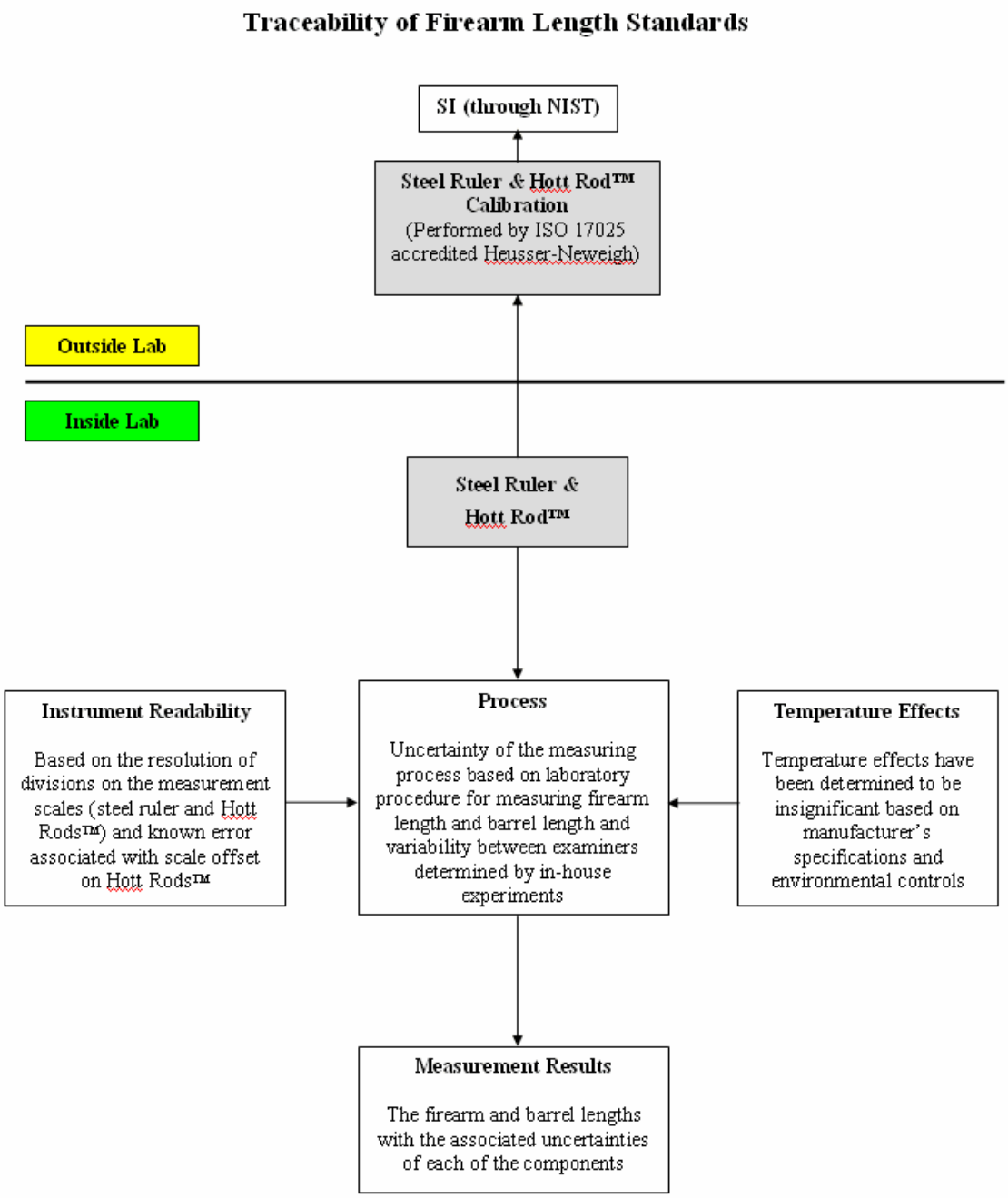
   a. The estimated measurement uncertainties will be reported by the Laboratory in accordance with the procedures in the Comparative Evidence Unit Technical Manual.

   b. The estimated uncertainty of the measurement has been calculated with approximately a 95% confidence using the root sum squares method. The uncertainty estimate includes type A uncertainty components (assuming a normal distribution) and type B uncertainty components.

C. Estimated Comparative Evidence Measurement Uncertainties:

1. Overall Firearm Length (steel ruler) Budget: ± 0.155 inches
2. Firearm Barrel Length (Hott Rods) Budget: ± 0.103 inches
3. Trigger Pull Budget: ± 0.490 pounds

4. Leica Disto Budget: ± 0.121 inches



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 05/14/2018	**NUMBER:** CE.35 - Uncertainty of Measurement: Overall Firearm Length & Barrel Length
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB: 5.1, 5.4**	
CHAPTER: Equipment	**SUBJECT:** Uncertainty of Measurement: Overall Firearm Length & Barrel Length	

I. Policy: Firearm length standards (steel ruler and Hott Rods) will be calibrated and checked to ensure their reliability and accuracy. The following procedures describe the handling and use of these standards.

A. New length standards

1. A length standard that is new to the laboratory will be calibrated before being used in casework.

B. Annual Calibration

1. The length standards in the Comparative Evidence Unit will be calibrated annually.
2. The laboratory will maintain copies of the calibration certificates for the period defined in FSD.44.
3. The external calibration service should label the length standards or their proximal containers to indicate the calibration status, including the last calibration date and the recommended date for the next calibration.

C. Instructions for measuring overall firearm length using the steel ruler length standard.

1. The steel ruler is used to measure the overall length of a firearm during casework in the Comparative Evidence Unit. To obtain accurate length measurements within the calculated uncertainties (see *Uncertainty of Measurement* policy, CE.34), use the steel ruler in the following manner:
   a. Remove the calibrated steel ruler (Starrett model C604R 48" ruler) from its container.
   b. Visually check to ensure the ruler is damage free before continuing. Notify the unit supervisor if the ruler is damaged.
   c. Place long axis of ruler perpendicular to table edge.
   d. Place long axis of firearm to be measured parallel and adjacent to long axis of ruler.
   e. Align end of ruler and end of firearm with table edge.
   f. Take the reading on ruler that corresponds to the point on the firearm that is the farthest from the end aligned with the edge of the table (e.g. crown of muzzle). This measurement includes any accessories that extend beyond the

end of the barrel if they are permanently attached (i.e. through the use of a tool).

g. Measurements will be read and recorded to the nearest 1/8 inch, unless they are within +/- one inch of the relevant statutory dimensions (16, 18, 26, or 30 inches), in which case they will be read and recorded to the nearest 1/16 inch (rounding up). Fractions used in reported results will be expressed with the lowest common denominator. Any bias, determined during calibration of the length standard, will be accounted for in the measurement result. See CE.34 for reporting information.

h. If firearm has a collapsible or readily removed stock, take one measurement with the stock fully extended and one with the stock collapsed/removed.

D. Instructions for measuring firearm barrel length using the Hott Rod length standards.

1. Hott Rods™ are used to measure the barrel length of a firearm during casework in the Comparative Evidence Unit. To obtain accurate length measurements within the calculated uncertainties (see *Uncertainty of Measurement* policy, CE.34), use the Hott Rods™ in the following manner:

a. Remove the appropriate calibrated Hott Rod from its container. There are two types/sizes available, depending on the caliber of the barrel to be measured: .22 caliber and .30 caliber +.

b. Visually check to ensure the Hott Rod is damage free before continuing. Notify the unit supervisor if the Hott Rod is damaged.

c. Make sure the barrel of the firearm is free of obstructions and then hold the firearm vertically, with the muzzle pointing up.

d. Place the end of the Hott Rod into the barrel until it rests on the breech face of the firearm.

e. Hold the Hott Rod so it is parallel with the long axis of the barrel.

f. Take the reading on Hott Rod that corresponds to the point on the muzzle that is the farthest from the breech face. On most unaltered, factory-produced firearms, this point will be the peak of the muzzle crown. On altered firearms, such as sawed-off shotguns where the muzzle may be uneven, this point will be that which corresponds to the maximum length of the barrel. This measurement includes any accessories that are permanently attached (i.e. through the use of a tool) to the end of the muzzle, such as flash suppressors, muzzle brakes, etc.

g. Measurements will be read and recorded to the nearest 1/16 inch (rounding up). Fractions used in recorded results will be expressed with the lowest common denominator. Any bias, determined during calibration of the length standard, will be accounted for in the measurement result. See CE.34 for reporting information.

E. Handling of Equipment:

1. The length standards will be stored, handled, used, and transported in a manner that prevents contamination, deterioration and protects the integrity of the length standards. This includes:

a. **Storing** the length standards in their original packaging or appropriate storage cases to prevent deterioration.

b. **Handling** the length standards with appropriate care to minimize deterioration.

c. **Using** the length standards for their intended purpose, i.e. measuring overall firearm and barrel length.

d. There are no intermediate checks required, other than a visual inspection for damage upon use.

e. **Transporting** the length standards in the appropriate containers or cases to prevent deterioration.

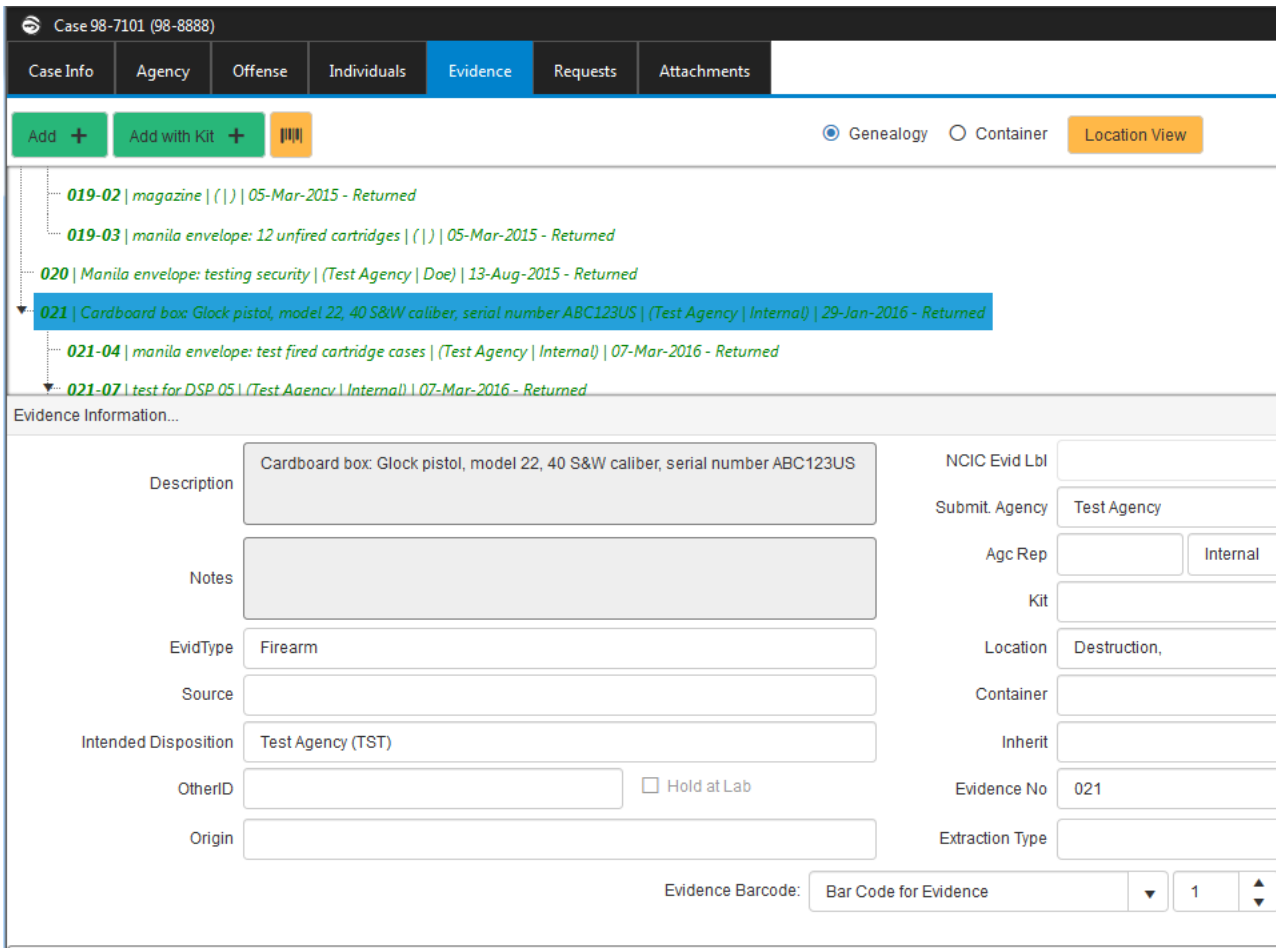
END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 12/03/2019	**NUMBER:** CE.39 - Electronic Notes
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Com Comparative Evidence	**SUBJECT:** Electronic Notes	

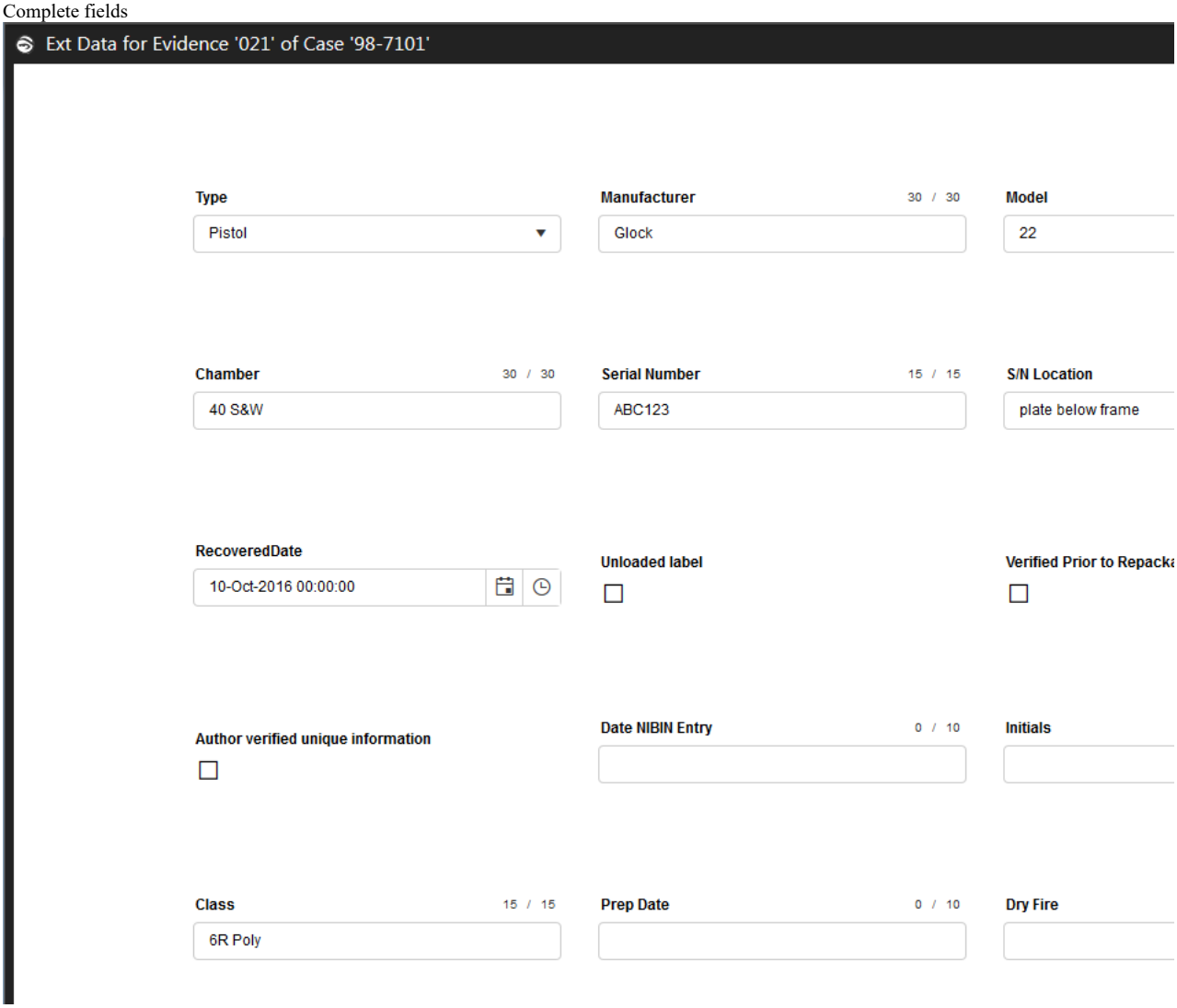
I. LIMS may be used to create electronic notes for requests.

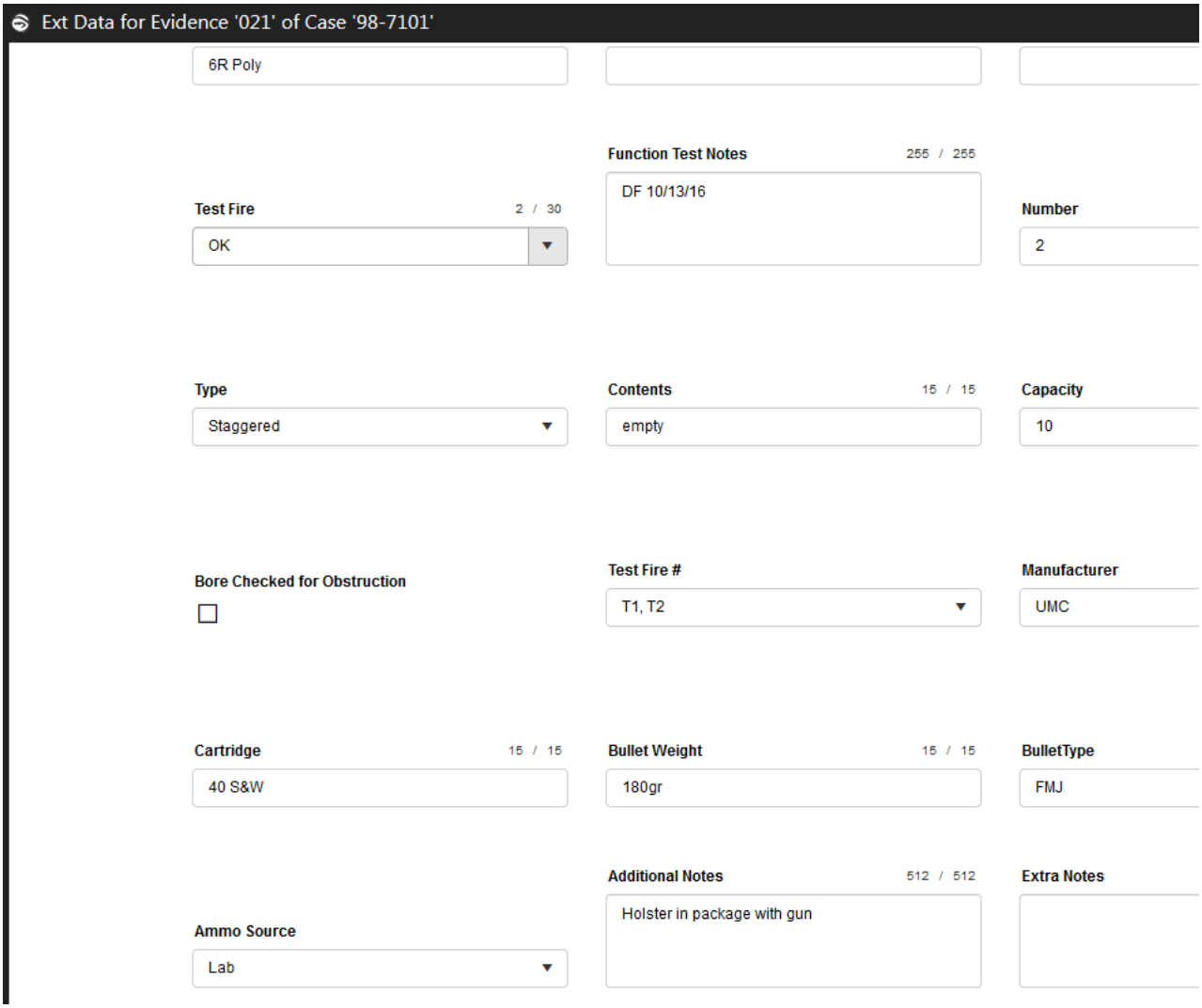
A. Firearms

1. Open the evidence tab in LIMS
2. Set the evidence type to Firearm (see image below)
3. Open the additional data tab by clicking the "..." button (see image below)
4.



5. Complete fields

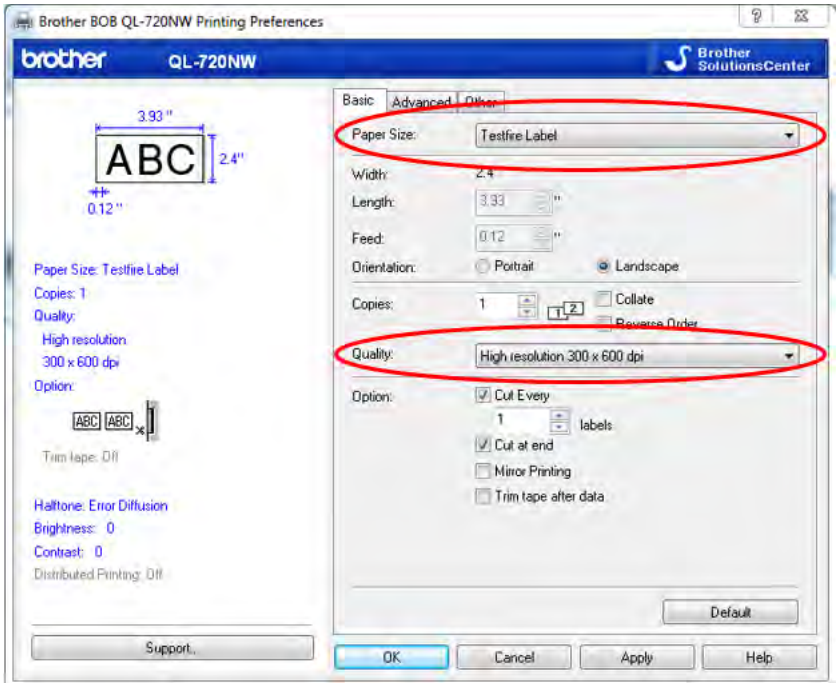




6. Check the "Verified Prior to Repackaging" to document that the unique information on the firearm was verified against the unique information on the packaging at the time of repackaging.
7. Use the "Author Verified Unique Information" when the author of a notification report did not prepare the firearm for test firing. Checking the box documents that the author verified the unique information on the firearm.

B. Printing label for test fires

1. Open Administration -> Crystal Reports -> Generate Reports in LIMS
2. Change the category to Firearms and select "Firearms Label with Barcodes"
3. Click the box and scan the barcode on the assignment notification sheet. Note, the evidence item with the evidence type set to firearm must be related to the request before this will work.
4. Print to the Brother QL-720NW barcode printer by changing the Paper Size to "Testfire Label" and Quality to "High resolution 300 x 600 dpi"



5. Attach the label to the test-fire envelope

C. Adding Worksheets to LIMS

1. Print completed worksheets (e.g. cartridge case) using the JusticeTrax Imaging printer using the following settings:
   a. Resolution: Low 200x200 DPI
   b. File format: JPEG
   c. Filename generation: use doc name
   d. Output directory: C:\temp (or other as desired)
   e. Ensure "Save each page as a separate file" is checked under the File Formats tab
   f. Ensure "Disable group file" is unchecked under the Filename Generation tab
   g. Image size should be less than 1000 KB and should be checked prior to uploading the image
2. Switch to the attachments tab in the case view window in LIMS
3. Right-click on the appropriate request folder and select either "Add New Attachment" or "Add Multiple Attachments"
4. Any filename beginning with REQ will print first.
5. Any uploaded image file will print in alphanumeric order.
6. To view or print the electronic notes, right click on the request in the main case view and select "Edit Lab Notes" then the printer icon.

D. Ballistic Leads

1. The same steps in C will be repeated to archive the PDF of a NIBIN Lead into the notes as images.

E. Service types

1. Ballistic Imaging requests should be completed with electronic notes.
2. Electronic notes may be used to create the notes for other service types. Image the worksheets and any other notes into LIMS by following the procedure in step C above.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Technical Unit Manual	**REVISION DATE:** 02/12/2019	**NUMBER:** CE.40 - Technical Lead
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Comparative Evidence	**SUBJECT:** Technical Lead	

I. Technical responsibility for the Comparative Evidence Unit involves both the Firearm/Toolmark and Footwear/Tire disciplines. The individual with technical responsibility may be the Unit Supervisor, an analyst, or both, depending on the qualifications of the individuals.

A. Roles and Responsibilities: The Technical Lead will work closely with the Unit Supervisor on quality issues and be responsible for the following duties:

1. Oversee the technical operations of the discipline.
2. Oversee Quality Assurance of the discipline.
3. Evaluate and document the approval of all validations and methods, and approve new or modified procedures.
4. Review and approve training records and qualifications for new hires.
5. Review, update, and technically approve unit procedures as needed.
6. Review and approve training, quality assurance measures, and proficiency testing program.
7. A newly appointed Technical Lead will be responsible for reviewing relevant validation studies and methodologies currently used by the discipline.
8. Perform technical and administrative review of casework.
9. Perform (or oversee) and technically approve validations.
10. Assist in assigning and administering proficiency and competency tests, including verification of correctness of test results.
11. May recommend suspension of casework for an individual or for the discipline.

B. Qualifications: The Technical Lead must be a full time employee of the Laboratory and meet FSD.03 requirements for experience.

C. Authorization: The Technical Lead will meet the same requirements for authorization to conduct casework as other examiners.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 08/30/2017	**NUMBER:** CET.01 - Introduction and Overview to Training Modules
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Introduction and Overview to Training Modules	

I. Introduction

A. This manual is designed to guide a trainee through the various areas of knowledge integral to the field of firearm and toolmark identification. It is imperative that the trainer and trainee strive to achieve the following objectives in a timely manner:

1. To independently examine submitted firearms and create items used for ballistic database entry and subsequent testing;
2. To independently examine and compare evidence relating to firearm and toolmark identification;
3. To independently render an opinion and reach conclusions relating to examinations and comparisons;
4. To provide expert testimony in court in matters involving firearm and toolmark identification in a professional, competent, and impartial manner.

B. There is a moral and ethical obligation incumbent upon firearm examiners to prepare themselves technically and professionally during training in order to be able to perform casework in accordance with policy.

C. A trainee is expected to become familiar with all pertinent unit equipment and instruments, the Comparative Evidence Technical Procedures Manual, the Division Manual, the Quality Manual, and the Safety Manual. Study will include the required and suggested readings listed in each module. Integral to the course of study will be job shadowing unit personnel who have special expertise in certain areas.

1. The minimum qualification for an analyst to perform firearm and toolmark identifications is a bachelor's degree in a natural science and successful completion of the appropriate training modules.
2. The minimum qualification for an analyst to perform all other firearms casework is a high school diploma (or equivalent) and successful completion of the appropriate training modules.

D. The trainee is required to document their training as outlined in each module.

1. This documentation may take the form of a training binder, which may consist of handwritten notes, word documents, charts, graphs, photographs, photocopied material, etc, .

E. Practical exercises are required to demonstrate an understanding of the knowledge and understanding of training elements. Practical exercises should be administered using test cases in LIMS for trainees to document as mock casework and demonstrate knowledge of Division and unit requirements for case records and reports. Mock casework will be evaluated to provide an assessment of the trainee's progress through the training module.

F. A moot court exercise will test the trainee's knowledge and comprehension of the technical material and their ability to adequately convey the information. This will typically be held at the conclusion of the Firearms Identification training module and will be the assessment for the Testimony, Report Writing, and Professionalism training module (CET.04).

II. Assessment for Previously Qualified Examiners

A. The Forensic Manager and CE Supervisor will interview the employee in detail upon assignment to the unit. The focus will be on past training, experience, education, published articles, and other credentials so that the employee's knowledge, skills, and abilities can be evaluated. Based on this information, a training plan will be developed to address any areas upon which the new employee lacks training. A competency test will be administered before the previously qualified examiner is authorized to perform casework.

III. Progression through the Training Manual

A. The training manual is divided into modules which have varying criteria for successful completion. Refer to each module for its assessment criteria. Completion of each module will be documented on a module documentation form by the trainer.

1. Modules that require a competency test will conform to FSD.21 for competency test requirements.

    a. The trainee will be informed of the passing requirements for each competency test prior to beginning the competency test. Typically 80% is the minimum passing score.

2. A trainee may be authorized to perform casework after successful completion of certain modules.

B. The estimated time frame for a trainee to complete all modules is two uninterrupted years.

C. The trainee will be informed of a timeline for expectations regarding the completion of each module.

D. The effectiveness of initial training will be monitored by the CE Supervisor in one or more of the following ways:

1. Providing feedback to the trainee after completion of initial training modules.

2. Soliciting feedback from the trainee regarding the initial training modules, including discussion about the practical exercises, required readings, and study questions.

3. Performing technical or administrative review of initial casework produced by trainee.

4. Providing annual performance evaluations.

IV. Continuing Education

A. All analysts should participate in continuing education to broaden and/or maintain their skills and expertise in the firearm and toolmark discipline. and document all of the training as outlined in QA.12. External training courses or programs including, but not limited to,

the ATF National Firearms Examiner Academy (NFEA) or the CCI Firearms and Toolmark Examiners Academy may be attended by the trainee and used to supplement or substitute for some of the training assignments and exercises contained in this manual. The effectiveness of on-going training will be monitored by the CE Supervisor in one or more of the following ways:

1. Requiring a teach back from the analyst attending the training.
2. Providing feedback regarding the training, either in a unit meeting or with one-on-one discussion with the CE Supervisor.
3. Evaluating proficiency test results.
4. Technical review of casework.
5. Reviewing court testimony and court critiques.
6. Providing annual performance evaluations.

V. Readings

A. The reading list in each module provides the following:

1. Gain knowledge for use in completing practical exercises and answering study questions (required readings)
2. Gain additional depth in the particular subject area (suggested readings)
3. Gain practice locating reference materials for future use (both)

B. The trainee is responsible for knowing the information contained in the required readings. The trainee is responsible for knowing that additional resources exist and how to locate them; a sampling of additional resources is listed in the suggested reading section. A reading log will be kept by the trainee documenting what books, journals, articles, etc ... have been read. This log can be maintained electronically or in hard copy.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 09/05/2018	**NUMBER:** CET.02 - Instrumentation Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Instrumentation Module	

I. This module will provide the trainee with the knowledge, skill, and ability to use the variety of instruments and equipment in the Comparative Evidence Unit.

A. **Objectives**

1. To acquaint the trainee with the instruments and equipment in the Comparative Evidence unit.

B. **Study Questions**

1. What is the difference between compound, stereo, and comparison microscopes?
2. How does the laboratory conduct a magnification check on the comparison microscope?
3. What are the advantages and disadvantages of the different light sources available?
4. How often must the digital scales have a performance check conducted?
5. When must the length standards be used in casework?

C. **Practical exercises**

1. Using each type of light source in the field of view on a comparison microscope, note the differences in the quality of each using the following different surfaces: lead bullets, jacketed bullets, various types of cartridge cases, and various types of surfaces containing impressed and striated toolmarks. Manipulate the light sources with respect to angle and vary the intensity of the light source when possible. Gain an appreciation for the effects of varying the angle and intensity for each light source on each type of surface. Discuss this with the trainer.
2. Set up a comparison microscope for your vision requirements and focus the dividing line.
3. Perform a magnification check on a comparison microscope.
4. Conduct a performance check on a digital scale.
5. Demonstrate the correct way to use length standards to measure overall length and barrel length using at least ten long guns.

D. **Reading**

1. **Required**

   a. Biasotti, A.A., “Photomicrography and Illumination: Some Critical Factors,” AFTE Journal, 11(4), Fall 1979, p. 60.

   b. Cook, C.W., “Basic Optics,” AFTE Journal, 1985; 12(4):14.

   c. AFTE Glossary (latest version)

   d. Chapman, Mark, “Increasing the Depth of Field When Photographing Through the Objectives of a Comparison Microscope,” AFTE Journal, 39(1), Winter 2007, pp. 44-46.

   e. Schlueter and Gumperty, “The Stereomicroscope - Instrumentation and Techniques,” American Laboratory, Apr. 1975.

2. **Suggested**

   a. Chamberlain, D., “Microscope Comparison Bridge,” 1972; 4(1):9.

   b. Dutton, G., “Firearms Identification, Comparison Microscope & the Spencer Lens Co.” 2002; 34(2):186-198.

   c. Frazier, Robert A., "Firing Pin Impressions - Their Measurement and Significance," 1989; 21(4): 584-588. Frazier, Robert A., "Firing Pin Impressions - Their Relation to Hammer Fall Condition," 1989; 21(4):589-592.

   d. Haemmerle, C., “Easily Made Diffusers for Fiber Optic Illuminators,” 1990; 22(4): 446-442.

   e. Hueske, E.E., “Application of Fiber Optic Video Microscopy to Firearm and Toolmark Examination: A Further Look,” 1993; 25(2):132-139.

   f. “Preliminary Report on the Application of Fiber Optic Video microscopy to Firearm and Toolmark Examination,” 1990; 22(3):280-282.

   g. Lansing, J.F., “Customized Comparison Microscope,” 1973; 5(5):25.

   h. Lutz, M.C., “Evaluation of New Fiber Optics System,” 1986; 18(1):12.

   i. Martini, L., “Adaptation of a Toolmaker’s Microscope for Bullet Measurements,” 2005; 37(3): 194-196.

   j. Moran, B., “Building an Inexpensive High Intensity Fluorescent Lighting System for the Comparison Microscope,” 1992; 29(1):49-54.

   k. Ojena, S. and J. Murdock, “The Evaluation of an Alibi Through the Examination of Relative Firing Pin Impression Depths,” 1981; 13(3),79-83

   l. Randich, Erik, Ph.D., Frederick A. Tulleners, M.A., and Michael F. Giusto, B.S., “A Simple Method for Examining Deep Toolmarks Using Scanning Electron Microscopy,” AFTE Journal, 2008; 40(4): 327-337.

   m. Thornton, J. I., "Some Historical Notes on the Comparison Microscope," 1978; 10(1): 7

   n. Ziegler, P.A., “Examination Techniques: The Beam Splitter and Reverse Lighting,” 1983; 15(2):32.

E. **Assessment**

1. Successful completion of this instrumentation portion of this module will involve:
    a. Observation of the trainee successfully:
        i. performing a performance check on a digital scale
        ii. magnification check on the comparison microscope
    b. The trainee successfully answering the study questions.
2. Successful completion of length measurement portion of this module will involve competency testing. The competency test may be incorporated into another competency test (e.g. function) or administered as a stand-alone competency test.
    a. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test for internal components.
    b. A successful competency test will result in authorization of the trainee to perform length measurements in casework using the equipment specified on the authorization.

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 08/30/2017	**NUMBER:** CET.03 - Firearms Safety Module
	RELATED ORDERS: CE.03, SAF.32	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** CET.03 Firearms Safety Module	

I. This module will provide the trainee with the knowledge, skill, and ability to safely handle firearms. The trainee shall, when available, take the CCI Firearms Safety class, though it is not required to complete this module. A lecture will provide the basis for understanding how to render firearms safe.

A. **Objectives**

1. To safely handle firearms
2. To be aware of evidence handling concerns and prevent any deleterious change from occuring
3. To be able to render loaded firearms to a safe condition

B. **Study Questions**

1. What is the correct order to safely unload most modern firearms?
2. What is the difference between an accidental and negligent discharge?
3. What types of evidence may be present on a firearm found at a crime scene?
4. How can blackpowder firearms be unloaded?
5. What do you need to document when unloading a firearm that was accepted into the laboratory without an "Unloaded" sticker?

C. **Practical Exercises**

1. Safely handle a variety of firearms (at least 40) under the direction of a member of the Comparative Evidence Unit.
2. Safely test fire a variety of firearms (at least 10, including a revolver, semiautomatic pistols and rifles, a bolt-action rifle, a pump-action shotgun, and a fully-automatic firearm) under the direction of a member of the Comparative Evidence Unit or as part of the CCI Firearms Safety Class. This exercise must include simulated failures.

D. **Reading**

1. **Required**

a. William George. "Black Powder Firearms - Safety Precautions", AFTE Journal, 1988, Volume 20, Number 1 (January), Page 57 through 58.

b. The Four Laws of Gun Safety, Gun.02.

c. Handgun Safety & Design, Gun.03.

d. A Guide to Firearm Safety, Gun.05.

e. Dutton, G., "Firearms Safety in the Laboratory", AFTE Journal, 1997: 29(1): 37-41

2. **Suggested**

a. Pavel Kosachevsky and Rafi Siso. "FN Pistol Accidental Discharge Due To Magazine Safety Mechanism Bypass", AFTE Journal, 2014 Volume 46, Number 1 (Winter), Page 76 thru 79.

E. **Assessment**

1. Successful completion of this module will involve:

a. Successful completion of the practical exercises.

b. The trainee successfully answering the study questions.

c. A review of the trainee's reading log.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 08/31/2017	**NUMBER:** CET.04 - Testimony, Report Writing, and Professionalism Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Testimony, Report Writing, and Professionalism Module	

I. This module will provide the trainee with the foundation for preparing clearly-written reports, providing competent court testimony, displaying a professional demeanor, and a thorough understanding of ethics. A mock court exercise will be conducted in conjunction with other modules.

A. **Objectives**

1. To provide the trainee with the foundation for preparing clearly-written reports, giving thorough and competent testimony, and displaying a professional demeanor.
2. To provide the trainee with the framework for a professional and ethical career in forensics.
3. To provide the trainee with an understanding of legal procedures and the presentation of evidence in court.
4. To hold a mock court exercise with the trainee (this may be performed in conjunction with other modules).

B. **Study Questions**

1. What are the division and unit policy requirements for content in a laboratory report? In the notes?
2. Define the following terms and phrases: Expert witness, reasonable degree of scientific certainty, practical certainty, hearsay, opinion, voir dire, Daubert hearing
3. What legal procedures govern the presentation of evidence in court?
4. List the most common objections that may be raised during expert testimony along with their legal basis.
5. What are the ANAB Guiding Principles of Professional Responsibility? What do you consider to be the key points in this document?
6. What are the Division requirements for courtroom testimony monitoring?
7. At what point when providing general knowledge testimony as an expert witness must you potentially resist answering further questions because doing so would, per policy, require a lab report to have been previously issued?

C. **Practical exercises**

1. Discuss with your trainer the policy requirements regarding note taking.
2. Discuss with your trainer the similarities and differences regarding criminal and civil testimonies and discoveries.
3. Read through copies of Firearm Identification reports written by at least two different examiners in the Comparative Evidence Unit.
4. Observe an examiner's testimony and write a synopsis of the experience (if possible).
5. Prepare your responses to a list of potential questions that could be asked during voir dire.
6. Discuss with several examiners their best and worst testimony experiences. Discuss common themes with your trainer.
7. Become familiar with the Statement of Ethical Responsibilities and sign a personal copy.
8. Review the AFTE and CAC Codes of Ethics along with their enforcement procedures. Prepare answers for a series of proposed ethical dilemmas provided by your trainer for review with your trainer.
9. Participate as an "expert witness" in a mock court exercise based on one of the trainee's mock cases from the Identification training module.

D. **Reading**

1. **Required**

a. Hoyle, P.J., "Role of the Expert Witness," AFTE Journal, 1989; 21(4):639.

b. Hatcher, J.S., Jury, F.J., and Weller, J., Firearms Investigation, Identification and Evidence, 2nd edition, Stackpole Books, Harrisburg, 1957, pp. 445-460.

c. Hodge, Evan E. and Blackburn, Bobby D., "The Firearms-Toolmark Examiner in Court", AFTE Journal, Vol. 11, No. 4., October 1979, p. 70-96.

d. Tuthill, Harold, Individualization: Principles and Procedures in Criminalistics, 1994, Lightning Powder Company, Inc.

e. Lucas, Douglas M., M.Sc., "The Ethical Responsibilities of the Forensic Scientist: Exploring the Limits," Journal of Forensic Sciences, Vol. 34, No. 3, May 1989, p. 719-729.

f. Saks, Michael J., Ph.D., M.S.L., "Prevalence and Impact of Ethical Problems in Forensic Science," Journal of Forensic Sciences, Vol. 34, No. 3, May 1989, p. 772-793.

g. Schroeder, Oliver C., J.D., "Ethical and Moral Dilemmas Confronting Forensic Scientists," Journal of Forensic Sciences, Vol. 29, No. 4, October 1984, p. 966-986.

h. Moran, Bruce, "Firearms Examiner Expert Witness Testimony: The Forensic Firearms Identification Process Including Criteria for Identification and Distance Determination," AFTE Journal, 32(3): 231-251.

i. Murdock, J.E., “Some Suggested Court Questions to Test Criteria for Identification Qualifications,” AFTE Journal, 1992; 24(1):69-75.

j. Biasotti, A.A., and Murdock, J.E., “Firearms and Toolmark Identification: Legal Issues and Scientific Status,” Chapter 23, Modern Scientific Evidence: The Law and Science of Expert Testimony, (Faigman, D.L., Kaye, D.H., Saks, M.J., and Sanders, J., eds., West Publishing Co., 1997), Vol. 2, pp.124-151.

k. Dutton, Gerard, "Commentary: Ethics in Forensic Firearms Investigation," AFTE Journal, 2005; 37(2): 79-85

l. Grzybowski, R.A., and Murdock, J.E., “Firearm and Toolmark Identification - Meeting the Daubert Challenge,” AFTE Journal, 1998; 30(1): 3-14.

m. Grzybowski, R., Miller, J., Moran, B., Murdock, J., Nichols, R., and Thompson, R., "Firearm/Toolmark Identification: Passing the Reliability Test Under Federal and State Evidentiary Standards," AFTE Journal, 2003; 35(2): 209-241.

n. Tanton, R.L., “Jury Preconceptions and Their Effect on Expert Scientific Testimony,” AFTE Journal, 1980; 20(2):67 (reprint from JFS, Vol. 24, p. 681-691).

2. **Suggested**

a. Fisher, Barry A. J. M.S., M.B.A., "Developing a Forensic Science Laboratory Operating Strategy," Journal of Forensic Sciences, Vol. 31, No. 4, October 1986, p. 1177-1184.

b. Joling, R.J., and Stern, W.W., “An Overview of Firearms Identification Evidence for Attorneys, II: Applicable Law of Recent Origin,” AFTE Journal, 1981; 13(4):134-139.

c. Joling, R.J., and Stern W.W., “An Overview of Firearms Identification Evidence for Attorneys, III:Qualifying and Using the Firearms Examiner as a Witness,” AFTE Journal, 1981; 13(4):140-144.

d. Joling, R.J., and Stern W.W., “An Overview of Firearms Identification Evidence for Attorneys, IV: Practice and Procedures When Using the Firearms Examiner and Demonstrative Evidence,” AFTE Journal, 1981;13(4):145-148.

e. Kates, James H. and Henry K. Guttenplan, Ph.D., "Ethical Considerations in Forensic Science Services," Journal of Forensic Sciences, Vol. 28, No. 4, October 1983, p. 972-976.

f. Keefe, J.F., “Forensic Sciences: Criminal Justice System Viewed by the Defense,” AFTE Journal, 1980; 12(2):59.

g. “Maryland State Court of Appeals. Appeals Case: (Olen J. Kelly et. al. vs. R.G. Industries, Inc., et.al.),” AFTE Journal, 1986; 18(2):77.

h. Moses, R.E., “Scientific Proof in Criminal Cases: A Texas Lawyer’s Guide,” AFTE Journal, 1989; 21(2):123-128.

i. Murdock, J. and Holmes, K., “California Department of Justice Firearms Toolmark Identification Training Syllabus: Professionalism,” AFTE Journal,

1991; 23(1):554-558.

j. Melson, G.R., “Qualifying as An Expert in State Court: The Impact of Daubert,” paper presented at the Fourth Annual Conference for Medical and Forensic Experts, Dec. 6-7, 1997, Newport Beach, CA.

k. Peterson, Joseph L., D. Crim., "Symposium: Ethical Conflicts in the Forensic Sciences Introduction," Journal of Forensic Sciences, Vol. 34, No. 3, May 989, p. 717-718.

l. Peterson, Joseph L., D. Crim. and John E. Murdock, M. Crim., "Forensic Science Ethics: Developing an Integrated System of Support and Enforcement," Journal of Forensic Sciences, Vol. 34, No. 3, May 1989, p. 749-762.

m. Andersen, G.R., “Round Pegs in Square Holes: The Aftermath of Daubert,” South Carolina Trial Lawyers Association Bulletin, Fall, 1996, pp. 9-12.

n. Saks, M.J., “Implications of the Daubert Test for Forensic Identification Science,” Shepard’s Expert and Scientific Evidence, Vol. 1, No. 3, Winter, 1994, pp. 427-434.

o. Sibert, R.W., “Laboratory Examinations Conducted Within the Field of Firearms Identification: A Tracing of the Acceptance by the Courts of Their Use in Expert Testimony,” paper submitted to the George Washington University Department of Forensic Sciences, 1973.

p. Thornton, J.I., “Courts of Law v. Courts of Science: A Forensic Scientist’s Reaction to Daubert,” Shepard’s Expert and Scientific Evidence, Vol. 1, No. 3, Winter, 1994, pp. 475-485.

q. Tuthill, Harold, Individualization: Principles and Procedures in Criminalistics, 1994, Lightning Powder Company, Inc.

r. Ward, Frances M, LLB, The John Marshall Law School Institute of Criminal Justice Seminar "The Officer in Court: Evidence for the Police - Chapter III Testifying in Court," March 10, 1979.

s. Wilson, C.M., “Evidence in Firearms Cases,” AFTE Journal, 1983; 15(2):83.

e. **Assessment**

a. Successful completion of this module will be met by successfully completing the study questions and practical exercises, culminating in satsifactory performance during the mock court exercise, typically performed in conjunction with the firearm identification module CET.10.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 02/12/2019	**NUMBER:** CET.05 - Ballistic Imaging Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Ballistic Imaging Module	

I. This module will provide the trainee with the ability to group cartridge cases based on class characteristics, safely prepare a firearm for test firing, and use the IBISTRAX-HD3D instrument to access the National Integrated Ballistic Information Network (NIBIN). The ballistic imaging system grants the ability to rapidly search through a database of hundreds and thousands of cartridge cases and test-fired cartridge cases to potentially link crime scenes.

A. **Objectives**

1. To provide the trainee with the ability to determine the minimum number of firearms represented by the recovered cartridge cases based on their class characteristics.
2. To provide the trainee with the ability to safely examine firearms and create test fires.
3. To provide the trainee with the ability to acquire cartridge cases into NIBIN via IBISTRAX-HD3D.
4. To provide the trainee with the ability to review correlations.

B. **Study Questions**

1. What information does the ballistic imaging system use to determine the scope of their searches?
2. What is the correct orientation for firing pin drag?
3. What types and calibers of firearms are acceptable for entry into the laboratory's ballistic imaging system?
4. What marks are created during the cycle-of-fire? What marks can be imparted onto a cartridge case through cycling a cartridge without firing it?
    a. Compare and contrast what marks may be present on cartridge cases fired in a recoil-operated pistol versus cartridge cases fired in a blowback-operated pistol.
5. What types of breechface marks appear on fired cartridge cases? What are the types of firing pin shapes found on cartridge cases from a laboratory perspective? Are those the same in NIBIN?
    a. What other types of marks appear on the head of the cartridge case that may be useful to determine the number of firearms present?
6. What may cause a magazine to hold more cartridges than its stated capacity?

C. **Practical Exercises**

1. With your trainer, examine sets of cartridge cases with the same class characteristics and evaluate the different types of marks present.

2. Group cartridge cases by class characteristics using the stereomicroscope or comparison microscope.

3. Safely inspect, document, and test fire a variety of firearms as selected by your trainer.

    a. Determine the magazine capacity for these firearms and additional magazines as selected by your trainer.

4. Receive hands-on training with the system, either by the company's trainers or by a trained member of the Comparative Evidence Unit staff. Part of that training will be to scan training cartridge cases into the system to learn the step-by-step entry procedures and perform correlations.

D. **Reading**

1. **Required**

    a. De Kinder, Jan, Tulleners, Fredric, Thiebaut, Hugues; "Reference ballistic imaging database performance", Forensic Science International, 2003, Vol. 140, pg. 207-215.

    b. Braga, Anthony A. et.al, "Linking Crime Guns: The Impact of Ballistics Imaging Technology on the Productivity of the Boston Police Department's Ballistics Unit", J. Forensic Sci, July 2004, Vol. 49, No. 4.

    c. IBISTRAX-HD3D training manual, latest version.

    d. Bartocci, C.R., "Class Characteristics of the 7.62 x 39mm Cartridge, Telling Whether a Fired Cartridge Case was Fired in an SKS or AK Type Rifle," AFTE Journal, 2002; 34(2): 144-147.

    e. McCombs, N.D., "Fired Cartridge Case Comparisons: 9mm and .40 Caliber Glock vs. Smith and Wesson Sigma Series Pistols," AFTE Journal, 2004; 36(2): 150-154.

    f. Tam, B., "Overview of Manufacturing Marks on Center Fire Cartridges," AFTE Journal, 2001: 33(2), 112-115.

    g. Warren, E. and S. Pitts, "Using Class Characteristics to Distinguish Between Cartridge Cases Fired by Glock, Smith & Wesson Sigma, and Springfield XD Pistols," AFTE Journal, 2007; 49(2): 70-78.

2. **Suggested**

    a. "Cracking The Case: The Crime-Solving Promise of Ballistic Identification", The Education Fund to Stop Gun Violence, June 2004.

    b. "Camodian Street Gangs: A Case Study of Six Crime-Guns in Stockton", Forensic Technology, 2009 publication.

    c. "Case Study" The Boston Gun Project and Operation Ceasefire", Forensic Technology, 2005 publication.

    d. "Fighting Gang Violence with NIBIN", Forensic Technology, 2005 publication.

e. Dillon, John H., “BulletTRAX-3D, MatchPoint Plus and the Firearms Examiner”, self-publication by author, 2005.

f. Nennstiel, Ruprecht, and Rahm, Joachim, “A Parameter Study Regarding the IBIS Correlator”, J. Forensic Sci, Jan 2006, Vol. 51, No. 1, pgs 18-23.

g. Nennstiel, Ruprecht, and Rahm, Joachim, “An Experience Report Regarding the Performance of the IBIS Correlator”, J. Forensic Sci, Jan 2006, Vol. 51, No. 1, pgs 24-30.

h. Roberge, Danny & Beauchamp, Alain, “The Use of BulletTrax-3D in a Study of Consecutively Manufactured Barrels”, AFTE Journal, Vol. 38 No. 2, Spring 2006, pg. 166 – 172.

i. Beauchamp, Alain & Roberge, Danny, “Model for the Behavior of the IBIS Correlation Scores in a Large Database of Cartridge Cases”, Un-credited report, pg. 1 – 19.

E. **Assessment**

1. Successful completion of this module will involve:

   a. The trainee successfully answering the study questions.

   b. The trainee successfully completing the practical exercises.

   c. The trainee successfully completing a competency test.

      1. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test for internal components.

      2. A successful competency test will result in authorization of the trainee to perform ballistic imaging casework using the equipment specified on the authorization.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 08/31/2017	**NUMBER:** CET.06 - Background, History, and Development Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Background, History, and Development Module	

I. This module will provide the trainee with the background, history, development, and trends related to firearms.

A. **Objectives**

1. To provide the trainee with a timeline of developments in firearms and ammunition.
2. To provide the trainee with general knowledge of forensic science.
3. To gain knowledge of the history and significance of the Association of Firearm and Tool Mark Examiners (AFTE), to include the following:
   a. History
   b. Criteria for membership
   c. AFTE Glossary
   d. AFTE Journal and its peer review process
   e. Online resources (Headstamp Guide, SWGGUN Admissibility Resource Kit, searchable AFTE Journal index, Forums, etc.)
4. To gain knowledge of the history and the current status of ballistic imaging systems such as IBISTRAX-HD3D and Evofinder

B. **Study Questions**

1. What types of evidence may be encountered on a submitted firearm? Why is it important to examine for these types of evidence before beginning an examination.
2. Compare and contrast usage of the terms Firearm Identification and Ballistics.
3. Is the forensic science discipline of Firearm and Toolmark Identification an art or science?
4. What are the types of conclusions that can be reached in firearm identification comparisons?

C. **Practical Exercises**

1. Develop a timeline on the history of firearms and ammunition. Focus on the significant designs changes and technology developments.

2. Visit each unit of the laboratory to understand the scope of their work. What similarities exist between the various forensic science disciplines? What differences exist? What forensic science disciplines are not performed by the laboratory? Discuss your observations with your trainer.

D. **Reading**

1. **Required**

a. **Books**

i. Heard, B.E., Handbook of Firearms and Ballistics: Examining and Interpreting Forensic Evidence, John Wiley & Sons, New York, 1997.

ii. Saferstein, R. Criminalistisc: An Introduction to Forensic Science, latest edition.

b. **AFTE Journal**

i. Biasotti, A.A., "Firearms and Toolmark Identification: A Forensic Science Discipline," 980; 12(3):12.

ii. Biasotti, A.A. and Murdock, J., "State of the Art of Firearm & Toolmark Identification, "1984; 16(4):16.

iii. Brent, W., "Proved Guilty by Ballistics (Hadley vs Arizona)," 1973; 5(6):5.

iv. Hamby, James E. and Thorpe, James W. "The History of Firearm and Toolmark Identification", 1999 31(3): 266-284.

c. **Other Professional Journals**

i. Biasotti, A. A., "The Principles of Evidence Evaluation as Applied to Firearms and Tool Mark Identification," Journal of Forensic Sciences, Vol. 9, 1964.

ii. Burd, D.Q., and Kirk, P.L., "Tool Marks. Factors involved in Their Comparison and Use as Evidence," Journal of Criminal Law and Criminology, Mar. - Apr. 1942.

iii. Burrard, G., "The Identification of Fire-Arms in Murder Cases," Game and Gun, Vol. 10, No. 92, May 1933, pp. 214 -219.

iv. Buxton, J.T., "The Science of Ballistics: Judicial Applications," Law Notes, Vol. 34, May 1930, pp. 24 – 28.

v. Cassidy, H.E., "Ballistics Forensically Applied," Journal of Criminal Law and Criminology, Vol. 20, Nov. 1929, pp. 439-448.

d. **Other Documents**

i. Kingston, C.R., and Kirk, P.L., "The Use of Statistics in Criminalistics," unpublished paper presented at California Association of Criminalists, Fall Seminar, Oct. 1973.

2. **Suggested**

a. **Books**

i. NRA Firearms Fact Book, 3rd edition, National Rifle Association, Fairfax, VA, 1989.

ii. NRA Firearms Source Book. National Rifle Association of America, 2006.

b. **AFTE Journal**

i. Katterwe, H., "Comparison Scanning Electron Microscope," 1983: 15(3):141.

ii. Thorton, J.. "Some Historical Notes on the Comparison Microscope," 1978; 10(1):7.

iii. ---. "Some Historical Notes on the Comparison Microscope," 1989; 21(2):215-217.

iv. Uchiyama, T., "Automated Landmark Identification System," 1993; 25(3):172-196.

v. ---. "Automatic Comparison Model of Land Marks," 1988; 20(3):252-259.

vi. ---. "Change of Rifling Marks of the Bullets Fired from a Revolver," 1986; 18(4):40.

vii. ---. "Correction: Automatic Comparison Model of Land Marks," 1990; 22(3):346.

viii. ---. "Criterion for Land Mark Identification," 1988; 20(3):236-251.

ix. ---. "Criterion for Land Mark Identification Using Rare Marks," 1988; 20(3):260-268.

x. ---. "Similarity Among Breech Face Marks Fired from Guns with Close Serial Numbers," 1986; 18(3):15.

xi. Uchiyama, T., Igarashi, N., and Nagai, M., "Frequency of Occurrence of Individual Characteristics of Firearms on Fired Bullets," 1988; 20(4):376-390.

xii. Warniment, D., "Brownsville Investigation – An Historical Cartridge Case Comparison," 2003; 35(4): 375.

xiii. Williams-Sorenson, "Barrel Corrosion and Its Effect on Identification," 1971; 3(2):34.

xiv. Ziegler, P.A., "Examination Techniques: The Beam Splitter and Reverse Lighting," 1983; 15(2):37.

c. **Other Journals**

i. Belveal, D.N., "Firearms Identification Based Upon Bullet Comparisons: Expertise or Guesswork," California Attorneys for Criminal Justice Forum, Vol. 4, No. 2, Mar. - Apr. 1977, p. 17.

ii. Grove, C.A., Judd, G., and Horn, R., "Examination of Firing Pin Impressions by Scanning Electron Microscopy," Journal of Forensic Sciences, Vol. 17, No. 4, 1972, pp. 645-658.

iii. Grove, C.A., Judd, G., and Horn, R., "Evaluation of SEM Potential in the Examination of Shotgun and Rifle Firing Pin Impressions," Journal of Forensic Sciences, Vol. 19, No. 3, 1974, pp. 441-447.

iv. Gunther, C.O., "Markings on Bullets and Shells Fired from Small Arms," Mechanical Engineering, 54, 1932, pp. 341-345.

v. Gunther, C.O., "Markings on Bullets and Shells Fired from Small Arms," Mechanical Engineering, 53, 1930, pp 107-113.

vi. Gunther, C.O., "Markings on Bullets and Shells Fired from Small Arms," Mechanical Engineering, 52, 1930, pp. 1065-1069.

vii. Sibert, R. W., "DRUGFIRE: Responding to Gang and Drug-Related Shootings,", Crime Laboratory Digest, Vol. 19, No. 1, January 1992, pp. 6-9.

viii. Smith, S., "The Identification of Firearms and Projectiles," The Police Journal, Vol. 1, Jul. 1928, pp. 411-422 (London).

ix. Sullington, D., "Ballistics, a New Science," The Criminologist, Vol. 5, Jun. 1929, pp. 32-34.

x. Tangen, E., "The Schopflin Case," The American Journal of Police Science," Vol. 2, 1931, pp. 518-28.

xi. Wigmore, J.H., "Evidence - Homicide - Identification of Bullet and Firearms," Illinois Law Review, Vol 25, 1931, p. 692.

d. **Other Documents**

i. "Study of Fired Bullets and Shells in Brownsville, Texas, Riot." Annual report of Chief of Ordnance, U.S. Army, Government Printing Office, Washington, DC, 1907.

E. **Assessment**

1. Successful completion of this module will involve:

   a. A review of the reading log. Entries are required to reflect the familiarity with each reading.

   b. The trainee successfully answering the study questions.

   c. The trainee successfully completing the practical exercises.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 06/28/2017	**NUMBER:** CET.07 - Make/Model Determination Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Make/Model Determination Module	

I. This module will familiarize the trainee with the different types of class characteristics found on fired bullets, cartridge cases, and shotshells. This will provide the trainee the ability to determine a list of firearms that could have fired the bullet, cartridge case, or shotshell.

A. **Objectives**

1. To provide the trainee with the knowledge of basic class characteristics of bullets, cartridge cases, and shotshells for the purpose of determining a list of potential firearms that could have fired the bullets, cartridge cases, and shotshells. This training will include the following:

   a. Become familiar with the various resources available to determine the manufacturer/marketer of a particular cartridge, cartridge case, or shotshell based on its headstamp.

   b. Become familiar with the types of marks typically found on reloaded ammunition.

   c. Become familiar with the ammunition storage areas in the unit.

   d. Become familiar with the various reference materials available in the laboratory, including the FBI's General Rifling Characteristics (GRC) File, and how to use them to search for information.

2. To provide the trainee with the ability to determine the minimum number of firearms represented by fired ammunition components based on class characteristics

B. **Study Questions**

1. Define the following terms or phrases:

   a. Slippage

   b. Shaving

   c. Obturation

   d. Leading edge and trailing edge

   e. Gas cutting

f. Impression

g. Striation

h. Individual characteristics

i. Subclass characteristics

j. Class characteristics

k. Rifling characteristics

l. Rifling impressions

m. Corrosion

n. Leading

o. Cycling marks

p. Cycle-of-fire marks

2. What are the importance and limitations of the following bullet characteristics with respect to caliber determination?:

   a. Weight

   b. Diameter

   c. Manufacturer (if it can be determined)

   d. Rifling characteristics (number, direction of twist, width)

   e. Pitch of rifling

   f. Jacket construction/composition

3. How has the GRC File been developed over the years?

4. Does a list of potential makes and models of firearms generated from the GRC contain all possible firearms with same class characteristics as those searched? Why or why not?

5. What reference points are used to properly measure the dimensions of land and groove impressions on a fired bullet?

6. What is the formula for estimating the caliber of a damaged fired bullet if the total number of land and groove impressions and at least one pair of land and groove impression measurements can be determined?

7. What is a good resource to help determine nominal caliber from a lead core?

C. **Practical exercises**

1. Using provided fired bullets (both pristine and damaged), demonstrate the ability to determine their caliber, manufacturer, and rifling characteristics.

2. Using provided cartridge cases, demonstrate the ability to determine any make/model information for the firearm that fired them.

   a. Combine information from the provided bullets (#1) and cartridge cases (#2) using limited universe assumptions.

3. Discuss with your trainer the feasibility of determining caliber and/or the rifling characteristics of a fired bullet from an examination of a bullet hole in metal.

4. Write a short report to describe what types of marks may appear on reloaded ammunition components.

5. Discuss with your trainer the ability to recognize and document gun powder particles that may be encountered in casework.

6. Visit at least one ammunition-manufacturing facility such as Remington, Federal, or Winchester to observe the manufacture of rimfire and centerfire cartridges and shotshells. Take detailed notes of the manufacturing processes. write a report on what you learned, and provide an oral presentation to the Unit. This exercise is optional due to a lack of nearby manufacturing facilities.

D. **Assessment**

1. Successful completion of this module will be assessed by the following:

   a. Successfully answering the study questions.

   b. Successfully completing the practical exercises.

   c. A review of the trainee's reading log.

   d. Competency testing.

      i. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test.

      ii. A successful competency test will result in authorization of the trainee to perform Make/Model Determination casework.

E. **Reading**

1. **Required** (Note: items denoted by [Reference] are intended as general references only and do not need to be read in their entirety by the trainee)

   a. **General**

      i. Barnes, F.C., Cartridges of the World, various editions. [Reference]

      ii. Burrard, G., The Identification of Firearms and Forensic Ballistics, 1st edition, Charles Scribner Sons, NY, 1934, revised edition, A.S. Barnes & Co., NY, 1964.

      iii. Davis, J.E., An Introduction to Tool Marks, Firearms and the Striagraph, Charles C. Thomas, Springfield, IL, 1958. [pgs 68-147]

      iv. FBI Laboratory, General Rifling Characteristics File, current edition. [Reference]

      v. Heard, B.E., Handbook of Firearms and Ballistics: Examining and Interpreting Forensic Evidence, John Wiley & Sons, New York, 1997.

      vi. Mathews, J.H., Firearms Identification, Volumes I - III, Charles C. Thomas, Springfield, IL, 1962. [Reference]

   b. **General Rifling Characteristics/Class Determinations/Bullet Markings**

i. Bartocci, C.R., “Class Characteristics of the 7.62 x 39mm Cartridge, Telling Whether a Fired Cartridge Case was Fired in an SKS or AK Type Rifle,” AFTE Journal, 2002; 34(2): 144-147.

ii. Biasotti, A.A., “Bullet Bearing Surface Composition: Variables: Fired Bullets,” AFTE Journal, 1981; 13(2):94.

iii. Carr, J., and Fadul, T., “Miami Barrel,” AFTE Journal, 1997; 29(2):232-234.

iv. Cashman, P.J., and Thornton, J.I., “Rapid Method for Determining Rifling Pitch,” AFTE Journal, 1975; 7(3):21.

v. Cassidy, F.H., “Nomograph for Calculation of the Number of Lands and Grooves,” AFTE Journal, 1981; 13(4):67.

vi. Reflections on Measurements of Land and Groove Dimensions,” AFTE Journal, 1983; 15(1):81.

vii. Collins, E.R., "The Use of Crimp Marks to Distinguish Between 357 SIG and 9mm Bullets," AFTE Journal, 2012; 44(1): 4.

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e. **Shot Pellets**

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i. **Manufacturing Marks**

i. Crum, R.A., “Manufacturing Toolmark Identification on the Base of Jacketed Bullets,” AFTE Journal, 1987; 19(4):447- 450.

ii. Hamman, J.E., “Loading Machine Marks on Federal Shotshell Wads,” AFTE Journal, 1980; 12(1):36.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 05/11/2017	**NUMBER:** CET.08 - Manufacturing Processes Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** CET.08	

I. This module will provide the trainee with a thorough understanding machining process and how they impact forensic firearm and toolmark analysis.

A. **Objectives**

1. To provide the trainee with a thorough understanding of machining processes and their impact on firearm and non-firearm toolmark identification casework.

B. **Study Questions**

1. Prepare a short report describing each process and how it is used in the manufacture of firearms:
   a. Shaping
   b. Planing
   c. Drilling
   d. Reaming
   e. Turning
   f. Boring
   g. Milling-include both face milling and peripheral (slab) milling broaching
   h. Investment casting
2. Prepare a short report describing each rifling method and its impact on casework
   a. Broach
   b. Button
   c. Hammer forging
   d. Hook method
   e. Scrape method
   f. ECM

g. EDM

3. Prepare a short report describing each term as they relate to firearm manufacture or firearms identification

a. Chambering

b. Crowning

c. Forcing cone

d. Bore

e. Choke

f. Choke tubes

C. **Practical Exercises**

1. Using samples provided by your trainer, demonstrate the ability to identify the machining process used to create each item.

2. Watch the provided videos and prepare a short description of each machining process.

D. **Assessment**

1. Successful completion of this module will involve:

a. The trainee successfully answering the study questions.

b. The trainee demonstrating an understanding of the machining processes via the practical exercises.

c. A review of the trainee's reading log.

E. **Reading**

1. **Required**

a. **Books**

i. Hatcher, J.S., Jury, F.J., and Weller, J., Firearms Investigation, Identification and Evidence, 2nd edition, Stackpole Books, Harrisburg, PA, 1957, Chapters 3-6.

ii. Herb, C.O., Machine Tools at Work, The Industrial Press, New York, 1942.

iii. "Machinery Handbook, 25th Edition" 1962, pp. 1-9.

iv. Moltrecht, K.H., Machine Shop Practice Vol 1 & 2

v. Oberg, Jones & Horton, Machinist's Handbook Revised 21st Edition

b. **AFTE Journal**

i. Biasotti, A. A., "Rifling Methods: Individual Characteristics Produced," 1981; 13(3):34.

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c. **Videos**

i. Provided by your instructor

2. **Suggested**

a. **Books**

i. Herb, C.O., Machine Tools at Work, The Industrial Press, New York, 1942.

ii. “Machinery Handbook, 25th Edition” 1962, pp. 1-9.

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b. **AFTE Journal**

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 06/07/2018	**NUMBER:** CET.09 - Function Testing Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Function Testing Module	

I. This module will provide the trainee with the ability to test firearms for operability and determine whether firearms or firearm components meet relevant statutory definitions in the State of California.

A. **Objectives**

1. To learn terminology associated with ammunition, its manufacture, and class characteristics of firearm-produced toolmarks left on fired ammunition components
2. To learn the difference between the true, nominal, and specific caliber of ammunition
3. To become familiar with the class characteristics of cycle-of-fire marks left by various known makes of firearms on bullets and cartridge cases fired from them
4. To provide the trainee with the history, understanding, and familiarity with all types of commonly encountered firearms
5. To provide the trainee with the knowledge, skills, and abilities to understand various firearm operating systems and types of safeties
6. To gain the ability to safely test fire firearms to determine operability
7. To become familiar with general procedures and reference materials for firearm disassembly and reassembly
8. To gain the knowledge and ability to classify features to determine whether a submitted firearm meets the legal definition of an Assault Weapon per the California Penal Code
9. To gain the ability to determine whether a device meets the legal definition of a silencer per the California Penal Code
10. To become familiar with the procedure for performing and reporting ejection pattern analysis

B. **Study Questions:**

1. Define the following terms or phrases as they relate to modern ammunition manufacture:

a. Antimony
b. Arsenic
c. Battery cup
d. Bearing surface
e. Boattail
f. Bottleneck cartridge
g. Brass
h. Brass-coated lead bullet
i. Bullet
j. Bullet sizing
k. Bunter
l. Cannelure
m. Cartridge
n. Cartridge case
o. Cast lead bullet
p. Casting seam
q. Closed base
r. Copper-coated lead bullet
s. Crimp
t. Dram equivalent
u. Extractor groove
v. Frangible ammunition
w. Full metal jacketed bullet
x. Gauge
y. Head
z. Headstamp
aa. Heel
ab. High brass; low brass
ac. Hollow-point bullet
ad. Jacketed bullet
ae. Lubaloy
af. Mold marks

ag. Mouth

ah. Neck

ai. Nylon-coated lead bullet

aj. Ogive

ak. Open base

al. Primer

am. Proof cartridge

an. Rebated-rim cartridge

ao. Recessed base

ap. Rifling

aq. Rimless cartridge

ar. Rimmed cartridge

as. Round-nosed bullet

at. Rule of 17

au. SAAMI

av. Semi-jacketed bullet

aw. Semi-rimmed cartridge

ax. Semi-wadcutter bullet

ay. Shot collar

az. Shotshell

ba. Shoulder

bb. Silvertip bullet

bc. Single base; double base

bd. Soft point bullet

be. Spitzer bullet

bf. Sprue

bg. Tapered cartridge

bh. Total metal jacketed bullet

bi. Truncated-nosed bullet

bj. Wadcutter bullet

bk. Wadding

2. What does the term "Gauge" refer to and how is it determined?

3. Define each of the following basic types of firearms:
    a. Handgun
        i. Revolver
        ii. Pistol
        iii. Derringer
    b. Long gun
        i. Rifle
        ii. Shotgun
            1. Single-shot
            2. Side-by-side
            3. Over-under
            4. Pump-action
        iii. Carbine
        iv. Machine gun
        v. Submachine gun
    c. Muzzle-loading firearm
4. Define each of the following firearm operating modes:
    a. Single action
    b. Single-action only
    c. Double action
    d. Double-action only
5. Define each of the following types of operating systems, to include the loading of cartridges and the subsequent movement of the cartridge case and/or bullet after firing. Give an example of each:
    a. Revolving
    b. Semiautomatic
    c. Automatic
    d. Gas-operated
    e. Blowback
    f. Delayed blowback
    g. Bolt action
    h. Pump-action/slide-action
    i. Lever action

j. Recoil-operated (short recoil)

k. Recoil-operated (long recoil)

l. Single-shot

m. Muzzle loading firearm

n. Percussion cap

6. What is the difference between a hammer and a striker?

7. Describe the difference between the following terms:

   a. External safety vs. Internal safety

   b. Active safety vs. Passive safety

8. Describe each of the following types of firearm safeties, including how they operate, and give an example of a firearm that employs each one. Classify each according to the terms in 7a and 7b above:

   a. Thumb lever

   b. Rebound slide

   c. Magazine safety

   d. Hammer block

   e. Transfer bar

   f. Crossbolt

   g. Rolling block

   h. Selector switch

   i. Trigger disconnect

   j. Sear engagement

   k. Trigger pull

   l. Trigger safety

9. Define the following terms relating to firearm malfunctions:

   a. Excessive headspace

   b. Bore obstruction

   c. Barrel bulge

   d. Broken extractor

   e. Hammer push-off

   f. Trigger shoe

   g. Slam-fire

   h. Inadequate/improper sear engagement

i. Defective safety

j. Blown primer

k. Stovepipe

l. Double-feed

m. Rail splitting

n. Hairline cracks

o. Improper timing

p. Excessive pressure

q. Dented barrel

r. Jar-off

s. Failure to feed

t. Failure to extract

10. What tests can be performed to determine if a firearm can be made to fire without pulling the trigger?

11. What are considered the normal ranges for the trigger pulls of a single and double-action semiautomatic pistol?

12. What is a "hair trigger"?

13. Define the features of an assault weapon as defined by the California Penal Code.

14. What is the legal definition of a sound suppressor? Individually define the features that may be present in a suppressor.

15. What is the difference between a barrel extension and a suppressor?

16. Describe how you would examine a suppressor to determine if it had been fired through.

17. List some potential causes of unintentional discharges. Can a firearm that is determined to function normally be involved in an accidental discharge? Why or why not?

C. **Practical Exercises**

1. Demonstrate your ability to distinguish between the following terms:

   a. True caliber

   b. Nominal caliber

   c. Caliber designation

   To do this, obtain at least six different cartridges from the following cartridge “families”: .22 caliber, .30 caliber, .32 caliber, and .38 caliber. Identify each one as to caliber designation and explain/demonstrate the meaning of true caliber and nominal caliber for each. This assignment will require you to use the laboratory’s ammunition standards and print reference files. For each

cartridge, obtain two standards, disassembling one and leaving the other intact. Use these to demonstrate the differences in cartridge case sizes and shapes, as well as variations in bullets (weight, jacketing, design, cannelures, true caliber, etc.).

2. Give five examples of each of the various methods used in the past for American caliber designations within caliber "families", including powder charge, velocity, manufacturer's name or designer's name, year of adoption, metric designation, etc. Contrast the European metric designators currently used with the less formalized American system.

3. Disassemble a 12 Gauge shotshell and examine the components. Discuss with your trainer.

4. Sketch the cross-section of Berdan and Boxer primers, showing their relationship to the head of the cartridge. Briefly discuss their development and practical significance.

5. Describe and/or safely demonstrate the potential for cartridge interchangeability between 380 Auto, 9mm Makarov, 9mm Luger, 40 S&W, and 357 SIG caliber firearms.

6. Examine the Glock 17 Gen4 cut-away model in the laboratory's Firearms Reference Collection. Note the operation of the firearm's striker and related components; describe how this system differs from a conventional single and double-action firearm mechanism. What does Glock call this proprietary type of action?

7. Using various firearms from the laboratory's Reference Collection, demonstrate your knowledge of firearms nomenclature by naming the various external and internal firearm components for your trainer.

8. Obtain manufacturer information and exploded diagrams for the following firearms as indicated below (note the listed exceptions that only require handling for familiarization). Using the laboratory's Firearm Reference Collection, complete a firearm worksheet and test fire each selected firearm, observing the class characteristics both on the firearm and on the test fires. Where possible, field strip each firearm and become familiar with the components using literature references or online video tutorials.

    a. .22 caliber rifles (document the 10/22, become familiar with the operation of the others)

        i. Ruger 10/22 semiautomatic rifle

        ii. Remington Model 550 (or other .22 caliber bolt-action rifle)

        iii. Winchester Model 62A (or other .22 caliber slide-action rifle)

    b. .22 caliber pistols and revolvers (pick one to document, become familiar with the operation of the others)

        i. Ruger Standard Model

        ii. Jennings J-22

        iii. H&R Model 999 (or other .22 caliber top-break revolver)

        iv. Ruger Single-Six (or other .22 caliber single-action revolver)

c. Derringers (become familiar with the operation)

d. 25 Auto caliber semiautomatic pistols (pick one to document, become familiar with the operation of the others)

   i. Beretta 950B or BS

   ii. Raven P-25 or MP-25

   iii. Colt 1908

e. 380 Auto pistols (pick two to document, become familiar with the operation of the others)

   i. Walther PPK or PPK/S

   ii. Sig Sauer P230

   iii. Browning BDA-380

   iv. AMT Backup

f. Medium/large caliber pistols

   i. 9mm Luger (9x19mm) caliber

      1. Smith & Wesson M&P-9

      2. Beretta 92 series

      3. Hi-Point Model C

      4. Lorcin L9MM

      5. Ruger P89 or P95

      6. Intratec TEC-9

      7. H&K P7 M8

   ii. 357 SIG caliber

      1. Glock 31C

   iii. 40 S&W caliber

      1. Sig Sauer P226 or P229

      2. Smith & Wesson SW40V (not VE)

      3. Springfield XD-40

      4. Beretta PX4 Storm

   iv. 45 Auto caliber

      1. Colt 1911 (any model)

      2. Kimber or Para Ordnance 1911-type (any compact model with bull barrel)

      3. Glock (any model)

v. Miscellaneous calibers

1. Desert Eagle (any caliber: 357/44 Mag/50 AE)

2. FN Herstal Five-Seven

g. Medium/large caliber revolvers

i. 38 Special/357 Magnum caliber (pick two to document, become familiar with the operation of the others)

1. Smith & Wesson Model 15 (38 Special)

2. Colt Python (357 Mag)

3. Ruger GP-100 (357 Mag)

4. Dan Wesson Arms Model 15 (357 Mag)

ii. 44 Magnum (pick one to document, become familiar with the operation of the others)

1. Smith & Wesson Model 29

2. Ruger Redhawk

iii. Miscellaneous calibers

1. Taurus Judge or Public Defender (45 Colt/.410 gauge)

h. Rifles

i. 30-30 caliber (any model; e.g., Winchester Model 94)

ii. 7.62x39mm caliber AK-type

iii. 7.62x39mm caliber SKS-type

iv. 223 Rem/5.56x45mm caliber AR-type

i. Shotguns (pick one to document, become familiar with the operation of the others)

i. Remington 870

ii. Mossberg 500

iii. Browning Auto-5

iv. Benelli M1 Super 90

v. Weatherby Orion (or other top-break model)

vi. "Streetsweeper" type with a rotary magazine (any model)

9. Become familiar with the operation of the following firearms:

a. Luger P08

b. 303 Lee Enfield

c. M1 Garand

d. M14/M1A

e. Thompson submachine gun

f. H&K MP5

g. 9mm Makarov caliber pistol

10. Familiarize yourself with the laboratory's literature references regarding ammunition and firearms. Ask your trainer for assistance if necessary.

11. Familiarize yourself with the laboratory's collection of firearm safety recall warnings.

12. As available, attend one or more armorer’s courses.

13. Locate and document proof and inspector marks on at least three firearms from the laboratory's reference collection. Research what the marks mean.

14. Discuss the laboratory's requirement for marking firearms evidence.

15. Demonstrate the ability to recognize, document, and recover trace evidence from the bore of a firearm prior to test firing.

16. Demonstrate the proper techniques for measuring the trigger pulls of a hand gun and long gun using one of the NRA steel weight sets.

17. Discuss proper evidence handling techniques when a firearm is recovered from water. What rust removal techniques can the laboratory employ?

18. Using a pencil or cotton swab, demonstrate how an examiner can determine if a firing pin is likely functional before test firing.

19. Demonstrate how an examiner can determine if a firearm has been altered to fire fully automatic before test firing.

20. Describe how ejection pattern testing is conducted. What are the limitations? Does the laboratory regularly perform ejection pattern analysis? Why or why not?

21. Examine representative samples of sound suppressors from the armory. Become familiar with the design features of commercially-produced and improvised suppressors. Examine internal components with the borescope and discuss your observations with your trainer.

D. **Assessment**

1. Successful completion of this module will involve:

a. The trainee successfully answering the study questions.

b. The trainee successfully completing the practical exercises.

c. The trainee successfully completing a competency test.

i. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test.

ii. A successful competency test will result in authorization of the trainee to perform Function testing casework

E. **Reading**

1. **Required**

   a. **Books** (Note: Books denoted by [Reference] are intended as general references only and do not need to be read in their entirety by the trainee)

      i. **General**

         1. Davis, J.E., An Introduction to Tool Marks, Firearms and the Striagraph, Charles C. Thomas, Springfield, IL, 1958. [FI 55]

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         7. NRA Firearms Fact Book, 3rd edition, National Rifle Association, Fairfax, VA, 1989.

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      ii. **Ammunition**

         1. Barnes, F.C., Simpson, L., Ed., Cartridges of the World, 12th Ed., Gun Digest Books, 2009. *Ch.1:* "Cartridge Nomenclature", pp. 7-10; *Color section:* "Ammunition Today: Ammunition, ballistics and components", pp. 457-463; "Cartridge Identification", pp. 478-480; *Ch. 11:* "Shotgun Shells", pp. 481-485. [FI 174].

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      iii. **Firearms**

1. U.S. Department of Justice, Bureau of Alcohol, Firearms and Explosives, Firearms Identification & Tracing Procedures, Project Safe Neighborhoods, 2004.

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3. Wood, J.B., The Gun Digest Book of Automatic Pistols: Assembly/Disassembly. Gun Digest Books, 2007. [Reference]

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i. **Ammunition**

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2. Dutton, G., "Ammunition Interchangeability - A Case Study," 1999; 31(2): 149-152

ii. **Accidental Discharge Potential/Safeties**

1. Berg, Stanton O., “False Safety Notch: Firearms Design Problem,” 1989; 21(4):580-582.

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iv. **Improvised/Homemade Firearms**

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** CET.10 - Firearm Identification Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Firearms Identification Module	

I. This module will provide the trainee with the ability to perform firearm identification examinations.

A. **Objectives**

1. To provide the trainee with knowledge, skills, and ability to perform identification examinations.
2. To provide the trainee with the knowledge, history, and significant of the Association of Firearm and Tool Mark Examiners (AFTE) including their certification program and Range of Conclusions.
3. To gain knowledge of themes from recent challenges to the admissibility of firearm identification testimony
4. To gain knowledge about recent developments including:
    a. 2008 NRC Report on Ballistic Imaging
    b. 2009 NAS Report on Strengthening Forensic Science
    c. Organization of Scientific Area Committees (OSAC) Firearms and Toolmarks Subcommittee
    d. 2016 PCAST report
5. To provide the trainee with a working knowledge of subclass characteristics, their origin, and their impact on identification casework.
6. To gain a working knowledge of current case law decisions and standards for casework.

B. **Study Questions**

1. When should a conclusion of inconclusive be issued? Why? What are the range of conclusions possible?
2. What machining processes often produce subclass characteristics?
    a. Generally, what types of surface will be free from subclass influence?
    b. How does an examiner evaluate for subclass?

3. What is the definition of sufficient agreement? Is there an analogy you could use to describe the concept?

4. Is it possible for experts in the discipline of Firearm and Toolmark Identification to disagree regarding their conclusions? Why or why not?

5. Do numerical criteria exist for identification conclusions on striated marks?

6. Do numerical criteria exist for identification conclusions on impressed marks? If not, why not?

7. How does "probability" relate to firearm identification?

8. What is the meaning of the term "practical certainty"?

C. **Practical exercises**

1. Develop a timeline on the history of firearm identification. Include significant court decisions, technology developments, documentation developments, and publications.

2. Using test fires from the function testing module, systematically intercompare known matches (KM) and known non-matches (KNM) and evaluate the amount of individual agreement present in each series. After comparison of the test fires from the same caliber, create test fires from at least two additional firearms of the same make/model/caliber for comparison (minimally for 9mm Luger, 40 S&W, 45 Auto, 38/357, and 380 Auto; more as directed by your trainer) using different types of ammunition. Take representative photographs of your observations during this exercise.

    a. This exercise is the foundation for understanding sufficient agreement.

3. Using the test fires from the function testing module as a reference, create a set of cartridges cycled through firearms selected by your trainer to compare the quantity and quality of cycling marks found on unfired ammunition with the quantity and quality of cycling marks found on fired ammunition. Document these comparisons on comparison worksheets and prepare a summary of your observations.

4. Select five firearms from the function testing module and fire an additional two shots using ammunition loaded with different types of bullets. Intercompare these bullets with the original test-fired bullets. Note, if additional test fires were created during the function testing module, proceed directly to the intercomparisons.

5. After the above exercises, obtain shotshells from four different “shooting scenes” from your trainer and examine them as you would a real case. Take appropriate notes and write a report as to your findings.

6. Participate in a study involving consecutively manufactured items (e.g. Brundage) if available.

7. Complete mock casework involving cartridge cases, bullets, and test fires as provided by your trainer.

D. **Assessment**

1. Successful completion of this module will involve:

    a. The trainee successfully answering the study questions.

b. A review of the reading log. Entries are required to reflect familiarity with each reading.

c. The trainee successfully completing the practical exercises.

d. The trainee successfully completing a competency test.

i. Prior to receipt of the competency test, the trainee will be provided with the criteria for successful completion of the competency test.

e. The trainee successfully completing a mock court exercise (done in conjunction with CET.04).

2. A successful competency test will result in authorization of the trainee to perform Identification casework.

E. **Reading**

1. **Required**

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i. AFTE Criteria for Identification Committee, "Theory of Identification, Range Striae Comparison Reports and Modified Glossary Definitions – AFTE Criteria for Identification Committee Report. AFTE J 24 (2): 336-340.

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xxii. Report to the President, Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods. [Gun.64]

xxiii. Uchiyama, Tsuneo, "Variations of Markings on Primers of Expended Cartridge Cases: Analysis of Cartridge Cases Fired from Caliber 25 Auto Semi-Automatic Pistols," AFTE Journal, 2010; 42(2): 120-131.

xxiv. Welch, N.E., "Matching a Bullet to a Cartridge Case," AFTE Journal, 1981; 13(4):79.

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ii. Shem, R.J., and Striupaitis, P.P., "Comparison of 501 Consecutively Fired Bullets and Cartridge Cases from a 25 Caliber Raven Pistol,"

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c. **Firing Pin Impressions**

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iii. Haag, L.C., “Firing Pin Protrusion and Impression Depth Measurement,” AFTE Journal, 1990; 22(3):295-298.

iv. Matty, W., and Johnson, T., “Comparison of Manufacturing Marks on Smith & Wesson Firing Pins,” AFTE Journal, 1984; 16(3):51.

v. McBrayer, W.S., “Unique Firing Pin Impression,” AFTE Journal, 1981; 13(4):116.

vi. Miller, J., “Pressure Effects on Firing Pin Impression Depth,” AFTE Journal, 1995; 27(3):242-245.

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d. **Anvil Marks**

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e. **Manufacturing Marks**

i. Dutton, G., “Manufacturing Marks on 12 Gauge Cartridges,” AFTE Journal, 1997; 29(2):170-172.

ii. LaCova, Salvatore, Jonathan Fox and Nicholas Mattia, “Subclass Characteristics on CCI Speer Cartridge Case Heads,” AFTE Journal, 2010; 42(3): 281-284.

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v. Rivera, Gene C., “Subclass Characteristics in Smith and Wesson SW40VE Sigma Pistols,” AFTE Journal, 2007; 39(3): 256-262.

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2. **Suggested**

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iv. Krcma, V., “Fluted and Annular Grooved Barrel Chambers in Firearms,” Journal of Forensic Sciences, Vol. 41, No. 3, May 1966, pp. 407-417.

v. Kennington, R.H., and Galan, J.I., “Ejector Type Marks on Unfired Cartridges,” AFTE Journal, 1987; 19(4):452.

vi. McKay, S.A., “Class Characteristics of Shotguns from Shell Markings,” AFTE Journal, 1971; 3(3):34.

vii. Nennstiel, R., “Computer Supported Method of Firearm Type Determination,” AFTE Journal, 1986; 18(4):4.

viii. Rathman, G.A., “Unusual Cartridge Case Identification,” AFTE Journal, 1976; 8(4):29.

ix. Stengel, R.F., “Which Cartridge Was Fired First?” AFTE Journal, 1987; 19(3):325-326.

x. Thompson, Evan, “Peened Chamber in a .22 Caliber Semiautomatic Pistol,” AFTE Journal, 2009; 41(4): 391.

xi. Walsh, K.A., and Buckleton, J.S., “Firing Sequence Involving Two 303 British Cartridges,” AFTE Journal, 1991; 23(3):816-819.

b. Specific Models and Mechanism Marks

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c. Firing Pin Impressions

i. Fraser, D.A., “Rimfire Firing Pin Impressions,” AFTE Journal, 1983; 15(3):85.

ii. Frazier, R.A., “Firing Pin Impressions: Their Relationship To Hammer Fall Conditions,” AFTE Journal, 1989; 21(2):589-92.

iii. Nielsen, F.I., “Ruger 10/22 Firing Pin Modification,” AFTE Journal, 1988; 20(3):325.

iv. Stephenson, J.S., McPhillips, E.T., and Jachimowicz, E., “Use of a Duplex Nail as a Firing Pin in the Intratec Tec-9 Pistol,” AFTE Journal, 1996; 28(1):15-18.

v. Verbeke, D.J., and Stauffer, J.C., “Unique Firing Pin Identification,” AFTE Journal, 1975; 7(1):59.

vi. Williams, Heather A., “Glock Firing Pin Alteration,” AFTE Journal, 2009(1); 41(1):74-76.

d. **Anvil Marks**

a. Dutton, G., “Anvil Bounce,” AFTE Journal, 1996; 28(4):243-246.

b. Ernest, R.N., “Anvil Marks in Centerfire Cartridge Cases,” AFTE Journal, 1992; 24(4):367-370.

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i. Hebsgard, Lars, “Identification of Production Toolmarks Inside Cartridge Cases,” AFTE Journal, 2010; 42(4): 335-346.

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b. Koffman, Avi and Gil Hocherman, “FN1910/1922 7.65mm – Chamber Impressions on Cartridge Cases,” AFTE Journal, 2010; 42(2): 191-195.

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d. Murphy, Christine, “Unusual Chamber Marks in a Hi-Point 9mm Pistol that Resemble Fluting,” AFTE Journal, 2007; 39(1):47-49.

e. Stotts, James Andrew, “Chamber Marks from 7.62x39mm Soviet Caliber AK- and SKS- Type Rifles,” AFTE Journal, 2008; 40(4): 379-381.

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 5/11/2017	**NUMBER:** CET.11 Distance Determination Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** CET.11	

I. This module will provide the trainee with the ability to perform distance determinations.

A. **Objectives**

1. To provide the trainee with the knowledge, skills, and abilities to perform distance determinations.

B. **Study Questions**

1. Generally, describe the chemical processes that take place in the burning of smokeless powder, the Modified Griess test, the Sodium Rhodizonate test, and the DTO Test.
2. What challenge does blood on clothing pose for distance determinations?
3. What recent changes to some buckshot loads have changed the conservative “1 inch spread per yard for 00 buckshot” rule of thumb?
4. Under what circumstances would it be advisable to perform a distance determination when the firearm was not available? What limitations would need to be included in the report?

C. **Practical Exercises**

1. Demonstrate a good working knowledge of the literature by preparing a brief explanation of the following as they relate to distance determinations:
   a. Cylinder gap
   b. Intervening objects
   c. Muzzle orientation and attachments
   d. Geometric aspects to powder patterns
   e. Smokeless powder morphology and treatment
   f. Wind
   g. Barrel length
2. Demonstrate a strong working knowledge by performing practice casework while:
   a. Preparing and using the required chemicals and test papers

b. Performing distance determination analysis on the specimens provided by the trainer.

c. Using photographs provided by your trainer, determine the muzzle to target distance

D. **Assessment**

1. Successful completion of this module will involve:

a. The trainee successfully answering the study questions.

b. A review of the reading log. Entries are required to reflect the familiarity with each reading.

c. The trainee successfully completing the practical exercises.

d. The trainee successfully completing a competency test.

i. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test.

ii. A successful competency test will result in authorization of the trainee to perform distance determination casework

E. **Required Reading**

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F. **Suggested**

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      ii. Bailey, J., "Enhancement of Gunshot Residue Patterns on Dark Colored Fabric Using Sodium Hypochlorite," 2005; 37(3): 169-171.

      iii. Bailey, J.A, Swart, D.J., and Finch, H.L., "Limit of Detection with Sodium Rhodizonate: Bullet Wipe Patterns with Selected Ammunition Examined for Lead," 2007: 39(2): 95-99.

      iv. Bashinski, J.S., Davis, J.E., and Young, C., "Detection of Lead in Gunshot Residues on Targets Using Sodium Rhodizonate Test," 1974; 6(4):5.

      v. Bonfanti, M., and Gallusser, A., "Problems Encountered in the Detection of Gunshot Residues," 1995; 27(2):105-122.

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      vii. Brown, C.G., "Detection of Nitrites and Lead in Gunpowder Residue Patterns," 1985; 17(2):118.

      viii. Carr, J.C., "Alternative Device for Distance Measurement in Range Determination Tests," 1992; 24(l):76-78.

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      x. Cayton, J.C., "Blackpowder Firearms, Powder Residue & Ball Penetration," 1984; 16(4):80.

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xvi. Denio, D.J., “Forms To Document Procedure in Case Notes: Chemical Tests for Gunshot Residues,” 1997; 29(l):61-65.

xvii. Deobald, G., “Spiral Pattern,” 1995; 27(3):247.

xviii. Dillon, J.H., “Manufacture of Conventional Smokeless Powder,” 1991; 23(2):682-688.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 1/04/2018	**NUMBER:** CET.12 Serial Number Restoration Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** CET.12 Serial Number Restoration Module	

I. This module will provide the trainee with the ability to perform serial number restorations.

A. **Objectives**

1. To provide the trainee with the knowledge, skills, and abilities to perform serial number restorations, to include the following:
   a. An understanding of the underlying theory behind serial number restortaions
   b. The methods commonly used to obliterate serial numbers
   c. An understanding of the chemicals and chemical reactions involved in serial number restorations
   d. An understanding of the use of magnets in restoring serial numbers
   e. Proper techniques for restoring serial numbers
   f. Proper methods of documenting and reporting a serial number restoration attempt

B. **Study Questions**

1. Sketch a cross-section of the entire stress area above and below the indentation of a stamped item and depict what remains when the indented area is removed.
2. What are the main methods used to serialize items in the firearms industry?
3. Define the term *plastic deformation*.
4. Discuss grinding, over stamping, gouging, heating, welding, removal, and combinations of these alterations with your trainer.
5. What are telltale signs left by the various alteration methods? Discuss with your trainer how these signs will determine your approach to the restoration attempt.
6. Discuss surface preparation with your trainer, including its importance, the various methods, and how this step may affect the results of a restoration attempt.
7. Discuss the theory and use of magnets in serial number restorations. How does the Parker Contour Probe work and what advantages does it offer (if any) when compared with horseshoe magnets?

8. Describe, in general, the chemical reactions that take place when etching is conducted.
    a. Is the reaction rate for a stressed area faster or slower than the etching rate for the rest of the surface? Why?
9. What are the two primary references available in the laboratory for determining the format (numbering scheme) of a particular firearm's serial number?
10. What is the proper way to record and report a partial serial number restoration, where some characters are in doubt?

C. **Practical Exercises**

1. Using samples provided by your trainer, attempt to restore the obliterated serial number. Check in with your trainer at each step in the process to receive feedback.
2. Witness at least three serial number restoration attempts in casework by other laboratory staff members. Document the laboratory number and discuss the results with your trainer.

D. **Assessment**

1. Successful completion of this module will involve:
    a. The trainee successfully answering the study questions.
    b. The trainee successfully completing the practical exercises.
    c. The trainee successfully completing a competency test.
        i. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test.
        ii. A successful competency test will result in authorization of the trainee to perform serial number restoration casework.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 05/11/2017	**NUMBER:** CET.13 Toolmark module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** CET.13	

I. This module will provide the trainee with the ability to perform non-firearm toolmark comparisons.

A. **Objectives**

1. To provide the trainee with the knowledge, skills, and ability to perform non-firearm toolmark comparisons.
2. To provide the trainee with a working knowledge of subclass characteristics, their origin, and their impact on non-firearm toolmark comparisons.

B. **Study Questions**

1. Discuss with your trainer the significance of examining submitted tools first for trace evidence
2. Prepare a short description of the following machining processes:
    a. Abrasive machining-include honing, lapping, grinding, sanding, and ultrasonic methods
    b. Sawing
    c. Filing
    d. Swaging
3. What types of conclusions can be reached in cases involving toolmark comparisons where no tool is submitted? Consider such things as the type of tool, size of the tool, action employed by tool, value of toolmark for comparison purposes, and unusual toolmark features.
4. Define the following terms as they relate to toolmark identification and give three examples of tools or methods that could produce each category:
    a. Shearing
    b. Pinching
    c. Fracture
    d. Scrape mark

e. Impression

f. Slicing

g. Puncture

C. **Practical Exercises**

1. Select a flat-bladed tool such as a screwdriver and a pry bar. Initially, make marks in lead with both tools varying the pressure and angle of action. Compare these marks to one another. Make the same type of marks in a piece of copper or brass sheeting. Microscopically compare those in the brass or copper sheeting with the test marks in the lead. Attempt to identify the appropriate marks with the appropriate tool. Repeat making tests in lead and compare them with the original lead tests. Photograph your results and comment on the difference in the quality of marks made by each tool in each medium.

2. Using a drive pin punch, produce a set of test marks in lead and examine these two marks. Then produce an impression in a piece of brass or copper sheeting. Compare the marks in brass or copper to the lead test marks. Make a second set of tests in lead and compare those to the original lead test marks. Attempt to identify these as having been made by the same tool. Support your results by photographs.

3. Obtain an ax blade that contains numerous defects. Cut a piece of seasoned wood such as dowel rod with the ax blade and attempt to identify the blade with the cut. Insure that your test cuts are consistent with your "unknown" with respect to the orientation of the ax to the wood and the direction of the grain. Support your results with notes and photographs. Obtain a variety of wire-cutting tools and cut 1/8” thick wire solder with each. Carefully note the profile of the cut ends. Prepare a table that illustrates the class characteristics of the cut ends as related to the profile of the tool-cutting edges.

4. Repeat the previous practical exercise with files and abrasive tools, and discuss problems encountered with these types of examinations.

5. Using a saw and blade, properly document each saw/blade on a worksheet. Make test cuts in lead and attempt to identify the tests to one another. Ensure that you label your tests properly with respect to the orientation of the blade. Following this examination, produce "questioned" cuts in materials such as wood, plastic, and metal. Try to compare these marks with the original lead test marks. Make more test marks in lead and repeat the comparison process to attempt to identify the "questioned" cuts to the second set of lead test cuts. Compare the original lead test marks with the second set of lead test marks. Properly document "best match" comparisons with notes and photographs.

6. Obtain a variety of wire cutting tools and cut 1/8" thick wire solder with each. Carefully note the profile of the cut ends. Prepared a table that illustrates the class characteristics of the cut ends as related to the profile of the tool cutting surface.

7. Perform mock casework using the samples provided by your trainer.

D. **Assessment**

1. Successful completion of this module will involve:

a. The trainee successfully answering the study questions.

i. A review of the reading log. Entries are required to reflect familiarity with select readings.

ii. The trainee successfully completing the practical exercises.

iii. The trainee successfully completing a competency test.

1. Prior to receipt of the competency test, the analyst will be provided with the criteria for successful completion of the competency test.

2. A successful competency test will result in authorization of the trainee to perform toolmark casework

E. **Reading**

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Comparative Evidence Training Manual	**REVISION DATE:** 04/04/2019	**NUMBER:** CET.14 - Impression Evidence Module
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Eric Collins & Debbie McKillop	**ANAB:**	
CHAPTER: **Training**	**SUBJECT:** Impression Evidence Module	

I. The objective of this training module is to provide the knowledge, skills, and abilities for an analyst to become competent in the footwear/tire discipline.

A. This training incorporates literature review, demonstrations, and hands-on practical exercises. Footwear or tire imprint/impression examination related classes, professional seminars, schools, and workshops can substitute or supplement this training module. No external classes can substitute for the competency test.

B. A trainee is expected to become familiar with all pertinent unit equipment and instruments, the Comparative Evidence Technical Procedures Manual, the Division Manual, the Quality Manual, and the Safety Manual. Study will include the required readings listed in the module. Integral to the course of study will be job shadowing unit personnel who have special expertise in certain areas.

1. The minimum qualification for an analyst to perform shoe/tire impression analysis is a bachelor's degree in a natural science and successful completion of the training module.

C. The trainee is required to document their training. This documentation may take the form of a training binder, which may consist of handwritten notes, word documents, charts, graphs, photographs, photocopied material, etc.

D. Practical exercises are required to demonstrate an understanding of the knowledge and understanding of training elements. Practical exercises should be administered using test cases in LIMS for trainees to document as mock casework and demonstrate knowledge of Division and Unit requirements for test records and reports. Mock casework will be evaluated to provide an assessment of the trainee's progress through the training module.

E. The Forensic Manager and Supervisor will interview the employee in detail upon assignment to the unit. The focus will be on past training, experience, education, published articles, and other credentials so that the employee's knowledge, skills, and abilities can be evaluated. Based on this information, a training plan will be developed to address any areas upon which the new employee lacks training. A competency test will be administered before the previously qualified examiner is authorized to perform casework.

F. Prior to beginning the training module, the trainer and trainee will discuss the trainee's general knowledge of forensic science.

G. The trainer and trainee will discuss the following items related to ethics:

1. ANAB Guiding Principles of Professional Responsibility.

2. CAC Code of Ethics
3. FSD Statement of Ethical Responsibility
4. Ethical scenarios.

H. Progression through training module.

1. The estimated time frame for a trainee to complete the training module, if allowed to train full-time, is six months
2. The trainee will be informed of a timeline for expectations regarding the completion of the training module.
3. External coursework (e.g., California Criminalistics Institute courses, online training programs) may be substituted for some or all of this training module. The equivalency of such coursework will be evaluated on a case-by-case basis.
4. A competency test will be administered at the completion of the training module. The trainee will be informed of the criteria for successful completion prior to beginning the competency test.
    a. A mock court exercise will be conducted based on the mock test report completed as part of the competency test.
5. The effectiveness of initial training will be monitored by the Supervisor in one or more of the following ways:
    a. Providing feedback to the trainee after completion of the training module.
    b. Soliciting feedback from the trainee regarding the training module, including discussion about the practical exercises, mock casework, and required readings.
    c. Performing technical or administrative review of initial casework produced by trainee.
    d. Providing annual performance evaluations.

I. All analysts should participate in continuing education to broaden or maintain their skills and expertise in the footwear/tire discipline. The effectiveness of on-going training will be monitored by the Supervisor in one or more of the following ways:

1. Requiring a teach-back from the analyst attending the training.
2. Providing feedback regarding the training, either in a unit meeting or with one-on-one discussion with the Supervisor.
3. Evaluating proficiency test results.
4. Technical review of casework.
5. Reviewing court testimony and court critiques.
6. Providing annual performance evaluations.

II. Introduction to Historical Developments

A. **Objective:** To introduce the trainee to the historical development of footwear and tire imprint/impression examinations, current practices of footwear and tire imprint/impression examinations, and understand the discipline's nomenclature.

B. **Practical Exercises**

1. There are no practical exercises for this section.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments with the trainee.

D. **Reading:**

1. Chapter 1, 15, Introduction to Forensic Science, 6th edition, Richard Saferstein, Prentice Hall, Englewood Cliffs, NJ 07632.
2. Chapter 1, Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010."Shoe and Tire Impression Evidence," William J. Bodziak, FBI Law Enforcement Bulletin, July, 1984.
3. Chapters 1, 2 and 3, and glossary, Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.
4. "Tire Impressions as Evidence" Nause, Cpl. N.A., R.C.M.P. Gazette, 44(12) 11-27, 1982.
5. "The Science of Tire Impression Identification," Nause, Cpl. N.A., R.C.M.P. Gazette, 49(1) pp 1-25, 1987.
6. Chapter 5, Techniques of Crime Scene Investigation, second edition, Arne Svensson and Otto Wendel, American Elsevier Publishing Company, New York, NY 10017, pp 72-91, 1971.

III. Recording and Working with 2-Dimensional Footwear Impressions

A. **Objective**: The trainee will learn methods for recording 2-dimensional imprints and special methods for enhancement or visualization of 2-dimensional imprints.

B. **Practical Exercises**:

1. Photography of 2-dimensional imprints.
2. Learn and demonstrate methods to develop latent imprints and methods to record them, including:
    a. Dusting with fingerprint powder
    b. Electrostatic dustprint lifter
    c. Gelatin lifter
    d. Chemical methods
3. Learn to distinguish between examination-quality photographs of questioned evidence and those that are of limited or no value for comparison purposes.
    a. Learn to re-size/scale examination-quality photographs to natural size (1:1) using Adobe Photoshop for direct comparison with test impressions.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Reading**

1. Chapter 3 “Two-Dimensional Footwear Impressions,” Footwear Identification, Michael J. Cassidy, RCMP, Canadian Government Publishing Centre, Hull Quebec, Canada, K1A 0S9.
2. Chapter 2 “Lifting Two-Dimensional Footwear Impressions,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.
3. Chapter 5 “Techniques to Enhance Footwear Impressions,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.
4. “A Systematic Approach to the Enhancement of Footwear Marks,” Roger J. Davis, Canadian Society of Forensic Sciences Journal, Vol 21 No 3, pp 98-105, 1988.
5. “The Use of Water Soluble Proteins Dyes for the Enhancement of Footwear Impressions in Blood on Non-Porous Surfaces, Part I,” K. G. Barnett, R. G. Bone, P. W. Hall, and R. H. Ide, Technical Note 629, The Forensic Science Service, Birmingham, England B5 6QQ, 1988.
6. “The Use of Water Soluble Proteins Dyes for the Enhancement of Footwear Impressions in Blood on Non-Porous Surfaces, Part II,” K. G. Barnett, R. G. Bone, P. W. Hall, and R. H. Ide, Technical Note 645, The Forensic Science Service, Birmingham, England B5 6QQ, 1988.
7. "The Use of Water Soluble Proteins Dyes for the Enhancement of Footwear Impressions in Blood on Non-Porous Surfaces, Part III,” K. G. Barnett, R. G. Bone, P. W. Hall, and R. H. Ide, Technical Note 650, The Forensic Science Service, Birmingham, England B5 6QQ, 1988.
8. “The Use of Gelatin Lifts and Protein Transfer Media for the Enhancement of Footwear Impressions in Blood on Carpets, Porous and Dark Non-Porous Surfaces,” K. G. Barnett, R. G. Bone, P. W. Hall, and R. H. Ide, Technical Note 652, The Forensic Science Service, Birmingham, England B5 6QQ, 1988.
9. Directions for Use, Kinderprint Electrostatic Dust Print Lifter, Kinderprint Co., Inc., Martinez, CA.
10. “The Enhancement of Marks in Blood Part II, A Modified Amido Black Staining Technique,” J. I. Hussain and C. A. Pounds, CRSE Report 685, 1989.
11. “Chemical Methods for the Enhancement of Footwear Marks,” E. Keedwell, J. Birkett and R. J. Davis, MPFSL Report 73, Metropolitan Police Forensic Science Laboratory, London, England SE1 7LP, 1988.

IV. Recording and Working with 3-Dimensional Footwear and Tire Impressions

A. **Objective**: The trainee will learn methods for recording 3-dimensional impressions.

B. **Practical exercises:**

1. Practice photographing 3-dimensional footwear impressions
2. Practice casting (using dental stone) 3-dimensional footwear impressions in
    a. mud

b. sand

c. submerged soil

3. Discuss with your trainer the utility of casts in the comparison process.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapter 2 “Three-Dimensional Footwear Impressions,” Footwear Identification, Michael J. Cassidy, RCMP, Canadian Government Publishing Centre, Hull Quebec, Canada, K1A 0S9.

2. Chapter 3, “Casting Three-Dimensional Footwear Impressions,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

3. “Identification of Suitable Plaster for Crime Scene Casting,” J. V. Vandiver and J. H. Wolcott, J. of Forensic Sciences, Vol 23 No 1, pp 607-614, January 1978.

4. “Dental Stones for Casting Depressed Shoemarks and Tyremarks,” J. S. Brennan, J. of the Forensic Science Society, Vol 23, pp 275-285, 1983.

5. “Easier and Better Casts,” James V. Vandiver, Identification News, pp 3-10, May 1980.

V. Shoe Manufacturing

A. **Objective**: The trainee will learn methods of footwear manufacturing.

B. **Practical exercises:**

1. Using a selection of footwear, describe the methods of manufacture.

2. Discuss the implications for identification and individualization based on

a. the method of manufacture

b. footwear design, fashion, and styles.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapter 4 “Manufacturing of Soles and Heels,” Footwear Identification, Michael J. Cassidy, RCMP, Canadian Government Publishing Centre, Hull Quebec, Canada, K1A 0S9.

2. Chapter 7 “Basic Manufacturing Processes of Athletic Shoes Outsoles,” Footwear Impression Evidence, Second Edition, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

3. “Manufacturing Processes for Athletic Shoe Outsoles and their Significance in the Examination of Footwear Evidence,” William J. Bodziak, J. of Forensic Science, Vol

31 No 1, pp 153-176, January, 1986.

4. "The True Story of Shoe Sizes," The Sterling Last Corporation, 43-05 Tenth St., Long island City, NY 11101.

5. "The Foot Inside the Shoe," National Shoe Association, 342 Madison Ave, New York, NY.

VI. Tires: Tread & Sidewall Design

A. **Objective:** The trainee will learn the significance of tread patterns, sidewall information, tire noise treatment, and tread wear indicators.

B. **Practical exercises:**

1. The trainer will provide the trainee with tires and tire imprints/impressions for examination. The trainee will complete the following practical exercises.

   a. Examine the tire(s) and describe the following features:

      i. tire construction and type

      ii. tread design

      iii. tread wear indicators

      iv. sidewall information including size, brand, mold identifier, & serial number

      v. noise treatment

      vi. sipes

   b. Examine the tire imprints/impressions and describe the following features:

      i. tread design

      ii. tread wear indicators

      iii. noise treatment

      iv. sipes

      v. manufacturer identification

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapters 5 and 12, Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.

2. "Tire Impressions as Evidence" Nause, Cpl. N.A., R.C.M.P. Gazette, 44(12) 11-27, 1982.

3. Chapter 8, "Tire Components and Terminology," and Chapter 9, "Tire Construction," Nause, Lawren; *Forensic Tire Impression Identification*, Canadian Police Research Centre, National Research Council of Canada, 2001

VII. Tires: Wear Patterns

A. **Objective:** The trainee will learn the significance of tread wear patterns.

B. **Practical exercises:**

1. The trainer will provide the trainee with tires and vehicles for examination. The trainee will complete the following practical exercises.

   a. Make vehicle measurements of the wheelbase and stance.

   b. Have the vehicle make left, right, and U-turns. Do this with the vehicle traveling in both a forward and rearward direction.

      i. Correlate the tire tracks with the direction of travel and the position of the wheels on the vehicle.

      ii. Measure the turning radius.

   c. Identify elements of vehicle suspension that affect tire wear.

   d. Survey vehicles for the following information.

      i. tire brand, size, model, type, and tread design

      ii. variation with position on vehicle

      iii. degree of wear with position on vehicle

      iv. variation with make, model and age of vehicle.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapters 4 and 8 Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.

2. “Tire Impressions as Evidence” Nause, Cpl. N.A., R.C.M.P. Gazette, 44(12) 11-27, 1982.

3. Chapter 4, "Vehicle Track Measurements," Nause, Lawren; *Forensic Tire Impression Identification*, Canadian Police Research Centre, National Research Council of Canada, 2001

VIII. Tires: Tire Construction & Manufacturing

A. **Objective:** The trainee will learn about tire construction, tire design, and tire manufacturing.

B. **Practical exercises:**

1. Visit a tire manufacturing or retreading facility. (Note: A video may substitute for this visit.)

2. Examine a tire mold and describe

   a. how the mold is designed and produced

   b. how a tire is manufactured

c. class, subclass and individual characteristics that may be produced in manufacturing a tire.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapters 5, 12 and 13 Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.
2. "Tire Impressions as Evidence" Nause, Cpl. N.A., R.C.M.P. Gazette, 44(12) 11-27, 1982.
3. "How a Tire is Built" and "Tire Construction", Goodyear Tire Publication.
4. Chapter 12, "Tire Manufacturing Process," Nause, Lawren; *Forensic Tire Impression Identification*, Canadian Police Research Centre, National Research Council of Canada, 2001

IX. Producing Test Imprints and Impressions

A. **Objective:** The trainee will learn about the examination of footwear preparatory to producing examination-quality test imprints and impressions

B. **Practical exercises:**

1. Document and conduct a preliminary examination of footwear, including
   a. description, brand, model, etc.
   b. blood and trace evidence
   c. damage
   d. Class and potential individual characteristics of outsole
2. Produce footwear test imprints or impressions by various means, including:
   a. Ink
   b. Dusting with fingerprint powder
      i. Adhesive lifting paper
      ii. Roller transport clean-up film (transparent)
   c. Photograph as needed.
3. Produce tire test imprints or impressions
4. Describe the advantages and disadvantages of the various methods of producing exemplar imprints/impressions.
5. Explain criteria for selection of the method.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapter 7, pp 131-136, “The Suspect’s Shoe,” Footwear Identification, Michael J. Cassidy, RCMP, Canadian Government Publishing Centre, Hull Quebec, Canada, K1A 0S9.

2. Chapter 8 “Known Shoes of Suspects and the Preparation of Test Impressions,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

3. Chapter IV “The Controlled Test Impression,” Footwear Evidence, John R. Abbott, Charles C. Thomas, Publisher, Springfield, IL, 1964.

4. Chapter 11, Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.

5. Chapter 4 “Known Exemplars of Tires for Elimination and Examination,” Tire Tread and Tire Track Evidence, William J. Bodziak, CRC Press, Boca Raton, FL 33487-2742.

X. Investigative "No Suspect" Information

A. **Objective:** The trainee will learn about the possible investigative information that can be gleaned from shoe imprint/impression evidence.

B. **Practical exercises:**

1. Study mock crime scene scenarios and develop investigative information, such as

   a. size, brand, and model of suspect’s shoes

   b. actions of individuals as revealed by their footwear patterns.

   c. possible tire brand and model.

2. Study the use of:

   a. footwear forensic databases (including online references, Foster + Freeman's SICAR, etc.)

   b. footwear manufacturers’ resources (printed or electronic).

   c. Tread Design Guide, Tire Guides, Inc.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapter 6 “Footwear Impressions - An Investigational Aid,” Footwear Identification, Michael J. Cassidy, RCMP, Canadian Government Publishing Centre, Hull Quebec, Canada, K1A 0S9.

2. Chapter 6 “The Evaluation and Treatment of Footwear,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

3. “A Correlation Between Shoeprint Measurements and Actual Sneaker Size,” Harvey VanHoven, J. of Forensic Sciences, Vol 30 No 4, pp 1233-1237, October 1985.

4. Chapters 10, Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.

5. "The True Story of Shoe Sizes," The Sterling Last Corporation, 43-05 Tenth St., Long island City, NY 11101.

XI. Comparison of Questioned Imprint/Impression to Known (Suspect) Impression

A. **Objective:** The trainee will learn how to compare questioned footwear/tire imprints/impressions to known (suspect) shoes/tires for the purpose of source attribution.

B. **Practical exercises:**

1. Make a comparison of partial or complete footwear imprints/impressions to suspect shoes.

2. Identify class and individual elements of the imprints/impressions.

3. Discuss the following with your trainer:

   a. criteria for identification

   b. criteria for recognizing individualizing elements (randomly acquired characteristics)

   c. relation of footwear manufacturing method to class, subclass, and individual characteristics of the sole

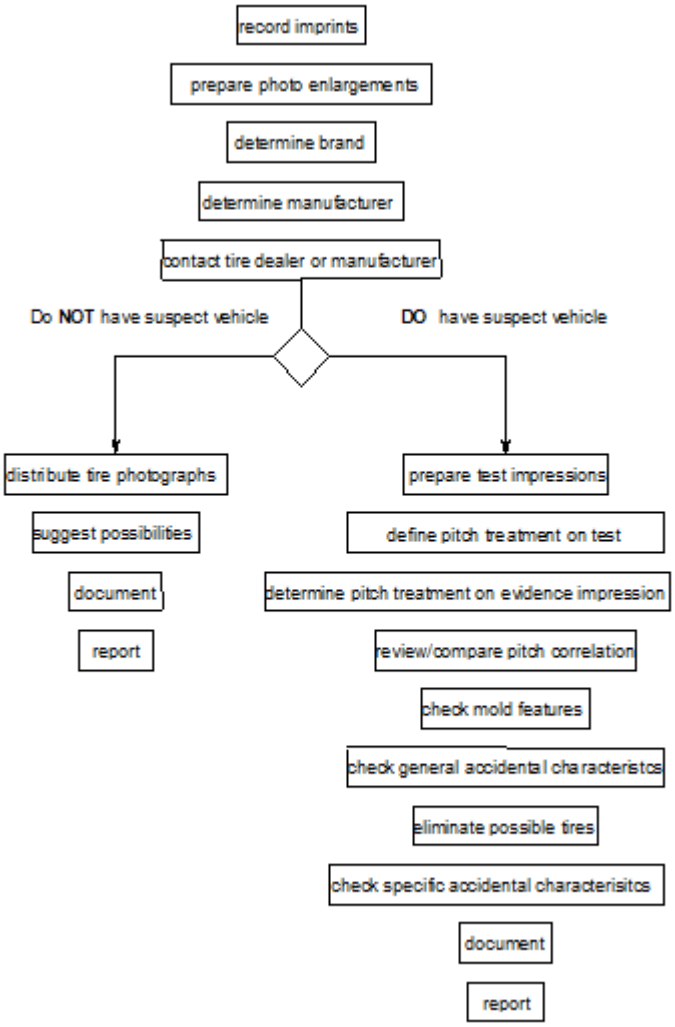
   d. weight for class or subclass identifications.

4. Study tire imprints/impressions from the mock crime scene.

5. Compare questioned tire imprints/impressions to known ("suspect") tires.

   a. Identify class and individual characteristics.

6. Discuss the following comparison process flowchart for tire examination with your trainer.



a.

C. **Evaluation of Trainee Progress**

1. The trainer will review the reading assignments and practical exercises with the trainee.

D. **Readings:**

1. Chapter 5 “Identification of Footwear Evidence,” Michael J. Cassidy, RCMP, Canadian Government Publishing Centre, Hull Quebec, Canada, K1A 0S9.

2. Chapter 9 “Wear Characteristics,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

3. Chapter 10 “Class and Identifying Characteristics,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

4. Chapter 11 “Comparison of the Questioned Impression with Known Shoes,” Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

5. “Class and Identifying Characteristics: The Identification,” John Paulisick personal communication (“An International Symposium on the Forensic Aspects of Footwear and Tire Impression Evidence,” FSRTC, FBI Academy, 1994).

6. Chapters 14, Tire Imprint Evidence, Peter McDonald, Elsevier Science Publishing Company, New York, NY 10010.

7. "A Survey of Men's Footwear," R. J. Davis and J. D. DeHaan, J. of Forensic Science Society, Vol 17 No 4, pp 271-285, 1977.

8. "Shoeprints: Quantum of Proof," R. J. Joling, J. of Forensic Sciences, Vol 13 no 2, pp 223-235, April 1968.

9. "Variations in Adidas 'Kick' and Related Sole Units," MPFSL report 34, J. Birkett, Metropolitan Police Forensic Science Laboratory, London, SE1 7LP, England, June 1983.

XII. Court and the Footwear Expert

A. **Objective:** The trainee will be able to competently present footwear and tire evidence in court.

B. **Practical exercises:**

1. Discuss criminal and civil law procedures with your trainer.

2. Prepare a presentation for a mock court exercise based on the report and notes from the competency test.

C. **Evaluation of Trainee Progress**

1. The trainer will review the trainee's performance in the mock court exercise.

D. **Readings:**

1. Chapter 12 "The Footwear Examiner in Court," Footwear Impression Evidence, William J. Bodziak, Elsevier Science Publishing Company, New York, NY 10010.

2. Chapter I "The Footwear Specialist in Court," Footwear Evidence, John R. Abbott, Charles C. Thomas, Publisher, Springfield, IL, 1964.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 06/10/2013	**NUMBER:** DRG.01 - General Information
	RELATED ORDERS: DRG.34 - Analytical Procedures - General, MONO.MAR - Analysis of Marijuana, MONO.PHEN - Analysis of Phenethylamines, MONO.ANALOGS - Drug Analogs, MONO.COC - Analysis of Caines, MONO.BEN - Analysis of Benzodiazepines, MONO.LSD - Analysis of Lysergic Acid Diethylamide (LSD), MONO.PCP - Analysis of PCP, MONO.TRY - Analysis of Tryptamines, MONO.STE - Analysis of Steroids, MONO.GHB - Gamma-Hydroxybutyric Acid (GHB), MONO.OPI - Analysis of Opiates, MONO.BAR - Analysis of Barbituates, DRG.33 - Case Examination Protocols & Sample Selection, DRG.09 - Evidence Handling, DRG.41 - Uncertainty of Measurement, DRG.42 - Uncertainty Budget for Reported Drug Weights, DRG.43 - Training: General Information, DRG.44 - Training: Barbituate, DRG.45 - Training: Benzodiazepine, DRG.46 - Training: Caines, DRG.47 - Training: GHB, DRG.48 - Training: LSD, DRG.49 - Training: Marijuana, DRG.50 - Training: Opiates, DRG.51 - Training: PCP, DRG.52 - Training: Phenethylamine Analog, DRG.53 - Training: Phenethylamine, DRG.54 - Training: Steroid DRG.55 - Training: Tryptamine, DRG.56 - Training: Miscellaneous Compounds & No Common Controlled Substances, DRG.25 - GC-MS Using the Software, DRG.18 - Balances, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, FSD.12 - Document Control	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: 5.4.1.1**	
CHAPTER: General Information	**SUBJECT:** General Information	

I. Policy This manual covers the policies and procedures specific to the examination of solids, powders, and liquids for the presence of controlled substances.

A. Terminology

1. The verbs "shall", "must", and "will" indicate mandatory requirements, while "should" is used to denote compelling or recommended practices and "may" is used in the permissive sense.

B. Scope of Examinations

1. Analysis of solids (e.g. powders) and liquids for the presence of controlled substances. Quantitative analysis or purity checks are not performed on solid dosage cases.
2. The laboratory does not analyze solids or liquids in cases related to Clandestine manufacture of controlled substances or their precursors.
    a. Such evidence may be tested for the presence of a controlled substance only.

C. Presumptive Tests

1. See Monographs as well as "Suggested Tests" in DRG.34 for more information on color tests for specific analytes.

D. Confirmatory Tests

1. See Monographs as well as "Suggested Tests" in DRG.34 for more information on confirmatory analysis for specific analytes. The titles of the Monographs are:
    a. Marijuana (MONO.MAR)
    b. Phenethylamines (MONO.PHEN)
    c. Phenethylamine Analogs (MONO.ANALOGS)
    d. Caines (MONO.COC)
    e. Benzodiazepines (MONO.BEN)
    f. LSD (MONO.LSD)
    g. PCP and Dissociative Anesthetics (MONO.PCP)
    h. Tryptamines (MONO.TRY)
    i. Steroids (MONO.STE)
    j. GHB (MONO.GHB)
    k. Opiates (MONO.OPI)
    l. Barbiturates (MONO.BAR)

E. Test Methods

1. The Controlled Substance Unit will use appropriate methods and procedures for all tests within its scope (DRG.34). These include:
    a. sampling (DRG.33)
    b. handling (DRG.09)
    c. storage (DRG.09)

d. preparation of items to be tested (DRG.34)

e. where appropriate an estimation of uncertainty as well as statistical techniques for analysis of test data (DRG.41 & DRG.42). (ISO/IEC 17025:2005 5.4.1)

2. The Controlled Substance Unit shall have instructions on the use and operation of all relevant equipment, handling and preparation of items for testing, see: DRG.43, DRG.44, DRG.45, DRG.46, DRG.47, DRG.48, DRG.49, DRG.50, DRG.51, DRG.52, DRG.53, DRG.54, DRG.55, DRG.56, DRG.25, DRG.18, DRG.28, DRG.29 and DRG.09. (ISO/IEC 17025:2005 5.4.1)

3. All instructions, standards, manuals and reference data relevant to the work of the Controlled Substance Unit shall be kept up to date and made readily available to personnel through the use of this Unit Manual. (ISO/IEC 17025:2005 5.4.1)

4. All methods shall be documented and the documents readily available for review by laboratory personnel through PowerDMS (FSD.12). (Supplemental 5.4.1.1)

5. Deviation from test methods shall occur only if the deviation has been documented, technically justified and authorized. (ISO/IEC 17025:2005 5.4.1)

F. Customer Communication

1. The laboratory uses a DAT (Drugs Alcohol and Toxicology) Handbook to communicate with the clients regarding the service offered, the equipment used and the opinions, conclusions and interpretations drawn based on results (ISO/IEC 17025:2005 4.7).

a. The DAT handbook by itself or in combination with inter-agency agreements serves as inter-agency contract for service (ISO/IEC 17025:2005 4.4).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 06/10/2013	**NUMBER:** DRG.02
	RELATED ORDERS: FSD.32 - Security	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.3.4, 5.6.3.4** **ASCLD-LAB International Supplemental 2011: 5.3.4.1 (a-f), 5.8.4.1**	
CHAPTER: General Information	**SUBJECT:** Drug Unit Security	

I. Policy: Due to the higher probability of theft and/or tampering in narcotics cases than in other types of cases, stringent controls are necessary in the handling of narcotics evidence within the Drug Unit.

A. Laboratory Security

1. The Division Manual has written procedures for building security. (ISO/IEC 17025:2005 5.3.4, Supplemental 5.3.4.1)

2. See Division Manual polices on security: FSD.32.

B. Drug Unit Security

1. Drug evidence must be stored and examined only in those areas of the laboratory with restricted access to non-laboratory persons and are protected by intrusion alarms when the laboratory is vacant. (Supplemental 5.3.4.1 a, b, e, f)

2. To the extent possible, drug evidence should be kept in the drug examination room or evidence storeroom until returned to the submitting agency. (Supplemental 5.3.4.1 f, 5.8.4.1)

3. Anytime the Muir facility is vacant, the doors must be closed and locked and the alarms engaged. (Supplemental 5.3.4.1 b, c, e, f)

4. Keys to the secured areas are limited (Supplemental 5.3.4.1 d, 5.8.4.1). The secured areas in the controlled substance unit are the doors to the controlled substance unit and the lock boxes at each drug station. The keys for the lock boxes are maintained:

   a. Under the personal control of the Analyst(s) responsible for the case, and

   b. A duplicate key in a locked key box accessible to the Muir administration.

C. Personnel Security

1. Only Division personnel who have successfully passed an extensive background investigation and/or polygraph examination are permitted to handle drug evidence or reference materials (Drug Standards).

2. All other persons, including laboratory visitors, are permitted in the area of drug evidence or reference materials only when escorted by a Division member. (Supplemental 5.3.4.1 a)

3. All Division members must avoid discussing with individuals outside the Division the nature, quantity, and location of drugs which are present in the Division.

D. Drug Reference Materials Storage

1. Drug reference materials are to be kept in the secured designated storage/or refrigerator. Access to drug reference materials shall be limited to designated personnel. (ISO/IEC 17025:2005 5.6.3.4)

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 06/10/2013	**NUMBER:** DRG.03
	RELATED ORDERS: DRGF.10 - Reference Material Usage Log Title 21, Code of Federal Regulations 1304.11	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.6.3.4**	
CHAPTER: General Information	**SUBJECT:** Drug Inventory	

I. Policy: A computerized inventory of laboratory drug reference materials (Drug Standards) is maintained. All controlled and prescription drugs are visually inventoried quarterly and weighed once in a calendar year. (ISO/IEC 17025:2005 5.6.3.4)

A. Description of Inventory

1. An alphabetical listing of all controlled, prescription and over the counter drug reference materials is maintained in a computer database.
2. The list is in an access database named "DRUG INVENTORY".
3. Current copies of the inventory are kept in the Chemical Storage Room and by the Manager of the Drug, Alcohol and Toxicology Section.
4. The inventory contains the generic name of the drug, the weight (number if in dosage form or volume if in liquid form) of the drug, inventory/vial number, and a code designating its location.

B. Quarterly Inventory

1. Quarterly, a staff member designated by the Manager of the Drug, Alcohol and Toxicology Section will visually inventory the drug reference materials.
2. The staff member will locate each item on the inventory and will verify the presence of each controlled and prescription drug. This will be compared with the current inventory list.
3. The Manager must be notified immediately of any missing drugs.

C. Yearly Inventory

1. Yearly, a staff member designated by the Manager of the Drug, Alcohol and Toxicology Section will inventory all of the drug reference materials.
2. The staff member will locate each item on the inventory and weigh, count, or measure all of the controlled drugs.
3. The changed amounts are recorded for updating the inventory. DRGF.10 should be used to document drugs used for casework or training purposes.
4. Any discrepancies must be reported immediately to the Manager.

D. Updating the Inventory

1. The inventory will be updated routinely with the new amounts of each drug reference material and after each yearly inventory.

2. A new inventory listing will be created after the yearly inventory.

3. It is recommended to log any amount used on the DRGF.10.

4. However, when larger amounts are consumed, more than 100 milligrams, or released for such things as training or research, the date and amount must be recorded and initialed. This can be done on the DRGF.10 in the Chemical Storage Room or at an analyst's workbench by the person consuming or releasing the drug.

5. When drug reference materials are added, the person maintaining the database must enter the reference material, assign a number, create a barcode, date, amount, and location on the inventory list in the Drug Database.

E. Discrepancies in Inventory

1. All discrepancies reported to the Manager, in connection with the quarterly or yearly inventory will be immediately investigated by him/her to determine if the discrepancy is due to an oversight or error.

2. If not, the Chief will be notified immediately. He/she will determine what, if any, investigation will be pursued.

3. If any controlled substances have been lost or stolen, the Manager must complete a "Report of Theft or Loss of Controlled Substances" form (DEA form 106) in triplicate and file it with the Drug Enforcement Administration Office in San Francisco.

F. Inventory Records

1. Inventories from previous years will be retained in a file by the Manager for a period of at least three years after which they may be discarded.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** DRG.04 - Purchasing and Ordering Supplies
	RELATED ORDERS: FSD.30 - Purchasing and Ordering Supplies, DRGF.09 - Reference Material Verification Log, DRG.12 - Reference Materials Title 21, Code of Federal Regulations 1301.75, 1304.19, 1304.27, 1305.04, 1307.21	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 6.6**	
CHAPTER: General Information	**SUBJECT:** Purchasing Controlled Substances	

I. Policy: Division personnel will comply with Drug Enforcement Administration (DEA) regulations regarding the purchase, disposal and records associated with controlled substances.

A. Introduction

1. The purchase of drugs, which are federally scheduled by the Controlled Substances Act, is restricted to persons and agencies registered with the Drug Enforcement Administration. The Division is registered as an analytical laboratory and must meet certain associated requirements to retain the registration status.

B. Registration Requirements

1. Prior to initial registration with the Drug Enforcement Administration (DEA), the site to be registered is inspected by a DEA agent to insure that security is adequate. The Division's security requirements are described in the Division Manual, and must be followed to ensure continued registration. Should the laboratory relocate, it must be re-inspected.

2. The registration must be renewed yearly and is effective until August 31 each year. The application for renewal is received in July each year. The Manager of the Drugs, Alcohol and Toxicology Section will renew the registration electronically or prepare the renewal form and return the renewal form to the DEA.

C. Ordering Controlled Substances

1. In order to purchase controlled substances, the vendor must be supplied with the laboratory's DEA Registration Number. Requisitions for Schedule I or II Controlled Substances must also be accompanied by a U.S. Official order Form (DEA form 222). Instructions for completing the form are listed on the back of the form.

2. DEA order forms are numbered and must be retained in a secure location. Order forms with errors must be marked "VOID" and retained. The Purchaser's copy of those forms sent to a vendor, along with the voided forms, must be retained indefinitely. An application for additional DEA order forms can be requested online and may only be requested by the Manager, as needed.

3. Ordering of controlled substances will be handled by the Manager. All DEA order forms must be signed by the designated signature.

D. Receipt of Controlled Substances

1. Any Division staff member checking in a Controlled Substances order must date and initial the individual containers and date and sign the packing list. A copy of the packing list is to be retained electronically.

2. The receipt of Controlled Substances will be recorded electronically in the Laboratory data base.

II. Policy: Laboratory personnel will follow procedures for the selection, ordering, verification and storage of supplies. See FSD.30.

A. Ordering Supplies-Putting Supplies on the List to be Ordered

1. General laboratory consumables and supplies may be placed on the order list by any member of the laboratory staff. These consumables and supplies **do not** affect the test result.

2. The following are some examples of consumables that **do not** affect the test results:

a. Gloves

b. Glass or plastic transfer pipettes

c. Vials, caps, inserts

d. Shell vials

e. Weigh paper

f. Spot plates

g. Bulbs

h. Glassware

3. Supplies which *may affect the test result* (see below for some examples) should be placed on the order list by personnel within the unit in which the supplies are to be used. The following is a list of **supplies** that *may affect the test results* in Controlled Substance Unit:

a. Reference Materials (Drug Standards)

b. Parts for the GC/MS. These may be ordered based on part information in the instrument manual(s).

c. Parts for the FTIR. These may be ordered based part information in the instrument manual(s).

d. Balances

e. Reference Standards (check weights for use with the balances)

4. The following is a list of **services** that *affect the test result* in Controlled Substance Unit. **The suppliers of these services must be evaluated yearly and the evaluation will be documented**:

a. Calibration of balances

b. Calibration of reference standards (check weights)

5. The "type" or "grade" of chemicals for use in controlled substance analysis is not specified in the procedure as any type or grade of chemical is acceptable.

   a. The chemicals used to make reagents are evaluated through the verification process of the reagent

   b. The chemicals (solvents) used for analysis are evaluated (for contamination) through the use of blanks before each sample

6. Supplies may be placed on the order list by any lab staff member and verified by a qualified analyst.

B. Approval of Orders

1. Any lab staff member or support staff may order supplies from the vendor. The supplies on the "Supply Order List" are inputted into a computer database. The list(s) of supplies to be ordered is printed out (typically sorted by vendor).

2. The verified list(s) of supplies to be ordered are then given to a Manager for approval.

C. Ordering Supplies from the Vendor

1. After the list(s) of supplies to be ordered have been approved, any lab staff member or support staff may order supplies from the vendor by phone/e-mail. The orders maybe placed:

   a. using an existing open Purchase Order for vendors or

   b. using a requisition form or

   c. using the County credit card held by the Account Clerk.

D. Receiving Supplies

1. Supplies that affect the quality of tests are not used until they have been inspected or verified as being the supply that was ordered.

2. When the consumables or supplies are received by the laboratory, the supplies are unpacked and verified by:

   a. Using the database generated list of supplies to be ordered (or equivalent) and checking against the supplies received (labels on supplies)

   b. The supplies received are also checked against the shipping receipt or packing slip.

   c. The person checking the supplies against the shipping receipt will initial the shipping receipt. This paperwork goes to Account Clerk of the Sheriff's Department.

   d. The information from the database generated list of supplies to be ordered (or equivalent) is entered into the supply ordering database to ensure what was ordered is what was received.

   e. There is a received/verified date and place to indicate who is entering the information (by initials)

3. The supplies are then put away in a storage location.

4. General laboratory consumables and supplies are stored in the supply room or within the units of the laboratory. Any special storage requirements (refrigeration, storage in flammable, corrosive cabinets, etc.) will be adhered to.

5. Reagents and supplies will be re-evaluated on an on-going basis through the use of controls and intermediate checks.

6. Supplies required for specific instrumentation, chemicals required for certain procedures or supplies that are specifically listed in the method or procedure being used should be given to the lab staff member who ordered that supply item.

7. Reference materials are checked to ensure that the proper traceability paperwork accompanies the item or the traceability paperwork is retrieved from the vendor electronically. Reference materials (standards) are stored according to the storage recommendations on the package.

    a. The traceability paperwork Certificates of Analysis or other verification paperwork are maintained in the DRGF.09.

    b. Consumables provided by the manufacturer of the equipment being used - Manufacturer's consumables quality documentation is needed to ensure the quality of product is adequate for the testing being performed.

    c. Once a product is evaluated and approved for use, for example through validation or as supplied for use with an instrument, it will be ready for use in casework and may be ordered as needed

8. Drug reference materials are entered into the drug inventory database upon receipt and verification. Drug reference materials will not be used for casework until verified. See the section of the DRG.12 for more information on verification of drug reference materials.

9. The received supplies are also entered electronically into the ordering database to verify that the supply that was ordered is the same as the supply that was received.

E. Discrepancies

1. If there is any discrepancy between the supply ordered and the supply received, the person ordering supplies will notify the vendor of the discrepancy and the supply will not be used by the laboratory. The supply will be returned and exchanged for the proper supply.

2. If there are any problems exchanging the supply for the correct item, the Forensic Manager or Supervisor will be made aware of the problem.

3. If the supply ordered is found to be defective or does not perform as expected it will not be used for casework.

4. Actions: Taking any actions arising from evaluations, monitoring of performance, and re-evaluations of the external providers. Actions may include ensuring the correct services or supplies are received, issues are resolved, or monitoring that services and supplies meet the needs of the unit.

F. Sole Source Vendors

1. Sole Source Vendors may be vendors that supply the lab with supply items that another vendor cannot readily supply. This may be because procedures were

validated with items specific to a vendor (eg. immunoassay plates). The Department Account Clerk maintains a justification for sole source vendors.

2. For the Controlled Substance Unit, a reference material used for confirmation is considered a supply that affects the quality of a test.

3. The laboratory chooses suppliers of reference materials by a number of factors including (but not limited to) price, ease of ordering, vendors with whom we have open purchase orders.

    a. The vendors commonly used to order drug reference materials are located in the supply ordering database

    b. All reference materials are verified before use in casework and the verification is documented. See DRG.12.

4. Vendors that provide a service that may affect the test result are:

    a. Rice Lake Weighing Systems or equivalent for balance, pipette, diluter, titrator calibration.

        i. Calibration services provided from an ISO 17025 vendor - Certificate of Calibration is needed for evaluation and documentation when calibration occurs

5. The Unit is responsible for the evaluation, selection and monitoring of performance, and re-evaluation of external providers.

    a. Criteria for evaluation, selection, monitoring of performance, and re-evaluation of the external providers. For example:

        i. Checking a scope document to ensure the calibration being requested is within the scope of the vendor

        ii. Checking an accreditation certificate to ensure that accreditation has not lapsed

        iii. Checking that quality controls or standards meet the performance criteria of the equipment or method

        iv. Ensuring that a certificate is checked after the expiration date before ordering additional supplies or service

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/19/2016	**NUMBER:** DRG.05 - Types of Drugs Identified
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005:**	
CHAPTER: General Information	**SUBJECT:** Types of Drugs Identified	

I. Policy: The following is a list of drugs that can be identified by the laboratory. The laboratory is not limited in scope to this list and has the capacity to analyze other drugs provided suitable standards are available. The laboratory may limit identification to the primary controlled substance if a sample contains breakdown products or secondary related controlled substances.

A. PHENETHYLAMINES

1. Amphetamine
2. Benzphetamine
3. B-Phenethylamine
4. Ethylamphetamine
5. Mephentermine
6. Methamphetamine
7. Methylphenidate
8. Phendimetrazine
9. Phenmetrazine
10. Phentermine

B. OPIATES

1. 6-Acetlycodeine
2. 6-Monoacetylmorphine
3. Apomorphine
4. Butorphanol
5. Codeine
6. Dihydrocodeine
7. Ethylmorphine
8. Fentanyl

9. Heroin
10. Hydrocodone (Dihydrocodeinone)
11. Hydromorphone
12. Meperidine
13. Methadone
14. Morphine
15. Nalorphine
16. Norcodeine
17. Normorphine
18. Opium
19. Oxycodone
20. Oxymorphone
21. Papaverine
22. Propoxyphene
23. Thebaine

C. CAINES

1. Benzocaine
2. Benzoylecgonine
3. Cocaine Base
4. Cocaine Salt
5. Ecgonine
6. Lidocaine
7. Mepivacaine
8. Norcocaine
9. Piperocaine
10. Procaine
11. Tetracaine

D. MARIJUANA

1. Cannabidiol
2. Cannabinol
3. Marijuana Plants
4. Tetrahydrocannabinol (THC)

E. DISSOCIATIVE ANESTHETICS

1. Ketamine
2. Phencyclidine (PCP) phenylcycohexylpiperidine
3. Piperidinocyclohexanecarbonitrile (PCC)

F. HALLUCINOGENS

1. +/-2,5-Dimethoxy-4-bromoamphetamine (2C-B, Nexus)
2. +/-2,5-Dimethoxyphenyl-2-aminopropane
3. 2,5-Dimethoxy-4-iodoamphetamine (DOI)
4. 2,5-Dimethoxy-4-n-propylphenethylamine (2C-T-7)
5. 3,4-methylenedioxyamphetamine (MDA)
6. 3,4-methylenedioxyehtylamphetamine (MDE)
7. 3,4-methylenedioxymethamphetamine (MDMA)
8. 4,4-dimethoxytrityl-chloride
9. 4-chloro-2,5-dimethoxyamphetamine
10. 4-methyl-2,5-dimethoxyamphetamine (DOM)
11. 5-Methoxy-N,N-dimethyltryptamine
12. Bufotenine
13. Diethyltryptamine (DET)
14. Dimethylamphetamine
15. Dimethyltryptamine (DMT)
16. Harmaline
17. Harmine
18. LAMPA
19. Lysergic Acid
20. Lysergic Acid Diethylamide (LSD)
21. Mescaline
22. Methoxyamphetamine
23. Methyltryptamine
24. n,n-Diethyltryptamine
25. n,n-diisopropyl-5-methoxytryptamine (FOXY)
26. N-Acetylmescaline
27. Peyote

28. P-methoxyamphetamine (PMA)
29. Psilocin

G. BARBITURATES

1. Allobarbital
2. Amobarbital
3. Aprobarbital
4. Barbital
5. Butabarbital
6. Butalbital
7. Hexobarbital
8. Mephobarbital
9. Methabrital
10. Pentobarbital
11. Phenobarbital
12. Secobarbital
13. Thiopental
14. Other barbituric acid derivatives

H. BENZODIAZEPINES

1. Alprazolam
2. Bromazepam
3. Chlorazepate
4. Chlordiazepoxide
5. Clobazam
6. Clonazepam
7. Desalkylflurazepam
8. Diazepam
9. Estazolam
10. Flunitrazepam
11. Flurazepam
12. Halazepam
13. Lorazepam
14. Medazepam

15. Midazolam
16. Nitrazepam
17. Nordiazepam
18. Oxazepam
19. Prazepam
20. Temazepam

I. STEROIDS

1. 17a-Methandrostan-17B-OL-3-ONE (Mestaline)
2. 17a-Methyltestosterone
3. 17B-Dihydroandrosterone
4. 19-Nortestosterone
5. 19-Nortestosterone 17-deconate
6. Androlone
7. Androstenediol
8. Androstenediol Dipropionate
9. Androstenedione
10. Androsterone
11. Boldenone
12. Boldenone Undecylenate
13. Chlorotestosterone 17-acetate
14. Dihydrotestoserone Benzoate
15. Mesterolone
16. Methandriol
17. Methandrostenolone
18. Methenolone
19. Nandrolone
20. Nandrolone Decanoate
21. Nandrolone Phenpropionate
22. Nandrolone Propionate
23. Norethandrolone
24. Normethandrolone
25. Oxandrolone

26. Oxymetholone
27. Stanozolol
28. Testosterone
29. Testosterone 17B-Cypionate
30. Testosterone 17-Phenylpropionate
31. Testosterone Decanoate
32. Testosterone Enanthate
33. Testosterone Isocaproate
34. Testosterone Propionate
35. Trenbolone
36. Trenbolone Acetate
37. Trenbolone Enanthate

J. MISCELLANEOUS

1. 1,4-Butanediol
2. Chloral hydrate
3. Diethylpropion
4. Ethchlorvynol
5. Fenfluramine
6. Gamma Butyrolactone (GBL)
7. Gamma Hydroxybutyric Acid (GHB)
8. Glutethimide
9. Meprobamate
10. Methaqualone
11. Methylprylon
12. Pentazocine
13. Scopolamine
14. Valproic Acid
15. Zolpidem
16. Zaleplon

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 01/03/2019	**NUMBER:** DRG.06 - Controlled Substance Literature References
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2.7**	
CHAPTER: General Information	**SUBJECT:** Controlled Substance Literature References	

I. Policy: The following is a list of some references available to analysts in the drug unit. Additional references may be found in the Drug Monographs. Additional literature may be found in the Muir Library. The list should not be considered inclusive of all references available. (Supplemental 5.2.7)

A. Controlled Substance References

1. Clark, E.G.C. (editor), *Isolation and Identification of Drugs, 2nd Edition*, Pharmaceutical Press, Pennsylvania, 1986.
2. Joyce, C.R.B. and Curry, S.H., The Botany & Chemistry of Cannabis, J & A Churchill, London, 1970.
3. Controlled Substance Monographs, Contra Costa County, Office of the Sheriff, Forensic Services Division.
4. CND Analytical Profiles
5. Instrumental Data for Drug Analysis, T. Mills & J. Roberson
6. Mass Spectral and GC Data, K. Pfleger, H. Mauer & A. Weber
7. Drug Identification Bible (any edition)
8. Physician's Desk Reference (any edition)
9. Ident-A-Drug (any edition)
10. Amera-Chem RX-ID CD ROM (any edition)
11. Pillbox website: https://pillbox.nlm.nih.gov/ (FDA information via National Institute of Health/National Library of Medicine)
12. Poison Control Website: https://pill-id.webpoisoncontrol.org/
13. Drugs.com Pill Identifier: https://www.drugs.com/imprints.php (information from Multum, Truven Health Analytics, Inc., and National Library of Medicine)

B. General Forensic References

1. Forensic Science Handbook Vol 1-3 Saferstein
2. Fundamentals of Forensic Science, Houck and Siegel
3. Forensic Chemistry, Bell

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 08/06/2016	**NUMBER:** DRG.07 - Abbreviations
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Debbie McKillop	**ASCLD-LAB International Supplemental 2011: 4.13.2.13**	
CHAPTER: General Information	**SUBJECT:** Abbreviations	

I. Policy: The following is a list of abbreviations approved for use in the drug unit. (Supplemental 4.13.2.13)

A. Abbreviations for commonly used terms in the forensic science community may not be listed. An explanation of the abbreviation will be included if the abbreviation is unique to this Laboratory. Additional approved abbreviations may be found in TOX.04.

PACKAGING	
BFC	BLACK FILM CANISTER
CF	COFFEE FILTER
CFC	CLEAR FILM CANISTER
CONT	CONTAINER
CSE	CONTROLLED SUBSTANCE ENVELOPE
DB	DOLLAR BILL
ENV	ENVELOPE
FPA	FILTER PAPER
FW	FOIL WRAP
GV	GLASS VIAL
HS	HEAT SEALED
HSPB	HEAT SEALED PLASTIC BAG
KTPB	KNOT TIED PLASTIC BAG
ME	MANILA ENVELOPE
PA	PAPER
PAB	PAPER BAG
PABIN	PAPER BINDLE
PAT	PAPER TOWEL
PB	PLASTIC BAG
PLW	PLASTIC WRAP
PSB or PBSAND	PLASTIC SANDWICH BAG

PW	PAPER WRAP
REP	REPACKAGED
SAND	SANDWICH
SCTS	SCOTCH TAPE SEALED
STJ	SCREW TOP JAR
STP CL	STAPLE CLOSED
TSCSE	TAPE SEALED CONTROLLED SUBSTANCE ENVELOPE
TS or EVTS	TAPE SEALED, EVIDENCE TAPE SEALED
ZLPB	ZIP LOCK PLASTIC BAG

ITEMS	
CAP	CAPSULES
CB	COTTON BALL
CM	CHUNKY MATERIAL
CRYS	CRYSTAL or CRYSTAL SUBSTANCE
CS	CHUNKY SUBSTANCE
HRC	HAND-ROLLED CIGARETTE
LIQ or L	LIQUID
P or PS	POWDER or POWDER SUBSTANCE
PBHRC	PARTIALLY BURNED HAND-ROLLED CIGARETTE
PILL	PILLS
PM	PLANT MATERIAL
RES	RESIDUE
S	SUBSTANCE
SC	SUGAR CUBES
TAB	TABLETS
TLS	TAR LIKE SUBSTANCE

COLORS	
BLK	BLACK
BL or BLU	BLUE
BRN	BROWN
CC	CLEAR COLORLESS

CLR	CLEAR
G or GRN	GREEN/GREENISH
LAV	LAVENDAR
ORNG	ORANGE
OW	OFF WHITE
PUR	PURPLE
PY	PALE YELLOW
SALM	SALMON
W or WH	WHITE
Y or YEL	YELLOW

MISCELLANEOUS	
C or ---->	CONTAINING
EA	EACH
EST	ESTIMATED
EV	EVIDENCE
g	GRAMS
ID	IDENTIFIED
LG	LARGE
MT	EMPTY
SM	SMALL
W/	WITH
WT	WEIGHT

TESTS	
A/B	ACIDIC BASIC EXTRACT
ATR or UATR	ATTENUATED TOTAL REFLECTANCE or UNIVERSAL ATTENUATED TOTAL REFLECTANCE
BPEE OR BPE	BASIC PETROLEUM ETHER EXTRACTION
$CHCl_3E$ or $CHcl_3$	CHLOROFORM EXTRACTION (may or may not include the $_3$)
COS	COBALT THIOCYANATE
D-L OR DL	DUQUENOIS-LEVINE
ETHAC	ETHYL ACETATE
ETOH	ETHANOL

EXT	EXTRACTION
FROE	FROEHDE
GC/MS	GAS CHROMATOGRAPHY MASS SPECTROMETRY
FTIR or IR	FOURIER TRANSFORM INFRARED SPECTROMETRY
LIB	LIBRARY
MACRO	MACROSCOPIC
MARQ	MARQUIS
M-COS	MODIFIED COBALT THIOCYANATE
MeOH E or MEOH	METHANOL EXTRACTION
MICRO	MICROSCOPIC
PDMBA	p-DIMETHYLAMINOBENZALDEHYDE
PEE or PE	PETROLEUM ETHER EXTRACTION
ROTH	ROTHERA

RESULTS	
Additional Result abbreviations may be found in the Monographs. For example: MONO.ANALOGS.	
COC	COCAINE
DMS	DIMEHTYLSULFONE
HER	HEROIN
MAR	MARIJUANA
AMP	AMPHETAMINE
METH	METHAMPHETAMINE
PCP	PHENYLCYCLIDINE
MDA	METHYLENEDIOXYAMPHETAMINE
MDE	METHYLENEDIOXYETHYLAMPHETAMINE
MDMA	METHLENEDIOXYMETHAMPHETAMINE
LSD	LYSERGIC ACID DIETHYLAMIDE
NR	NO REACTION
NO CCS	NO COMMON CONTROLLED SUBSTANCES
6-MAM	6-MONOACETYLMORPHINE
COD	CODEINE
MOR or MORP	MORPHINE
PAP	PAPAVERINE

THEB	THEBAINE
INT	INTERFERENCE
(+)	POSITIVE
(-)	NEGATIVE

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 06/10/2013	**NUMBER:** DRG.08
	RELATED ORDERS: FSD.43 - Test Reports, DRG.11 - Reports	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005:**	
CHAPTER: General Information	**SUBJECT:** CSE, General Request & Report	

I. Policy: The following documents is the general information about the Controlled Substance Envelope (CSE) and Controlled Substance Report.

A. A Controlled Substance Envelope provided by the laboratory contains all the information necessary for a request for drug analysis.

1. If a CSE is not used, the following information is needed by the laboratory for controlled substances submissions:

   a. Person requesting the examination

   b. Requesting agency

   c. Agency case number

   d. Offense(s)

   e. Full name of all suspects

   f. Chain of custody

   g. List of item(s) being submitted (including item number, description and source)

2. The laboratory staff responsible for receiving the evidence is responsible for indicating on the request form that the evidence was received in a tape sealed condition.

3. The following information is desired:

   a. Telephone Number

   b. Badge Number

   c. Indication if a RUSH is needed and the reason

   d. If CHP, the arrest location

   e. If fingerprint analysis is also required

   f. Agency instructions to the laboratory

B. Reports for controlled substance analysis will adhere to Division policy. See FSD.43. For more information regarding the contents of the report and the annex to the report, refer to the reporting policy in the Controlled Substance Technical Unit Manual. See DRG.11.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/31/2019	**NUMBER:** DRG.09 - Evidence Handling
	RELATED ORDERS: FSD.35 - Evidence Handling, DRG.33 - Case Examination Protocols & Sample Selection, FSD.38 - Evidence Itemization, FSD.31 - Subcontracting & Externally Directed Analysis	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.4**	
CHAPTER: Evidence Handling	**SUBJECT:** Evidence Handling	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 08/07/2018	**NUMBER:** DRG.10 - Case Records
	RELATED ORDERS: FSD.42 - Case Record, DRGF.09 - Reference Material Verification Log, DRG.38 - Entering Results in LIMS, DRG.39 - Referee Analysis and Discoveries, DRG.07 - Abbreviations, FSD.35 - Evidence Handling, FSD.44 - Control of Records	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 4.13**	
CHAPTER: Case Records	**SUBJECT:** Case Records	

I. Policy: The following guidelines for the preparation of examination records must be followed in all cases. Failure to do so will result in the report and examination records being returned to the analyst for correction. These guidelines represent the most common note taking requirements. See FSD.42 for more information.

A. The case record is considered to be the files containing administrative and examination documentation generated or received by a laboratory pertaining to a particular case . The case record consists of:

1. The report and case notes (examination documentation)
2. Any records of phone conversations or e-mail communication will be maintained as administrative documents
3. Discovery requests or referee analysis requests are maintained as administrative documents
4. The electronic chain of custody. The official chain of custody is maintained in the Laboratory Information Management System (LIMS). See FSD.35. The chain of custody at the time the case is submitted for review may be included in the case notes
5. A **reference** to the Lot # of standards used for confirmation will be included in the case notes. *More information about the Lot # may be found in the Drug Verification Log (DRGF.09).*
6. A **reference** to the reagents used in the case will be included in the case notes *More information about the reliability of reagents is maintained in the Reagent Log*
7. A **reference** to the equipment used in the case will be included in the case notes. *The reliability of equipment used is maintained in their respective maintenance logs.* The unique identifier for the Stereomicroscope used for confirmation of marijuana samples is not included in the case notes.
8. A **reference** to the instrumental operating parameters (method name) used in the case will be included in the case notes. *The operating parameters for the GC/MS are located in the maintenance binder for each instrument. The operating parameters for the FTIR are located in the Controlled Substance Standard Operating Procedure*

9. Communication on Business Record or Official Record for court is maintained electronically under case activities in the Laboratory Information Management System (LIMS)-see below

B. Examination Records

1. Examination records (notes) and observations, data and calculations shall be recorded at or near the time they are made and shall be identifiable to the specific task.

2. The date(s) of analysis will appear in the case notes. The technical records will identify on what date(s) each task was performed. (See FSD.42)

3. The records must be sufficiently detailed that in the absence of the analyst, another competent analyst or supervisor could evaluate what was done and interpret the data and would know the basis of the conclusions. The case notes and records shall be sufficiently detailed to facilitate an audit trail (the test being repeated under conditions as close as possible to the original) and shall include the identity of the personnel responsible for sample selection, performance of each test and checking of results.

4. Examination records shall be or a permanent nature in ink or computer generated. See DRG.38 for instructions on how to generate electronic notes.

5. Case notes will be single-sided on a page

6. The notes can be LIMS generated or handwritten. See DRG.38 for instructions on how to generate electronic notes.

7. The list of abbreviations found in DRG.07 can be used in note taking.

8. Refer to the Division Manual for policies regarding retention of case records. See FSD.44.

C. Business Records or Official Records

1. If an individual (other than the analyst on the report) interprets the findings including testifying concerning the documentation (eg. Business Record or Official Record), that individual will document the review of the examination documentation in LIMS.

2. The use of the LIMS activity "Business/Official Record" means that the report and notes were reviewed by the individual. If time is spent but a review is not completed, an alternate activity can be used (ie. Court prep).

   a. For case related (lab number related) business records or official records the activity should be related to the request.

   b. For non-case related activity, click on the "activity button"

3. LIMS Instructions:

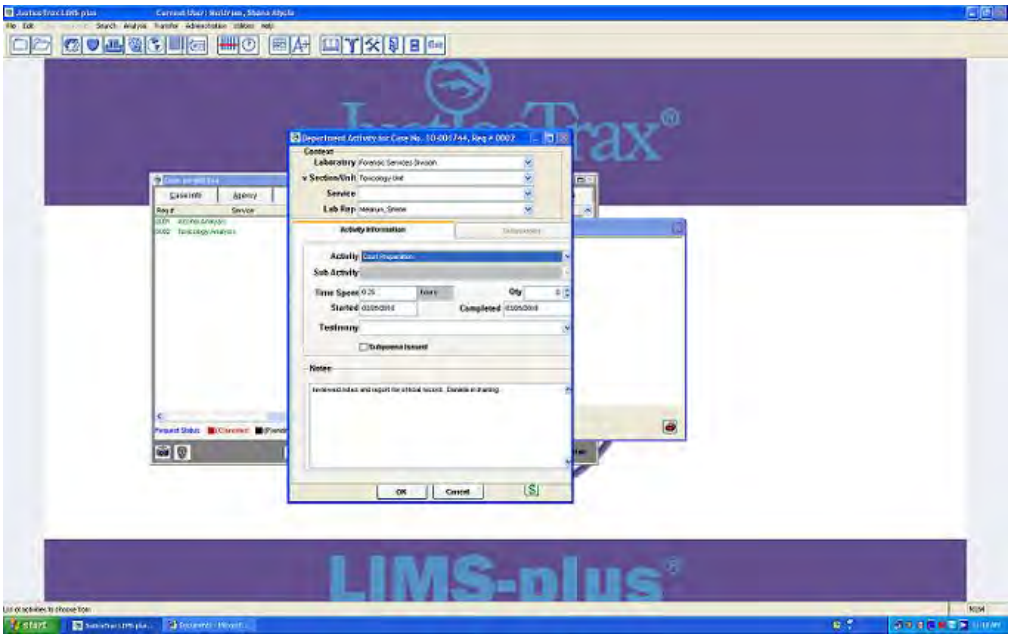
   a. Under the request tab, select the request

   b. Right click and select "activity"

   c. Click the green "+" button

   d. Choose the appropriate activity (Business/Official Record or court prep)

e. Add the time spent and the notes should document why a business or official record was done



D. For examined items, the following must appear in the case notes along with data and results:

1. **Weight:** The net weight of all material(s) (eg. powder, crystalline material or loose plant materials) examined.

   a. The estimated weight or gross weight of material(s) (eg. powder, crystalline material, or loose plant material) not examined.

   b. Calculations for any weight estimates or manner in which the estimated weight was determined must be noted.

   c. Total estimated weights should be reported for possession for sale cases.

2. **Dosage Units**: The number or estimated number of dosage units received.

3. **Estimated Volume**: The **estimated volume** of any liquid samples.

4. The manner or technique used to measure or estimate the volume should be noted.

5. **Verifications**: If any examination verifications are performed by an competency tested analyst, for example verification of a new analyst's first 50 marijuana cases, the initials of the verifier and date will be recorded in the case notes in LIMS. The verifier's initials indicate that the finding was agreed upon.

6. **Discrepancies**: Any differences between the number of units or items in the evidence description and the envelope contents.

   a. The name or initials of the analyst verifying the discrepancy and the date will be recorded in the analyst's notes.

   b. The information (description of evidence) contained in the report being reviewed by the Agency will be considered as notification of any discrepancies.

c. A photograph should be taken when possible to illustrate the discrepancy.

d. The checkbox in the “Controlled Substance Analysis” request extended data form for “Inventory Discrepancy” will be checked to identify any request containing a discrepancy. Marking the checkbox for a discrepancy will cause "An inventory discrepancy was noted" to appear in the analyst's notes.

e. The technical and administrative review conducted by a Supervisor or Manager will be considered as notification to a Supervisor/Manager of any discrepancies. If the Supervisor or Manager is not the technical reviewer, they must be notified (eg. email, given copy of notes, etc.)

7. **Packaging**: A notation regarding any unusual occurrences such as leaking containers, spilled evidence, seals that appear to have been broken, etc.

   a. An explanation and date of any reopening and resealing of evidence items or the evidence envelope.

   b. If the item(s) were repackaged differently than how they were received.

8. **Sample Consumption**: A notation in the notes and report if the sample was completely consumed during analysis, such that re-analysis is not possible.

   a. Refer to the Division Manual policy on Sample Preservation.

   b. The notification to the Agency will be a statement on the report reflecting consumption of evidence during analysis.

9. **Referee Analysis**: A notation regarding any item sent for analysis to a referee laboratory

   a. For instructions on splitting, packaging, and sending a sample to a referee laboratory see DRG.39.

10. **Similar in Appearance (Units)**: If there are multiple units within an item and a percentage is selected for examination, a notation should be included in the notes indicating the units were packaged and/or similar in appearance. Opinions regarding the identification of untested items will not be offered.

11. **Similar in Appearance (Items)**: If an item is not examined because it is similar to an item already examined, a notation should be included in the notes and report indicating the item(s) were packaged and/or similar in appearance. Opinions regarding the identification of untested items will not be offered.

12. **Traceability** information including, but not limited to:

    a. The balance used

    b. The vial # of the reference material (standard) used

    c. The reference for pharmaceutical presumptive identification

    d. The library used

13. **Technical/Administrative Review Corrections:**

    a. Technical review corrections: All corrections will be recorded in LIMS in the Request #, within the Notes: Reviewer field

       i. Identify any corrections and include the reason for the correction

ii. Record the date and technical reviewer's initials

iii. The analyst will enter when the correction was completed with their initials and date.

b. Administrative review corrections: All corrections will be recorded in LIMS in the Request #, within the Notes: Reviewer field

i. Identify any corrections

ii. Record the date and technical reviewer's initials

iii. It is recommended that the analyst enter when the correction was completed with their initials and date.

E. Page Identification

1. All note pages shall have the laboratory number, handwritten or computer generated initials of the examiner and the page number on the upper right hand corner of the page.

2. The first and last page shall have the total number of pages.

F. Corrections

1. Handwritten corrections must be made using a single line strikeout. The person making the correction must initial nearby.

a. Pre-electronic notes: If the correction or addition is made after the draft complete date and when the notes package is submitted for technical review the person making the change must initial and date nearby.

b. Electronic notes: If a correction or addition needs to be made after the draft complete, the notes must be un-draft complete, corrected and re-draft complete. An amendment must be opened and completed to make corrections to the notes after administrative review.

2. An electronic audit trail is maintained to view changes made electronically after a case has been draft complete.

G. Miscellaneous Information

1. The following miscellaneous information may be attached to the case documentation electonically:

a. Telephone logs

b. Special procedures

c. Drawings (photocopies are acceptable)

d. Pictures or information from reference sources (CDs or websites)

e. Photographs

2. Administrative documentation

a. Pre-Electronic : Will be uniquely identified by the laboratory with the laboratory number. Refer to the Division Policy on Case Records.

b. Electronic : Will be imaged into all relevant requests as ADM.XX.

H. Disposition of Evidence

1. The evidence disposition is included on the annex of the report. Evidence being returned to the submitting agency or being forwarded to Property is considered routine and those transactions are documented in LIMS.

2. Any evidence that is not immediately returned to the agency will be noted on the Report as a Report Comment.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 02/16/2018	**NUMBER:** DRG.11 - Reports
	RELATED ORDERS: FSD.35 - Evidence Handling, DRG.38 - Entering Results in LIMS, DRG.42 - Uncertainty Budget for Reported Drug Weights, DRG.10 - Case Records, FSD.43 - Test Reports, QA.04 - Amending Reports	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.10.1, 5.10.2 a-k, 5.10.3.1 a-e, 5.10.3.2 a-f, 5.10.5, 5.10.7, 5.10.8, 5.10.9 ASCLD-LAB International Supplemental 2011: 5.10.3.3, 5.10.3.4, 5.10.3.5, 5.10.3.6, 5.10.3.7**	
CHAPTER: Case Records	**SUBJECT:** Reports	

I. Policy: Reports will be written in accordance with the following guidelines.

A. Report Writing

1. Controlled substance analysis reports are to be prepared by the analyst at or near the time of completion of the analysis.

2. A notation that the sample has been consumed during analysis should appear in the notes and on the report. See the Division Manual policy on Sample Preservation, FSD.35.

3. If an item is not examined because it is similar to an item already examined, a notation should be included in the notes and report indicating the item(s) were packaged and/or similar in appearance.

4. The results of each test or series of tests carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively, and in accordance with any specific instructions in the test methods. The results shall include all the information requested by the customer and necessary for their interpretation of the test results and all information required by the method used.

5. The results will be reported in a laboratory report of examination and includes the information required by the customer necessary for their interpretation of the test result (the results of analysis, schedule and weight of items examined) as well as the method used (analytical techniques). See DRG.38 for instructions on how to generate electronic reports.

    a. If the request for analysis is cancelled, the Laboratory will issue a report indicating no work was performed. See DRG.38 for more information.

6. Reports will include information, **unless otherwise indicated**:

    a. Title of report or "Report of Laboratory Examination"

    b. Identity and location (address) of the testing laboratory

    c. Unique case identifier (laboratory number) and clear identification of the end of the report

d. Name of the customer (submitting agency) the address of the customer is in the **report annex.**

   i. The address of the contracted agencies in Contra Costa County will be maintained by the Laboratory.

   ii. An *effort* will be made to obtain addresses for agencies that do not *routinely* use the services of the Drug, Alcohol, and Toxicology Section.

e. Method(s) used or analytical techniques employed is in the **report annex.**

f. Description of, condition of and unambiguous identification of submitted evidence. This is the item description accompanied by item number. The tape-sealed condition of the outer packaging is also included.

g. The date of request is included on the report. The date of receipt of evidence is in the **report annex.**

h. The date(s) of the examination will be included on the report. The analyst will enter the exam date(s), a date range if applicable, in the LIMS extended data field of the request.

i. The reference to the sample selection plan is in the **report annex**. The report states how many items are tested.

j. Results of analysis including units of measurement.

k. Routine disposition of evidence will be included in the **report annex**. Evidence will be returned to the agency unless otherwise noted.

l. Identity and signature (or electronic equivalent) of the author of the report and the reviewer. For Controlled Substance reports, the "approved by" signature refers to the individual who technically and administratively reviewed the case

m. Clarity of how many units were tested and that the results reported only relate to items tested

   i. For multiple item cases: if items are not tested the report will indicate that the item was not tested

   ii. For multiple unit cases: if all units are not tested, a statement about the number of units tested will be included (For example: *Tested 1 of 9*)

   iii. For pill cases: if all pills are not tested, a statement about the number of pills examined will be included (For example: *One pill examined and found to contain the above result*)

7. In addition, reports shall, where necessary for the interpretation of test results, include the following, **unless otherwise indicated**:

   a. Any deviations in analytical techniques, will be included in the **case notes**

   b. Uncertainty of net drug weights, will be included in the **report annex**. A statement on the report will indicate that for any estimated weight, if uncertainty is required, the lab can perform further work. For more information see DRG.42.

c. Opinions and interpretations. Results of drug analysis are conclusions. The report header will state "Examination Results and Conclusions".

i. A qualifying statement about the opinion of an analyst regarding the similarity of items to one another "similar in appearance" based on the analyst's visual examination of the evidence will be in the **report annex**.

d. Additional information required by customer if necessary (eg. schedule of controlled substance identified)

8. In addition, test reports containing the results of sample selection shall include, where necessary, for the customer's interpretation of test results, include the following, **unless otherwise indicated**:

a. The date of sample selection will be included in the **case notes.** The date(s) of analysis will be included on the **report**.

b. Unambiguous identification of the item (item number)

c. Location of sample selection or analysis is the laboratory, this in the **report annex.**

d. The sampling plan is in the **Controlled Substance Unit SOP**.

e. There are no environmental conditions that would affect sample selection, thus this is **not applicable**.

f. Any significant deviations from the casework protocol or sample selection plan in the SOP will be authorized by the Supervisor or Manager and be noted in the **case notes**

9. In addition, test reports will contain the following:

a. Date of report (Draft Complete date in LIMS)

b. An association made of the item with its location.

i. A qualifying statement about the association between the item and its reported location as coming from information provided by the agency will be in the **report annex**.

c. If no definitive conclusions can be reached, the reason will be documented

d. The author of the report will have conducted, participated in or observed the examination or testing

10. Laboratory personnel who issue findings, including writing reports and providing testimony, based on examination results documented and generated by another person will document the review of examination documentation in LIMS. See DRG.10 for a more detailed instruction.

11. The release of case report information as well as Verbal Results will be done according to Division Manual Policy. See FSD.43.

12. The electronic release of reports will be done through the Automated Regional Information Exchange System (ARIES) and in accordance with the Division Policy. See FSD.43.

13. The format of reports will be in conformance with the Division Manual policy. See FSD.43.

14. Amendments to reports will be in conformance with the Division Manual policy. See FSD.43 and QA.04.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances	**REVISION DATE:** 01/04/2017	**NUMBER:** DRG.12 - Reference Materials
	RELATED ORDERS: DRGF.09 - Reference Material Verification Log, DRGF.10 - Reference Material Usage Log, DRG.18 - Balances	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.6.3.1, 5.6.3.2, 5.6.3.3, 5.6.3.4**	
CHAPTER: Quality Assurance	**SUBJECT:** Reference Materials	

I. Policy: Reference Materials (Drug Standards) will be verified, labeled and stored in a manner to ensure the integrity of the standard.

A. Reference Material Collection

1. Reference Material: A reference material is a substance of known concentration and/or composition.

2. All reference materials received must be verified and the verification must be documented (DRGF.09). Some examples of verification include (ISO/IEC 17025:2005 5.6.3.2):

   a. Instrumental analysis such as GC/MS or FTIR analysis and comparison to a published spectrum or comparison to an existing verified reference material. Some examples of publications include but are not limited to:

      i. CND Analytical Profiles

      ii. Instrumental Data for Drug Analysis, T. Mills & J. Roberson

      iii. Mass Spectral and GC Data, K. Pfleger, H. Mauer & A. Weber

      iv. Peer reviewed published articles

      v. SWGDRG Mass Spectral Library

      vi. NIST Mass Spectral Library

   b. A Certified Reference Material (with accompanying certificate from a vendor accredited under ISO Guide 34)

   c. A NIST Reference Material

3. Working Reference Material: A working reference material is a substance transferred from the original packaging to a separate laboratory container. A working reference material should be prepared using a minimal amount of the reference material. Analysts should fill out DRGF.10 when consuming reference materials to make working reference materials. This will aid in conducting the Drug Inventory.

B. Labeling

1. All reference material containers must be labeled with the following information:
    a. Name of reference material (standard)
    b. Source
    c. Lot number
    d. Vial number (Required for tracking in the drug inventory)
    e. Initials of the person who received the reference material
2. All working reference material (standard) containers (typically GC vials) should be labeled with the following information:
    a. Name of reference material
    b. Vial number
    c. The initials and date of the person preparing the reference material
    d. The solvent and internal standard being used

C. Storage, Handling and Use (ISO/IEC 17025:2005 5.6.3.4)

1. All reference materials will be stored, handled and used in a manner that prevents contamination, deterioration and protects their integrity. This includes:
    a. **Storing** reference materials according to the vendor instructions on the reference material label or certificate.
        i. Controlled, non-controlled, and prescription reference materials are stored in one or more of the following locations within the laboratory:
            1. The chemical storage room.
            2. A refrigerator within the drug unit.
        ii. Drug reference materials that are controlled, non-controlled, and prescription reference materials should **not** be kept at an analyst's workbench for extended periods. If it is necessary to keep a reference materials for an extended period, even overnight, the Manager/Supervisor should be notified about the reference material being kept at the workbench along with the assigned drug inventory tracking number.
        iii. Working reference materials should be stored at the analyst's workbench, under a chemical hood, or in a refrigerator located within the laboratory.
            1. Access to the working reference materials is available to all technical staff within the Laboratory.
    b. **Handling** the reference material with care when removing it from its storage location and returning it to its designated location.
        i. Movement of reference materials within the laboratory is not considered transport.
    c. **Using** the reference material utilizing good lab practices to prevent against contamination and to protect the integrity of the reference material. This may

include:

i. Ensuring proper labeling as noted above.

ii. Abiding by any expiration dates on the reference material label or certificate, and not using the reference material or any solution made from that reference material past the expiration date.

1. This includes ensuring the expiration date on the reference material label or certificate is transferred to any secondary bottle or solution made from that reference material. Or, if there is a laboratory assigned expiration date that is before the expiration date of the reference material, the laboratory assigned expiration date will be transferred to any secondary bottle or solution made from that reference material.

iii. Following any safety warnings on the reference material label or certificate.

D. Intermediate Checks (ISO/IEC 17025:2005 5.6.3.3)

1. The reference materials run in the "performance standard" and monthly reference materials are checked each time they are run to ensure appropriate ions are present for identification by clicking on the peak on the "TOTAL ION CHROMATOGRAM" and evaluating the spectra data in the "ION SCAN".

a. This is based on the frequency of use of these reference materials and the analyst's knowledge of the spectra.

2. Other reference materials run for casework are also evaluated each time they are run by evaluating the spectra data in the "ION SCAN". Analysts frequently use a library search to ensure major ions are present.

3. The ions are also evaluated when the report is technically reviewed. The retention time and spectral data for all reference materials used for confirmation are included in the case notes and evaluated.

E. Reference Standards (Balance Check Weights)

1. See DRG.18 for the program and procedure for calibration of check weights (reference standards). (ISO/IEC 17025:2005 5.6.3.1)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** DRG.13 - Reagent Preparation
	RELATED ORDERS: DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.1**	
CHAPTER: Quality Assurance	**SUBJECT:** Reagent Preparation	

I. Policy: Reagents will be prepared in accordance with recipes in the drug monographs and/or reagents binder. Effectiveness of reagents will be checked prior to use in casework.

A. The Reagent Log must be filled in with the appropriate information.

1. A list of commonly used reagents and recipes can be found listed below.

B. Initial Reagent Verification

1. Reagents are tested to verify they are working as expected when initially prepared and the check is documented. See DRGF.13.

a. The reagent log will also indicate who prepared the reagent and who checked the reagent and the date checked

b. Verification using a drug standard will include the vial number of the standard

c. Verification by GCMS will include the instrument number

C. Reagent Retesting

1. Reagents will be given a retest date 2 years from the date of preparation to ensure they continue to work as expected.

a. After 2 years, the solution should be discarded or retested

b. After a successful retest, the retest date can be extended for one year. The check will be recorded in the log.

i. The check may be performed on the stock solution or a working solution

c. If an issue arises prior to the next retest date, the solution will be checked or discarded. The check will be recorded in the log.

d. If an issue arises with a working solution that has to be discarded, the stock solution should be checked to determine if it must also be discarded. The check will be recorded in the log.

2. The lifespan of the Marquis reagent varies greatly and may be shorter than two years depending on storage conditions. See below for on-going checks of reagents.

D. On-going Checks of Reagents

1. Reagents are checked routinely with casework analysis by comparison of the reagent result to the analyte confirmed.
    a. The reagent results are evaluated by the analyst and technical reviewer.
    b. If issues arise, for example the reagent not giving the expected result for the analyte confirmed, the reagent should be checked against a standard and the check should be logged in the reagent log.
2. Webers must be prepared and used the same day. The analyst signing the report is the analyst who prepared the reagent; the preparation is not logged in the Reagent Log due to the short shelf life of the reagent. A positive confirmatory result is considered the check of the reliability of the reagent. If the confirmatory results are negative, the analyst will check the reagent with a standard, to ensure its reliability, and record that check in the case file.

E. Reagent Labeling

1. The reagent will be labeled, at minimum, with:
    a. The identity of the reagent
    b. The date when the reagent was prepared or a lot number
    c. The storage requirements, as applicable
        i. Chemicals will be stored in accordance with SAF.12 and manufacturing labeling recommendations
        ii. Reagents are stored in a fume hood
        iii. All reagents are stored at room temperature unless labeled otherwise
    d. Retest date

F. Reagent Recipes and Analytes Used for Verification

1. Refer to Table 1 for the analyte used for verification of the reliability of the reagent.
    a. Refer to the Reagent Recipe list below for reagent recipes and hazard information.

Table 1

Reagent	Primary Analyte for Verification
Benedict's	Glucose (dextrose)
Benzaldehyde IS	GC/MS
Chens	Ephedrine
Cholesterol Internal Standard	GC/MS
Cobalt Nitrate	GHB
Cobalt Thiocyanate	Cocaine HCl
Cobalt Thiocyanate, Modified	Cocaine base or HCl
Dille-Koppanyi	Secobarbital

Duquenois-Levine	Marijuana or delta-9-THC
Ferric Chloride	GHB
Froehde	Heroin
Liebermann	Methadone
Marquis	Methamphetamine
Mecke	Heroin
pDMBA	LSD or Psilocyn
1.2 N KOH	basic pH
Rothera 1, 2, 3	Methamphetamine
Rothera 2 (optional)	basic pH >= 10
n-Tricosane	GC/MS
Valerolactone	GC/MS
Weber	Psilocyn
Zwikker	Secobarbital
10% Hydrochloric Acid	Acidic pH

Reagent Recipes

Benedict's Solution

Compound(s) of Interest: Reducing Sugars
Primary Analyte for Verification: Glucose (dextrose)

Recipe: Solution 1 or A:
- 0.865 g $CuSO_4$ (or 1.353 g $CuSO_4 \cdot 5\ H_2O$)
- 5 ml water



Recipe: Solution 2 or B:
- 8.65 g sodium citrate (or 9.858 sodium citrate dihydrate $Na_3C_6H_5O_7 \cdot 2H_2O$)
- 5 g anhydrous Na_2CO_3
- 40 ml hot water



Benzaldehyde Internal Standard

Compound(s) of Interest: GC/MS internal standard for 1,4 butanediol
Primary Analyte for Verification: GC/MS (correct ions present)

Benzaldehyde Internal Standard Recipe
- 0.1 ml benzaldehyde
- 10 ml chloroform



Chens Solution

Compound(s) of Interest: Ephedrine/Pseudoephedrine
Primary Analyte for Verification: Ephedrine

Recipe: Solution 1 or A:
- 1% $CuSO_4$ in water



Recipe: Solution 2 or B:
- 1% Acetic Acid



Recipe: Solution 3 or C:
- 8% NaOH



Cholesterol Internal Standard

Compound(s) of Interest: GC/MS internal standard for all steroids except for stanozolol
Primary Analyte for Verification: GC/MS (correct ions present)

Cholesterol Internal Standard Recipe
- 0.1 g cholesterol
- 2 ml methanol
- 3 ml chloroform



1% w/w Cobalt Nitrate Solution

Compound(s) of Interest: GHB
Primary Analyte for Verification: GHB

Recipe:
- 3.9 g cobaltous nitrate
- 500 mL methanol



Cobalt Thiocyanate (COSCN) Solution

Compound(s) of Interest: Cocaine
Primary Analyte for Verification: Cocaine Base

Recipe:
- 2% solution of cobalt thiocyanate in water



Modified Cobalt Thiocyanate (M-COSCN) Solution

Compound(s) of Interest: Cocaine
Primary Analyte for Verification: Cocaine Salt

Recipe:
- 18 ml water
- 0.36 g cobalt thiocyanate
- 8 ml phosphoric acid
- 1 ml 10% platinum chloride
- *Solution should be filtered.*
- *If solution is too orange, allow time for precipitate to form then filter again*



Dille-Koppanyi (Koppanyl) Solution

Compound(s) of Interest: Barbiturates
Primary Analyte for Verification: Secobarbital

Recipe: Solution 1 or A:
- 1% cobaltous acetate in absolute methanol



Recipe: Solution 2 or B:
- 1.5 mL isopropylamine
- 28.5 mL in absolute methanol



Duquenois-Levine Solution

Compound(s) of Interest: THC
Primary Analyte for Verification: Marijuana or Delta-9-THC

Recipe:

- 0.5 ml acetaldehyde
- 50 ml ethanol
- 1 g vanillin



Ferric Chloride Solution

Compound(s) of Interest: GHB
Primary Analyte for Verification: GHB

Recipe:
- 5% solution in water



Froehde Solution

Compound(s) of Interest: General
Primary Analyte for Verification: Heroin

Recipe:
- 0.1 g molybdic acid
- *10 ml hot, concentrated sulfuric acid*
- *Heat acid on hotplate until powder dissolves*



Liebermann's Solution

Compound(s) of Interest: Cathinones, Steroids, Miscellaneous
Primary Analyte for Verification: Methadone

Recipe:

- 5 g sodium nitrite
- 50 mL sulfuric acid



Marquis Solution

Compound(s) of Interest: Phenethylamines and Opiates
Primary Analyte for Verification: Methampetamine

Recipe:
- 10 ml sulfuric acid
- 8-10 drops 40% (approximately) formaldehyde
- note: solution slowly loses potency over 1-2 months



Mecke Solution

Compound(s) of Interest: Phenethylamines and Opiates Primary Analyte for Verification: Heroin

Recipe:
- 0.25 g selenous acid
- 25 ml sulfuric acid



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pDMBA (p-dimethylaminobenzaldehyde) Solution

Compound(s) of Interest: LSD, Psilocyn, Tryptamines
Primary Analyte for Verification: LSD or Psilocyn

Recipe:
- 0.1 g p-dimethylaminobenzaldehyde
- 18 ml ethanol
- 2 ml sulfuric acid



1.2 N potassium hydroxide (KOH)

Compound(s) of Interest: used for GHB analysis
Verification: check that pH is basic

Recipe:
6.732 g KOH, add water to a volume of 100 mL



Rothera Solution

Compound(s) of Interest: secondary amines
Primary Analyte for Verification: Methamphetamine
Rothera 2 may be verified alone with pH paper, pH >= 10

Recipe: Solution 1 or A:
- 5% sodium nitroferricyanide (aka nitroprusside) in water



Recipe: Solution 2 or B (saturated Sodium Carbonate):
- Saturated Sodium Carbonate solution in water



Recipe: Solution 3 or C:
- 10 % acetaldehyde in water



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n-Tricosane Solution

Compound(s) of Interest: GC/MS Internal Standard
Primary Analyte for Verification: GC/MS (correct ions present)

Recipe:
- 0.1 g n-tricosane
- 15 ml chloroform
- 9 ml methanol



Valerolactone Internal Standard

Compound(s) of Interest: GC/MS internal standard for GBL
Primary Analyte for Verification: GC/MS (correct ions present)

Valerolactone Internal Standard Recipe
- 0.1 ml valerolactone
- 10 ml water



Webers Solution

Compound(s) of Interest: Psilocyn
Primary Analyte for Verification: Psilocyn

Recipe:
- 1-2 heaping toothpicks of o-Dianisidine bis(diazotized) zinc double salt (CAS # 14263-94-6) AKA Fast Blue B Salt in

- ~0.5 mL water
- Allow solids to settle out
- Use within a day



Zwikker Solution

Compound(s) of Interest: Barbiturates
Primary Analyte for Verification: Secobarbital

Recipe: Solution 1 or A:
- 0.5% copper sulfate in water



Recipe: Solution 2 or B:
- 5% pyridine in chloroform



10% Hydrochloric Acid (HCl) Solution

Compound(s) of Interest: used for Acid/Base Extraction
Verification: check that pH is acidic

Recipe: • 10% solution of Hydrochloric Acid in water



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 05/15/2018	**NUMBER:** DRG.14 - Technical and Administrative Review
	RELATED ORDERS: DRGF.11 - Controlled Substance Technical Review Checklist, FSD.43 - Test Reports, FSD.17 - Technical Review, FSD.18 - Administrative Review	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005:**	
CHAPTER: Quality Assurance	**SUBJECT:** **Technical and Administrative Review**	

I. Policy: The technical review process addresses the appropriate use of analytical controls; correct interpretation based on analytical controls; and the consensus of results between the examiner and the reviewer. This process ensures the conclusions of the analyst's are reasonable, within the constraints of validated scientific knowledge and supported by examination documentation. See FSD.17.

A. Any significant differences in results by the reviewer must be resolved prior to issuing a final result and report.

1. If a discrepancy is found, the report and notes along with a notation describing the discrepancy is returned to the analyst for correction.

B. Technical review shall be conducted by individuals having experience gained through training in the Controlled Substance Unit.

1. Personnel who have successfully passed the competency test for controlled substances are minimally qualified to perform technical review in the controlled substance unit. However, based on the work load and experience of the analysts the Manager/Supervisor may choose to designate a specific Criminalist as Tech Reviewer in their absence.

a. It is recommended that a currently proficiency-tested analyst perform the majority of the technical review of a newly competent drug analyst to ensure the most current practices and procedures are being implemented and reviewed.

b. The duration or number of cases to be technically reviewed by a currently proficiency-tested analyst will be determined by the Supervisor/Manager.

2. Documentation of personnel authorized to perform technical review will be documented on the Training authorization checklist.

3. The individual technically reviewing the report will not be the person who authored the report.

4. The technical reviewer will consider the following scope, which include, but may not be limited to:

    a. Approved technical procedures used and documented, any deviations in analytical techniques will be included in the case notes. The color produced or reaction observed is documented for presumptive color tests in the case notes

    b. Marijuana microscopic tests include a description of leaf characteristics

    c. Accuracy of test reports: the data supports the results and/or conclusions in the test report. "No common controlled substance detected" supported by adequate screening tests which may include instrumental analysis (except for marijuana)

    d. Results are properly transferred from notes to report

    e. Evidence weights calculated properly and appropriately stated (including units of measurement)

    f. Documentation of the use of verified reference material as well as blanks and internal standard as applicable. Appropriate extraction procedures (methods and solvents) for preparing samples for instrumental analysis were used.

    g. Documentation of the identity of equipment (except stereomicroscopes) used for analysis in the case notes.

    h. Instrumental charts and graphs are included and meet laboratory criteria for identification. GC/MS mass spectra, GC retention times or infrared spectra are compared to lab standard and match sufficiently

    i. Controlled substance reported uses nomenclature listed in Health and Safety drug schedules. For some drugs, the laboratory may not be able to identify isomers (eg. Ephedrine/Pseudoephedrine and Propoxyphene/Dextropropoxyphene).

    j. Proper schedule listed for controlled substances

    k. Significant figures will be consistent between the reported Total Net Weight or Total Estimated Weight and the analyzed unit weight(s) for each item.

5. The Technical Reviewer may use DRGF.11 encompassing the scope listed above.

    a. It is recommended that any newly competent analyst reference DRGF.11 prior to submitting cases for technical review (For example: cases with multiple items).

    b. It is recommended for any technical reviewer that is not currently proficiency tested to reference DRGF.11 upon reassignment to this task.

6. The Administrative review milestone in LIMS reflects the technical and administrative review of the case.

    a. The signature of the reviewer on the laboratory report designates approval.

II. Policy: The administrative review process addresses the case report package for format and content. The reviewer verifies the requested examination has been performed and the basis for the conclusions is supported in the notes. See FSD.18.

A. It is the responsibility of the analyst, not the Manager/Supervisor, to prepare and present a completed report package that complies with the Laboratory's policies and is free of errors.

1. It is recommended that any newly competent analyst reference DRGF.11 prior to submitting cases for administrative review.

2. It is recommended for any administrative reviewer that is not currently proficiency tested to reference DRGF.11 upon reassignment to this task.

B. All reports will be technically and administratively reviewed by a Manager/Supervisor or a person designated by the Manager/Supervisor.

C. The individual administratively reviewing the report will not be the person who authored the report.

1. Personnel who have successfully passed the competency test for controlled substances are minimally qualified to perform administrative review in the controlled substance unit. However, based on the work load and experience of the analysts the Manager/Supervisor may choose to designate a specific Criminalist as Admin Reviewer in their absence.

2. Documentation of personnel authorized to perform administrative review will be documented on the Training authorization checklist.

3. The Administrative Reviewer may use DRGF.11 encompassing the scope listed below.

4. The Administrative review milestone in LIMS reflects the technical and administrative review of the case.

D. Administrative review will take place prior to the release of the report. Refer to the Division Manual for release of information verbally. See FSD.43.

1. The administrative reviewer will consider the following scope, which includes, but may not be limited to:

a. All information is correct on case report header (agency case number, name, agency, offense, request date, etc.)

b. The administrative and examination records are uniquely identified.

i. The unique identifier is the laboratory number.

ii. There is a clear identification of the end of the report.

c. Proper report format followed per Division policy

d. The signature (or electronic equivalent) of the author appears on the report

e. Clarity of conclusions in report

i. the reference to the sample selection plan is in the report annex

ii. the date of sample selection is typically the date of analysis, this will be included in the case notes

iii. clarity of how many units were tested in multiple unit cases or how many pills were examined in items with multiple pills, the results relate only to items tested

iv. uncertainty of drug weights, will be included in the report annex

f. Method(s) used or analytical techniques employed listed on report

g. The description and identification of submitted items is clear

h. The tape-sealed condition of the outer packaging is noted

i. Chain of custody documented in report and LIMS. The date of request is included on the report. The date of receipt of evidence is in the report annex.

j. Evidence items listed on request form correspond to reported items

k. The notes are legible

l. Correct grammar and spelling

m. All handwritten corrections to notes shown by initialed single strike-out

n. All handwritten notes in ink

o. All notes pages, including data, are properly marked with lab number, date and initials

p. The first and last notes page includes the total number of pages

q. Photos (pill identification printout) have description of what is being depicted

r. Disposition of the evidence is given in the notes if the evidence is not being returned to the submitting agency

s. Any communication is documented in the notes or telephone log documents

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 05/21/2018	**NUMBER:** DRG.15 - Courtroom Testimony Monitoring & Proficiency Testing
	RELATED ORDERS: FSDF.02 - Internal Court Critique Form, FSDF.03 - External Court Critique form, FSD.26 - Court Testimony Monitoring, DRG.57 - Training: General Controlled Substance Competency, QA.10 - LIMS Proficiency and Competency test procedures, FSD.23 - Proficiency Testing, FSD.44 - Control of Records, FSD.15 - Non-Conforming Work and QA Actions	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**(ANAB 17025/2005): None**	
CHAPTER: Quality Assurance	**SUBJECT:** Courtroom Testimony Monitoring & Proficiency Testing	

I. Policy: Managers/Supervisors or persons designated by the Manager will review the testimony of their staff annually according to the following procedure.

A. Court Critique Forms (FSDF.02 and FSDF.03) are available to staff members to encourage input from judges, attorneys, or peers regarding employee performance for courtroom testimony. The cards can be used in lieu of supervisory review of testimony.

B. There are other means of review of testimony that include, but may not be limited to, reviewing transcripts, or interview of an individual who witnessed the testimony. Refer also to the Division Manual policy on Courtroom Testimony Monitoring. See FSD.17 and FSD.26.

C. Individuals shall be given feedback regarding their courtroom monitoring. Typically, the analyst is provided a copy of the Court Critique. If a Court Critique is not filled out and returned to the analyst, the feedback shall be documented.

D. If performance is less than satisfactory, the Supervisor/Manager will gather appropriate information; this may take the form of interviewing the person filling out the Court Critique to determine the extent of the unsatisfactory performance.

1. The Supervisor/Manager will address the performance with the analyst if they also deem the performance is unsatisfactory.

2. Any remedial action taken will be documented; this may take the form of a corrective action if deemed necessary.

E. The records of testimony monitoring shall be retained not less than one full ASCLD/LAB International accreditation cycle. See FSD.44.

F. If an individual does not testify in the calendar year, the Supervisor/Manager will document this according to the Division Manual policy. See FSD.26.

II. Policy: Proficiency samples will be submitted to each analyst who performs testing, or an activity which contributes to the quality of testing, on a yearly basis.

A. These samples will be supplied by an outside agency, internally, or blind.

1. See QA.10 and DRG.57 for more information on using case samples or re-using samples for proficiency testing.

B. Proficiency samples may include controlled or non-controlled substances in solid or liquid dosage forms.

C. When participating in proficiency testing, the Controlled Substance Unit's own approved and documented test procedures shall be used

D. Criteria for passing drug analysis proficiency:

1. For drug analysis proficiencies, all controlled substances must be identified. Appropriate presumptive and confirmatory testing will be documented in same manner as casework analysis. See DRG.43

2. If a drug identification is missed or incorrect drug identification is made, then remedial training will occur and it will be documented in a QA Action.

E. See Division Manual policy FSD.23 for more information about complying with ASCLD/LAB Proficiency Review Program

F. The laboratory shall maintain records of proficiency testing, including:

1. The test set identifier
2. How samples were obtained or created
3. Identity of the person taking the test
4. Date of analysis and completion
5. All data and notes supporting the conclusions
6. Proficiency test results
7. Discrepancies noted (refer to the Division Manual Policy FSD.23 and FSD.15)
8. Indication that performance has been reviewed and feedback to the analyst
9. Details of any corrective action taken (refer to the Division Manual Policy FSD.15)

G. Records shall be retained not less than one full ASCLD/LAB International accreditation cycle. See FSD.44.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 02/08/2019	**NUMBER:** DRG.16 - Validation and Verification
	RELATED ORDERS: FSD.27 - Method Selection & Validation, FSD.15 - Non-Conforming Work and QA Actions, QA.18 - Quality Assurance Action Request Procedure, FSDF.12 - QA Action Request - Validation and Performance Verification, FSD.34 - Control of Software and Data, DRGF.12 - Software Log, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.2**	
CHAPTER: Quality Assurance	**SUBJECT:** Validation and Verification	

I. Policy: New procedures or methods of analysis must be validated or verified before use in casework.

A. Any new method or procedure or adjustment to a current procedure must be tested in our laboratory to insure that the method or procedure works, the verification or validation shall be as extensive as necessary to meet the needs of identification of a controlled substance. The laboratory shall record the results and document the procedure. Approval of the method for use in casework is documentation that the method is fit for the intended use. See FSD.27.

B. A Quality Action Request, or equivalent, should be generated and given to the Manager/Supervisor to be approved; then forwarded to the Quality Assurance Coordinator.

C. See the Division Manual policy for more information on validation: FSD.15, QA.18 and FSDF.12.

D. Selection of Methods

1. The Controlled Substance Unit shall use test methods for identification of controlled substances, including methods for sampling which meet the needs of the customer and which are appropriate for the tests it undertakes.

2. When the customer does not specify the method to be used, the Controlled Substance Unit shall select appropriate methods. In general, the objective and scope of analysis is the identification of controlled substances.

3. Laboratory-developed methods or methods adopted by the laboratory will be used if they are appropriate for the intended use (identification of controlled substances). They will be validated to the extent necessary to meet the needs of the given application.

4. The customer shall be informed as to the method chosen by the Controlled Substance Unit listing the analytical techniques on the report.

E. The following factors shall be taken into account in developing test methods and procedures

1. **human factors**
2. **accommodation and environmental conditions**
3. **test and calibration methods and method validation**
4. **equipment**
5. **measurement traceability**
6. **sampling**
7. **the handling of test and calibration items**

F. ***SWGDRUG Recommendations, Quality Assurance/Validation of Analytical Methods*** may be used as an additional guide for validation of methods.

G. Documentation is required. A written description of the method used, instrument parameters, reproducibility data, and any other data should be documented and available for review

H. Guidelines for Performance Verification

1. The purpose of performance verification is to ensure that a previously validated method, or method from a manufacturer, will work in our laboratory with our personnel and instrumentation. '
2. Performance verification should consist of taking the validated method (without making significant changes to the extraction, GC/MS parameters, etc.) and demonstrating that the reference materials has been carried through the process and yielded the expected results. Prior to implementation of a validated method new to the laboratory, or a method from a manufacturer, the reliability of the procedure shall be documented in-house against any documented performance characteristics of that procedure. Records of performance verification shall be maintained.
3. The identification of a controlled substance is done with comparison to a reference material.
    a. If similar procedures (use of an internal standard, dilution of the sample with a solvent, and comparison to a reference material run using the same instrument parameters) are employed, then no verification or validation is required when new substances are encountered.
    b. Consideration to the appropriateness of solvent used and instrument run time should be considered when encountering new substances.
4. Qualified personnel criteria for a Performance Verification:
    a. For an instrument verification, an analyst who is competent in the unit can complete a performance verification.
    b. An analyst who is competency tested or in training can acquire data to be evaluated for the performance verification.

c. For new technology (such as instrumentation), an analyst who is competent in the unit can complete a performance verification.

I. Guidelines for Method Validation

1. The purpose of method validation is to demonstrate that the method is suitable for the intended use and is reproducible by our laboratory's personnel with the use of our instrumentation.

2. Method validation is required on new methods, methodology or procedures. Validation is the confirmation that the requirements for a specific intended use are fulfilled by examination of objective evidence.

3. Methods developed by the laboratory for its own use will be a planned activity and assigned to qualified personnel. Plans will be updated as development proceeds and effective communication between the analyst and Supervisor/Manager will be ensured.

4. Qualified personnel criteria for a Method Validation:

a. For a method validation, an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

b. An analyst who is competency tested or in training can acquire data to be evaluated by a competent analyst for a method validation.

c. For new technology (such as instrumentation), an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

J. Software

1. When computers or automated equipment are used for the acquisition, processing, recording, reporting, storage or retrieval of test data, the laboratory shall ensure that **laboratory configured** software is suitably validated and documented as being adequate for use. In the Controlled Substance Unit, this may include, but is not limited to: a) Lab-created macros used for data analysis.

2. Commercial off-the shelf software used within its designed application range will be considered to be sufficiently validated. In the Controlled Substance Unit, this may include, but is not limited to:

a. Agilent ChemStation software and firmware

b. the libraries used for presumptive identifications

c. Reference software for the presumptive identification of pharmaceuticals (eg. AmerChem RX-ID) are considered approved

i. Any version of AmerChem RX-ID

ii. NIH/NLM website for pill identification: https://pillbox.nlm.nih.gov/

iii. Poison Control website for pill identification: https://pill-id.webpoisoncontrol.org/

iv. Drugs.com Pill Identifier: https://www.drugs.com/imprints.php

d. JusticeTrax Indexer

e. Perkin Elmer FTIR software and firmware

3. Documentation of software validation will be reviewed by a Supervisor/Manager prior to approval for use. If the software is controlled or approved through the use of a software log, the approval initials in the log will document the review and approval of the validation. If the software is controlled or approved through PowerDMS, the electronic approval signature will document the review and approval of the validation. See FSD.34.

4. Records shall be maintained of software significant to the result and shall, when possible, be uniquely identified. This will be tracked on DRGF.12.

K. Equipment

1. Equipment that is new to the laboratory shall be properly evaluated to ensure its reliability. The evaluation will be as extensive as necessary to meet the needs of the controlled substance unit.

2. Before being placed into service, equipment shall be calibrated or checked to establish that it meets the laboratory's specification requirements. It shall be checked or calibrated before use in casework.

3. If the type of equipment already exists within the laboratory and additional equipment of the same type is obtained, a check of the equipment may be satisfactory to ensure its reliability. This check shall ensure that the equipment is operating properly. This will be evaluated by the Supervisor/Manager.

4. If the equipment is a new methodology or the operation is significantly different from equipment already in the laboratory, validation, training and an associated competency may be necessary. This will be evaluated by the Supervisor/Manager. The competency test will meet the requirements in the ANAB.

5. See DRG.17 for information on equipment**.**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 08/28/2018	**NUMBER:** DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes
	RELATED ORDERS: DRG.43 - Training: General Information, DRG.44 - Training: Barbituate, DRG.45 - Training: Benzodiazepine, DRG.46 - Training: Caines, DRG.47 - Training: GHB, DRG.48 - Training: LSD, DRG.49 - Training: Marijuana, DRG.50 - Training: Opiates, DRG.51 - Training: PCP, DRG.52 - Training: Phenethylamine Analog, DRG.53 - Training: Phenethylamine, DRG.54 - Training: Steroid DRG.55 - Training: Tryptamine, DRG.56 - Training: Miscellaneous Compounds & No Common Controlled Substances, DRG.18 - Balances, DRG.32 - Software, DRG.19 - GC-MS Routine Maintenance, DRG.20 - GC-MS Cleaning the Ion Source, DRG.21 - GC-MS - Changing the Column, DRG.22 - GC-MS Cleaning the Inlet, DRG.23 - GC-MS Changing the Pump Oil, DRG.24 - GC-MS Cleaning the Liners, DRG.25 - GC-MS Using the Software, DRG.26 - Storage of Instrumental Data, DRG.27 - GC-MS References, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, DRG.30 - FTIR Spectrometer Maintenance, DRG.31 - Fourier Transform Infrared Spectrometer References, DRG.02 - Drug Unit Security, DRG.18 - Balances, FSD.32 - Security, FSD.50 - Facility Maintenance	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: None**	
CHAPTER: Equipment	**SUBJECT:** Calibration/Maintenance of Equip. & Environ. Changes	

I. Policy: Analysts or outside service technicians perform calibration checks and maintenance of equipment and instruments.

A. The Controlled Substance Unit is furnished with the measurement (balances) and test equipment (GC/MS, FTIR and microscopes) required for the correct performance of tests.

B. The equipment listed below and software used for testing is capable of achieving the accuracy required for weighing and qualitative testing of suspected controlled substances.

C. Equipment will be operate by authorized personnel. See DRG.43, DRG.44, DRG.45, DRG.46, DRG.47, DRG.48, DRG.49, DRG.50, DRG.51, DRG.52, DRG.53, DRG.54, DRG.55, DRG.56

D. Before being placed into service (to perform casework), equipment will be calibrated or checked to establish that it meets the laboratory's requirements. All balances will be calibrated before being used in casework. The test equipment shall meet the vendor's performance check criteria or the laboratory criteria before being used in casework. The check criteria will be documented.

1. See DRG.18 for the **calibration program for balances.**

E. After being placed into service, equipment will be calibrated or performance checked to establish that is continues to meet the laboratory's requirements. If equipment does not pass a performance check criteria or calibration tolerances (eg. AS FOUND data listed on the calibration certificate), an evaluation of the equipment's impact on casework will be completed and documented.

1. When an evaluation determines that the reported results are not affected, a level 2 log entry will be cross referenced in the equipment calibration log.

2. When an evaluation determines the reported results are affected, the impact will be documented through the QA ACTION process. See FSD.15

F. Each piece of equipment and its software significant to the test result in the controlled substance unit is uniquely identified. See DRG.32.

G. GC/MS

1. Each GC/MS in the Controlled Substance Unit is uniquely identified. Each of these has an accompanying maintenance binder that includes:

a. The identity of the equipment (Laboratory assigned identifier) and software (version number or equivalent)

b. The manufacturer's name and serial number or other unique identification

c. The checks that the equipment complies with specifications (Autotune and Performance Standard Checks)

d. The dates, results or reports of any adjustments. The report of the Autotune and Performance Standard Checks indicate acceptance criteria for use in casework

e. Any damage, malfunction or repair

f. Documentation of maintenance carried out

2. The instructions for use of GC/MS and the maintenance plan are contained in the Controlled Substance Unit manual.

a. See DRG.19 - GC/MS Routine Maintenance

b. See DRG.20 - GC/MS Cleaning the Ion Source

c. See DRG.21 - GC/MS - Changing the Column

d. See DRG.22 - GC/MS Cleaning the Inlet

e. See DRG.23 - GC/MS Vacuum Pump Maintenance

f. See DRG.24 - GC/MS Cleaning the Liners

g. See DRG.25 - GC/MS Using the Software

h. See DRG.26 - Storage of Instrumental Data

i. See DRG.27 - GC/MS References

H. FTIR

1. The FTIR in the Controlled Substance Unit, is uniquely identified. It has an accompanying maintenance binder that includes:
    a. The identity of the equipment (Laboratory assigned identifier=FTIR) and software (version number or equivalent)
    b. The manufacturer's name and serial number or other unique identification
    c. The checks that the equipment complies with specifications (ready checks)
    d. The dates, results and copies of reports or certificates of maintenance or adjustments
    e. Any damage, malfunction or repair
    f. Documentation of maintenance carried out
2. The instructions for use of FTIR and the maintenance plan are contained in the Controlled Substance Unit manual.
    a. See DRG.28 - FTIR Analytical Procedures
    b. See DRG.29 - FTIR Spectrometer Sample Prep and Cleanup
    c. See DRG.30 - FTIR Spectrometer Maintenance
    d. See DRG.31 - Fourier Transform Infrared Spectrometer References

I. Microscope

1. The Microscopes in the Controlled Substance Unit are uniquely identified. Each of them have a maintenance binder that includes:
    a. The identity of the equipment
    b. The manufacturer's name and serial number or other unique identification
    c. The annual external maintenance checks that the equipment complies with specifications
    d. The instructions for use are located in the Training sections of the Controlled Substance Unit manual, **this is not listed in each maintenance log**.
    e. The dates, results and copies of reports or certificates of maintenance or adjustments
    f. Any damage, malfunction or repair
    g. The documentation of the maintenance is in the maintenance log.

J. Balances

1. The balances in the Controlled Substance Unit are uniquely identified. Each balance has a maintenance binder that includes:
    a. The identity of the equipment
    b. The manufacturer's name and serial number or other unique identification
    c. The Monthly Calibration checks that the equipment complies with specifications

d. The dates, results and copies of reports or certificates of calibrations or any adjustments.

e. Any damage, malfunction or repair

f. Documentation of maintenance carried out

2. The instruction for use of balance and the maintenance plan are located in the Controlled Substance Unit manual.

a. See DRG.18

K. Equipment that needs repair shall be taken out of service. It shall be clearly marked or labeled as being out of service until it has been repaired and/or shown by calibration or test to perform correctly. If there is a concern that the defect affected previous tests, the laboratory shall investigate.

L. See DRG.18 for information on calibration , intermediate checks and the calibration program for balance check weights

M. Test equipment will be handled according to procedures in the SOP and in accordance with training such that the equipment is safeguarded from adjustments which would invalidate the test and/or calibration results. If any damage, malfunction or repair is needed the equipment will not be used for casework until remedial action is taken.

1. Procedures for proper use of the GC/MS, FTIR and balances can be found in the associated GC/MS, FTIR and Balances procedures. Procedures for the proper use of the microscope can be found in the Training sections. By following the procedures and using equipment in accordance with proper training equipment will be handled in such a way to safeguard the equipment from adjustments that may invalidate test results.

N. Accommodations and Environmental Conditions

1. The laboratory is in a climate controlled building and the lighting and energy sources are suitable for drug analysis.

2. There are no environmental conditions in the technical requirements for testing drugs that need to be documented or monitored.

3. If power to any equipment is lost, analysts will ensure that equipment is properly working prior to resuming drug analysis.

4. Reference materials that require refrigeration are stored refrigerated and the refrigerators are monitored. See TOX.17 for further information on monitoring.

5. There is physical separation between drug unit and toxicology units, where cross contamination may occur. To further prevent cross contamination, analysts from either unit remove lab coats before entering the other section.

6. Access to areas of the laboratory are limited and controlled. See also Drug Unit Security (DRG.02) and Division Policy (FSD.32).

7. Analysts are responsible for maintaining a clean work area and general lab cleanliness. Trash is picked up from the lab and routine cleaning is performed by General Services Department (GSD). Non-routine cleaning (e.g.. floor waxing, etc.) is scheduled with General Services Department (GSD). See FSD.50.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/01/2019	**NUMBER:** DRG.18 - Balances
	RELATED ORDERS: DRGF.02 - Balance Calibration Check Log, DRG.42 - Uncertainty Budget for Reported Drug Weights, FSD.28 - Measurement Traceability of Equipment, Reference Materials and Reference Standards, FSD.30 - Purchasing and Ordering Supplies	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Balances	

I. Policy: Balances will be calibrated and checked to ensure their reliability.

A. New or Serviced Balances

1. A balance new to the laboratory, or a balance that has been serviced or has undergone substantial maintenance will be calibrated by an ISO 17025 compliant vendor before being used in casework.

B. Annual Calibration

1. The balances in the drug unit will be calibrated yearly by an external calibration service that is ANAB ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification. See FSD.28 and FSD.30.

   a. The unit will report correction factors to the UOM committee for evaluation.

2. The laboratory will maintain copies of the certificates obtained for at least the current five year accreditation cycle.

3. The external calibration service labels each balance to indicate the calibration status, including the last calibration and the recommendation for the next calibration.

C. Monthly Accuracy or Calibration Check

1. The balances in the Drug Unit will be checked monthly to ensure that they are operating satisfactorily. This procedure shall be performed by an analyst or a specialist.

2. Calibration or accuracy checks must be done with reference standards that are NIST (National Institute of Standards and Technology) traceable or American Society for Testing and Materials (ASTM) - ASTM 1 or ASTM 2 weights.

3. The results of the check will be logged. During the monthly check, the balance should also be checked for cleanliness and to ensure that it is level. See DRGF.02.

4. **Procedure for checking the calibration of the balances in the Drug, Alcohol and Toxicology Section**.

   a. Turn the balance on

b. Ensure that the balance is level

c. Tare the balance to a zero weight (0.000)

d. Place the weight (M1) on the center of the balance.(See Table 1 for the reference standard M1 as appropriate for each balance).

e. Record the weight result in the Balance Calibration Log

f. Remove the reference standard (M1)

g. Tare the balance to a zero weight (0.000)

h. Repeat with the reference standard M2. (See Table 1 for the reference standard M2 as appropriate for each balance).

i. Record the weight result in the Balance Calibration Log

j. Remove the weight (M2)

5. Refer to Table 1 for the allowable error range

6. If the balance falls outside the acceptable range the balance must be taken out of service. Calibration may be performed by an external calibration service meeting the requirements of ANAB ISO/IEC 17025.

7. The following references were used during the development of this procedure:

a. Instruction Manual for Precision Advance Electronic Balances, GT Series. Ohaus

b. 1998 Annual Book of ASTM Standards, General Methods and Instrumentation. ASTM. Section E 898-88, pages 541-544.

D. **Instructions for weighing on the balance.**

1. **Before an item is weighed, make sure:**

a. The balance does not have any issues with routine calibration and monthly checks.

b. The balance should be placed in a stable location to minimize vibrations, air drafts, and unnecessary movements.

c. If the balance indicates that it is not level, adjust the level appropriately.

2. **Open the draft shield by the side-loading door.**

a. The top-loading door will only be used for sufficiently tall items.

3. **Place the weighing media (vessel, weigh boat, weigh paper...etc.) near the center of the weighing pan**.

a. If a weigh boat is being used, the analyst will use the best weigh boat for the item being weighed to help increase visibility (contrast) and minimize spills (sturdier weigh boats for heavy items).

4. **Tare the weighing media**.

a. Allow the weight displayed to stabilize before pressing TARE

5. **Remove weighing media from balance and add item to be weighed.**

a. Be mindful and use caution when transferring contents into and out of the weighing media

b. Always assume that an item is in the weigh boat to minimize the chance of a spill

c. For suspected fentanyl-related items, use proper Personal Protective Equipment (PPE) and only make content transfers while items are in the hood. See DRG.58 for more information.

6. **Place weighing media on scale, near center**.

a. Do not place item(s) on edge of the weighing pan as this may cause inaccurate results

7. **Close the draft cover, if applicable**.

a. The draft cover (sliding doors or lid) should be closed while taking a weight measurement.

8. **Weigh item. Allow enough time for balance to settle. If the balance will not settle (more than 10 seconds and still fluctuates) use the lowest weight.**

9. **Record the weight. See DRG.42 for more information about reporting weights.**

E. **Handling of Equipment**: Follow the instructions for using the equipment.

TABLE 1

Balance ID#	Model	Serial #	Location	M1/M2	Error Range (+/-)
1	Mettler PB303-S	112116384	Drug Station 1	0.100g/10 g	0.005
2	Mettler BB244 Delta Range	J94874	Crime Scene Area	0.100g/10 g	0.005
7	Mettler PB303-S	1118390093	Drug Station 2	0.100g/10 g	0.005
8	Mettler PB303-S	1118390092	Drug Station 3	0.100g/10 g	0.005
10	Metter PG503-S Delta Range	1118190952	Toxicology	0.100g/10 g	0.005
11	Mettler AB204-S	1119122298	Alcohol	1.0 g/10 g	0.0005 for 1.0 g and 0.005 for 10 g
12	Mettler PB303-S	1122252848	Drug Station 4	0.100g/10 g	0.005
13	Ohaus EP4102	N217 1123271769P	Drug Station 2 (Large Drug Balance)	50 g/1000 g	0.005

1. The balance should not be adjusted by laboratory staff as this may invalidate the calibration. If adjustments and calibrations are necessary, they are performed by an external calibration laboratory either on-site or off-site.

2. For off-site service, the balance will be transported to the external calibration laboratory in a secure packaging to prevent any damage.

3. The specifications for calibrations have been determined by the external calibration laboratory and meet the guidelines of euramet cg-18 and ASTME 898.

F. Reference Standards

1. The reference standards, check weights, will be checked yearly by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification. See FSD.28 and FSD.30.

    a. The unit will report correction factors to the UOM committee for evaluation.

2. The laboratory will maintain copies of the certificates obtained for not less than the current four year accreditation cycle.

3. All reference standards will be stored, handled, used and transported in a manner that prevents contamination, deterioration and protects the integrity of the reference standard. This includes:

    a. **Storing** reference standards in the packaging provided by the manufacturer to prevent deterioration.

    b. **Handling** reference standards, when practical, with the tweezers provided to minimize deterioration.

    c. **Using** reference standards for their intended purpose i.e. balance calibration checks.

        i. If a reference standard is dropped, it will be sent out for calibration.

    d. **Transporting** reference standards in the packaging provided by the manufacturer to prevent deterioration. Transporting reference standards may be necessary when weights are transported to/from the external calibration laboratory.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/13/2018	**NUMBER:** DRG.19 - GC/MS Routine Maintenance
	RELATED ORDERS: DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.24 - GC-MS Cleaning the Liners, DRG.23 - GC-MS Changing the Pump Oil, DRG.20 - GC-MS Cleaning the Ion Source, DRG.21 - GC-MS - Changing the Column, DRG.22 - GC-MS Cleaning the Inlet, DRG.27 - GC-MS References	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Routine Maintenance	

I. Policy: The Gas Chromatograph/Mass Spectrometer (GC/MS) instruments will be checked to ensure their reliability. Maintenance will be carried out if needed according to the procedures below.

A. The following checks are performed as part of the **Weekly Maintenance Checks**. If the instrument is not in use and the checks cannot be done due to staffing levels, this will be logged in the maintenance log.

1. A Standard Spectra Auto Tune is performed weekly.
2. Standard Specta Auto Tune Interpretation:
   a. EM Volts should be reasonable depending on the age of the instrument and the electron multiplier (typically 1200-2400 Volts). A higher EM voltage may indicate a need for a source cleaning. The EM Volts should not exceed 3000.
   b. The EM Volts should not vary significantly from previous autotunes.

MASS	RELATIVE ABUNDANCE
69	100%
219.0	= or > 30%
502.0	= or > 1%

   c. Peak widths (Pw50): 0.45-0.65 amu.
   d. Ions with an amu of less than 69 should have an abundance less than 10% of the base ion (69 amu). If ions 18, 28, and 32 are higher than 10% this may be an indication of a leak.
   e. Vacuum pressure and mass spectrum temperatures should not vary significantly from previous autotunes.
   f. If the above criteria are not met, corrective action shall be taken.
   g. The analyst performing or evaluating the autotune will initial the printout.

h. Printouts of the Autotune (Standard Tune) and the Performance Standard check will be kept in the Gas Chromatography/Mass Spectrometry Maintenance Binder. See DRG.17 for further information about the maintenance log.

3. Performance Standard Check

a. Printouts of the Performance Standard Check will be kept in the Gas Chromatography/Mass Spectrometry Maintenance Binder.

b. The Performance Standard consists of a mix of commonly encountered compounds covering a broad span of elution times. The mixture of compounds can be changed upon the Drug Units discretion to optimize retention time monitoring.

c. The Performance Standard shall be run using the General (Gen.M) Method.

d. The chromatography should not differ significantly from previous chromatograms of the Performance Standard.

e. Relative retention times should not vary significantly from previous chromatograms of the Performance Standard (not greater than +/-5%).

f. The analyst performing or evaluating the performance check will initial the printout.

g. If the above criteria are not met, corrective action shall be taken.

4. Change Septum

a. The inlet septum is changed weekly or more often as needed.

b. The recommended septum is the Agilent Inlet Septa. These septa are preconditioned and it is recommended that they be handled with tweezers for best results.

c. The injector port shall be visually inspected to ensure that the port is clean.

5. Change Insert (Liner)

a. The insert (liner) is changed weekly or more often as needed.

b. The insert will be replaced with a clean, silanized insert.

c. A small amount of silanized glass wool is added to the insert.

d. The new insert is accompanied with a new liner o-ring.

e. See DRG.24 for procedure for cleaning dirty liners

6. Check Vacuum Pump Oil Level

a. The oil level in the rotary pump should be checked if an oil rotary pump is installed. The level of oil should be at least half full. See DRG.23 for vacuum pump maintenance.

7. Documentation

a. Changing the septum, insert (liner) and vacuum pump maintenance will be noted in the Gas Chromatography/Mass Spectrometry Maintenance Binder.

B. Quarterly-Moisture Traps

1. The moisture traps for each of the gas lines shall be checked quarterly. **The check will be logged in the aide binder.**
2. A change in the color of the indicator beads suggests the presence of moisture or oxygen and the trap/filter kit needs to be replaced.
    a. Moisture Trap (yellow originally, turns clear when saturated)
    b. Oxygen Filter (green originally, turns grey when saturated)
    c. The medical air line will have the oxygen filter saturated and can still be used
3. Procedure for changing moisture traps:
    a. Turn off the main gas line.
    b. Refer to manufacturer's instruction for replacing the trap/filter kit.
    c. **REMEMBER: Changing the filters on the carrier gas line means that the oven, injector, and detector temperatures have to be at room temperature, unless the procedure is performed rapidly. If you do not do this, the column will be damaged.**
    d. Changing the trap/filter will be logged in the aide binder

C. Non-Routine Maintenance

1. Agilent GC 6890 refilling the calibration vial
    a. The calibration vial is refilled with PFTBA as needed.
    b. This may be based on visual inspection of the calibration vial or if issues are observed during a tune.
    c. Ensure that the MS analyzer and any attached gauges are off. (The MS does not have to be turned off or vented but the MS must not be collecting data.)
        i. In the Tune and Vacuum Control view, select MS OFF from the Execute menu.
    d. Loosen the calibration vial collar by turning it counterclockwise - do not remove collar.
    e. Remove calibration vial and refill with PFTBA - leaving the top 6 mm of vial unfilled.
    f. Push vial all the way back into collar, then withdraw the vial 1mm.
    g. Tighten collar (turn clockwise). Hand tighten only - a tool should not be used to tighten the collar.
    h. From Tune and Vacuum Control, in the Vacuum menu, select Purge Cal Valve
        i. This must be done before any type of analysis is done
    i. **Refilling of the vial and subsequent purging of the valve will be documented in the maintenance binder.**
2. Agilent Intuvo GC 9000 refilling the calibration vial

a. The calibration vial is refilled with PFTBA as needed.

b. This may be based on visual inspection of the calibration vial or if issues are observed during a tune.

c. Ensure that the MS analyzer and any attached gauges are off. (The MS does not have to be turned off or vented but the MS must not be collecting data.)

i. In the Tune and Vacuum Control view, select MS OFF from the Execute menu.

d. Remove the analyzer window cover

e. Loosen the calibration vial collar. Do not remove the collar

f. Pull the calibration vial out. You may feel some resistance due to residual vacuum

g. Refill with PFTBA. With the vial vertical, the liquid should be just below the end of the internal tube, approximately 70ul of sample.

h. Push the calibration vial into the valve as far as possible

i. Withdraw the vial 1mm. This prevents damage when you tighten the collar

j. Tighten collar (turn clockwise). Hand tighten only - a tool should not be used to tighten the collar.

k. Reinstall the analyzer window cover

l. From the Tune and Vacuum Control, in the Vacuum menu, select Purge Cal Valve

m. **Refilling of the vial and subsequent purging of the valve will be documented in the maintenance binder.**

3. Agilent GC 6890 split vent maintenance

a. Changing the split vent trap (may also be referred to as chemical trap)

i. Split vent trap maintenance should be done whenever ion source or column maintenance is performed

ii. Change the method to maint.m to cool the inlet and oven.

iii. Stop the inlet gas flow.

iv. Remove the top, rear cover on the GC. It is on by pressure-fit only, no screws need to be removed.

v. Remove the weldment and gas lines from the holding bracket. Try not to stress or kink the gas lines.

vi. Unscrew the big knurled knob of the vent line trap weldment.

vii. Note the orientation of the old trap.

viii. Remove the white trap and 2 o-rings. The o-rings may stick and can be removed with tweezers.

ix. Place 2 new o-rings into the indentations onto the ends of the new trap.

x. Place the new trap into the trap weldment, narrow end toward the front of the GC. Screw the knurled knob until the vent line trap weldment is back together, but do not tighten yet.

xi. Place the weldment and gas lines back into the bracket.

xii. Tighten the knurled knob until sealed.

xiii. Replace the GC cover.

xiv. Reload a valid method and allow gases to purge the inlet for about 15 minutes.

xv. There is a video on the Agilent web site: http://www.chem.agilent.com/en-US/products-services/Columns-Sample-Preparation/GC-GC-MS-Columns/Pages/splitventtrap.aspx

b. Cleaning the split vent line

i. Split vent line maintenance is an option when troubleshooting GCMS issues

ii. Change the method to maint.m to cool the inlet and oven.

iii. Stop the inlet gas flow. The column may need to be capped to prevent air from entering the system. This may not be necessary if other maintenance is being done such as changing the column.

iv. Remove the top, rear cover on the GC. It is on by pressure-fit only; no screws need to be removed.

v. Move the tower.

vi. Unscrew the auto-sampler carrousel.

vii. Unscrew the top, left inlet access panel.

viii. Unscrew the top, left, back cooling-fan access panel if needed.

ix. Unscrew the nut connecting the split vent line to the inlet.

x. Unscrew the nut connecting the split vent line to the trap weldment.

xi. Carefully extract the vent line from the GC housing. Try not to stress or kink the vent line or other gas lines.

xii. Place the line vertically in a large beaker. Use the beaker to catch solvent wash waste. Dispose of organic chemical waste properly.

xiii. Wash the vent line with a variety of solvents until the washes run clear. Solvent suggestions include: methanol, acetone, chloroform, and methylene chloride. Use gravity to add each solvent at the trap weldment end, washing debris out the inlet end.

xiv. Cotton swabs can be used to clean debris out of the vent line ends and the inlet port.

xv. Allow the vent line to dry.

xvi. Thread the vent line back into the GC housing.

xvii. Reconnect the nuts at the inlet and trap weldment ends.

xviii. Replace the 3 GC covers, the carrousel, and the tower.

xix. Start the gas inlet flow.

xx. Slowly increase the inlet temperature over time, allowing any remaining solvents to evaporate and purge.

xxi. Allow gas to flow through the inlet at high temperature for about 15 minutes.

4. Agilent Intuvo GC 9000 split vent maintenance

a. Changing the split vent trap (may also be referred to as chemical trap)

i. Split vent trap maintenance should be done whenever ion source or column maintenance is performed

ii. Prepare the inlet and GC for maintenance (there are three possible ways)

1. From the GC touchscreen, navigate to Maintenance > Inlets > Perform Maintenance > Replace Split Vent Trap (check box) > Start Maintenance

1. This option provides step-by-step instructions from the GC screen, which are summarized below

2. From the GC touchscreen, naivigate to Maintenance > Instrument > Perform Maintenance > Maintenance Standby Mode > Start Maintenance

3. Change the method to maint.m or maint2.m to cool the inlet and oven.

iii. Remove the split vent trap cover (top, back of GC)

iv. Loosen the black knurled knob that secures the filter cartridge in place

v. Gently pull forward the split vent trap assembly

vi. Remove the old filter cartridge and insert a new one. The cartridge should only fit one way. Remove any o-rings that may have been left behind from the old trap

vii. Gently push the assembly back into place and tighten the knurled knob finger tight

viii. Check for leaks

ix. Reinstall the split vent trap cover

b. Cleaning the split vent line

i. Split vent line maintenance is an option when troubleshooting GCMS issues. Due to the long coiled transfer line, replacement may be a better option than cleaning

ii. Prepare the inlet and GC for maintenance (there are two possible ways)

1. Change the method to maint.m to cool the inlet and oven.
2. From the GC touchscreen naivigate to Maintenance > Instrument > Perform Maintenance > Maintenance Standby Mode > Start Maintenance

iii. Move the tower and remove the GC inlet cover

iv. Remove the split vent trap cover

v. Stop the gas flow

vi. Unscrew the nuts of the transfer line from the inlet to the split vent trap assembly

vii. Place or hold the line vertically over a large beaker to catch solvent wash waste. Dispose of organic chemical waste properly.

viii. Wash the vent line with a variety of solvents until the washes run clear. Solvent suggestions include: methanol, acetone, chloroform, and methylene chloride.

1. Note that the line is coiled and pressure from a wash bottle may help

ix. Cotton swabs can be used to clean debris out of the vent line ends and the inlet port.

x. Allow the vent line to dry.

xi. Thread the vent line back into the GC housing and reconnect the nuts to the inlet and split vent trap assembly

xii. Return the covers and tower

xiii. Start the gas inlet flow.

xiv. Slowly increase the inlet temperature over time, allowing any remaining solvents to evaporate and purge.

xv. Allow gas to flow through the inlet at high temperature for about 15 minutes.

5. For non-routine maintenance on procedure for cleaning the ion source - Refer to DRG.20.
6. For non-routine maintenance on procedure for changing the column - Refer to DRG.21.
7. For non-routine maintenance on procedure for cleaning the inlet - Refer to DRG.22.
8. For non-routine maintenance like ordering parts, see DRG.27. These references may be used for troubleshooting and maintenance procedures.
9. Any additional maintenance will be noted in the Gas Chromatography/Mass Spectrometry Maintenance Binder.

a. This includes but is not limited to

i. vacuum pump maintenance such as changing the tip seal on a scroll pump

ii. replacing the Weldment Assembly

iii. switching the tower or autosampler, even if on a temporary basis

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/13/2018	**NUMBER:** DRG.20 - GC/MS Cleaning the Ion Source
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Cleaning the Ion Source	

I. Policy: Procedures for cleaning the ion source.

A. Ion Source Cleaning

1. There isn't a recommended interval for ion source cleaning. The following changes in the tune are indications that the ion source needs cleaning:
    a. Inadequate abundances at high masses
    b. Low overall sensitivity
    c. Missing isotopes
    d. Incorrect isotope abundances
2. For additional information, refer to the HELP menu on any version of the instrument software and look for "Testing for a dirty ion source"

B. Cleaning the Ion Source on Agilent 5973

1. On the computer, from Instrument Control, go to the pull-down menu and select View-Tune and Vacuum Control
    a. Chemstation: From the Vacuum menu select vent, then click OK. This takes about 40 minutes
2. Chemstation software may be shutdown at this point. Some versions of software will automatically shutdown once venting is complete.
3. Set up the workstation with butcher paper, beakers, microgrit, GC instrument bag, sand paper, etc.
4. Turn the front inlet down to 40°C
5. After the vent cycle has completed, turn the Mass Spec off via the power switch
6. Remove the cover of the mass spec
7. Open the vent valve (turn to the left), the hissing should not last more than one minute. After venting, close the valve.
8. Loosen the side plate thumbscrew if necessary.
    a. The front and rear side plate thumbscrews should remain unfastened during instrument use
    b. The rear plate thumbscrew should should be tighten for only shipping purposes
9. Disconnect the side board control cable and the source power cable
10. Open the mass spectrometer
11. Put the lint free gloves on at this point
12. The quadrupole wires (top set of green beaded wires and white wires) do not need to be disconnected from the feedthrough board. Disconnect the ion source wires from the feedthrough board (bottom set of green beaded wires and white wires)
13. Disconnect all the wire connections from the ion source
14. Remove the thumbscrews that connect the source heater assembly to the source radiator
15. Gently slide the source out of the source radiator

16. Close the door, slightly tighten the plate thumbscrews to keep the door closed during source cleaning
17. Take the source over to a clean area (with tools, butcher paper, green sandpaper, and lint free cloth.
18. Set the source on top of the source rest, on top of the lint free cloth
19. Using a Hex wrench unscrew the screws on the top of the source starting with the screws on the filaments. Pull out the filaments with the tweezers and set the filaments and screws aside.
20. Take the nut & the washer off the top and set aside
21. Take the repeller out and take the white ceramic loop off.
22. Set the plastic pieces off to the side with the screws and ceramic part
23. The plastic pieces may be cleaned with a cotton tipped applicator dipped in methanol. Do not touch the plastic pieces with your hands after cleaning them. The ceramic part is too fragile to clean.
24. Only the metal parts require cleaning:
    a.

Agilent 5973
repeller
interface socket
source body
drawout lens
drawout cylinder
ion focus lens
entrance lens

    b. The metal repeller block insert is not directly in the sample path, but may be cleaned if needed.
    c. The repeller block insert might not be present on the Agilent 5973
25. Sand all the surfaces, inside and outside, of all the metal pieces until they are shiny and there are no longer any black marks. Try to use a figure eight pattern when possible to reduce scratching. To sand the inside of some pieces, wrap the sandpaper around the metal rod and sand the inside surface.
26. Mix approximately two scoops of microgrit with methanol to achieve a slurry-like consistency
27. Use cotton tipped applicators to clean any remaining black surfaces. Rinse the microgit off into a waste beaker before putting the pieces in a 250 ml beaker with DI water.
28. Sonicate the metal parts using one of the following schemes:
    a. Traditional
        i. One time in DI water for 15 minutes
        ii. Two times in Methylene Chloride for 15 minutes each (organic waste)
        iii. One time in Acetone for 15 minutes
        iv. One time in Methanol for15 minutes
    b. Non-chlorinated solvent option
        i. Two times in DI water for 15 minutes each
        ii. One time in Methanol for 15 minutes
        iii. One time in Acetone for 15 minutes
        iv. One time in Hexane for 15 minutes
29. When transporting the parts from one bath to another, use the tweezers to grab the "non-shiny" surfaces when possible. When sonicating be sure to fill the water level up so it ½ to ¾ up the side of the beaker.
30. After the final sonication put metal pieces in a clean dry beaker to dry. They can be allowed to dry overnight at room temperature in a ventilated hood or dried more quickly in an oven. To dry in oven, cover beaker loosely with aluminum foil and place in the oven at 100 degrees for approximately 15 minutes
31. Put on the lint free gloves and assemble the source:

a. Assemble the lens stack:

i. Slide the draw out plate (disk) and draw out cylinder into the source body (ensure the windows of the draw out cylinder align with the windows on the source body).

ii. Reassemble the entrance lens and ion focus lens inside the plastic lens insulator.

iii. Slide the lens assembly into the source body.

b. Slide the lens stack into the source body, ensure the prongs on the side are lined up in the center

c. Tighten the set screw into the source body to hold everything together, check that the windows are still lined up on the cylinder and source body

d. Set the assembly on the source rest

e. Screw in interface socket

f. Place the ceramic piece onto the bottom of the repeller. The repeller is placed through the heater block assembly and another ceramic piece is placed on top of the repeller. Install a washer, if applicable, and tighten with repeller nut.

g. Put the heater block assembly on the source body and tighten the washer and nut. The wires of the repeller assembly are on the same side of the source body as the prongs that stick out

h. Tighten the screws on the top of the assembly

i. Put the filaments on (the one on top is #1). The shield should face out and the filament should face the source

j. Tighten the filament screws

32. Slide the source into the source radiator, tighten the thumbscrews (2) until they are finger tight

33. Reconnect the wires from/to the feedthrough board:

a. Blue wire to entrance lens

b. Orange wire to ion focus lens

c. White wires to filament 1 (top)

d. Red wire to repeller

e. Black wires to filament 2 (bottom)

f. Ion source heater wires (green)

g. Ion source sensor wires (white)

34. Close the analyzer chamber door

35. Reconnect the side board control cable and the source power cable

36. Ensure the vent valve is closed

37. Apply pressure to the MS door by pushing on it

38. Turn on the MS. Maintain pressure while the instrument initiates and pumps down.

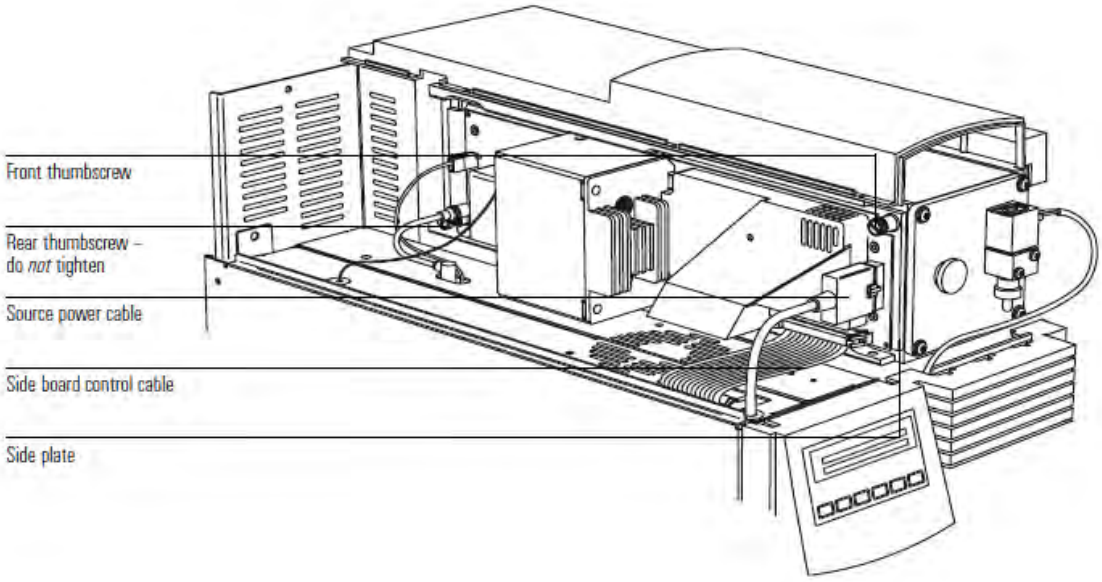
a. Pump down can be initiated/completed with or without the instrument software being loaded

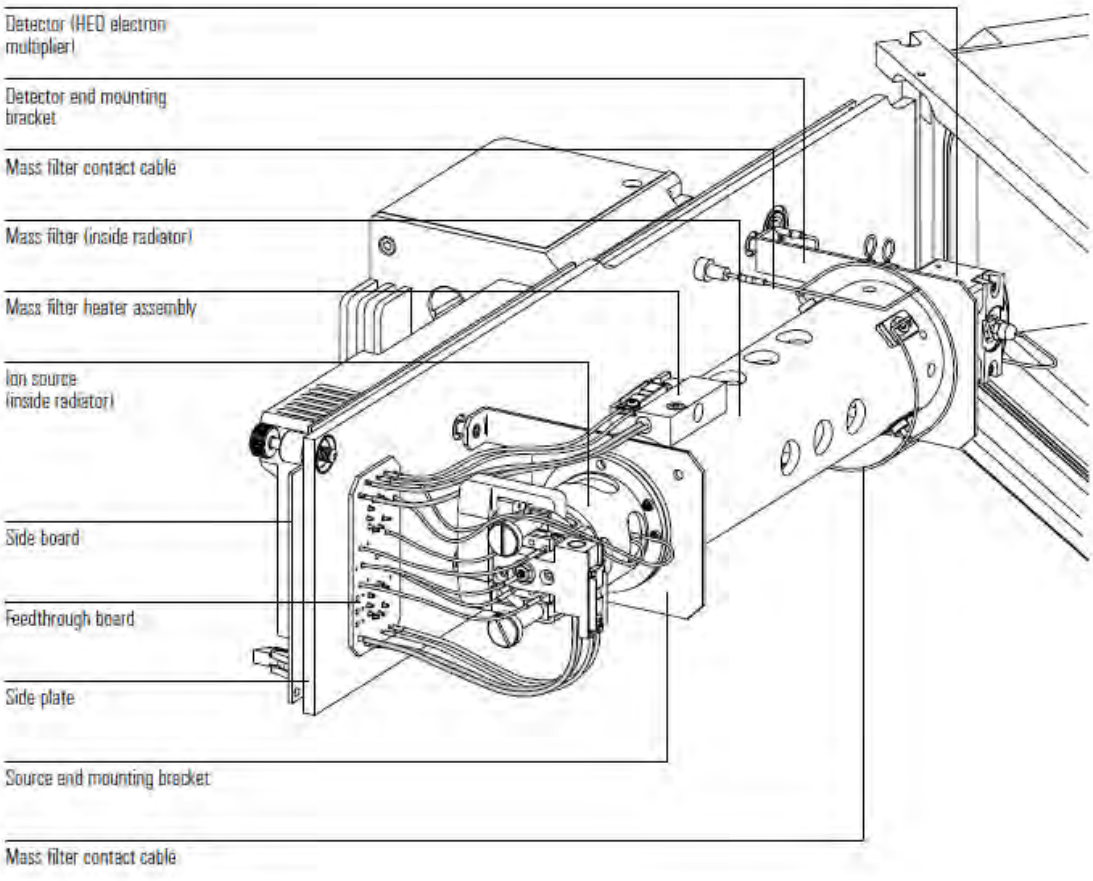
b. Pump Down is typically initiated once the MS is turned on. However, it can also be initiated from the MS front panel (Menu: Maintenance, Item: Pump Down).

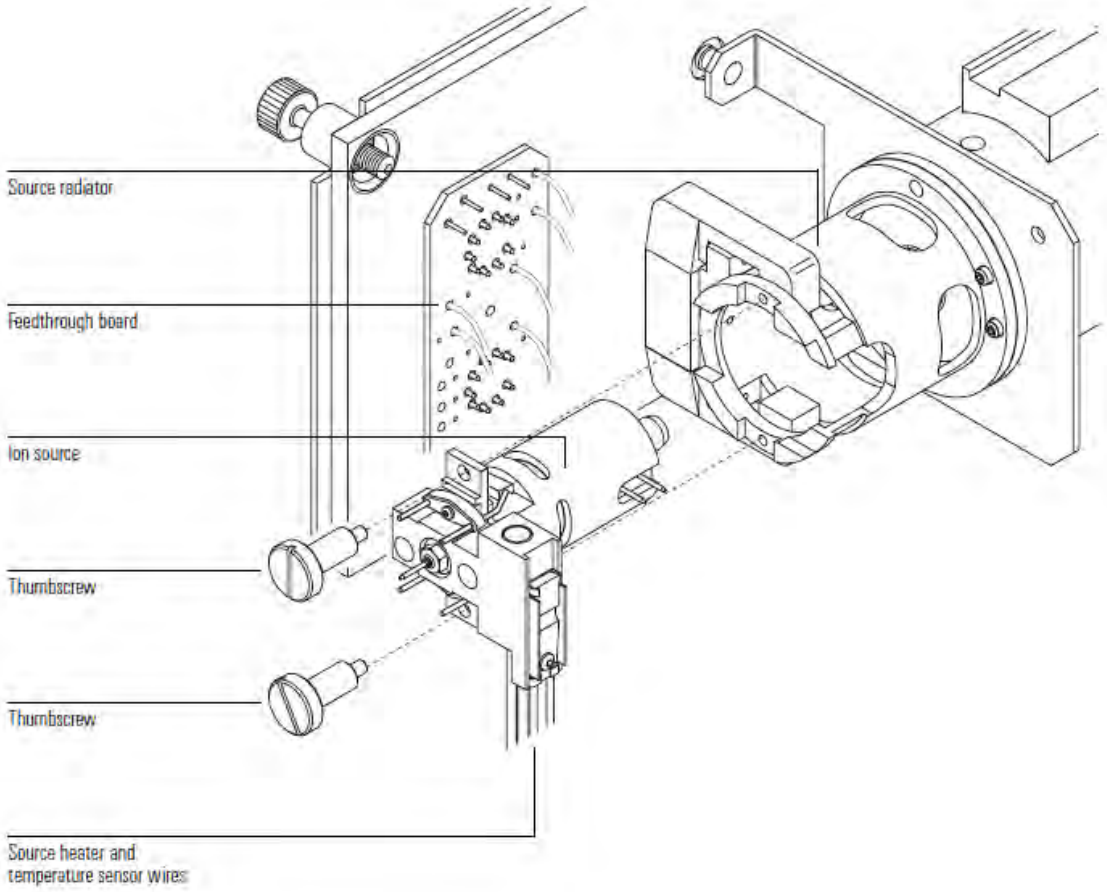
c. If the instrument software is loaded, it can be initiated from the Vacuum menu: Pump Down

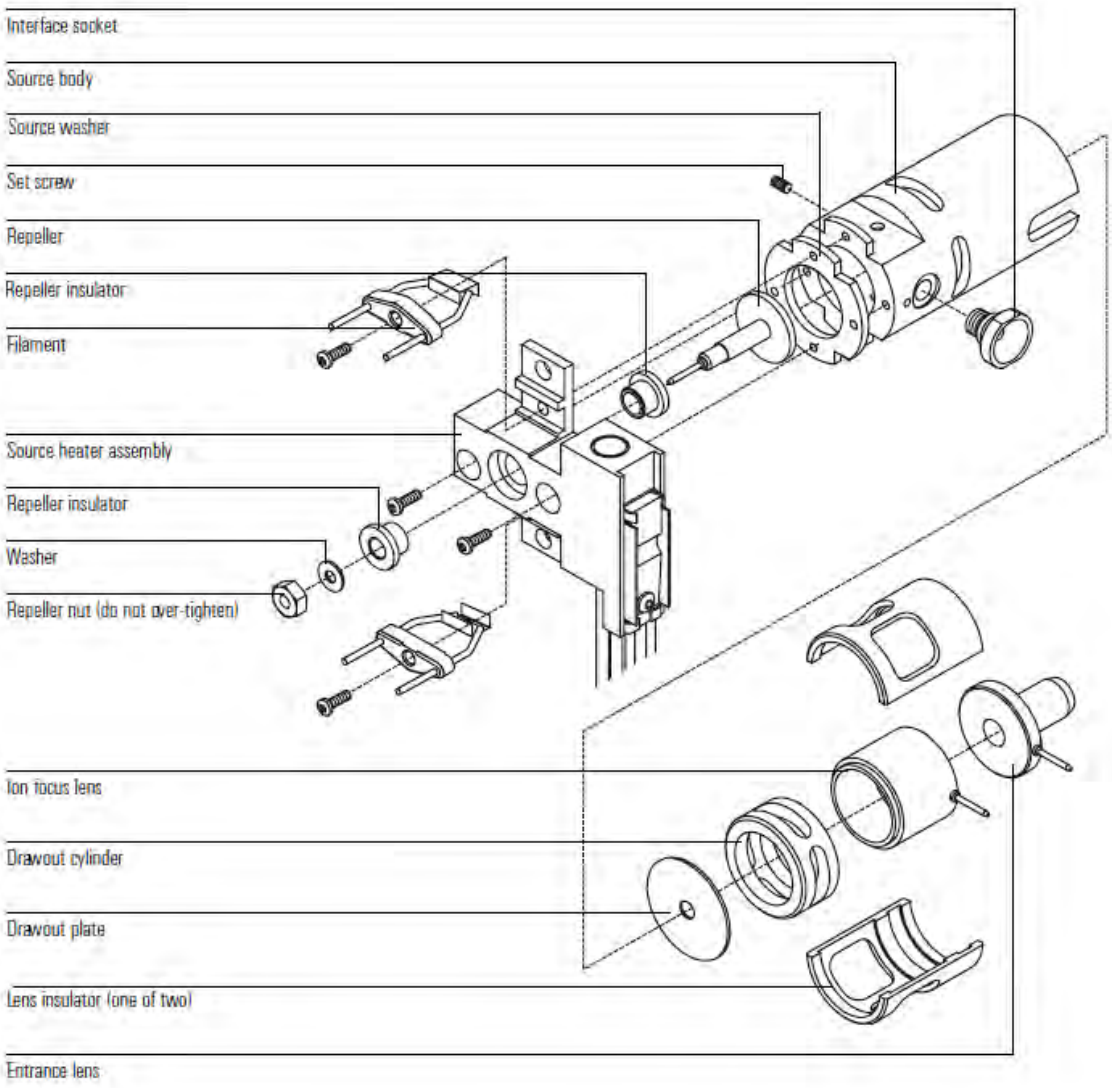
39. The turbo speed should rise, or for the diffusion pump it will begin the cycle. Completion of the pump down can be seen on the instrument front panel or the instrument software. Once pump down is complete, the MS temperatures must be returned to operating conditions: when asked about temperatures click APPLY (MS Zones) and OK. From Instrument Control, load a method other than Maint.M, such as Bakeout.M or Gen.M

C. Agilent 5973 diagrams


Front thumbscrew
Rear thumbscrew –
do *not* tighten
Source power cable
Side board control cable
Side plate


Detector (HED electron
multiplier)
Detector end mounting
bracket
Mass filter contact cable
Mass filter (inside radiator)
Mass filter heater assembly
Ion source
(inside radiator)
Side board
Feedthrough board
Side plate
Source end mounting bracket
Mass filter contact cable


Source radiator
Feedthrough board
Ion source
Thumbscrew
Thumbscrew
Source heater and
temperature sensor wires





D. Cleaning the Ion Source on Agilent 5977

1. On the computer, from Instrument Control, go to the pull-down menu and select View-Tune and Vacuum Control
    a. MassHunter: From the Vacuum menu select MS Vacuum Control, click on the vent button
2. MassHunter software may be shutdown once venting is complete.
3. Set up the workstation with butcher paper, beakers, microgrit, GC instrument bag, sand paper, etc.

4. Turn the front inlet down to 40°C
5. After the vent cycle has completed, turn the Mass Spec off via the power switch
6. Remove the front cover and side cover of the mass spec
7. Open the vent valve (turn to the left), the hissing should not last more than one minute. After venting, close the valve.
8. Loosen the side plate thumbscrew if necessary.
    a. The front and rear side plate thumbscrews should remain unfastened during instrument use
    b. The rear plate thumbscrew should should be tighten for only shipping purposes
9. Disconnect the side board control cable and the source power cable
10. Open the mass spectrometer
11. Put the lint free gloves on at this point
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13. Disconnect all the wire connections from the ion source
14. Remove the thumbscrews that connect the source heater assembly to the source radiator
15. Gently slide the source out of the source radiator
16. Close the door, slightly tighten the plate thumbscrews to keep the door closed during source cleaning
17. Take the source over to a clean area (with tools, butcher paper, green sandpaper, and lint free cloth.
18. Set the source on top of the source rest, on top of the lint free cloth
19. Using a Hex wrench unscrew the screws on the top of the source starting with the screws on the filaments. Pull out the filaments with the tweezers and set the filaments and screws aside. Washers may be present with these screws; the washers do not need to be cleaned
20. Take the nut & the washer off the top and set aside
21. Take the repeller out and take the white ceramic loop off.
22. Set the plastic pieces off to the side with the screws and ceramic part
23. The plastic pieces may be cleaned with a cotton tipped applicator dipped in methanol. Do not touch the plastic pieces with your hands after cleaning them. The ceramic part is too fragile to clean.
24. Only the metal parts require cleaning:
    a.

Agilent 5977
repeller
repeller block insert
source body
extractor lens
ion focus lens
entrance lens

    b. The extractor insulator is not cleaned
25. Sand all the surfaces, inside and outside, of all the metal pieces until they are shiny and there are no longer any black marks. Try to use a figure eight pattern when possible to reduce scratching. To sand the inside of some pieces, wrap the sandpaper around the metal rod and sand the inside surface.
26. Mix approximately two scoops of microgrit with methanol to achieve a slurry-like consistency
27. Use cotton tipped applicators to clean any remaining black surfaces. Rinse the microgit off into a waste beaker before putting the pieces in a 250 ml beaker with DI water.
28. Sonicate the metal parts using one of the following schemes:

a. Traditional

i. One time in DI water for 15 minutes

ii. Two times in Methylene Chloride for 15 minutes each (organic waste)

iii. One time in Acetone for 15 minutes

iv. One time in Methanol for15 minutes

b. Non-chlorinated solvent option

i. Two times in DI water for 15 minutes each

ii. One time in Methanol for 15 minutes

iii. One time in Acetone for 15 minutes

iv. One time in Hexane for 15 minutes

29. When transporting the parts from one bath to another, use the tweezers to grab the "non-shiny" surfaces when possible. When sonicating be sure to fill the water level up so it ½ to ¾ up the side of the beaker.

30. After the final sonication put metal pieces in a clean dry beaker to dry. They can be allowed to dry overnight at room temperature in a ventalated hood or dried more quickly in an oven. To dry in oven, cover beaker loosely with aluminum foil and place in the oven at 100 degrees for approximately 15 minutes

31. Put on the lint free gloves and assemble the source:

a. Assemble the lens stack:

i. Insert the extractor insulator and the extractor lens into source body (ensure the windows of the draw out cylinder align with the windows on the source body).

ii. Reassemble the entrance lens and ion focus lens inside the plastic lens insulator.

iii. Slide the lens assembly into the source body.

b. Slide the lens stack into the source body, ensure the prongs on the side are lined up in the center

c. Tighten the set screw into the source body to hold everything together, check that the windows are still lined up on the cylinder and source body

d. Set the assembly on the source rest

e. Place the ceramic piece onto the bottom of the repeller. Then place the repeller block insert over the ceramic insulator. Insert this assembly through the heater block assembly and place another ceramic piece on the repeller. Insert washers and tighten with repeller nut.

f. Put the heater block assembly assembly on the source body and tighten the washer and nut. The wires of the repeller assembly are on the same side of the source body as the prongs that stick out

g. Tighten the screws on the top of the assembly

h. Put the filaments on (the one on top is #1). The shield should face out and the filament should face the source

i. Tighten the filament screws

32. Slide the source into the source radiator, tighten the thumbscrews (2) until they are finger tight

33. Reconnect the wires from/to the feedboard:

a. Blue wire to entrance lens

b. Orange wire to ion focus lens

c. White wires to filament 1 (top)

d. Red wire to repeller

e. Black wires to filament 2 (bottom)

f. Ion source heater wires (green)

g. Ion source sensor wires (white)

h. Extractor lens wire (brown)

34. Close the analyzer chamber door

    a. There will be slight resistance to the closing of the door as the interface tip seal fits into the source body. Be sure the the parts are aligned and do not try to force if strong resistance is felt.

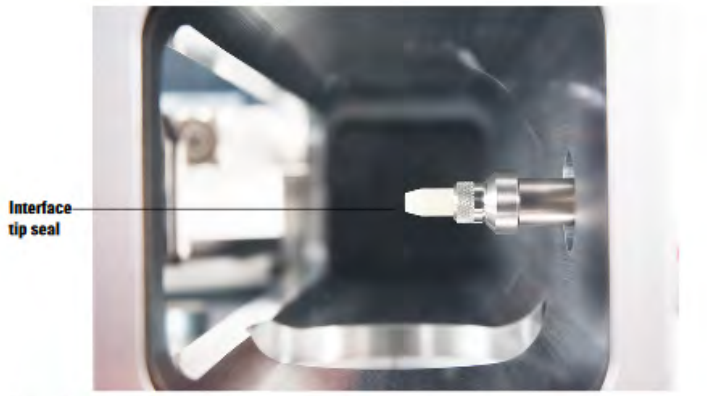


Figure 8 Interface tip seal

35. Reconnect the side board control cable and the source power cable

36. Ensure the vent valve is closed

37. Turn on the MS. Maintain pressure while the instrument initiates and pumps down.

    a. Pump down can be initiated/completed with or without the instrument software being loaded

    b. Pump Down is typically initiated once the MS is turned on. However, it can also be initiated from the MS front panel (Menu: Maintenance, Item: Pump Down).

    c. If the instrument software is loaded, it can be initiated from the Vacuum menu: Pump Down

    d. Gentle pressure may need to be applied to the MS door during pump down

38. The turbo speed should rise, or for the diffusion pump it will begin the cycle. Completion of the pump down can be seen on the instrument front panel or the instrument software. Once pump down is complete, the MS temperatures must be returned to operating conditions: when asked about temperatures click APPLY (MS Zones) and OK. From Instrument Control, load a method other than Maint.M, such as Bakeout.M or Gen.M

E. Agilent 5977 diagrams



Figure 58 Source parts to be cleaned

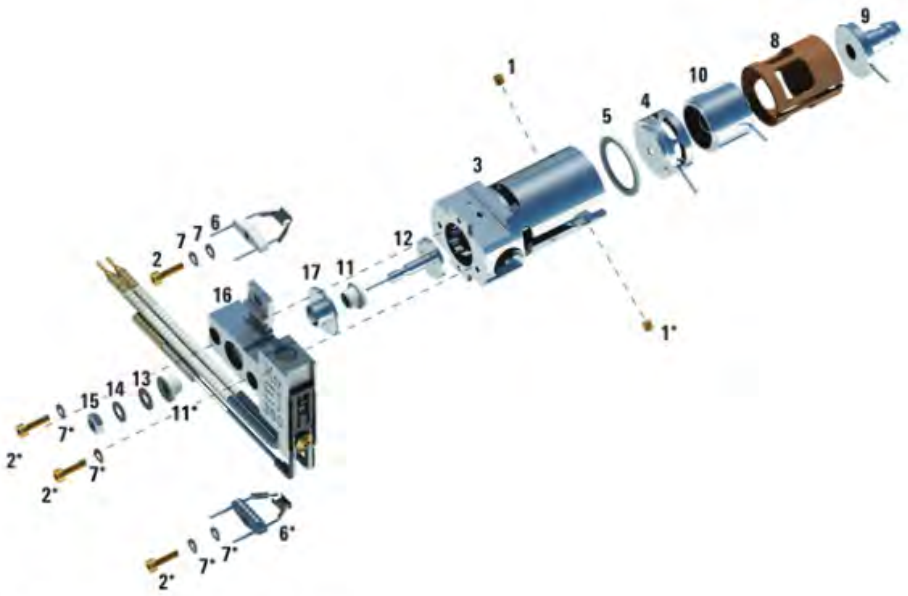


Figure 57 Disassembling the EI XTR source

Table 20 Parts list for EI XTR source (Figure 57)

Item	Description	Part number
1	Setscrews	G3870-20446
2	Screws	G3870-20021
3	Source body	G3870-20440
4	Extractor lens	G3870-20444
5	Extractor lens insulator	G3870-20445
6	Filaments	G7005-60061
7	Spring washer	3050-1301

Item	Description	Part number
7	Flat washer	3050-0982
8	Lens insulator	G3870-20530
9	Entrance lens assembly, Extended	G7000-20026
10	Ion focus lens	05971-20143
11	Repeller insulator	G1099-20113
12	Repeller	G3870-60171
13	Flat washer	3050-0891
14	Belleville spring washer	3050-1301
15	Repeller nut	0535-0071
16	Source heater block assembly	G3870-60177
17	Repeller block insert	G3870-20135

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/13/2018	**NUMBER:** DRG.21 - GC/MS - Changing the Column
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS - Changing the Column	

I. Policy: Procedures for changing the column, cutting the column, and other column maintenance

A. Changing the Column on Agilent 6890

1. Injector end

a. When changing the column, best practice is to vent the MS and allow to cool

b. Turn the inlet and oven temperature to room temperature

c. Unscrew the nut from the inlet, remove the column, the nut may be save and re-used with a new ferrule

d. Remove the insulator cup under the injector port by removing the screws

e. Remove the Reducing nut with a 1/2 inch wrench to access and replace the goldseal

f. Discard the old goldseal and washer

g. Before inserting the new goldseal, sonicate it in methylene chloride for 15 minutes

h. Put in the washer, then the gold seal. The flush part of the gold seal should be facing up so it comes in contact with the liner. Attach the Reducing nut and insulator cup

i. The liner rests of the flush part of the gold seal

i. If a guard column is used, the guard end should be marked. The guard end of the column goes into the inlet

j. Unwind a little of the column

k. Cut a septum into quarters and insert a piece of septum onto the column as a guide

l. Thread the column through the septum; then thread a column nut and injector ferrule through the column

i. the flat, wider end of the ferrule goes against the column nut

m. Cut 10 cm off the column and check the cut with a magnifying glass, it should be smooth and no jagged

n. Wipe off the column with a methanol

o. Adjust the septum up the column until there is 4-6 mm of column sticking out of the end of the ferrule/nut

p. Install the nut to the inlet end

q. Turn on the gas flow and inspect the detector end of the column. Place the end of the column in a vial of methanol and check for bubbles to ensure there is gas flow and pressure throughout the column

r. Make sure the pressure is on before conditioning the column. Set the pressure to at least 12 PSI.

s. Oven parameters for conditioning can be directly inputted from the GC interface

i. Time-30 min

ii. Temp-30

iii. Rate-10

iv. Final Temp-280 (or 5-10 degrees above the highest temperature method)

v. At least 120 minutes (up to 8hrs - 480 min)

vi. Enter, then hit START

t. The serial number of the column should be logged in the maintenance log. Any manufacturer's verification paperwork for the column should be filed in the maintenance log.

2. Detector end

a. If necessary remove the existing column and disconnect the nut on the detector end with a wrench; slide the column completely out of the transfer line. The nut may be saved and re-used with a new ferrule

i. If the nut appears worn or if there's swelling, it should be changed

b. Cut a rubber septa into quarters, insert a piece of septum onto the new column to use as a guide

c. Insert the nut and then ferrule; the pointed end of the ferrule rests against the inside of the nut

d. Wipe the column down with methanol

e. Cut approximately 3-8cm (1-3iches), check that the cut is straight and not jagged

f. Wipe the column down with methanol

g. Insert the column into the detector transfer line; move the septum and nut up to the thread and turn the nut slightly onto the thread

h. Start backing up the column until approximately 1mm is sticking out of the MS transfer line

i. The column installation tool can be used to assist in proper measurement of the column

i. Tighten the nut and again check for the proper distance of 1mm. Finish tightening the nut and the nut may make noise to indicate a tight fit

j. Close the doors to the oven and MS and pump down

B. Clipping the Column on Agilent 6890

1. As sections of the column become contaminated, they can be removed.

a. Typically 1 or 2 loops from the inlet side will need to be removed to bring the column to acceptable performance.

b. One loop is approximately 50 centimeters

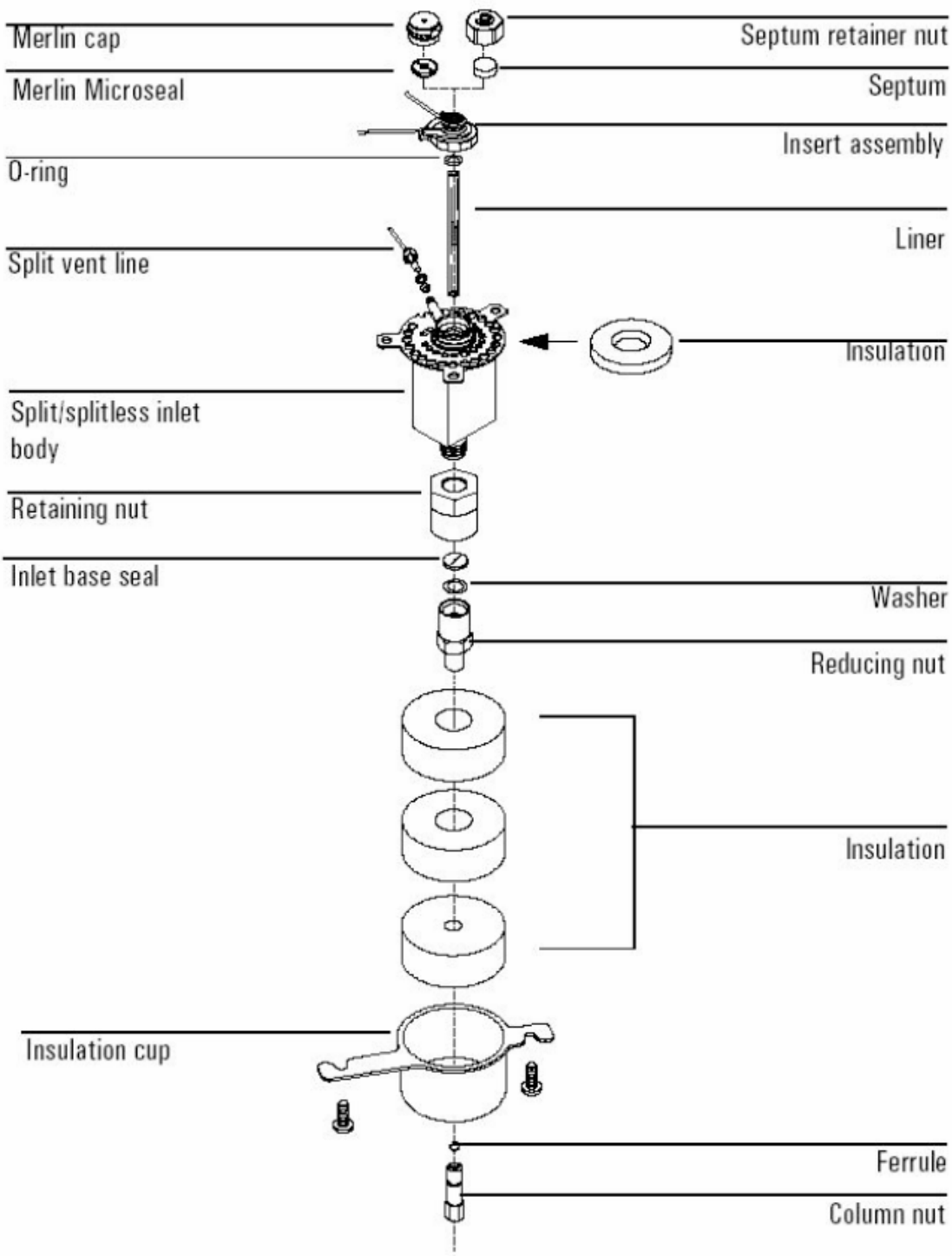
2. The procedures for changing the column above can also be used to "clip" or cut the column which can extend the life of the column without replacing the column

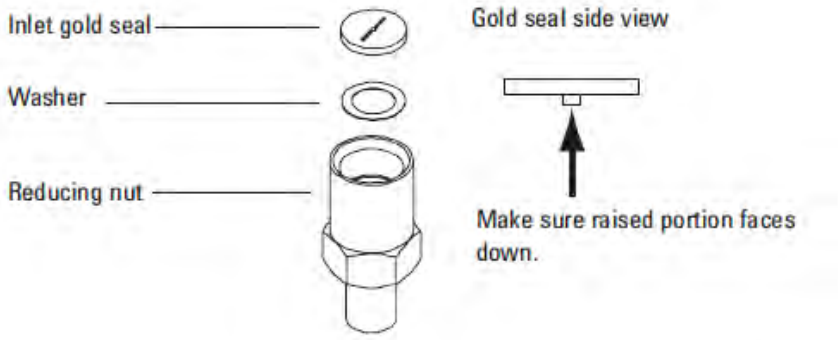
3. The MS can be left on and does not need to be vented, as long as maintenance is done at a sufficient pace without interruptions. The oven and inlet are cooled so that the inlet column assembly can be taken apart.

4. The desired amount is cut from column and then the column is reinstalled into the inlet.

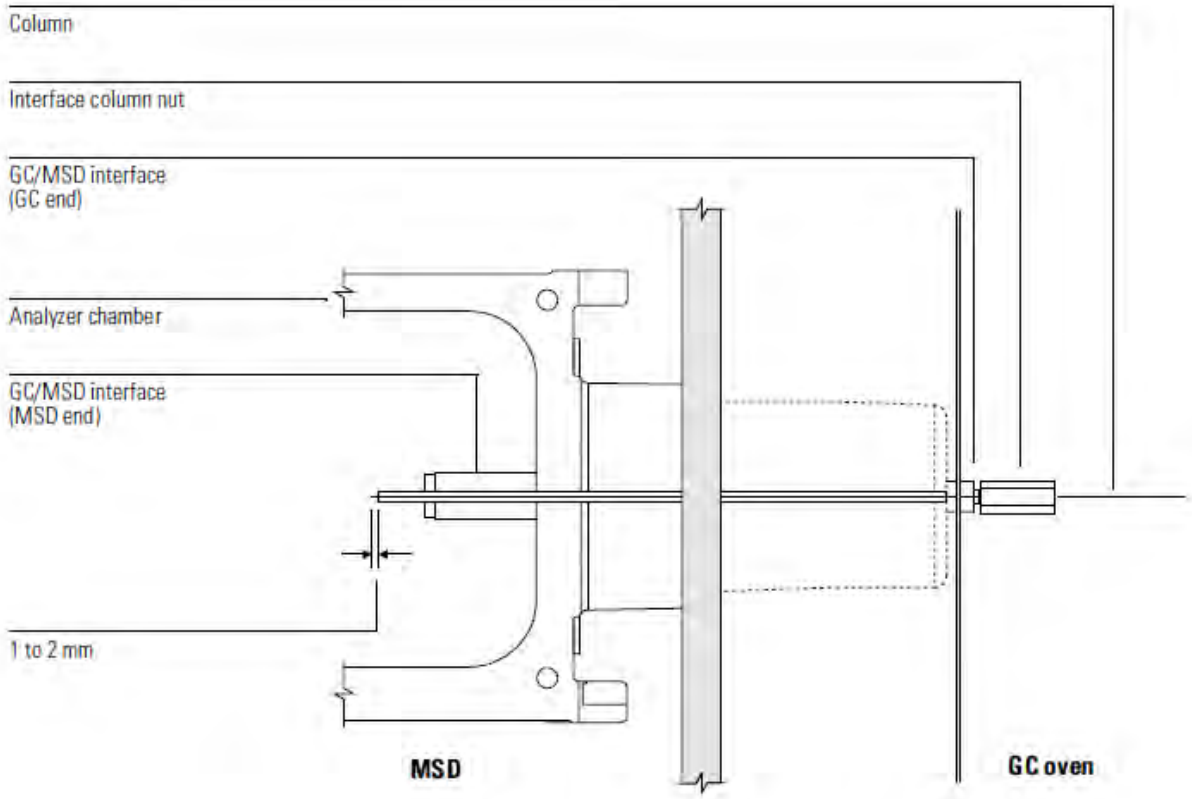
5. Fill out an entry in the maintenance log

C. Agilent 6890 Diagrams

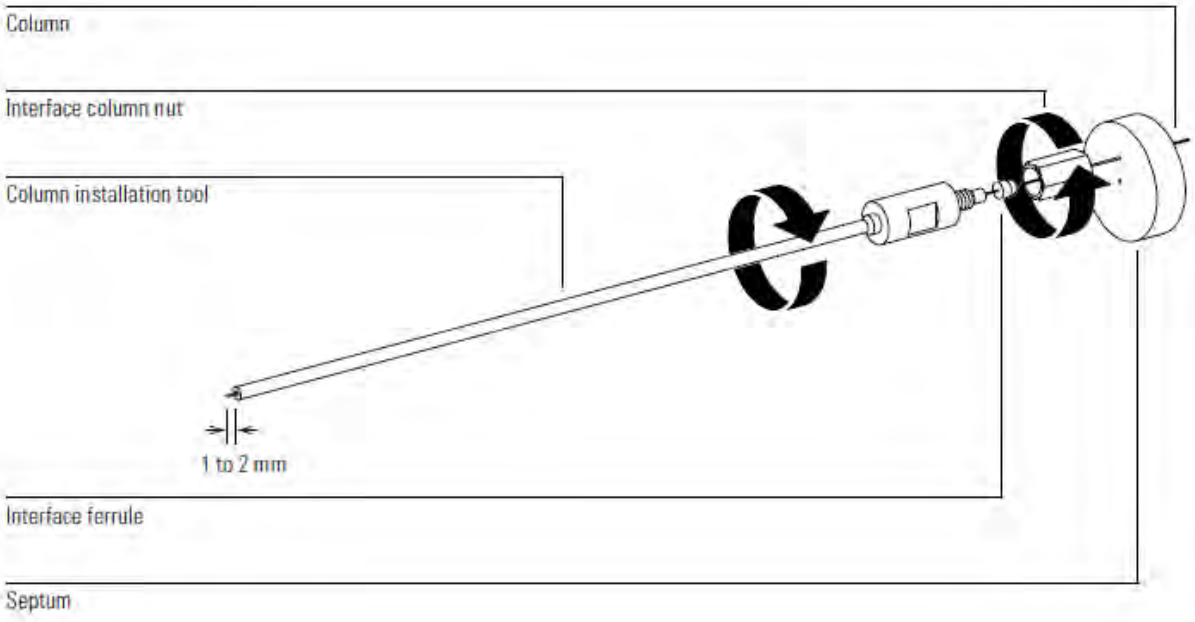

Merlin cap
Merlin Microseal
O-ring
Split vent line
Split/splitless inlet body
Retaining nut
Inlet base seal
Insulation cup
Septum retainer nut
Septum
Insert assembly
Liner
Insulation
Washer
Reducing nut
Insulation
Ferrule
Column nut


Inlet gold seal
Washer
Reducing nut
Gold seal side view
Make sure raised portion faces down.

To install a capillary column in the GC/MSD interface



To install a capillary column using the installation tool



D. Changing the column on Agilent Intuvo 9000

1. Prepare the GC for maintenance (there are two possible ways); the GC does not need to be turned off

    a. From the GC touchscreen, navigate to Maintenance > Columns > Perform Maintenance > Install Column > Start Maintenance

i. This option provides step-by-step instructions from the GC screen, which are summarized below

b. Load maint2.m to cool all part of the oven

i. It is important to use maint2.m and not maint.m is used to ensure all parts (guard chip, column, inlet chip, detector chip, and transfer line) in the GC are cooled properly

2. Open the GC front door and lower oven door; remove the bus door
3. Remove the two compression bolts at the top of column assembly, these will be reused
4. Open the column clamps (4 total), unplug the smart key, and remove the column
5. Using forceps for the entire process, remove the old gasket and replace with a new gasket
6. Install the new column, carefully to holding it only by the outer ring
   a. Place column on the bottom clamps, tilt the column up to fit into place
   b. Loosely install compression bolts
7. Ensure column is correctly placed and aligned with the gasket; tighten compression bolts until one click on the torque wrench
8. Close the column clamps, insert the smart key
   a. The software should automatically recognize the type and length of column installed
9. Reinstall the bus door and close the lower oven door and GC door

E. Replacing the Guard Chip on Agilent Intuvo 9000

1. Prepare the GC for maintenance (there are two possible ways); the GC does not need to be turned off
   a. From the GC touchscreen, navigate to Maintenance > Inlets > Perform Maintenance > Replace Guard Chip > Start Maintenance
      i. This option provides step-by-step instructions from the GC screen, which are summarized below
   b. Load maint2.m to cool all part of the oven
      i. It is important to use maint2.m and not maint.m is used to ensure all parts (guard chip, column, inlet chip, detector chip, and transfer line) in the GC are cooled properly
2. Remove the ALS injector and inlet cover
3. Open the GC front door and remove the bus door
4. Slide the guard chip cover to expose the guard chip compression bolt
5. Loosen the sealing screw at the base of the inlet (7/16-inch open-end wrench)
6. Loosen the guard chip compression bolt with a torque wrench; the bolt is accessed from above where the inlet cover would rest
7. Depress the front of the guard chip heater assembly to expose the guard chip
8. Lift the right side of the guard chip and pull out of the GC.
9. Remove the left side of the guard chip from inlet base.
10. Install the new guard chip - the large end inserts into the inlet base and the smaller end inserts into the GC flow path.
    a. Place the large end into the inlet base
    b. Rotate the right end into the fitting
    c. Finger tighten compression bolt until you feel slight contact on the guard chip
    d. Raise the guard chip heater assembly and finger tighten the inlet sealing screw

e. Ensure the guard chip is seated correctly and tighten sealing screw and compression bolt.

11. Tighten the sealing screw
12. Tighten the compression bolt with the torque wrench until you hear one clock
13. Reinstall the bus door, inlet cover, and ALS; close the GC door

F. Flow path maintenance on Agilent Intuvo 9000 - Flow path maintenance is not performed often but is similar to installing a GC column. General directions are listed below

1. See Intuvo maintenance manual (G4580-90004) for directions
   a. Replace Inlet Chip
   b. Replace Detector Chip
   c. Replace MS transfer line
2. Prepare the GC for maintenance (there are three possible ways); the GC does not need to be turned off
   a. From the GC touchscreen, navigate to Maintenance > Inlets > Perform Maintenance > Replace Guard Chip > Start Maintenance
      i. A general work scheme is summarized below
   b. From the GC touchscreen navigate to Maintenance > Instrument > Perform Maintenance > Maintenance Standby Mode > Start Maintenance
   c. Load maint2.m to cool all part of the oven
      i. It is important to use maint2.m and not maint.m is used to ensure all parts (guard chip, column, inlet chip, detector chip, and transfer line) in the GC are cooled properly
3. Remove the ALS and inlet cover; open the GC front door and lower oven door, remove the bus door
4. For the Inlet Chip, the Guard Chip must be removed and the compression bolt loose. Both must be changed if changing the Inlet Chip
5. For the MS transfer line The MS must also be vented
6. Open latches that secure the chip and/or loosen any compression bolts
7. Remove the chip and unplug the smart key; remove any gaskets if applicable
8. Install the chip into it's proper fitting with a new gasket if applicable
9. Close and latches or tighten and screws
10. Plug in smart key
11. Reinstall the bus door, ALS, and inlet cover
12. Close the GC lower door and front door

G. Agilent Intuvo 9000 diagrams



Figure 13 GC inlet cover and compression bolt access plate

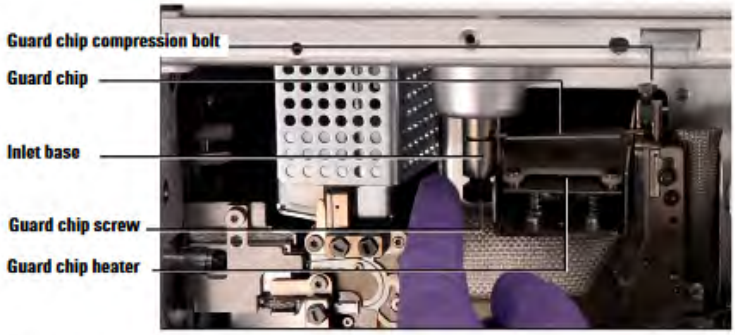


Figure 14 Guard chip and related parts

Figure 4 shows the Intuvo major bus components.

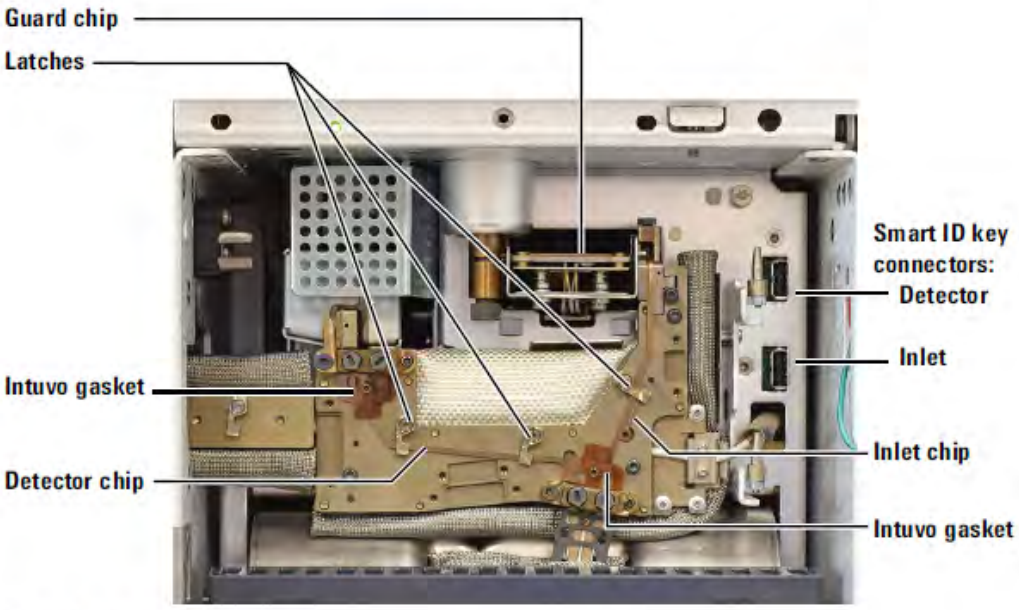


Figure 4 Intuvo bus components

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/13/2018	**NUMBER:** DRG.22 - GC/MS Cleaning the Inlet
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Cleaning the Inlet	

I. Policy: The following procedures will be used for cleaning the inlet. Cleaning the inlet used to be a common practice but Agilent Technologies does not currently recommend this practice as regular maintenance if liner insert and split vent trap changes are performed regularly. Inlet cleaning should be one of the last options when troubleshooting GC/MS issues.

A. The following is the procedure from the Agilent Technologies for the GC 6890.

Agilent Technologies

Split/Splitless Inlet Cleaning Procedure

5890 and 6890 Split/Splitless Inlets

The Split/Splitless inlet will become active (degrading certain types of compounds) over time. In some cases, just changing the liner and the gold seal will not remedy this problem. In these cases a more vigorous cleaning procedure must be implemented. The following procedure has been developed to help in this process.

The following parts and solvents will be needed:

38-caliber brass gun barrel cleaning brush with metal rod.
Methylene Chloride
Acetone
Methanol
Glass transfer pipettes with bulb
"Kimwipes"
Safety Glasses
Lab Coat
Nitrile Chemical Resistant Gloves

1. Cool the inlet. This is best accomplished by reducing the inlet temperature to 40C. Leaving the inlet on allows the injection port fan to continue to operate thus, aiding in cooling the injection port. It is also helpful to lower the oven temperature to 40C. These steps can be performed from the GC front panel or the Chemstation software.

This document is believed to be accurate and up-to-date. However, Agilent Technologies, Inc. cannot assume responsibility for the use of this material. The information contained herein is intended for use by informed individuals who can and must determine its fitness for their purpose.

2. After the inlet has cooled sufficiently (at least 70C), turn the inlet flow off.

3. If an autosampler is in place, remove tower, tray and top cover.

4. While wearing appropriate safety apparel, remove the weldment assembly that covers the GC liner. Remove the liner completely from the GC. Notice a flow line that sits below the weldment, this is the split vent flow line. This should have a 7/16" swagelok fitting, loosen the fitting and remove the split vent flow line.

5. Turn the GC oven off and open the door. Loosen and remove the GC column nut from the inlet. Place a septa over the injection port end of the column, so as NOT introduce O2 to the column. Remove the insulator and the gray reducing nut that houses the gold seal and washer from the bottom of the inlet.
6. The injection port consists now of just a long metal tube. All flow lines and the glass liner have been removed from the assembly. Dip the gun brush into the Methylene chloride and insert the brush into the inlet completely. **MOVE THE BRUSH UP AND DOWN DO NOT TWIST.** Perform this step twice. Then use the glass pipette to rinse the inlet with Methylene Chloride. Follow the Methylene Chloride rinse with an Acetone brush and rinse and finish with a Methanol brush and rinse.
7. After the last Methanol brush and rinse, dab the top of the inlet with a "kimwipe" to remove any residual solvent that may pool. Look down through the assembly to make sure that it is free of particles that may stick to the walls of the inlet. Heat the inlet to 65C to flash vaporize the solvent away. (**THIS IS A CRITICAL STEP THAT CANNOT BE BYPASSED).**
8. Reassemble the inlet with a new gold seal, washer, liner, and a new ferrule on the column. Make sure that the column is re-cut prior to installation. Reinstall the split vent line and tighten. Reinstall the weldment assembly **(NOTE: Prior to reinstalling the autosampler assembly turn the injection port flow back on. Do not turn the injection port temperature on.)** Check to make sure that proper head pressure can be obtained, if not recheck all fittings for leaks.

   Before increasing the temperature, let the inlet sit at 65C for about 10 minutes to remove any oxygen that might be in the inlet. **THIS STEP MUST NOT BE SKIPPED. IF IT IS THE CLEAN PARTS JUST INSTALLED WILL BE REOXIDIZED.**

9. After 10 minutes heat the inlet to operating conditions. Let it stabilize for 5 minutes. Make at least 2 blanks runs before any analyte is injected, to make sure that the inlet has been successfully cleaned. Be aware this technique does not work on all applications, and over time will not bring the inlet back. The assembly will need to be changed in time.

Please make sure that there is full understanding of this procedure prior to disassembly of injection port. If you are unable to complete this procedure please Call Agilent.

B. Agilent Intuvo GC 9000 cleaning the inlet

1. Prepare the inlet and GC for maintenance (there are two possible ways)
    1. From the GC touchscreen naivigate to Maintenance > Instrument > Perform Maintenance > Maintenance Standby Mode > Start Maintenance
    2. Change the method to maint2.m to cool the inlet and oven.
2. Turn off the GC
3. Remove the tower and inlet cover
4. Remove the liner and guard chip
5. Due to the compression nut and the small space in the oven, a gun brush will not be used. With a clean cotton swab, dip the swab in methylene chloride to clean the inlet. Check that there are no cotton fibers in the inlet.

6. With a clean swab, repeat with acetone
7. With a clean swab, repeat with methanol
8. Repeat as necessary until the inlet is clean
9. Flash the inlet at 65C for 10min
10. Install a new liner insert and guard chip
11. Continue with maintenance or prepare the system for a Standard Spectra Tune.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 05/30/2018	**NUMBER:** DRG.23 - GC/MS Pump Maintenance
	RELATED ORDERS: DRG.20 - GC-MS Cleaning the Ion Source	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005: 5.3**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Pump Maintenance	

I. Policy: The following is the procedure for vacuum pump .

A. **General Information**

1. There are two types of GC/MS vacuum pumps that may be found in the Controlled Substance Unit
   a. Oil rotary pumps
   b. Dry scroll pumps

B. **Dry Scroll Pump Maintenance**

1. The basic maintenance for a dry scroll pump consists of changing the tip seal and the exhaust silencer filter. The tip seal should be changed approximately every 9000 hours or when there is an increase in pump base pressure. If an exhaust silencer is installed on a dry scroll pump, the filter should be changed when the tip seal is changed.
   a. Changing the tip seal
      i. Vent the Mass Spec. See the instructions in DRG.20 (*GC/MS-Cleaning the Ion Source)* for proper venting.
      ii. Make sure the Mass Spec power is OFF
      iii. Turn off pump and remove electrical cord
      iv. Carefully remove the exhaust silencer if it is attached
      v. Remove the Front Cowling and Outboard Housing by removing their respective bolts
      vi. Change the Tip Seal
         1. replace the o-ring
      vii. Attach Front Cowling and Outboard Housing
      viii. Attach the exhaust silencer
      ix. Plug in electrical cord and turn on pump
      x. Pump down MS
      xi. Make an entry in the maintenance log
      xii. Exterior surfaces may be cleaned with isopropyl alcohol

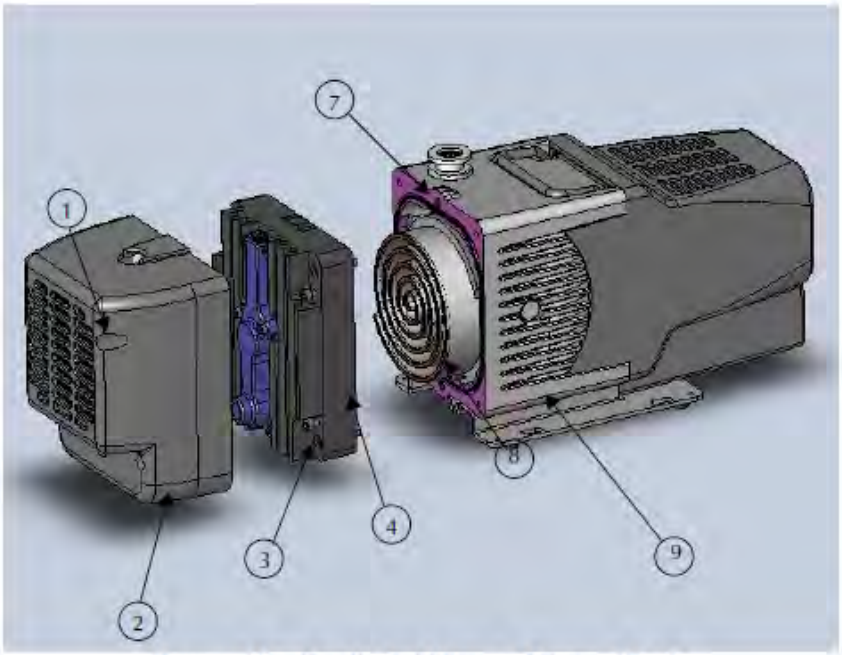


Figure 12 Exploded View of Pump Body

1. Front Cowling Bolts; M5 (4)
2. Front Cowling
3. Frame Bolts; M5 (4)
4. Outboard Housing
5. Tip Seals (Not shown)
6. Main O-ring Parker No. 2-160 (Not shown)
7. Locating Pins (2)
8. Orbiting Scroll
9. Frame

b. Changing the exhaust silencer filter

i. Remove the front cover of the exhaust silencer

ii. Replace filter

iii. Attach exhaust silencer cover

C. **Oil Rotary Pump Maintenance**

1. If possible, the pump oil should be changed in conjunction with a source cleaning when the instrument is already vented

a. Vent the Mass Spec. See the instructions in DRG.20 *(GC/MS-Cleaning the Ion Source)* for proper venting.

b. Make sure the Mass Spec power is OFF

c. Place a container under the oil drain plug (drain valve) on the pump to catch the oil

d. Open the oil filler located on the top of the pump

e. Open the oil drain plug on the bottom of the pump and let the oil drain out

f. Pour a small amount of clean oil through the oil filler to ensure all the dirty oil has been drained out

g. Replace the oil drain plug

h. Fill the oil filler with clean oil SLOWLY while viewing the oil sight glass

i. Fill to at least ½ full in the oil sight glass, but do not fill completely (the oil level should remain visible in the window)

j. Close the oil filler

k. Make an entry in the maintenance log

l. Once the pump is working again, check the oil level to ensure it is at least ½ full.

D. **References**

1. Agilent IDP-3 Dry Scroll Vacuum Pump Instruction Manual; Manual No 699904350, Revision F, February 2016.

2. Agilent IDP Series Exhaust Silencer Kit Instruction Manual; Manual No 699904390, Revision B, July 2009.

3. http://www.agilent.com/en-us/video/agilent-idp-3-dry-scroll-pump-maintenance

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/24/2016	**NUMBER:** DRG.24 - GC/MS Cleaning the Liners
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Cleaning the Liners	

I. Policy: The following is the procedure for cleaning the GC liners. (ISO/IEC 17025:2005 5.5.3)

A. The criminalists should remove the glass wool from the liners and place them in a storage location away from clean liners.

B. Liners for controlled substances and toxicology can be cleaned at the same time.

C. **SAFETY**: Label all your glassware and put chemicals away when you are finished with them. Use Nitrile gloves, and clean the liners under a hood.

1. Soak the liners in chromic or nitric acid (**cleaning solution**) for one hour
    a. The cleaning solution is an acid. It is located in the acid cabinet in the Controlled Substance Unit
    b. Use a pasteur pipette to thoroughly wash the liners with the cleaning solution and attempt to submerge all the liners in the solution
    c. Recycle the cleaning solution acid after use (by pouring back into the bottle)
2. Rinse with **distilled water** (4-5 times with a pasteur pipette or squirt bottle). The waste should be collected into a beaker or equivalent and the water and acid waste should be disposed of in the acid waste.
    a. The liners should be placed onto paper towels (or equivalent) in between rinses to dry.
3. Rinse with **methanol** (4-5 times with a pasteur pipette or squirt bottle). The methanol waste should be disposed of in the organic waste.
4. Rinse with **hexane** (4-5 times with a pasteur pipette or squirt bottle). The hexane waste should be disposed of in the organic waste.
5. Soak the liners in **siloxane** or silane for 30 minutes (attempt to submerge all the liners)
    a. Cover the siloxane or silane with parafilm (or equivalent) or it will evaporate.
    b. Recycle the siloxane or silane after use (by pouring back into the bottle)
        i. The Siloxane Solution is 10% by volume Dichlorodimethylsilane in Pentane.

For example: 50 milliliters of Dichlorodimethylsilane would be added to 450 milliliters of Pentane in order to make 500 milliliters of a 10 % Siloxane Solution

ii. The bottle should be labeled with hazard information (NFPA, or equivalent):



Blue 3, Red 4 and Yellow 3.

6. Rinse with **toluene** (4-5 times with a pasteur pipette or squirt bottle). The toluene waste should be disposed of in the organic waste.

7. Rinse with **methanol** (4-5 times with a pasteur pipette or squirt bottle). The methanol waste should be disposed of in the organic waste.

8. Rinse with **hexane** (4-5 times with a pasteur pipette or squirt bottle). The hexane waste should be disposed of in the organic waste.

9. Air dry completely (overnight) under the hood on a paper towel.

10. **Handle the liners with kim-wipes (or equivalent). Do NOT handle the clean liners with bare hands or gloves.**

11. Put the liners into their protective plastic sleeves (or equivalent) and return to the appropriate section.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 06/10/2019	**NUMBER:** DRG.25 - GC/MS Using the Software
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 6.4**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Using the Software	

I. Policy: The following is the procedure for using the ChemStation and MassHunter pragrams available Drug Unit instruments

A. Instructions do not account for discrepancies between software versions but all software has a similar user interface.

1. Instructions were created from Instrument #12 which uses MSD ChemStation ver. E.02.00.493, however some screen images are from Instrument #7.

2. Instructions are intended to be used as a guide. Slight variations may exits for file paths, table names, access to certain applications, etc.

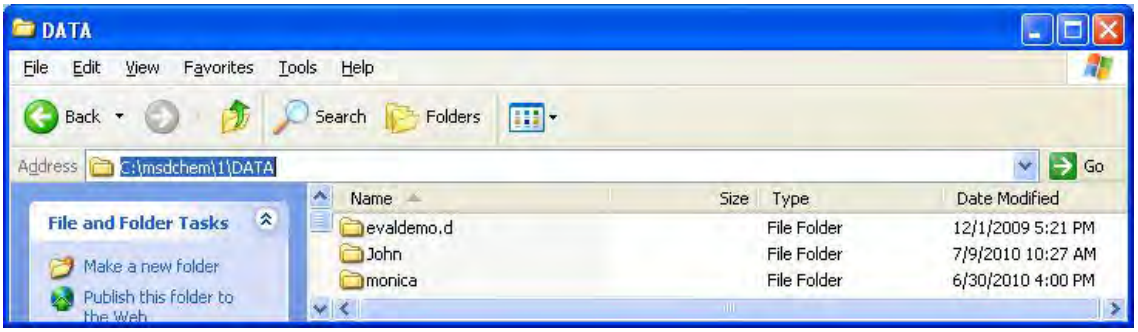
3. MassHunter Aquisition is used and has a similar interface and layout as ChemStation and was designed to appear similar.

4. ChemStation will be used for data analysis. MassHunter Data Analysis software is **not used** in the Drug Unit.

B. Folder Structure for data files and sequences

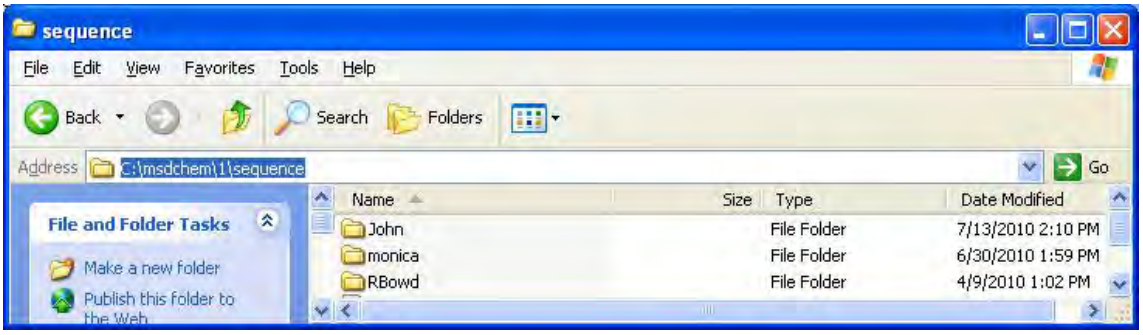
1. Create folders on the local drive for the storage of **(a.) Data** and **(b.) Sequence** information. Create folders through explorer as instructed below; some systems are configured with with different default paths and path location is not critical for the programs to function.

2. The default data location in ChemStation is C:\msdchem\1\DATA\xxxxxx



3. The Drug Unit's default location in MassHunter is D:\Data

4. The default sequence location in ChemStation is C:\msdchem\1\sequence\xxxxxx



5. The default sequence location in MassHunter is D:\MassHunter\GCMS\1\sequence

6. Open ChemStation or MassHunter application by double-clicking the instrument icon on the desktop. Wait for the system to initialize.

C. Creating a sequence - the name of a sequence is Sample Log Table in ChemStation and Sequence Table in MassHunter

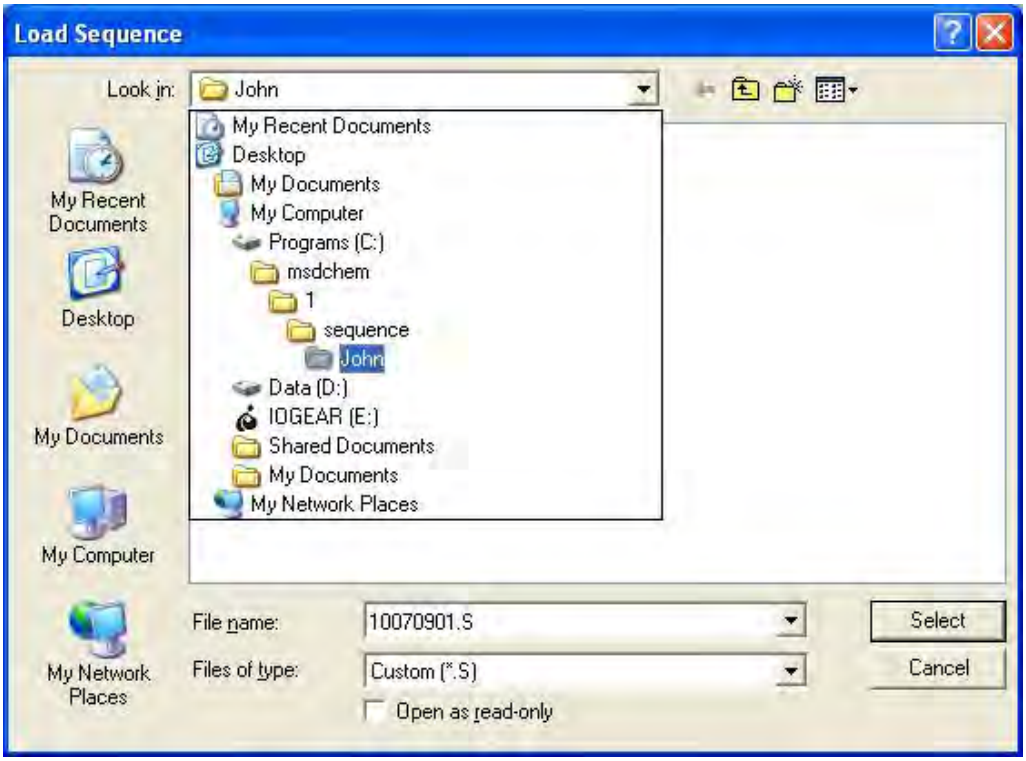
1. Load any existing sequence as a template (analyst may make copy an existing sequence into their folder using Explorer). (Sequence > Load Sequence).

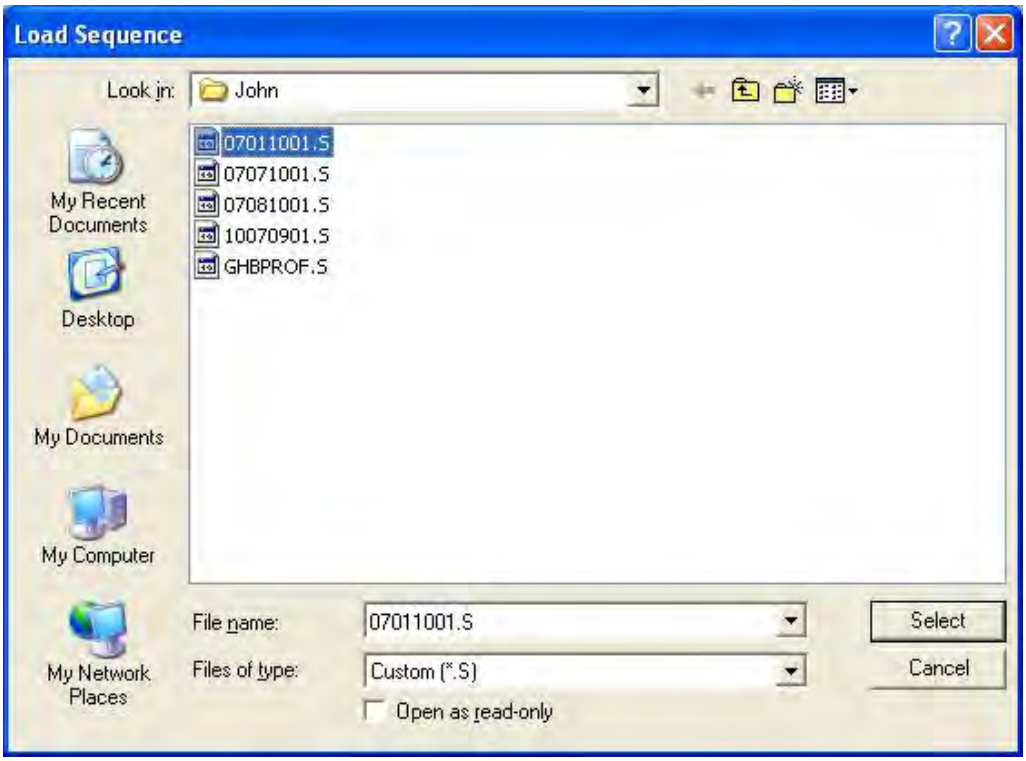
   a. Analyst may create a new sequence each time the instrument is used

   b. Alternatively, the same sequence can be changed for each use

   c. A sequence does not need to be saved for archive purposes

2. If edits to an existing sequence are made, the **data file name and location** must be checked so existing data is not inadvertently overwritten





3. Make changes to the sequence by selecting Edit Sequence from the menu bar (Sequence > Edit Sequence).

   a. The sequence table opens

   b. Make sure the Data Path is correct by checking the Data Path window. If it not correct, browse to the correct data path

   c. In the Method Data box, ensure the local method storage location is displayed.

   d. The default method location for ChemStation is C:\MSDCHEM\1\METHODS



   e. The default method location for MassHunter is D:\MassHunter\GCMS\1\methods

   f. Some systems are configured with with different default paths and path location is not critical for the software to function.

4. The sequence table typically contains the following fields however additional fields not listed may be selected or deselected for viewing in MassHunter. Ensure the fields are populated as instructed.

    a. **Type** - Click the drop down menu to select the appropriate sample type from the drop-down menu

    b. **Vial** - Indicate the location of the sample vial on the autosampler tray

    c. **Sample** - enter a sample description

        i. The description is typically blank, standard name, or the lab number and accompanying evidence information

        ii. MassHunter: this field is titled **Name**

    d. **Method/Keyword** - enter the method to be used for data acquisition and analysis

        i. It is recommended to select the Method from the menu instead of typing it manually

        ii. Keywords can be used for a variety of functions like setting timers for sequences and tunes, command line prompts, and changing the data path

            1. ChemStation

                1. The Data Path may be changed in the middle of a sequence by using the Method/Keyword field. In the Type field select Keyword, choose DataPath from the drop-down in Method/Keyword, and indicate the new Data Path in the Comment/Keyword String.

            2. MassHunter

                1. There is a separate field in the sequence table to change Data Path

                2. The **Keyword** field is separate from the **Method** field

    e. **Data File** - enter the name of the data file.

        i. The recommended format for a data file is YYMMDD## but is at the discretion of the analyst. Only the last two digit number at the end of the name should change when running samples in the same day.

        ii. For example, the first blank of the day can be named as YYMMDD01 and each proceeding sample will be an increment of the first blank

    f. **Comment/Keyword** - enter a description (typically the solvent used and the Internal Standard)

        i. MassHunter: The **Keyword** field is separate from the **Comment** field

    g. **Multiplier** - enter the correct multiplier as indicated by the analytical method, or enter 1.00000

        i. MassHunter: this field is named **Dil.** and may be deselected from viewing; it can be left blank if it is available in the sequence table

    h. **Level** - complete per analytical method requirements, if no instruction exists, leave blank

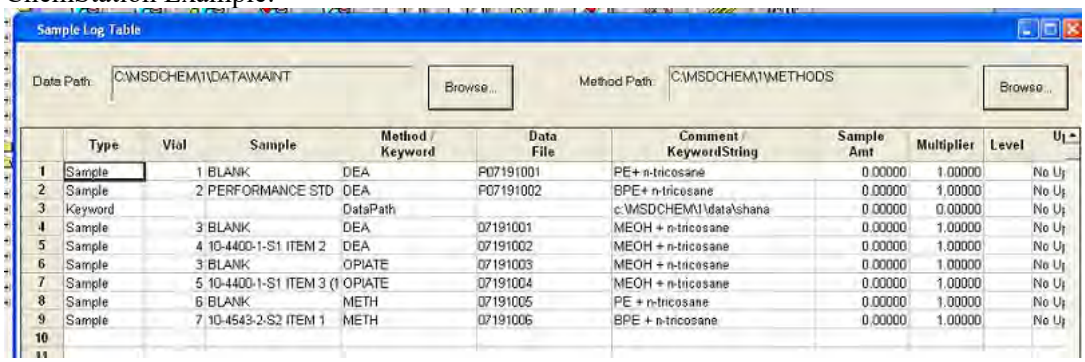
    i. **Update RF** - complete per analytical method requirements, if no instruction exists, select no update

    j. **Update RT** - complete per analytical method requirements, if no instruction exists, select no update

    k. **Update QI** - complete per analytical method requirements, if no instruction exists, select no update

l. **Update MZ** - complete per analytical method requirements, if no instruction exists, select no update

ChemStation Example:



	Type	Vial	Sample	Method / Keyword	Data File	Comment / KeywordString	Sample Amt	Multiplier	Level
1	Sample	1	BLANK	DEA	P07191001	PE+ n-tricosane	0.00000	1.00000	No U
2	Sample	2	PERFORMANCE STD	DEA	P07191002	BPE+ n-tricosane	0.00000	1.00000	No U
3	Keyword			DataPath		c:\MSDCHEM\1\data\shana	0.00000	0.00000	No U
4	Sample	3	BLANK	DEA	07191001	MEOH + n-tricosane	0.00000	1.00000	No U
5	Sample	4	10-4400-1-S1 ITEM 2	DEA	07191002	MEOH + n-tricosane	0.00000	1.00000	No U
6	Sample	3	BLANK	OPIATE	07191003	MEOH + n-tricosane	0.00000	1.00000	No U
7	Sample	5	10-4400-1-S1 ITEM 3 (1	OPIATE	07191004	MEOH + n-tricosane	0.00000	1.00000	No U
8	Sample	6	BLANK	METH	07191005	PE + n-tricosane	0.00000	1.00000	No U
9	Sample	7	10-4543-2-S2 ITEM 1	METH	07191006	BPE + n-tricosane	0.00000	1.00000	No U
10									

m. The following fields may be observed in MassHunter and can be left blank: Level, Vol., Sample Prep Path Name, Sample Prep File Name, Tray Name

D. Saving the sequence and starting the sequence

1. Saving the Sequence

a. Select Sequence > Save As

b. Navigate to the correct folder location as created above

c. Enter a sequence name

d. The analyst may overwrite their own sequence

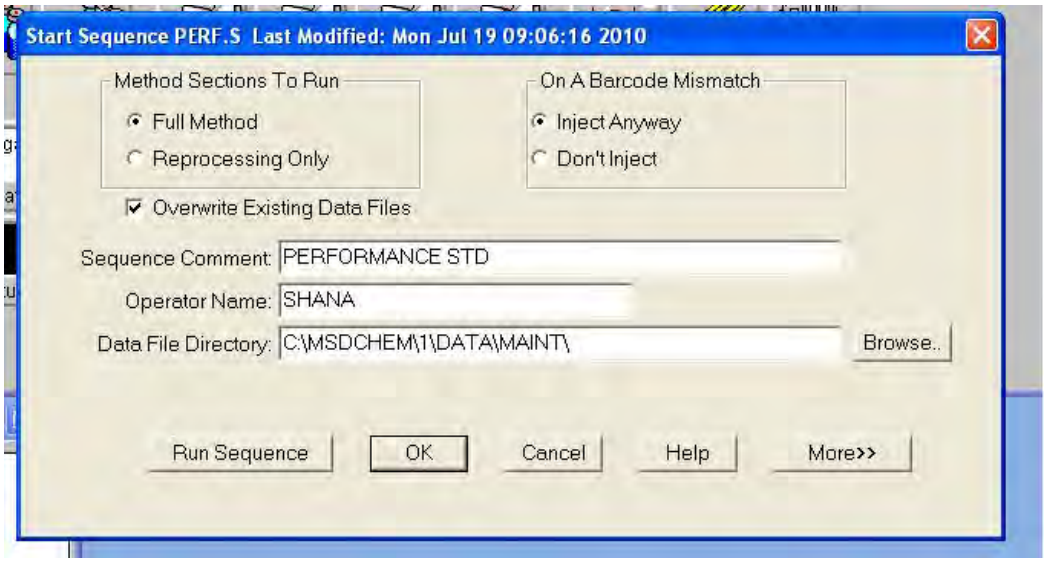
e. Ensure the sequence is saved with the file extension (.s).

i. MassHunter can use .s or .sequence.xml extensions

2. Starting the Sequence

a. Start the Sequence and check that the information in the Run Sequence screen is correct before beginning a run

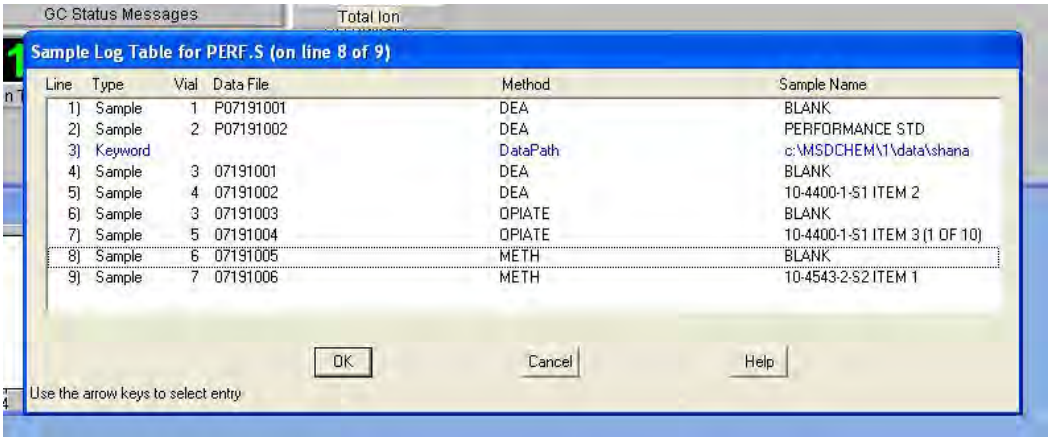
b. Run Sequence - to start from the beginning of the sequence (Sequence > Run Sequence)



i. Analysts must use caution when the "Overwrite Existing Data Files" box is checked

c. Position and Run Sequence - to start from a certain place within the sequence (Sequence > Position and Run Sequence)

i. The program will ask if the analyst wants to process the keywords before beginning the sequence and the analyst must select Yes if using keywords



E. Data Analysis - All instruments use ChemStation data analysis software

1. Macros are a tool created for expediency; it is up to the analyst to ensure the correctness of the images that are created.
For example:

a. Mislabeling can occur if peaks are too close together.

b. Mislabeling can occur if the standard file is annotated with one integration threshold (expecting a certain number of integrated peaks), but the sample is later annotated with a different integration threshold (resulting in a different number of integrated peaks).

2. Macro settings can be changed to correct labeling when improper labeling occurs.
For example:

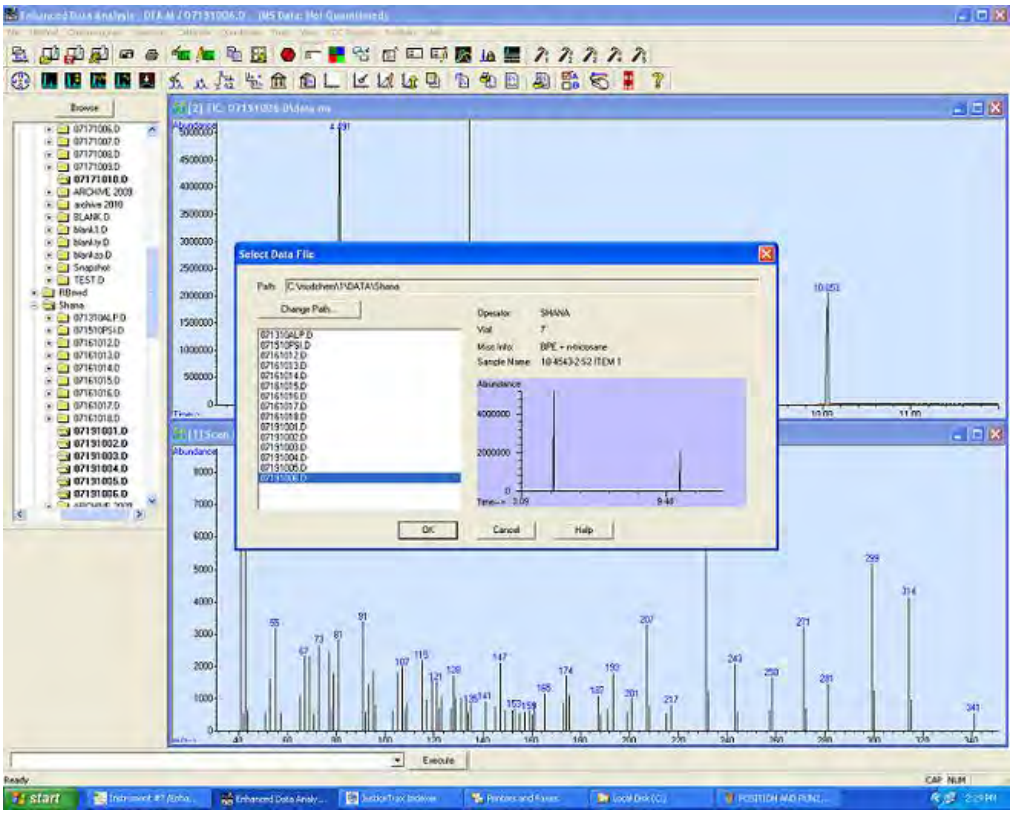
a. "Change RT tolerance" will change how close a sample peak retention time must match the standard peak retention time to be automatically labeled.

b. The integration threshold can be changed so that the standard file and sample file are annotated under the same threshold conditions.

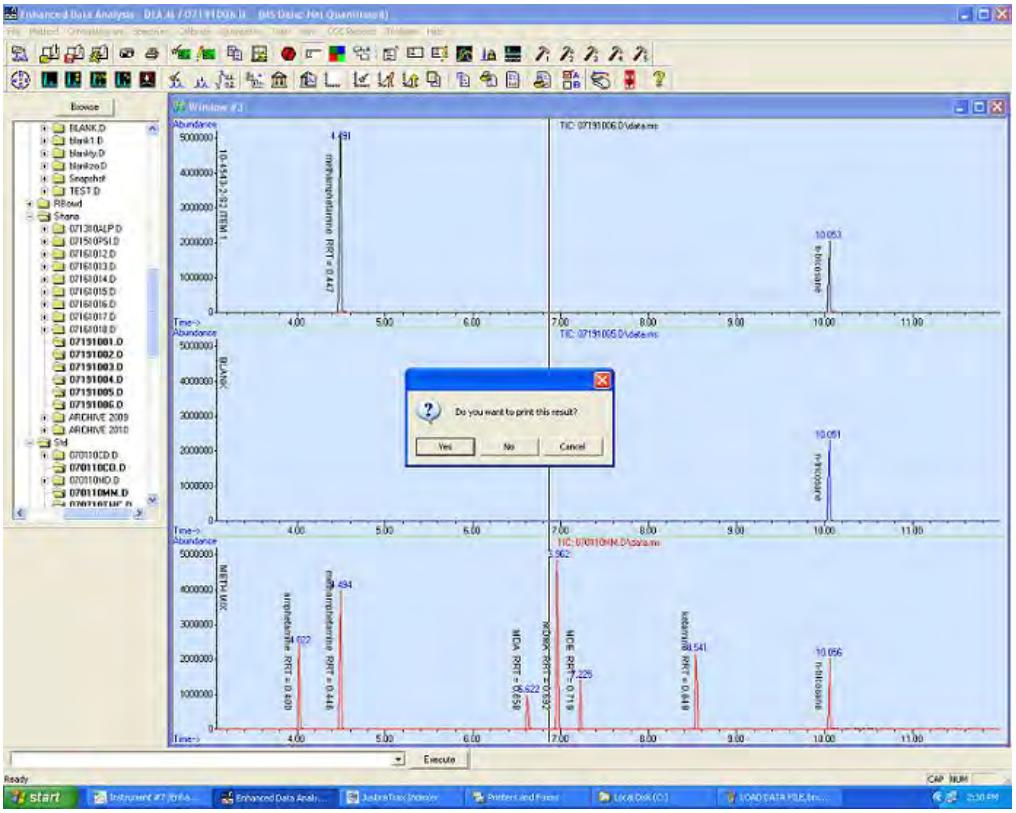
3. If the macros are unable to produce correct labels, the analyst may have to manually annotate the peaks by other means.(See H. Manual Data Analysis)

F. Macros may be used to perform data analysis. (CCC Reports>Generic 3-Panel)

1. The data file for the sample is loaded first, the next data file loaded is the blank before the sample, and the last data file loaded is the properly annotated standard.



2. The analyst should evaluate criteria for acceptable chromatography such as peak resolution, peak shape, and retention times. The analyst must also evaluate criteria for acceptable mass spectra for confirmation.



3. The MS parameters may have to be changed to obtain optimal viewing and acceptable spectra. The scan within a peak can be changed as well as the X-axis or Y-axis range.

4. Background subtracted data is another useful macros (CCC Reports > Subtracted MS reports)

a. Find scan to subtract from the peak of interest

b. Start the macros

c. Follow the prompts which includes inputting the scan to subtract

G. Annotate Mode

1. The Total Ion Chromatogram (TIC) and Spectra (MS) for the files of interest may also be obtained in the Annotate Mode. The annotation mode allows for more alterations than the Generic 3-Panel macros. (CCC Reports>Annotate Mode)

2. Other functions in Annotate Mode include

a. moving standard annotations so they are more visible

b. editing peaks or placing an "x" over non-controlled stances or cutting-agents

c. overlaying two chromatograms for samples with no common controlled substances

H. Manual Data Analysis

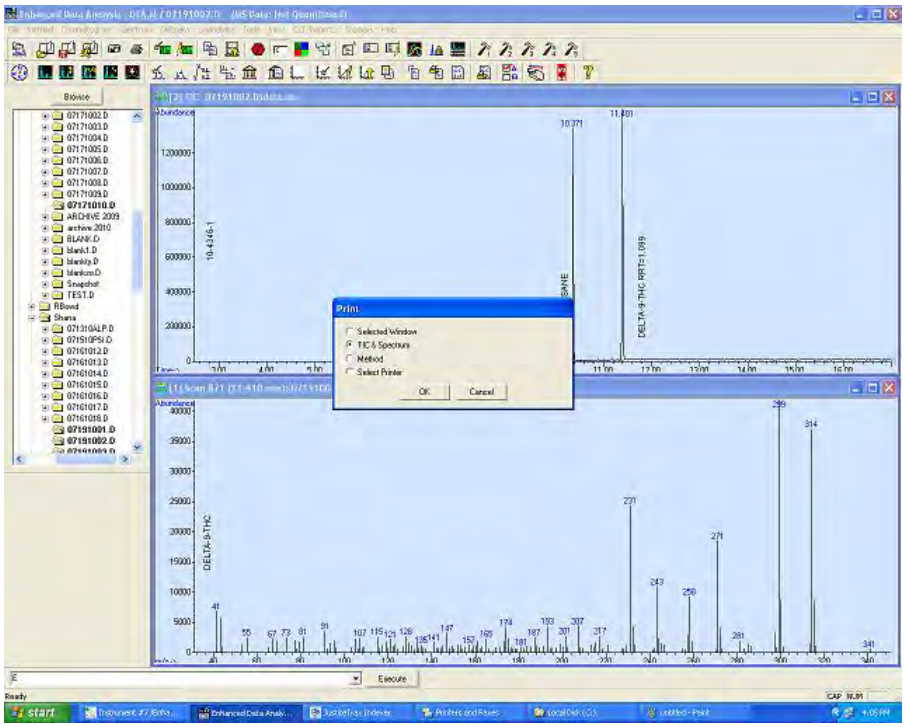
1. A Total Ion Chromatogram (TIC) and Spectra (MS) of the sample and standard used for identification can also be printed manually (without using the Macros).

a. Load The data file of interest (TIC in window 2)

b. Click on the peak of interest to obtain the spectra (SCAN in window 1)

c. Label the TIC and SCAN appropriately

d. Print the TIC & SPECTRUM



2. Comparison of spectra between a case sample and standard may be done manually (without using the Macros)

a. Load the data file of interest and click or scan the desired peak

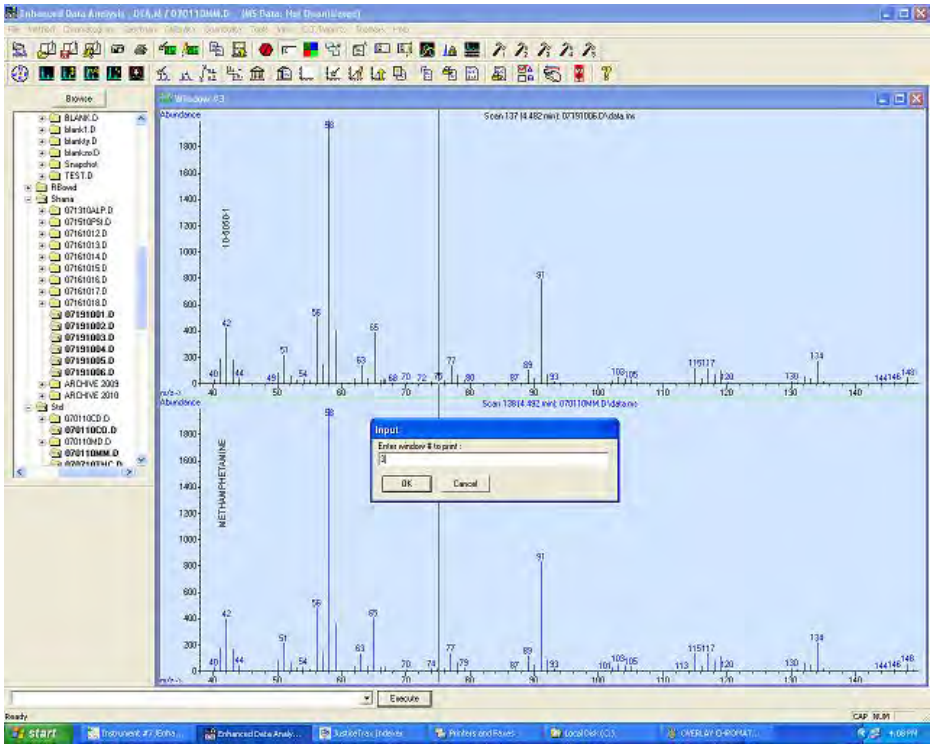
b. Load the appropriate standard and click or scan the desired peak

c. In the Command bar merge the two spectra, MERG

d. In the Command bar Normalize the two spectra, NORM

e. In the Command bar draw the two spectra in a window with the appropriate X and Y parameters, eg. DRAW 3,X,38:150:0:2000

f. Print the new window (eg. 3)

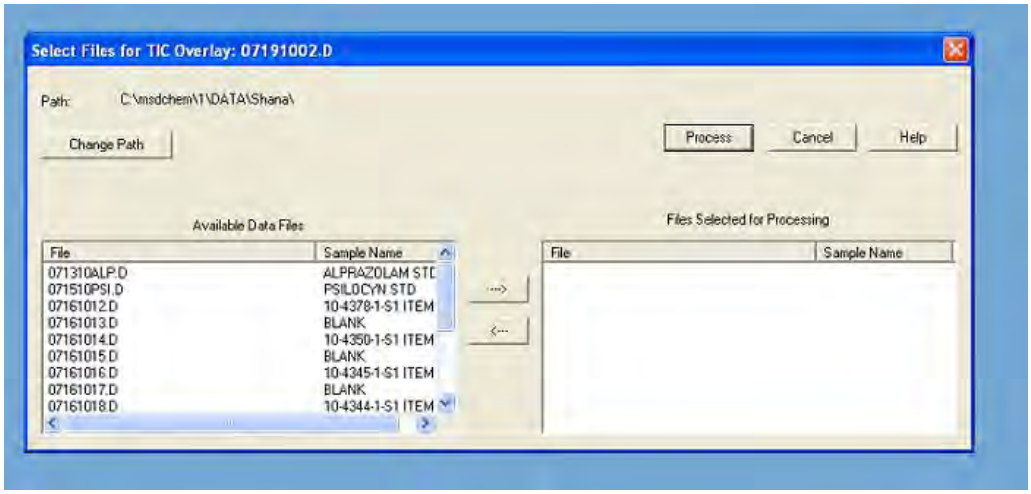


3. Chromatograms may be overlaid by using the Overlay Chromatograms tool (this is typically done for sample where no controlled substance is present and the sample is being shown with the blank immediately run before) (Tools> Overlay Chromatograms)

a. Select the blank data file before the sample

b. Integrate the Chromatograms (Chromatogram>Integrate)

c. In the Command Bar draw the two chromatograms in the same window, eg. DRAW 3,R0



I. In general, data from the GC/MS is imaged into JusticeTrax using a program called JusticeTrax Indexer

1. The person performing the data analysis and putting the images into JusticeTrax should be logged into JusticeTrax Indexer

2. The printer should be set to JusticeTrax Imaging
3. Type the laboratory number into the Locate field to search for requests associated with that laboratory number
4. Select the appropriate request and then enter the image number and item into the Enter Image Name field (eg. IMG or DATA as a prefix)
5. Hit the Save button
6. See DRG.62 for additional information and printer settings.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 04/27/2012	**NUMBER:** DRG.26
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025: 4.13.1.4** **ASCLD-LAB Supplemental: none**	
CHAPTER: Equipment	**SUBJECT:** GC-MS Storage of Data	

I. Policy: The following is the policy and procedure for storing electronic instrumental data.

A. GC/MS

1. Electronic data files

a. Analysts shall periodically back up all data files on a storage disk. Storage disks shall be maintained for a period of at least the current 5 year accreditation cycle.

i. Data inclusive of casework, monthly standards and weekly maintenance checks are located in data folders on each computer.

2. Methods

a. All methods will be backed up on a storage disk. A copy will be kept at a location designated by the Manager/Supervisor.

i. The GC/MS methods, inclusive of active and archived method settings are in the method folders on each computer.

b. Minor changes may be made to methods without validation for methods that are run FULL SCAN and a standard is used for confirmation.

c. A record of those changes will be tracked within the **Method Comments** screen.

d. Examples of changes that can be made include, but are not limited to changing the solvent delay, split ratio, run time may be increased.

3. Hardcopies of Data/Forms

a. Printouts of all checks performed, shall be kept for at least the current 5 year accreditation cycle.

b. Equipment Logs shall be kept for at least the current 5 year accreditation cycle.

B. FTIR

1. Electronic data files

a. Analysts shall periodically back up all data files on a storage disk. Storage disks shall be maintained for a period of at least the current 5 year accreditation cycle.

i. The report spectra, inclusive of casework, monthly standards and yearly checks are located in C:\pel_data\spectra

ii. The ready checks, inclusive of the weekly checks, reference spectra and contamination checks run prior to casework are located in C:\pel_data\Ready Checks

2. Methods

a. All methods will be backed up on a storage disk. A copy will be kept at a location designated by the Manager/Supervisor.

i. The methods, inclusive of the UATR and Sample Holder method settings are located in C:\pel_data\export

3. Hardcopies of Data/Forms

a. Printouts of all Checks performed, shall be kept for at least the current 5 year accreditation cycle.

b. Equipment Logs shall be kept for at least the current 5 year accreditation cycle.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/13/2018	**NUMBER:** DRG.27 - GC/MS References
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS References	

I. Policy: The following is a list of references in relation to the GC/MS.

A. Operating Manual Volume 1 General Information HP 6890 Series Gas Chromatograph © 1989-1997

B. Operating Manual Volume 2 Inlets HP 6890 Series Gas Chromatograph © 1989-1996

C. Operating Manual Volume 3 Detectors HP 6890 Series Gas Chromatograph © 1989-1996

D. Hardware Manual HP 5973*Network* Mass Selective Detector © 1999

E. Installation Manual G1701DA MSD Productivity ChemStation Software version D.02.xx © 2005

F. Drug Analysis Software Getting Started Agilent G1701DA GC/MSD ChemStation © 2005

G. Getting Started Agilent G1701DA GC/MSD ChemStation © 2005

H. Quick Reference 5973N Local Control Panel (LCP) © 2001

I. Quick Reference HP 5973 MSD HP 6890 GC © 2001

J. Getting Started Custom Reports Software © 2001

K. Site Preparation and Installation Manual HP 6890 Series Gas Chromatograph © 1989-1996

L. Supplement HP 5973 Mass Selective Detector © 1998

M. Hardware Installation Manual HP 5973 Mass Selective Detector © 1998

N. Sampling Techniques Handbook HP Automatic Liquid Samplers © 1997

O. Operation Guide HP 7683 Automatic Liquid Sampler © 11/1997

P. Installation Guide HP 7683 Automatic Liquid Sampler © 11/1997

Q. Restek Insert for "Integra-Guard Columns" Rev. date 5/01

R. Restek GC Column Installation (Chromatography Products) Guide © 2010

S. Agilent website: chem.agilent.com

T. **HELP menu** on any version of CHEM STATION

U. Agilent User Manuals; most manuals listed below are available electronically on the Intuvo instruments

1. Agilent G6014A/B Quiet Cover GC/MS User Information © 2015. See INSDRG.01.
2. Agilent 5977 MSD Operating Manual (G7077-90026)
3. Agilent 5977 MSD Troubleshooting and Maintenance Manual (G7077-90025)
4. Agilent 7693 ALS Manual (G4513-90010)
5. Agilent Intuvo 9000 Gas Chromatograph Operation Manual (G4580-90003)
6. Agilent Intuvo 9000 Gas Chromatograph Maintaining Your GC (G4580-90004)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 03/05/2019	**NUMBER:** DRG.28 - FTIR Analytical Procedures
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** FTIR Analytical Procedures	

I. Policy: The following procedure will be followed for FTIR analysis.

A. The Universal ATR attachment or Sample Holder is used for FTIR sampling in the Controlled Substance Unit.

B. Before starting casework:

1. From the Spectrum software select Setup | Instrument. On the "Basic Instrument Setup" tab click the "Load and Save" button.



2. Select the line marked either:
"Spectrum 100 UATR standard analysis settings"
or
"Spectrum 100 Sample holder standard analysis settings" depending on the analysis to be done. Press the "Set as Current" button.

3. This will load the default settings:

   a. Start: 4000

   b. End 500

   c. Resolution: 4

   d. Accumulations: 4

   e. Scan Type: Sample

   f. Abscissa Units: Wavenumber

   g. Ordinate Units: %T

4. If ready checks have not been performed with the specific sampling accessory, perform the ready checks according to DRG.30

C. For each sample analyzed using the UATR attachment do the following:

1. Make sure that the UATR attachment is connected to the FTIR. A toolbar icon will appear identifying the UATR.



2. Clean the crystal, top plate, and shoe on the pressure arm with methanol or similar solvent. Avoid using acetone. Make sure surfaces are dry before continuing.
3. Perform a Contamination Ready Check.
    a. From the Spectrum software select Measurement | Instrument Checks | Ready Checks | Contamination, or use the Contamination button.
    b. This report compares a spectrum of the clean attachment to the current state.
    c. Observed Absorbance values in all three ranges should be below 0.1000.
    d. If the Contamination Ready Check does not pass, further cleaning should be done.
    e. The Contamination Ready Check is automatically saved on the hard drive.
    f. The analyst will include the documentation from the PASSING Contamination Ready Check in the case notes.
4. Collect a background spectrum. Use the Background button.
    a. The analyst may record in the case notes that a background spectrum was taken.



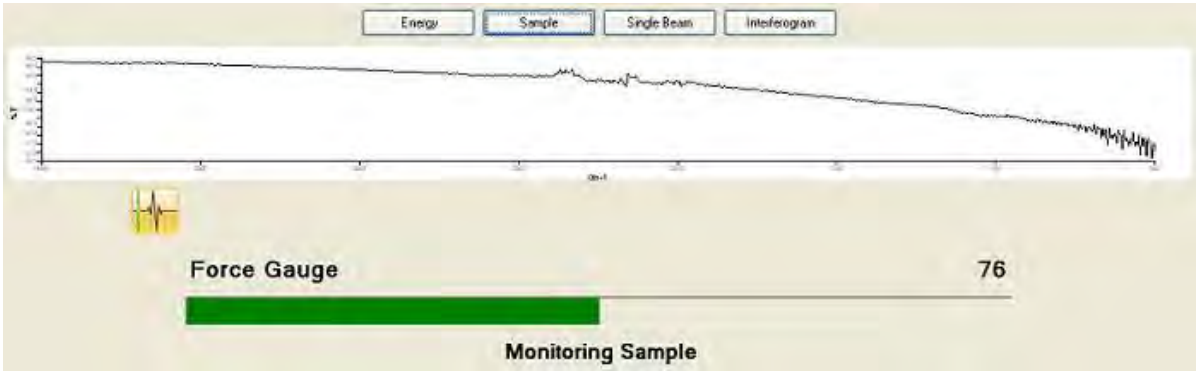
5. Load the crystal.
6. Name the sample spectrum to be collected.
    a. Click on the "Sample Table" line in the Data Explorer pane.



    b. The "Save Location" field shows where the files will be saved. Click on the ellipsis (…) button to choose a new location.
    c. The SampleID field is a unique file name (i.e., the date plus a sequential number).
    d. The Description field should include the lab number, request number, evidence number identifier of the sample, and the initials of the analyst.
    e. NOTE: If the description field is changed after the sample spectrum has been collected, then the file will have to be manually saved to keep the changes.
7. Use the Monitor or Scan button to preview the spectrum and applied force. (The first press of the scan button enters preview mode, which is similar to monitor)



8. Use the pressure arm to push the sample against the crystal. The monitor screen will show the amount of applied force. Do not go above 150 N. Excessive force may damage the crystal. Liquids do not need the pressure arm.



9. Use the Scan button to collect a sample spectrum. (If using monitor, the first press of the Scan button may enter preview mode. Press the Scan button a second time to acquire the scan.)



10. The spectrum will be automatically saved in the designated location.

11. Clean the crystal, top plate, and shoe on the pressure arm with methanol or similar solvent. See step #1

D. For each sample analyzed using the sample holder do the following

1. Make sure that the slide holder attachment is connected to the FTIR. A toolbar icon will appear identifying the slide holder.



2. Since the slide holder does not have a sample crystal, the contamination check does NOT need to be done.

3. Collect a background spectrum. Use a setup that matches the intended sample method (i.e. an empty slide holder, empty pellet disk, or empty vapor cell). Use the Background button. The analyst will record in the case notes that a background spectrum was taken.

4. Load the slide holder:

   a. If a sample card is used, insert the card into the slide holder slots.

   b. If a KBr pellet or vapor cell is used, insert the V-channel into the slide holder slots and place the pellet disk or vapor cell in the channel.

   c. Name the sample spectrum to be collected.

      i. The "Save Location" field shows where the files will be saved. Click on the ellipsis (…) button to choose a new location.

      ii. The SampleID field is a unique file name (i.e., the date plus a sequential number).

      iii. The Description field should include the lab number, request number, evidence number identifier of the sample, and the initials of the analyst.

      iv. NOTE: If the description field is changed after the sample spectrum has been collected, then the file will have to be manually saved to keep the changes.

   d. Use the Scan button to collect a sample spectrum.

E. Identifications

1. Confirmations

a. See DRG.34

2. Presumptive Library Identifications

a. See DRG.34

F. Image Creation and Transfer

1. In order to create readable data images in LIMS, the following settings are suggested:

a. Set the JusticeTrax Imaging Printing Preferences:

i. Set the Orientation to "Landscape"

ii. Check the "Rotate Landscape image to Portrait"

b. Set the Graph Properties in the Spectrum software:

i. Make sure all the spectra in the window are selected.

ii. Right click on a spectra name to bring up the option menu.

iii. Select the "Appearance" menu option.

iv. On the "Advanced" tab, set the Line Size to an appropriate thickness (typically 2-3)

G. References

1. Universal ATR Sampling Accessory User's Guide (L1050080, Release B, May 20110)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substance Technical Unit Manual	**REVISION DATE:** 03/05/2019	**NUMBER:** DRG.29 - FTIR Spectrometer Sample Prep and Cleanup
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.4**	
CHAPTER: Equipment	**SUBJECT:** FTIR Spectrometer Sample Prep and Cleanup	

I. Policy: The sample preparations for FTIR analysis are given here as guidelines for casework.

A. **FTIR UATR analysis**

1. Direct Analysis: a solid or liquid can be placed directly on the crystal.
2. Alternatively, the sample can be extracted or cleaned before analysis. See examples below.

B. **Vapor cell sample preparation**

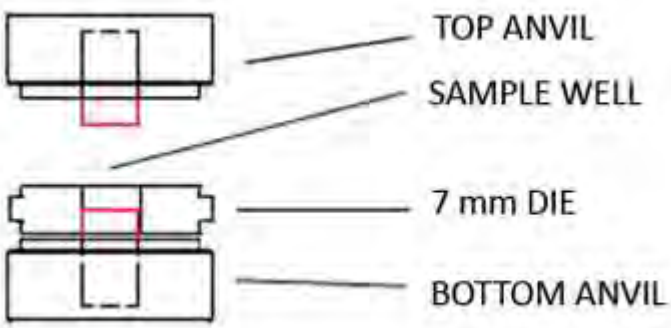
1. Use the glass vapor cell cylinder located in the desiccator.
2. There are two salt lenses (they are color coded blue and green) the green side should face left and the blue side should face right.
3. Place a small filter paper so it will line the inside of the glass cylinder without blocking transmission through the side lenses.
4. Put a drop of the substance onto the filter paper and seal the vapor cell by placing the lenses on each side.
5. Allow time for the volatile substance to evaporate and fill the chamber.
6. The vapor cell can be placed on the slide holder to analyze.

C. **Cleaning vapor cell**

1. Put the salt lenses away in the desiccator.
2. Rinse the glass cylinder with methanol and let dry, then put away in the desiccator.

D. **KBr pellet sample preparation**

1. The ratio of sample to potassium bromide is approximately 1:2 (toothpick fulls).
2. Mix the powder in a mortar and pestle until a very fine, homogeneous powder is obtained.
3. Place the bottom disk anvil flat on the bench with the shorter or stubby shaft upward.



4. The die ring fits over the shaft forming a well to put the sample in.
5. Put the powder in the sample well in the disk. Put enough powder in to cover the entire bottom, but not so much that the disk will be too thick and occlude the IR transmission.
6. Place the top anvil disk on top of the ring, with the longer shaft downward. Twist the top on. The two shafts should meet in the middle of the die ring, compressing the powder.
7. Put the whole disk anvil in the "presser apparatus" and set to about 60.
8. Compress.
9. If necessary, open with a lever.
10. Carefully twist off the top and bottom anvil disks and view the compressed pellet inside the die ring. Take care when opening, so the pellet does not fly out. The pellet should look like a translucent film stretching across the hole in the die ring.
11. If the sample pellet is not acceptable for analysis then regrind and begin the preparation process again.
12. The middle die ring with the pellet can be placed into the slide holder for analysis.

E. **KBr pellet equipment cleaning**

1. Poke out the pellet and dispose properly.
2. Rinse the disks with water, then acetone and return to the desiccator.

F. **Film**

1. Films can be placed directly into the slide holder.

G. **Standards and Libraries**

1. FT-IR analysis using UATR, KBr (or other salt pellets), and polystyrene films will include the spectrum of the material used to make or hold the sample (diamond, KBr, and polystyrene).
    a. Libraries that match the sample preparation technique will create better matches.

b. Standards for confirmation should use the same preparation technique as the sample.

II. Sample Preparation Theory Overview: The extraction scheme in each sample cleanup procedure is determined by the solubility of the desired compound in each solvent being used to be able to extract either the impurities or retain the compound of interest. At the molecular level, solubility is controlled by the energy balance of intermolecular forces between solute-solute, solvent-solvent and solute-solvent molecules. Recall from general chemistry that intermolecular forces come in different strengths ranging from very weak induced dipole – induced dipole interactions to much stronger dipole-dipole forces (including the important special case, hydrogen bonding). However there is a simple, very useful and practical empirical rule that is quite reliable. That simple rule is "like dissolves like" and it is based on the polarity of the systems i.e. polar molecules dissolve in polar solvents (e.g. water, alcohols) and non-polar molecules in non-polar solvents (e.g. the hydrocarbon hexane). This is why ionic compounds like table salt (sodium chloride) or compounds like sugar, dissolve in water but do not dissolve to any great extent in most organic solvents. It also applies to the separation of oil and water (e.g. in salad dressings). The polarity of organic molecules is determined by the presence of polar bonds due to electro-negative atoms (e.g. N, O) in polar functional groups such as amines (-NH2) and alcohols (-OH). (reference: Forensic Chemistry, Suzanne Bell, 2nd Edition, 2013, pages 100-136). The solvents utilized in the extraction/cleanup methods below have been developed to take into account the solvents readily available in the laboratory which pose a minimal health risk when proper safety precautions are used.

A. **Cocaine Salt Acetone Clean Up**:

1. Wash the sample with Acetone (Acetone is used as a solvent because of its high volatility and its ability to dissolve traces of petroleum solvents and water)
2. Dry and analyze using FTIR-ATR.

B. **Cocaine Salt Acetone Wash followed with $CHCl_3$ extract**:

1. Take sufficient sample (~ 30-50 mg) into filter paper and wash with acetone (20-30 milliliters).
2. Discard acetone.
3. Let the filter paper dry and extract sample using chloroform into a collection watch glass or concentrator cup.
4. Dry the collected chloroform. (Cocaine salt will be soluble in chloroform)
5. Use a small amount of dried sample for FTIR-ATR analysis.

C. **Cocaine Salt Cleanup-General**:

1. Place sample into filter paper
2. Rinse with Diethyl Ether (removes Nicotinamide, Isonicotinamide, Benzocaine, Procaine base).
3. Rinse generously with Ethyl Acetate (removes Caffeine).
4. Dry the paper bearing the undissolved sample.
5. Rinse with $CHCl_3$ onto a watch glass or concentrator cup (removes Cocaine HCl from sugars and other insoluble material plus most of the Procaine HCl which is

only slightly soluble in $CHCl_3$.)

6. Evaporate to dryness.
7. Remove the excess crystals to a test tube.
8. Rinse the residue on the watch glass with hexane and allow to dry thoroughly.
9. Use the dried watch glass residue for the IR pellet or FTIR-ATR.

D. **Cocaine Base Cleanup**

1. Place 5 to 10 mg in a shell vial
2. Extract the sample with 0.2 to 0.5 ml hexane. (Cocaine Base will be soluble in hexane)
3. Move the hexane to a new vial.
4. If no further clean-up is needed, this hexane can be dried and used for IR analysis.
5. If needed, wash the hexane with 0.2 to 0.5 ml water.
6. If hexane liquid is used on the ATR crystal:
   a. Collect a background with a drop of blank hexane on the crystal.
   b. Place 1 to 2 drops of hexane with the extracted cocaine sample on the crystal and scan the sample spectra.
   c. If needed, evaporate the washed hexane to dryness. The resulting solid can be placed on the ATR crystal.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 02/18/2014	**NUMBER:** DRG.30
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts & Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5 c & h, g**	
CHAPTER: Equipment	**SUBJECT:** FTIR Spectrometer Maintenance	

I. Policy: The Fourier Transform Infrared spectrometer (FT-IR) will be checked to ensure its reliability. Maintenance will be carried out if needed according to the procedures below.

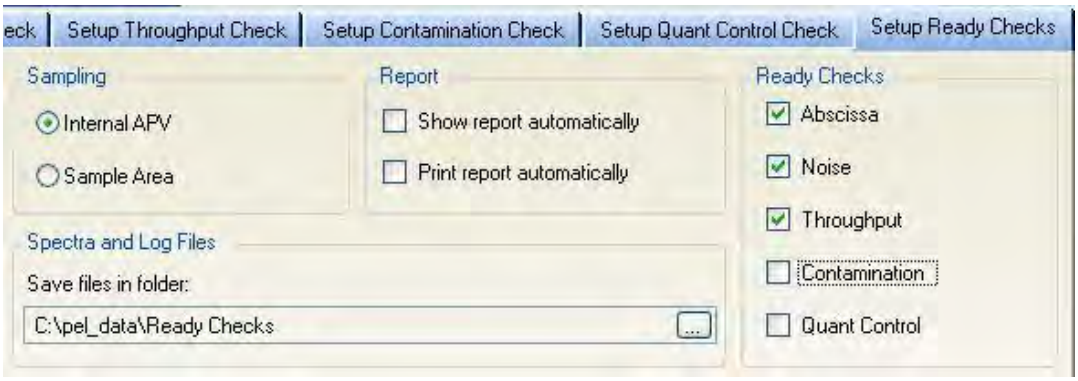
A. Log into the Spectrum software as user "pe1". This login will have the proper settings and ranges for normal use and maintenance.

B. The following Ready Checks are performed weekly when in use. *If the instrument is not in use and the checks cannot be done due to staffing levels, this will be logged in the maintenance log*. (ISO/IEC 17025:2005 5.5.3, 5.5.5 c, g):
- Abscissa
- Noise
- Throughput

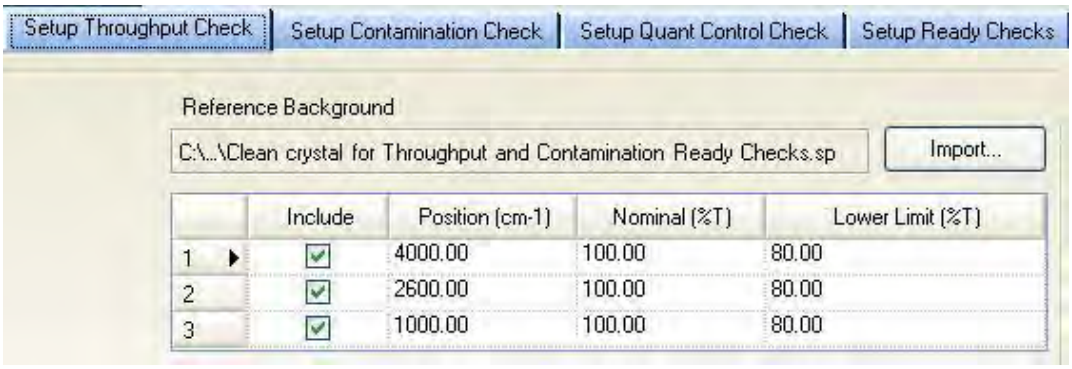
1. The Ready Checks evaluate instrument performance with a sampling attachment in place. The Ready Checks with the UATR attachment are performed on a weekly basis. If other sampling attachments are intended to be used for casework, (such as the slide holder for vapor cell analysis), then the Ready Checks should be repeated prior to use in casework with those attachments in place.

2. From the Spectrum software select Setup | Ready Checks.
NOTE: There is a menu Setup | Instrument Verification that looks very similar to the Setup | Ready Checks, but they have different settings and purposes. Instrument Verification can be used to help trouble-shoot and diagnose problems with the instrument, and should not be used for weekly checks.
Ready checks use the same scan parameters that regular samples use. These settings are found under the Setup | Instrument screens.

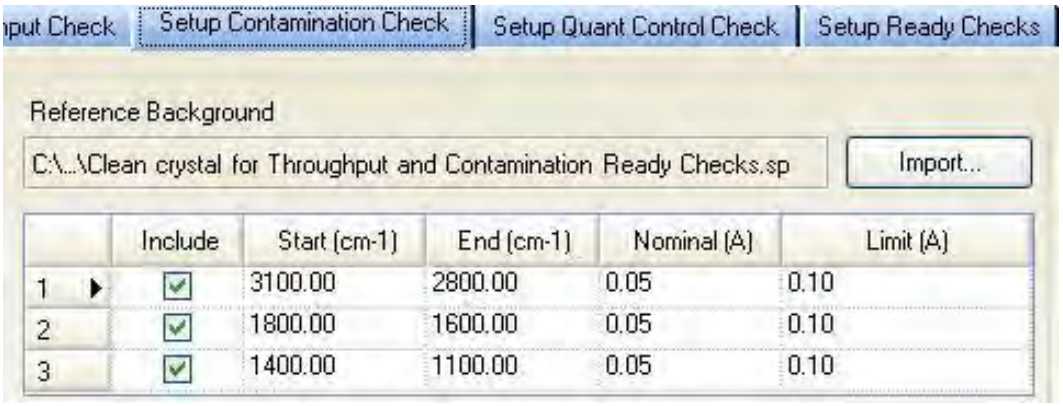
3. The "Setup Ready Checks" tab shows which tests to run to ensure that "Abscissa", "Noise" and "Throughput" are checked. Leave the other tests unchecked.



4. The "Setup Throughput Check" tab shows the location of the reference spectrum as well as the parameters for the test.



5. The "Setup Contamination Check" tab shows the location of the reference spectrum as well as the parameters for the test.



6. Use the appropriate reference spectra for both the Contamination Check as well as the Throughput check, located in the following folder:
For the UATR sample attachment use:
C:\pel_data\Ready Checks\Reference Spectra\
For the sample slide attachment use:
C:\pel_data\Ready Checks\Reference Spectra

7. The "Setup Noise Check" tab shows the parameters for the test.



8. The "Setup Abscissa Check" tab shows the parameters for the test.



9. From the Spectrum software select Measurement | Instrument Checks | Ready Checks | Run Selected.

10. Ready Check Interpretation:

    a. Printouts of the Ready Check will be kept in the Fourier Transform Infrared Spectrometer Maintenance Binder. (ISO/IEC 17025:2005 5.5.5 h)

    b. Abscissa

        i. This report uses the Internal Automatic Performance Valuator (Internal APV) polystyrene film to check the wavelength of known peaks at approximately 3060, 1601 and 1028 cm^{-1}.

        ii. The frequency should not vary more than the range given below.

Nominal cm^{-1}	*Lower Limit (cm^{-1})*	*Upper Limit (cm^{-1})*
3060	3058	3062
1601	1598	1603
1028	1025	1030

    c. Noise Check

        i. This report generates statistics of the noise in a range between 2600 and 2500 cm^{-1} of a blank sample.

        ii. The RMS, Peak to Peak, and Trend values are calculated and compared to the following criteria:

Statistic	*Limit*
RMS (%T)	1.000
Peak to Peak (%T)	1.000
Trend (%T/cm^{-1})	1.000

    d. Throughput Check

        i. This report checks the current background at certain wavelengths.

        ii. The %T is compared with the values obtained from the reference spectra.

Position (cm^{-1})	*Lower Limit (%T)*
4000	80
2600	80
1000	80

    e. If the above criteria are not met, corrective action shall be taken. As the components in the instrument age, values obtained in the Ready Checks may drift from those obtained when the instrument was first evaluated. Corrective

action may include re-evaluating nominal values used in the above tests or re-obtaining a reference spectrum, see instructions below for obtaining a new reference spectrum.

C. **Every 6 months** (or as needed) change desiccant (ISO/IEC 17025:2005 5.5.3)

1. The desiccant indicator is located on the top of the instrument. Blue indicates that the desiccant has capacity to absorb moisture.
    a. The desiccant can be changed if at least the first "10" section is pink, but the "15" and "20" sections are still blue.
    b. See page 33 and 52 of the Spectrum 100 User's Guide for more information.
2. Every six months, the software will prompt for a change of desiccant. This will be indicated in the status bar. The days remaining can be checked or reset by using the Setup Instrument BeamPath screen.
3. See pages 53 through 56 of the Spectrum 100 User's Guide for the procedure on changing the desiccant packs.
4. The change of desiccant will be noted in the maintenance log.

D. A check the internal filter wheel polystyrene against an external polystyrene standard that may be NIST traceable will occur **every two years**. (ISO/IEC 17025:2005 5.5.3, 5.5.5 c, g)

1. The software counter on the FTIR may be used as a reminder for analysts to perform the yearly maintenance on the instrument, but does not invalidate the function of the instrument. Maintenance must be performed within two calendar years.
    a. Place the slide cover attachment in the FTIR
    b. In the Perkin Elmer software, select the Setup Instrument Basic tab.
        i. Select Load and Save
        ii. Switch to Sample Holder and Set As Current, hit OK
    c. Perform the Weekly Maintenance with the slide holder in place
    d. Run the Selected Ready Checks and print and save a copy
    e. Acquire a Background
    f. Load the Polystyrene into the slide holder. The external Polystyrene is kept in the dessicator
        i. Name the sample in the sample log table (ensure to differentiate between external Polystyrene and the internal Polystyrene from the filter wheel). Analyst may also reference the serial number or other unique identifier for the external Polystyrene.
        ii. Select the appropriate folder to save the file
        iii. In the Setup Inst. Beam Path tab, verify the Filter Wheel is set to **None**
    g. Scan the sample to acquire the spectrum
    h. Remove the external Polystyrene Standard, and return to the dessicator
    i. Acquire a new Background

i. Name the sample in the sample log table (ensure to differentiate between external Polystyrene and the internal Polystyrene from the filter wheel).

ii. Select the appropriate folder to save the file

iii. In the Setup Inst. Beam Path tab, Change the Filter Wheel setting from None to **Polystyrene**

j. Scan the sample to acquire the spectrum

k. Overlay the samples (internal and external Polystyrene specta) and label the peaks

i. **Ensure that 3082, 3060, 1601, 1583 and 1028 are labeled**. This may be done by choosing Peak Detection under Set up and choosing to integrate the top peaks and adjust the number of peaks integrated until the required peaks have been labeled.

ii. Ensure that the labeled peaks on the internal Polystyrene are within +/- 2 wavenumbers of the labeled peaks on the external Polystyrene

l. Print both spectra to demonstrate the internal Polystyrene has been checked against an external Polystyrene reference material

i. Indicate on the Maintenance log that yearly maintenance was performed

ii. File the printout in the Maintenance binder

m. Set the Filter Wheel back to **None**

n. Remove slide cover attachment

o. In the Perkin Elmer software, select the Setup Instrument Basic tab.

i. Select Load and Save

ii. Switch to ATR and Set As Current, hit OK

p. Set the time for the next yearly check in the Setup Inst. Beam Path tab, hit the Serviced button to reset the counter and enter 365 days in the Instrument Service Field.

E. **Periodically,** it may be necessary to collect a new reference spectrum to be used for comparison during the contamination and throughput checks. Indications of the need to collect a new reference spectrum include an increase in baseline for the contamination checks when the sample plate is clean. A new reference spectrum should be collected after preventative maintenance to ensure the instrument is as clean as possible.

1. Load the current settings for the accessory type.

2. Under Instrument Setup, select the Instrument Basic Setup tab.

3. Change the Scan Type to Background.

4. Name the sample and choose the folder to save the spectrum in.

5. Select Scan

6. Under the “Ready Check” setup, select the “Setup Contamination Check” tab.

7. Import the new reference spectrum from the directory.
8. Under the “Ready Check” setup, select the “Setup Throughput Check” tab.
9. Import the new reference spectrum from the directory.
10. Save and rename the current settings for the accessory type (in the same window as step 1).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 05/30/2018	**NUMBER:** DRG.31 - FTIR References
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB-LAB ISO/IEC 17025:2005: 5.5**	
CHAPTER: Equipment	**SUBJECT:** FTIR References	

I. Policy: The following is a list of references in relation to the FTIR. These references are available on a CD named Spectrum Manuals L1050002-S 22/12/10.

A. UATR Accessory User's Guide (Accessory). Document name: L1050080. Release B. May 2010

B. Spectrum 100 Manual (Instrument). Document L1050021. Release I. September 2010.

C. Spectrum 10.x Administrator's Guide (Software). Document L1050095. Release D. September 2010.

D. Perkin Elmer website: perkinelmer.com

E. **HELP menu** on any version of Spectrum Software

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** DRG.32 - Software
	RELATED ORDERS: DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.16 - Validation and Verification, FSD.34 - Control of Software and Data	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.11**	
CHAPTER: Equipment	**SUBJECT:** Software	

I. Policy: The following is the policy for controlling software and tracking the version of software in use in the Controlled Substance Unit.

A. Software.

1. The identity (version of software or equivalent) will be logged in the maintenance binder for each piece of equipment. See DRG.17.

2. Manufacturer's technical support personnel, technical personnel contracted by the Laboratory, technical services personnel and approved lab staff may make changes, additions or upgrades to software

3. If the software is off-the-shelf software, no validation or verification is required. However the tracking of the identity and approval is required.

   a. The control or approval for use should be documented in the maintenance log by the Manager or Supervisor.

4. If the software is "custom" or developed by the user, then documentation of validation or verification is required. See DRG.16 for more information about Software. The tracking of the identity and approval is required.

   a. The control or approval for use should be documented in the maintenance log by the Manager or Supervisor.

   b. Any version of Microsoft Word, Excel or Access, JusticeTrax Indexer, Adobe Reader, Adobe Pro, PDF Creator, Microsoft ActiveSync or JusticeTrax Batch Image Capture is considered to be approved for use.

   c. Rad-Key is software that copies the value from the balance and pastes it into LIMS. Any version is considered approved for use.

   d. Chemstation Macros are present on each GC/MS within the Drug Unit. They are sometimes edited to accomodate any changes in Chemstation software or instrument installed. A log of any changes/edits are kept in the instrument maintenance log.

   e. Digital pictures require the use of software to take or download pictures. Any version of the Ipevo Presenter software is considered approved for use. Any version Paint, Photoshop or equivalent is considered approved for use.

i. Various types of digital devices can be used for pictures. Any software that is provided or recommended by the manufacturer of the device being used is considered approved for use.

f. Only Laboratory staff designated by the Manager or Supervisor should make changes, additions or upgrades to custom or user developed software. The documentation of approval by the Manager or Supervisor on the Software log will be considered as documentation that the Laboratory staff that made the change was designated to do so by the Manager or Supervisor.

5. For more information, see FSD.34.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 05/30/2018	**NUMBER:** DRG.33 - Case Examination Protocols & Sample Selection
	RELATED ORDERS: DRG.05 - Types of Drugs Identified, DRG.34 - Analytical Procedures - General , DRG.11 - Reports	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB-LAB ISO/IEC 17025:2005: 5.7**	
CHAPTER: Procedures	**SUBJECT:** Case Examination Protocols & Sample Selection	

I. Policy: The following is a general description of the guidelines and sample selection plan employed by the analyst in determining the analyses to be performed on a case. The Forensic Manager or Supervisor may direct deviations from the guidelines due to staffing levels or customer needs.

A. Case Examination Protocol

1. Limited laboratory staffing and resources prevent the examination of all confiscated items in each case. Consequently, guidelines have been developed to ensure the efficient and successful case resolution while minimizing unnecessary examinations by laboratory staff members.

2. Because the laboratory testing procedures may not detect uncommon drugs, it is important that any unusual drugs be brought to the attention of the laboratory by noting the name of the suspected drug on the Controlled Substance envelope.

3. If the laboratory does not possess reference materials (Drug Standards), they may be acquired, or suspected samples may be forwarded to a referral or outside laboratory with the appropriate reference materials. The laboratory has controlled substance reference materials from legitimate manufacturers for many drugs (see DRG.05). In addition, some drugs may not be identified due to limitations in equipment. In these instances an outside laboratory will be used.

4. Due to jurisdictional legal requirements, our laboratory utilizes "**sample selection**" (not sampling) for drug analysis. Thus, the report reflects that only certain items or units were tested.

5. If deviations from our laboratory policy are required by our customer, they must be approved by the Supervisor or Manager and will be documented in the case notes.

6. An agency may indicate to the Laboratory that certain items should NOT be examined, or to ONLY examine certain items. The Laboratory staff may not examine those items and should indicate in the notes and report that those items were not examined per agency instructions. This is not considered a deviation from Laboratory policy.

7. An outside agency (submitting agency or District Attorney's Office) may request deviations from the laboratory plan due to extenuating circumstances or enhancement requirements. The request should be approved by a Manager or Supervisor prior to analysis and the approval will be documented in the case notes.

8. Analysts may also deviate by analyzing more or less than the sampling plan indicates. The approval by the Supervisor or Manager is the Technical Review of the case.

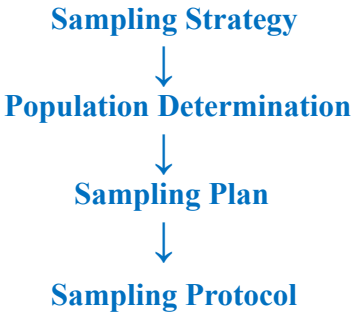
B. Definitions:

1. **Item**: An item is a grouping of suspected controlled substance or related material that are similar in appearance and packaging, and from a single source. An item is comprised of units but can also be a singular if only one unit is present.

2. **Unit**: A unit is a single, individual article of suspected controlled substance. An item may be composed of multiple units that are similar in appearance and packaging and are from a single source.

3. Example: An Agency lists one item (Item #1) on a Controlled Substance Envelope but it actually consists of ten bags of suspected methamphetamine and 8 balloons of suspected heroin. The evidence can be categorized as two items: one item consisting of 10 units (bags) and the second item consisting of eight units (balloons)

C. The following is an overall scheme of how sampling is carried out in a forensic context (Reference: *Guidance for Best Practice Sampling in Forensic Science, ENFSI, 2007*).



1. The **sampling strategy** is routinely based on legislative and legal practices and should be built on the aim of taking into account the investigation, the questions(s) asked and the end use of the results. In this jurisdiction, there is an assumed homogeneity of a substance in a single container (eg. bag) such that if any of the substance tests positive it is assumed that the entire container (or bag) contains the same substance.

2. The **population determination** refers to the number of units and most commonly refers to multiple units. Officers typically itemize evidence and segregate different types of substances into different items (i.e. Item 1 is a white crystal and Item 2 is a green plant material) before submitting to the Laboratory

   a. If upon opening the evidence, the analyst determines that sufficient segregation has not occurred (i.e. Item 1 consists of green and pink tablets; or 10 bags of crystals and 10 bags of white powder), the analyst may further segregate the items such that units within an item are visually similar to one another for analysis purposes.

      i. Segregation will be done if the item(s) are going to be analyzed and reported. If the laboratory does not further segregate dissimilar items due to manpower or resources the notes and report will reflect that.

   b. While there is some assumption of homogeneity among similar looking items or multiple units within a single item, there is no statistical or scientific certainty. While it is likely that other similar looking items or units contain the same substance as those that were tested it cannot be certain without confirmation.

3. The **sampling plan** can be numerically based or non-numerically based. Our Laboratory uses a non-statistical sampling plan. Non-statistical sampling plans are numerical sampling plans based on non-statistical methods such as management directive or judicial requirements. Our Laboratory is using a sampling plan to determine if a controlled substance is present.

a. For items that are similar in appearance (and from the same individual and/or location) **typically 10% of the items are analyzed** (i.e. if there are 12 items of marijuana, typically 2 are tested).

b. For a single item that contains multiple units, **typically 10% of the units are examined** (i.e. if there are 55 bags of cocaine, typically 6 are tested).

4. The **sampling protocol** is the procedure used for the analysis of items or units. This is the detailed procedure for selecting items/units for analysis, weighing items/units (when gross weights, net weights or estimates are appropriate) as well as the methods of analysis, reference materials (standards) and equipment used.

D. Sampling Protocol

1. Selection of items or units for analysis:

a. The offense, number of individuals, weight as well as the location of the item may influence the selection decision.

i. For a possession case, follow the "Possession" analysis scheme

ii. For a sales case, follow the "Sales" analysis scheme

iii. If similar looking items from different locations are submitted, typically the item found on the subject is selected for analysis

iv. If multiple similar looking items from a similar location or multiple units within a single item are submitted, typically the largest weight item is selected for analysis.

v. If all items or units appear similar in weight than the items or units selected for analysis is random.

vi. See below for analysis scheme based on offense

vii. See DRG.34 for suggested tests and equipment used in analysis.

2. Amount and selection of substance within an item that is used for analysis:

a. After the sample to be analyzed is weighed, a small amount is selected at random for presumptive chemical analysis.

i. For solid samples, this is typically between 2-10 milligrams of substance. It may be larger for some substances (i.e. marijuana and mushrooms 10-50 milligrams).

ii. For liquid samples, this is typically a couple of drops between 0.05-0.10 milliliters of substance. It may be larger for some substances.

b. A small amount is also selected at random for instrumental confirmation.

i. For solid samples, this is typically between 5-15 milligrams of solid substance but more substance may be necessary for low concentration samples or pills. Mushrooms use approximately 1 gram for extraction.

ii. For liquid samples, this is typically a few drops between 0.10-0.20 milliliters. It may be larger for some substances (i.e. Steroids 1-2 milliliters).

c. If more substance is used to concentrate a weak sample it should be noted in the case notes.

E. Procedure: **Possession**

1. Offenses:

   a. Possession of a controlled drug: 11350, 11357, 11377

   b. Possession of precursors for the illicit manufacture of drugs: 11383

2. **The lab will typically analyze only one item or unit within an item for each suspect.**

3. **For a possession case, the offense(s) (charge) listed on the request should be met. The extent of analysis is at the discretion of the analyst.**

   a. If multiple items are submitted from a single individual, and:

      i. they are similar in appearance, **then typically only one will be analyzed**.

      ii. they are different in appearance, **then both of the items may be identified** unless the results of the presumptive tests on the subsequent items are the same as those on the first item. In this case only the first item will be confirmed and the subsequent item(s) may be reported as presumptive positive.

   b. The net weight of the items examined will be reported (if possible).

   c. The gross weight or estimated weight of items not examined may be reported. This is at the discretion of the analyst however, typically estimated weights are given where feasible.

   d. Items, which are in dosage unit form, i.e. tablets, capsules, cigarettes, and paper squares, will not be weighed. However, the total number or estimated total number will be reported.

F. Procedure: Sales

1. Offenses:

   a. Sales of a controlled drug: 11352, 11360, 11375, 11379, 11380

   b. Sales in lieu of a controlled drug: 11382, 11355

   c. Possession for sale of a controlled drug: 11351, 11351.5, 11359, 11378, 11378.5, 11379.2

2. **One sample of each different drug submitted will typically be examined.**

3. **For a sales case, the offense(s) (charge) listed on the request should be met. The extent of analysis is at the discretion of the analyst.**

4. Often one of the factors, which indicate that a drug was possessed with the intent to sell, is that the quantity possessed exceeded that which is normally held for personal use.

5. The net weight of any examined items shall be given (where possible). The total estimated weight of all units within the item examined should be given.

6. If a single item consists of multiple units, a representative sample is selected at random, usually one of every ten will be examined.

7. If an item consists of a very large number of units (i.e., 100 or more), then fewer than one in ten will be examined. Typically no more than 10 units within an item are

examined.

8. For multiple item cases, a statement will be included in the laboratory case notes that the unexamined items were similar in appearance as the examined one.

9. If items are packaged in large quantities not ordinarily sold for personal use, then the analysis of one or two items may be necessary.

10. The weight of the items examined will be reported along with the total estimated weight of any remaining items. For any estimated weight, the laboratory will indicate that if uncertainty is required further work may be done. See DRG.11.

11. The laboratory does not have a large capacity balance and items that are physically large (e.g., marijuana plants) or weigh more than 1 kilograms cannot be weighed. If the intent to sell a controlled drug cannot be established through the quantity of drug alone, the laboratory will examine items used in the preparation of drugs for sale for the presence of controlled drugs. Such items include scales, sifters, and measuring devices.

    a. Procedure: **Cultivation of a Controlled Substance**:
        - Cultivation of marijuana: 11358
        - Cultivation of peyote: 11363

12. The laboratory will examine one item that is similar in appearance for each suspect.

13. The total number of units may be reported because of the variability in weight, which occurs at the various stages of drying. The sample may also be weighed and a weight may be reported (it should be noted in the case notes if dirt/roots/other materials are included in the weight).

14. Items, which have been packaged in plastic before thorough drying, can mold and decay very rapidly. This may alter the ability of the laboratory to identify the plant and may pose a health hazard. Therefore, plants must be submitted dry and/or packaged in a paper bag or a ventilated cardboard box. Large samples that exceed the drying capacity of the laboratory oven shall be returned to the client agency for drying or repackaging before examination.

    a. Below is information about charges and enhancements in California.

METHAMPHETAMINE

SCHEDULE II 11055 (d)(2)

CHARGE

11377	Possession (misd. or 16-2-3)
11378	Possession for Sale (16-2-3)
11379	Sale (transport, import, furnish, administer, give away, or offers...)(2-3-4)
11379.6	Manufacture (process, prepare, etc.) (3-5-7 plus $50,000) (See Filing Guide page (8)
11382	Agrees to sell and then sells another substance in lieu of (misd or 16-2-3)
11383a,c	Possession of precursor chemicals with intent to manufacture (2-4-6) (See 11379.7)
11366.8a	Possess or use false compartment in vehicle to store or transport (misd. or 16-2-3)
11366.8b	Design or construct false compartment in vehicle to store or transport (16-2-3)
11401	Analog of methamphetamine (controlled substance) (i.e. substantially similar chemical structure or effect)
PC 82a1	Conspiracy to do the above (same as substantive charge)
11532	Loitering in a public place with intent to commit a narcotic offense (misd.)
PC1170.74	If Meth in crystalline form, aggravating sentencing factor.

WEIGHT

PC1203.073b2	Two ounces (of substance containing Methamphetamine) or one ounce of pure Methamphetamine (No probation; judge has discretion)
11370.4b1	over One kilogram, or over 30 liters (plus 3 years)
11370.4b2	over Four kilograms, or over 100 liters (plus 5 years)
11370.4a3	over Ten kilograms, or over 200 liters (plus 10 years)
11370.4a4	over Twenty kilograms, or over 400 liters (plus 15 years)
11379.8	if 11379.6 and: > 1lb/3 gal. (add 3 yrs); > 3lbs/10 gal. (add 5 yrs); > 10lbs/25 gal. (add 10 yrs); >44 lbs/105 gal. (add 15 years)
PC 1170.73	if 11377, 11378, 11378.5, the quantity shall be considered an aggravating sentencing factor
PC 1170.74	if 11377, 11378, 11379, 11379.6 and substance is crystalline form of meth, this is sentence aggravation.

PRIORS

11370.2b,c	New 11378, 11379, 11379.6, 11380.5, 11383 with prior 11351, 11351.5, 11352, 11378, 11378.5, 11379, 11379.5, 11379.6, 11380. 11380.5, 11383 (add 3 yrs for each prior conviction)
PC 1203.07 (a)(11)	Any new 11378 or 11379 with prior 11378 or 11379 (No probation; NO discretion)
PC 1203.073 b8	Any new 11379.6, 11382, 11383 with prior 11378, 11379, 11379.6, 11380, 11382, 11383 (No probation; judge has discretion)
PC 667.5b	For each prior prison commitment (add one year) (Note: Do not impose for any prison commitment if upon release deft remained free for subsequent 5 years of both further prison and felony conviction
11366.5c	Prior 11366.5a with new 11366.5a (2-3-4)

FIREARMS

11550e	11550 while in personal possession (incl. passenger compartment of vehicle) of loaded, operable firearm (misd. or 16-2-3)
11370.1	If 11377 while armed (available for offense/defense) with loaded, operable firearm (2-3-4) (No diversion: no deferred entry of judgement)
PC 12022c	11378, 11379 or 11379.6 (or attempt) while armed (available for offense/defense) with firearm (loaded or unloaded, operable or inoperable) (full consecutive 3-4-5) (if vicarious, **12022d** (add 1-2-3))
12022a	Armed with firearm (loaded or unloaded) in the commission of any felony (add one year)

LOCATION

11366	Maintain a place for sale or use (misd. or 16-2-3)
11366.5a	Rents or makes available for manufacture or distribution (misd. or 16-2-3)
11366.6	Utilizing fortified location to possess for sale, sell, manufacture (3-4-5)
11366.5b	Derive excessive profit and allow to be fortified (2-3-4)
11353.6	Possess for sale, sell, manufacture upon grounds of school or within 1000 ft. of a school (in a public place, or place legally open to minors), while school was in session or when children using the school facility (add 3-4-5)
11379b	Transports for sale to non-contiguous county (3-6-9)
11380.5	Possession for sale or sale at public park or ocean-front beach if "drug free zone" (includes library, pool, youth center) (add one year)
11380.1a1	If 11380 and offense occurs upon grounds of playground, church, child care, pool, when open or when minors using facility (add one year)
11380.1a2	If 11380 and offense occurs upon grounds of, or within 1,000 ft of, school in session or when minors using school facility, (add two years)

MINORS

11380	Utilizing, soliciting, furnishing a minor re: Methamphetamine (3-6-9) (if 11380, then allege **PC1203.07a8** (No probation; no discretion) (if 11380, also allege **PC 1203.073b4** (No probation; NO discretion)).
11379.7	If guilty of 11379.6 or 11383 in structure where child under age 16 present, add 2 years. If 11379.6 or 11383 and child under 16 suffers great bodily injury, add 5 years. (See Filing Guide page 8)

COCAINE

SCHEDULE II 11055 (b)(6)

CHARGE

11350	Possession (16-2-3)
11351	Possession for Sale (2-3-4)
11352	Sale (transport, import, furnish, administer, give away, or offers...) (3-4-5)
11379.6	Manufacture (process, prepare, etc.) (3-5-7 plus $50,000) (See separate page 7)
11355	Agrees to sell, and then sells another substance in lieu of (misd. or 16-2-3)
11366.8a	Possess or use false compartment in vehicle to store or transport (misd. or 16-2-3)
11366.8b	Design or construct false compartment in vehicle to store or transport (16-2-3)
11401	Analog of cocaine (controlled substance) (i.e. substantially similar chemical structure or effect)
PC 182a1	Conspiracy to do the above (same as substantive charge)
11532	Loitering in a public place with intent to commit a narcotic offense (misd.)

WEIGHT

1203.073b1	Two ounces (of substance containing Cocaine) or one ounce of pure Cocaine (No probation; judge has discretion)	
11370.4a1	over One kilogram	(plus 3 years)
11370.4a2	over Four kilograms	(plus 5 years)
11370.4a3	over Ten kilograms	(plus 10 years)
11370.4a4	over Twenty kilograms	(plus 15 years)
11370.4a5	over Forty kilograms	(plus 20 years)
11370.4a6	over Eighty kilograms	(plus 25 years)

PRIORS

11370a	Any new 11350, 11351, 11352, 11353, 11355 with any prior narcotics felony offense (No probation; judge has discretion)
11370.2a	New 11351, 11352, 11380.5 w/prior 11351, 11351.5, 11352, 11378, 11378.5, 11379, 11379.5, 11379.6, 11380, 11380.5 or 11383 add 3 yrs. for each prior conviction
PC 1203.07 (a)(11)	any new 11351 or 11352 with any prior 11351 or 11352 (No probation; NO discretion)
PC 667.5b	For each prior prison commitment (add one year) (Note: Do not impose for any prison commitment if upon release deft remained free for subsequent 5 years of both further prison and felony conviction
11366.5c	Prior 11366.5a with new 11366.5a (2-3-4)

FIREARMS

11550e	11550 while in personal possession (incl. passenger compartment of vehicle) of loaded, operable firearm (misd. or 16-2-3)
11370.1	If 11350 while armed (available for offense/defense) with loaded, operable firearm (2-3-4) (No diversion; no deferred entry of judgement)
PC 12022c	11351 or 11352 (or attempt) while armed (available for offense/defense) with firearm (loaded or unloaded, operable or inoperable) (full consecutive 3-4-5) (if vicarious, **12022d** (add 1-2-3)).
PC 12022a	Armed with firearm (loaded or unloaded) in the commission of any felony (add one year)

LOCATION

11366	Maintain a place for sale or use (misd. or 16-2-3)
11366.5a	Rents or makes available for manufacture or distribution (misd. or 16-2-3)
11366.6	Utilizing fortified location to possess for sale, sell, manufacture (3-4-5)
11366.5b	Derive excessive profit and allow to be fortified (2-3-4)
11352b	Transports for sale to non-contiguous county (3-6-9)
11380.5	Possession for sale or sale at public park or ocean-front beach if "drug free zone" (includes library, pool, youth center) (add one year)

MINORS

11353	Did the deft induce minor to possess, possess for sale, sell, etc. OR hire minor to sell, etc. OR sells, etc. to minor (3-6-9). If 11353, allege **PC 1203.073b4** (No probation; discretion)
11353.1(a)(1)	If 11353 at church, youth center, day care, pool, etc. (add full one year)
11353.1(a)(2)	If 11353 and on or near school (a la 11353.6) (add full two years)
11353.1(a)(3)	If 11353 and minor four years younger than deft. (add full 1-2-3)
11370b	If 11353 (Sale) (No probation; no suspension; NO discretion)
PC 1170.72	If 11353, 11353.5, 11353.7, 11354, 11361, 11380 or 11353.1(a)(3), 11353.6, 11380.1(a)(3), & minor 11 years or younger; then is circumstance in aggravation for sentencing

COCAINE BASE

SCHEDULE I 11054 (f)(1)

CHARGE

11350	Possession (16-2-3)	
11351.5	Possession for Sale (3-4-5)	
11352	Sale (transport, import, furnish, administer, give away, or offers...)(3-4-5)	
11379.6	Manufacture (process, prepare, etc.) (3-5-7 plus $50,000) (See separate page 7)	
11355	Agrees to sell, and then sells another substance in lieu of (misd. or 16-2-3)	
11366.8a	Possess or use false compartment in vehicle to store or transport (misd. or 16-2-3)	
11366.8b	Design or construct false compartment in vehicle to store or transport (16-2-3)	
11401	Analog of cocaine base (controlled substance) (i.e. substantially similar chemical structure or effect)	
PC 182a1	Conspiracy to do the above (same as substantive charge)	
11532	Loitering in a public place with intent to commit a narcotic offense (misd.)	

WEIGHT

1203.073b5	Two ounces (of substance containing at least 5 grams of Cocaine Base.) or one ounce of pure Cocaine Base. (No Probation; judge has discretion).	
11370.4a1	over One kilogram	(plus 3 years)
11370.4a2	over Four kilograms	(plus 5 years)
11370.4a3	over Ten kilograms	(plus 10 years)
11370.4a4	over Twenty kilograms	(plus 15 years)
11370.4a5	over Forty kilograms	(plus 20 years)
11370.4a6	over Eighty kilograms	(plus 25 years)

PRIORS

1203.073b6	Transporting for Sale, Importing for Sale, Administering, or offering, or attempting (No probation; judge has discretion)
11370a	Any new 11350, 11351.5, 11352, 11353, 11353 with any prior narcotics felony offense with any prior narcotics felony offense (No probation; judge has discretion)
11370.2a	New 11351.5, 11352, 11380.5 w/prior 11351, 11351.5, 11352, 11378, 11378.5, 11379, 11379.5, 11379.6, 11380, 11380.5 or 11383 add 3 yrs. for each prior conviction
PC 1203.07 (a)(11)	Any new 11351 or 11352 with any prior 11351 or 11352 (No probation; NO discretion)
11353.4	New 11353 with prior 11353 (and served prison) (full 1-2-3)
PC 667.5b	For each prior prison commitment (add one year) (Note: Do not impose for any prison commitment if upon release deft remained free for subsequent 5 years of both further prison and felony conviction
11366.5c	Prior 11366.5a with new 11366.5a (2-3-4)

FIREARMS

11550e	If 11550 while in personal possession (incl. passenger compartment of vehicle) of loaded, operable firearm (misd. or 16-2-3)
11370.1	If 11350 while armed (available for offense/defense) with a loaded, operable firearm (2-3-4) (No diversion; no deferred entry of judgement)
PC 12022c	11351.5 or 11352 (or attempt) while armed (available for offense/defense) with firearm (loaded or unloaded, operable or inoperable) (full consecutive 3-4-5) (if vicarious, 12022d (add 1-2-3)).
12022a	Armed with firearm (loaded or unloaded) in the commission of any felony (add one year)

LOCATION

11353.6	Possess for sale, sell, manufacture upon grounds of school or within 1000 ft. of a school (in a public place, or place legally open to minors), while school was in session or when children using the school facility (add 3-4-5)
11366	Maintain a place for sale or use (misd. or 16-2-3)
11366.5a	Rents or makes available for manufacture or distribution (misd. or 16-2-3)
11366.6	Utilizing fortified location to possess for sale, sell, manufacture (3-4-5)
11366.5b	Derive excessive profit and allow to be fortified (2-3-4)
11352b	Transports for sale to non-contiguous county (3-6-9)
11380.5	Possession for sale or sale at public park or ocean-front beach if "drug free zone" (includes library, pool, youth center) (add one year)

MINORS

11353	Did the deft induce minor to possess, possess for sale, sell, etc. OR hire minor to sell, etc. OR sells, etc. to minor (3-6-9) (If 11353, allege PC1203.073b4 (No probation; NO discretion))
11353.1(a)(1)	If 11353 at church, youth center, day care, pool, etc. (add full one year)
11353.1(a)(2)	If 11353 and on or near school (a la 11353.6) (add full two years)
11353.1(a)(3)	If 11353 and minor four years younger than deft. (add full 1-2-3)
11370b	If 11353 (Sale) (No probation; no suspension; NO discretion)
PC 1170.72	if 11353, 11353.5, 11353.7, 11354, 11361, 11380 or 11353.1(a)(3), 11353.6, 11380.1(a)(3), & minor 11 years or younger; then is circumstance in aggravation for sentencing

HEROIN

SCHEDULE I 11054 (c)(11)

CHARGE

11350 Possession (16-2-3)
11351 Possession for Sale (2-3-4)
11352 Sale (transport, import, furnish, administer, give away, or offers...) (3-4-5)
11379.6 Manufacture (process, prepare, etc.) (3-5-7 plus $50,000) (See separate page 7)
11355 Agrees to sell, and then sells another substance in lieu of (misd. or 16-2-3)
11366.8a Possess or use false compartment in vehicle to store or transport (misd. or 16-2-3)
11366.8b Design or construct false compartment in vehicle to store or transport (16-2-3)
11401 Analog of heroin (controlled substance) (i.e. substantially similar chemical structure or effect)
PC 182a1 Conspiracy to do the above (same as substantive charge)
11532 Loitering in a public place with intent to commit a narcotic offense (misd.)
B & P 4140 (old B & P 4149) Possession of hypodermic needle or syringe

WEIGHT

11352.5 If 14.25 grams or more of substance containing heroin and 11351 or 11352 (add up to $50,000 fine)
PC 1203.07 (a)(1),(2) over 14.25 grams (one half ounce) and 11351 or 11352. (No probation; NO discretion)

11370.4a1	over One kilogram	(plus 3 years)
11370.4a2	over Four kilograms	(plus 5 years)
11370.4a3	over Ten kilograms	(plus 10 years)
11370.4a4	over Twenty kilograms	(plus 15 years)
11370.4a5	over Forty kilograms	(plus 20 years)
11370.4a6	over Eighty kilograms	(plus 25 years)

PRIORS

11370a New 11350, 11351, 11352, 11353, 11355 with any prior narcotics felony offense (No probation; judge has discretion)
11370.2a New 11351, 11352, 11380.5 w/prior 11351, 11351.5, 11352, 11378, 11378.5, 11379, 11379.5, 11379.6, 11380, 11380.5 or 11383 add 3 yrs. for each prior conviction
PC 1203.07 (a)(3) Any new 11351 or 11352 with prior 11351 or 11352 (No probation; NO discretion)
11352.5 Any new 11351 or 11352 with prior 11351 or 11352 (up to $50,000 fine)
PC 667.5b For each prior prison commitment (add one year) (Note: Do not impose for any prison commitment if upon release deft remained free for subsequent 5 years of both further prison and felony conviction
11366.5c Prior 11366.5a with new 11366.5a (2-3-4)

FIREARMS

11550e 11550 of drug while in personal possession (incl. passenger compartment of vehicle) of loaded, operable firearm (misd. or 16-2-3)
11370.1 11350 while armed (available for offense/defense) with a loaded, operable firearm 2-3-4) (No diversion; no deferred entry of judgement)
PC 12022c 11351 or 11352 (or attempt) while personally armed (available for offense/defense) with firearm (loaded or unloaded, operable or inoperable) (full consecutive 3-4-5) (if vicarious, **12022d** (add 1-2-3)).
12022a Armed with firearm (loaded or unloaded) in the commission of any felony (add one year)

LOCATION

11366 Maintain a place for sale or use (misd. or 16-2-3)
11366.5a Rents or makes available for manufacture or distribution (misd. or 16-2-3)
11366.6 Utilizing fortified location to possess for sale, sell, manufacture (3-4-5)
11366.5b Derive excessive profit and allow to be fortified (2-3-4)
11353.6 Possess for sale, sell, manufacture upon grounds of school or within 1000 ft. of a school (in a public place, or place legally open to minors), while school was in session or when children using the school facility/ (add 3-4-5)
11352b Transports for sale to non-contiguous county (3-6-9)
11380.5 Possession for sale or sale at public park or ocean-front beach if "drug free zone" (includes library, pool, youth center) (add one year)

MINORS

11353 Did the deft induce minor to possess, possess for sale, sell, etc. OR hire minor to sell, etc. OR sells, etc. to minor (3-6-9) (if 11353, allege **PC 1203.073b4** (No probation; discretion))
11353.1(a)(1) If 11353 at church, youth center, day care, pool, etc. (add full one year)
11353.1(a)(2) If 11353 and on or near school (a la 11353.6) (add full two years)
11353.1(a)(3) If 11353 and minor four years younger than deft. (add full 1-2-3)
PC 1170.72 if 11353, 11353.5, 11353.7, 11354, 11361, 11380 or 11353.1(a)(3), 11353.6, 11380.1(a)(3), & minor 11 years or younger; then is circumstance in aggravation for sentencing

MARIJUANA

SCHEDULE I 11054 (d)(13)

CHARGE	
11359	Possession for Sale (16-2-3)
11360	Sale (transport, import, furnish, administer, give away, or offers...) (2-3-4)
	Give away or transport 28.5 grams (one ounce) or less of marijuana (Not hashish) (misd., max. $100 fine)
11358	Cultivate or process marijuana (16-2-3)
11379.6	Manufacture (process, prepare, etc.) (3-5-7 plus $50,000) (See separate page 7)
11355	Agrees to sell, and then sells another substance in lieu of (misd. or 16-2-3)
PC 182a1	Conspiracy to do the above (same as substantive charge)
11366.8a	Possess or use false compartment in vehicle to store or transport (misd. or 16-2-3)
11366.8b	Design or construct false compartment in vehicle to store or transport (16-2-3)
11401	Analog of controlled substance (i.e. substantially similar chemical structure or effect)
11532	Loitering in a public place with intent to commit a narcotic offense (misd.)
WEIGHT	
	Except as noted in charges above, NO weight enhancements in the State of California for marijuana.
PRIORS	
PC 667.5b	For each prior prison commitment (plus one year) (Note: Do not impose for any prison commitment if upon release deft remained free for subsequent 5 years of both further prison and felony conviction
11366.5c	Prior 11366.5a with new 11366.5a (2-3-4)
FIREARMS	
12022a	Armed with firearm (loaded or unloaded) in the commission of any felony (add one year) (personally or vicariously.
LOCATION	
11366	Maintain a place for sale or use (misd. or 16-2-3)
11366.5a	Rents or makes available for manufacture or distribution (misd. or 16-2-3)
MINORS	
11353.5	Prepare for sale, sell, give away, upon grounds of school, child care, playground, church, during open hours or when minors using facility, if deft is 5 years older than the minor who receives the marijuana (5-7-9)
11361a	Utilizing or inducing any minor, or selling or furnishing to a minor under 14 years (3-5-7)
11361b	Furnishing to a minor between 14 and 18 (3-4-5)
EXEMPTION	
11362.5	11357 and 11358 shall not apply to a patient or to a patient's primary caregiver, who possesses or cultivates marijuana for the personal medical purposes of the patient upon the written or oral recommendation or approval of a physician. (See Good to Know, dated January 21, 1997).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 01/03/2019	**NUMBER:** DRG.34 - Analytical Procedures - General
	RELATED ORDERS: DRG.35 - Analytical Procedures-Suggested Tests, DRG.19 - GC-MS Routine Maintenance, DRG.30 - FTIR Spectrometer Maintenance, DRG.25 - GC-MS Using the Software	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Analytical Procedures - General	

I. Policy: The general analytical procedures given here are guidelines that will be followed in casework. Considerable variation in case samples require that analysts have the flexibility to exercise discretion in selecting the method(s) most appropriate for a specific case. The tests performed on the evidence will be dictated by the recommended testing procedures and by the training and experience of the analyst, as appropriate. Very small amounts of substance are required for presumptive and confirmatory analysis. The smallest amount of sample necessary should be used.

A. **Guidelines for Suggested Tests**

Drug	Presumptive Tests	C
Methamphetamine	Marquis: (+) Orange Rothera: (+) Blue Modified Cobalt: NR	GC bas ext chl or Infi
Cocaine Base	Marquis: (+) Salmon or No Reaction Modified Cobalt: (+) Blue Cobalt: NR If the color tests indicate cocaine base, the base form must be confirmed by FTIR	FTI dire FTI to c salt GC eth per coc
Cocaine Salt	Marquis: (+) Salmon or No Reaction Modified Cobalt: (+) Blue Cobalt: (+) Blue If the color tests indicate cocaine salt, the salt form must be confirmed by FTIR	FTI dire FTI to c salt GC ma ide
Cocaine	If the FTIR analysis is inconclusive or the sample is not amenable to FTIR analysis, based on the GC/MS analysis the sample will be identified as "cocaine". This is only to be used when form is not determined	GC met FTI dire
Heroin (solid)	Marquis: (+) Purple	GC

	Mecke: (+) Green Froehde: (+) Purple Modified Cobalt: NR	met CH
Heroin (liquid)	Marquis: (+) Purple Mecke: (+) Green Froehde: (+) Purple Modified Cobalt: NR	GC chl chl
Marijuana containing delta-9-THC	**Duquenois-Levine**: (+) Purple/Pink (extracted) **Macroscopic Examination**-see below for suggested verbiage	Mi Exa cys sur hai GC met pet
Delta-9-THC	Duquenois-Levine: (+) Purple/Pink (extracted)	GC met pet
MDMA	Marquis: (+) Purple/Black Mecke: (+) Teal Froehde: (+) Teal Modified Cobalt: NR	GC bas ext chl

	Rothera: (+) Blue	
Psilocyn (Mushrooms)	**Webers**: (+) Red/(+) Blue w/HCl addition (may be done on plant material or extract) **Acidified pDMBA**: (+) Lavender (may be done on plant material or extract)	GC col ext aci cle
LSD	UV Fluorescence UV Fluorescence with Methanol leaching Acidified pDMBA: (+) Lavender may be done on methanol extract of sample	GC met soli
Steroids	Marquis: variable Mecke: variable Froehde: variable Libermann: variable	GC met
GHB	Ferric Chloride: (+) red-orng Cobalt Nitrate: (+) pur or GCMS screen	GC der or und
New and Emerging Compounds	The analyst will follow a logical scheme of analysis for presumptive and confirmatory tests based on technical literature, in-house testing or direction from the Supervisor.	See Pre

1. Colors listed for the presumptive color tests are provided as examples of typical results. The actual color observed depends on a number of factors including the concentration of drug in the sample, presence of other substances in the sample, and the amount of sample used. Different colors may be observed and still contribute to a positive identification.
2. Expedited GC/MS methods may be used when presumptive analysis indicates a drug or drug class is present. For example, the METH method may be used when color tests indicate that methamphetamine is present, or the DEA method may be used when the appearance and markings of a pill indicate diazepam is present.
3. When presumptive tests are inconclusive, the GENERAL method will be used. Poor chromatography on the GENERAL method may require re-shooting a sample on the DEA method.

B. **Guidelines for an Identification**

Categories of Analytical Techniques		
Category A	**Category B**	**Category C**
Infrared Spectroscopy	Capillary Electrophoresis	Color Tests
Mass Spectrometry	Gas Chromatography	Fluorescence Spectroscopy
Nuclear Magnetic Resonance Spectroscopy	Ion Mobility Spectrometry	Immunoassay
Raman Spectroscopy	Liquid Chromatography	Melting Point
X-ray Diffractometry	Microcrystalline Tests	Ultraviolet Spectroscopy
	Pharmaceutical Identifiers	
	Thin Layer Chromatography	
	Cannabis only: Macroscopic Examination Microscopic Examination	

Table from: "SWGDRUG Methods of Analysis/Drug Identification Recommendations"

1. When a validated Category A technique is incorporated into an analytical scheme, at least one other technique (from either Category A, B or C) shall be used. When a Category A technique is not used, at least three different validated techniques shall be employed. Two of the three techniques shall be based on uncorrelated techniques from Category B. In cases where hyphenated techniques are used (e.g. gas chromatography-mass spectrometry), they will be considered as separate techniques provided that the results from each are used.
2. For cannabis, macroscopic and microscopic examinations will be considered as uncorrelated techniques from Category B when observations include documented details of botanical features. For exhibits of cannabis that lack sufficient observable macroscopic and microscopic botanical detail (e.g. extracts or residues), Δ9 -tetrahydrocannabinol (THC) or other cannabinoids shall be identified.
    a. Only botanists may identify cannabis and other botanical material utilizing morphological characteristics (category B) alone provided sufficient botanical features appropriate for identification are observed.
3. All Category A and botanical identifications shall have data that are reviewable. Examples include:
    a. GC/MS chromatograms
    b. FTIR spectra
4. For cannabis and botanical materials only: recording of detailed descriptions of morphological characteristics.
    a. Macroscopic examination includes observations of botanical features **without** the aid of a microscope. Suggested language for documentation include:
        i. **Plant material with clustered green leaves**, with the option of adding additional information: colors, presence of stalks, stems or seeds if significant. Clustered is the assumed clustering around a stem or stalk consistent with a "bud-like" structure
        ii. **Plant material with loose green leaves**, with the option of adding additional information: colors, presence of stalks, stems or seeds if significant. This is the macroscopic description for loose leaves that do not appear to be attached to a stem or stalk.
        iii. **Plant material with green leaves and stem**, with the option of adding young or attached leaves. This is the macroscopic description for "leaf clippings" or representative samples of plants when the leaves are often young.
        iv. **Whole plant material with green leaves, stem and roots**, if all are present. This would be the macroscopic description for a whole plant.
    b. Microscopic examination includes observations of botanical features **with** the aid of a microscope. Suggested language for documentation include:
        i. **Cystolithic and clothing hairs consistent with marijuana are visible on the same leaf**.

C. **Presumptive Tests:** A presumptive test is an analytical test that eliminates some drugs from consideration; and at the same time indicates which class of drugs might be present. Examples of presumptive tests are:

1. Color Tests
2. UV Fluorescence
3. Physical Appearance and Markings - for Pharmaceutical Preparations

D. **Confirmatory Tests:** A confirmatory test is an analytical test that confirms the identity of a drug in a sample. Examples of confirmatory tests are:

1. Gas Chromatography/Mass Spectrometry
    a. Before comparing an unknown sample to a reference standard the following criteria must be met (rejection of data criteria before comparison with a standard):
        i. The Gas Chromatograph/Mass Spectrometer must be in good working order; passing proper maintenance checks and periodic autotunes.
        ii. Sufficient peak shape (symmetrical) and resolution (baseline) of the unknown peaks
        iii. There should be sufficient mass fragments for comparison and identification without saturating the detector. Sample may be adjusted by dilution or concentration to achieve these results.
        iv. Internal standard is present in both the blank and unknown
            1. Internal standard is the only prominent peak in the blank
            2. Blanks must not include peaks of any drug or controlled substance. Any peaks in the blank should be related to column bleed, phthalates, etc.
    b. For comparison of the unknown sample to a known reference material (standard):
        i. The spectrum must be compared to a verified reference material analyzed on the same instrument using the same method for a confirmation.
            1. The mass spectrum of the sample overall should match the mass spectrum of the reference standard (base ion and other prominent ions).
            2. The overall fragmentation pattern and relative ratios of the ions are compared for consistency.
            3. There should not be any major differences or additional prominent ions that are not explained or noted.
        ii. The vial number of the reference material used will be documented in the case notes
        iii. The relative retention time (RRT) of the sample must be within +/- 5% of the RRT of the reference material for confirmation.
        iv. The mass spectrum should contain at least 10 prominent ions (when possible) as well as the molecular ion (if present in standard).
            1. The relative intensity of the major ions should agree between the reference and the sample spectrum.

2. Prominent ions with a relative intensity greater than 10% of the base ion in the reference spectrum should be present depending upon concentration) in the sample spectrum.

v. For confirmation, the reference material must be run within the calendar month of the sample.

c. GCMS Settings:

i. To ensure the highest quality analysis of each compound of interest is achieved, each Gas Chromatograph/Mass Selective Detector has settings which can be changed at the discretion of the Criminalist. Some settings are considered alterable while others are more crucial to the integrity of the method being used.

ii. **If settings are altered from the validated method parameters it must be documented; this may be accomplished by documenting the alteration to the method parameters in the analyst's notes.**

iii. The following are examples of settings that may be altered at the discretion of the Criminalist:

1. The EM Voltage or Gain Factor

2. The Injection Size

1. Injection volumes greater than 1 µL may overflow vapor from the inlet, causing analysis variations. If the injection volume is adjusted, it is important to consider the inlet size, inlet temperature and solvent volume before the injection. See Chemstation software calculator to assist with injection volume adjustments.

3. The Split Ratio & Flow for the inlet

4. The Final Hold Time

iv. The following are examples of settings that may not be altered for casework analysis:

1. The temperature program

2. The column flow

d. See DRG.19 for required checks to ensure reliability of test results.

e. See DRG.25 for instructions on the use of Macros.

f. See DRG.38 for instructions on the proper entry of results into LIMS.

2. Infrared Spectrophotometry

a. Before comparing an unknown to a reference standard the following criteria must be met (rejection of data criteria before comparison to a standard):

i. The Infrared Spectrometer must be in good working order; passing proper maintenance checks and contamination ready checks

ii. Both Contamination and Background checks must pass

iii. Identifiable peaks present in the fingerprint region (2000-500 cm-1) that may be compared to a standard

b. For comparing an unknown sample to a reference standard:

i. For a confirmation, the unknown spectrum must be compared to verified reference material, analyzed on the instrument, using the same technique (e.g. UATR).

ii. To determine a match, the sample and standard must be analyzed carefully by a qualified analyst.

iii. The overall absorbance pattern and relative ratios of the peaks within the spectrum are compared for consistency.

iv. A peak comparison is made between the unknown sample and the reference standard in the fingerprint region of the IR spectrum (2000-500 cm-1).

v. Peaks present in the standard spectra should be present in the unknown sample spectra.

vi. There should be no significant additional bands in the unknown sample when compared with a reference standard.

c. For confirmation, the reference material must be run within the calendar month of the sample.

d. The vial number of the reference material used will be documented in the case notes

e. See DRG.30 for required checks to ensure reliability of test results.

f. See DRG.38 for instructions on the proper entry of results into LIMS.

3. Stereomicroscopy-For Cannabis ONLY

E. **Guidelines for No Common Controlled Substance Detected**

1. It is up to each trained analyst to decide which tests are performed on a case by case basis. There can be variability in color reactions based on the composition of the materials being tested and pH may also be taken into account. To report that a sample has no common controlled substance detected the following criteria should be met:

a. **Solid Sample**

i. The following color tests performed: Marquis, Mecke, Froehde, Modified Cobalt Thiocyanate, Liebermann, and pDMBA.

ii. A methanol extraction analyzed by Gas Chromatography/Mass Spectrometry using the GEN method that does not show the presence of any commonly controlled substance. An acid/base chloroform extraction analyzed by Gas Chromatography/Mass Spectrometry using the GEN method may be performed instead of a methanol extract.

iii. Approximately 25-35 mg of sample should be used and diluted in 5-8 drops of solvent to ensure adequate extraction of potential substances in the unknown.

iv. Any number of units counted and reported will be a descriptor of the evidence analyzed. No uncertainty will be assigned to the number counted. See DRG.38 for instructions on entering results in LIMS.

b. **Liquid Sample**

i. The following color tests performed: Marquis, Mecke, Froehde, Modified Cobalt Thiocyanate, Liebermann, and pDMBA.

ii. Any volume measurement reported will be a descriptor of the evidence analyzed. No uncertainty will be assigned. See DRG.38 for instructions on entering results in LIMS.

iii. An acid and basic chloroform extraction analyzed by Gas Chromatography/Mass Spectrometry using the GEN method that does not show the presence of any commonly controlled substance. For an unknown clear liquid where color tests are inconclusive, it is recommended to check the pH of the liquid. Instructions for extraction:

1. Take a few drops of sample-add to a shell vial
2. Add 1 drop of 10% HCl-check pH
3. Add 5-10 drops of chloroform-check pH (should be acidic)
4. Aspirate the chloroform (bottom layer) into a GC/MS insert-fill insert to about ½ full
5. Add 1-2 drops of saturated sodium carbonate (Rothera 2) to original sample (shell vial)-check pH (should be basic)
6. Add 5-10 drops of chloroform
7. Aspirate the chloroform (bottom layer) into the same GC/MS insert (with the acidic solution)
8. Check the pH of the insert (should be neutral)
9. Add internal standard (n-tricosane)
10. Use chloroform blanks
11. GEN method (I.S. is typically n-Tricosane for most analytes and cholesterol for steroids)

c. **Plant Material**

i. The following color test is negative: Duquenois-Levine.

ii. Stereomicroscopy is not consistent with Marijuana

iii. A methanol extraction analyzed by Gas Chromatography/Mass Spectrometry using the GEN method that does not show the presence of any commonly controlled substance.

iv. Note: If only #i and #ii are done, then the analyst can only conclude the sample was negative for Marijuana.

d. **Mushroom-like Material**

i. The following colors tests are negative: Webers and pDMBA.

ii. A methanol extraction analyzed by Gas Chromatography/Mass Spectrometry using the GEN method that does not show the presence of any commonly controlled substance.

e. **Miscellaneous (Food, Swabs, Paper, Clothes, etc.)**

i. Visually inspect the sample for obvious stains or irregularities (eg. paper may have water marks from soaking)

ii. Cut or remove a portion of the item

iii. Extract in appropriate solvent

iv. You may need to concentrate and clean-up the sample using the drying block and centrifuge

v. A methanol (solid sample) or acid/base chloroform (liquid sample) extraction analyzed by Gas Chromatography/Mass Spectrometry using the GEN method that does not show the presence of any commonly controlled substance.

F. **Guidelines for Licit Pharmaceutical Pills**

1. Non-controlled pills may be presumptively identified by appearance and markings. If markings are visible on a whole pill, then it can be presumptively identified as consistent with the appearance and markings of a reference with the exception of licit pharmaceuticals known to have counterfeits (eg. Steroids) or illicit pills (eg. suspected MDMA).

a. The pill should be drawn, described or an electronic image may be printed out (including its shape, color, and markings). In the case notes, a drawing of the pill(s) or electronic image, the name of the reference used, the page number(s), the brand name (or common name), the schedule/prescription/over the counter status, as well as the usage should be indicated.

b. The report will clearly indicate the results are presumptive. For example: "The appearance and markings are consistent with the reference."

2. Controlled pills should be confirmed. It is at the discretion of the analyst to determine how many items to confirm as it depends on the schedule and number of pills for each item.

a. If a controlled substance that is not a pill has been confirmed for a suspect, the analyst may presumptively identify licit pharmaceuticals by appearance and markings.

b. Any pill count reported will be a descriptor of the evidence analyzed. No uncertainty will be assigned. See DRG.38 for instructions on entering results in LIMS

3. If the pill cannot be identified, or the markings are not legible then the pill must be treated like an unknown solid; the appropriate color tests and analysis by Gas Chromatography/ Mass Spectrometry must be performed.

4. References are maintained for comparison and presumptive identification purposes. The following are approved references for use:

a. Poison Control Center 1-800-876-4766 or website: https://pill-id.webpoisoncontrol.org/

b. Ident-A-Drug book (any version)

c. Physicians' Desk Reference (PDR) (any version)

d. Drug Identification Bible (any version)

e. Pill Identification Reference Rx-ID CD-ROM's (any version)

f. Pillbox NIH/NLM website: https://pillbox.nlm.nih.gov/

g. Drugs.com Pill Identifier: https://www.drugs.com/imprints.php

h. The manufacturer's website or phone conversations with the manufacturer

i. Other references may be used if approved by the Supervisor or Manager. This approval will be documented by the Technical Review of the case.

5. If one of the above references is used for presumptive identification, the report shall list the analytical technique as "Reference"

G. **Guidelines for Extracted Materials**

1. If any part of an item that has been analyzed and/or extracted is to be returned to the Controlled Substance envelope; it must be repackaged separately from the unexamined portion of that item. It should be marked as an extracted portion of the item (eg. mushrooms, LSD blotter paper, etc.).

2. A notation in the case-notes should indicate extracted material was returned to the Controlled Substance envelope. This is to avoid altering the evidence.

H. **Guidelines for Library Matches-GC/MS**

1. The mass spectral libraries are maintained for comparison for presumptive identification purposes.

2. Analysis of "unknown" spectra run on full scan is performed by the instrument's software of a semi-automated search against a commercial or user-created library. The results may yield a "match" or "hit" with a certain ratio or percentage associated.

3. Final review of a library match must be performed by an analyst and the following should be considered:

a. For a match to be considered positive, typically the most abundant ions in the unknown spectrum must match those in the "known" standard, and should be in the same relative abundance ratios.

i. Top 10 most abundant ions in unknown must match those in the known. The ions must be present in similar relative abundances.

ii. If the 10 most abundance ions don’t match:

1. Evaluate ion flip. When two ions have a slight shift in relative abundance between the unknown and known. Ions may “flip” based region being scanned in the peak. Try scanning a different region in the unknown.

2. Evaluate relative ion abundance. When the same ion appears in the unknown and known, but they appear to have different relative abundances, this can be a result of concentration differences. In most cases, the differences in ion abundances should be relatively minor.

3. Evaluate the presence or absence of ions from the unknown to the known. Additional ions in the unknown may be explained by column bleed (207, 281, 355). Very low abundance ions may be missing due to differences in concentration. The 10 most abundant ions should still be present in similar relative abundances.

4. Evaluate the presence or absence of ion clusters or groups. The ion present in groupings or clusters should not differ, although their relative abundance may differ slightly.

5. Search Tips:

1. Search multiple libraries and evaluate the top candidates in each library.

2. For spectra with multiple ions in very low abundance, consider a baseline subtract to reduce the impact of septa or column bleed.

6. If after performing the steps above and the spectral match is not justifiable (meeting proper criteria), then it will not be identified as a presumptive library match.

b. Occasionally, ions in the reference spectrum may be missing from the "unknown" due to low overall abundance.

c. If additional ions are present in the unknown, it is suggested to try to determine if these "extra" ions may be due to a co-eluting substance, or "background" such as column bleed or diffusion pump oil. An ion subtraction may aid in this.

d. Library matches should be reported as a screen or presumptive positive only if no confirmation has been performed or if the unknown has not been compared to a reference material run on the same instrument and the same temperature program.

4. The presumptive positive test will be included in the case notes. The TIC will be labeled with the presumptive library ID and supporting data printout will be included for the library match. The mass spectral library used will be documented on the data printout.

5. Additions to the mass spectral libraries may be made only after approval by a Supervisor/Manager. This control will be documented by the analyst entering the new addition. The analyst will indicate who is making the addition and the person authorizing the addition.

I. **Guidelines for Library Matches-FTIR**

1. The FTIR spectral libraries are maintained for comparison for presumptive identification purposes.

2. Analysis of unknown sample spectra are collected on the instrument. The FTIR software allows for a search against a commercial or user-created library. The results may yield a "match" or "hit" with a certain ratio or percentage associated.

3. Final review of a FTIR library match must be performed by an analyst and the following should be considered:

a. For a match to be considered positive, the unknown sample spectrum must be consistent with the spectrum of the library reference.

b. A peak comparison is made between the library reference and the unknown sample spectra in the fingerprint region of the spectrum (2000-500 cm-1)

c. Library matches should be reported as a screen or presumptive positive only if no confirmation has been performed with a reference standard.

4. The presumptive positive test will be included in the case notes. The FTIR spectra will be labeled with the presumptive library ID. The IR library will be identified and documented on the data printout.

5. Additions to the FTIR spectral libraries may be made only after approval by a Supervisor/Manager. This control will be documented by the analyst entering the new addition. The analyst will indicate who is making the addition and the person authorizing the addition.

END OF DOCUMENT

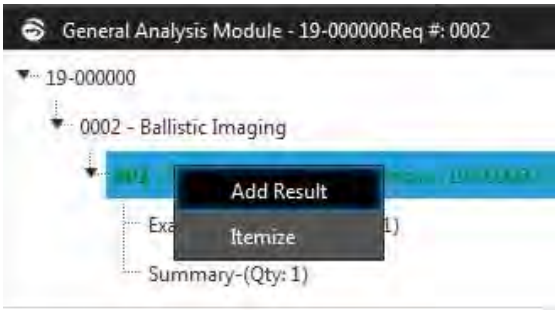
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 11/22/2019	**NUMBER:** DRG.38 - Entering Results in LIMS
	RELATED ORDERS: DRG.38 - Entering Results in LIMS	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Entering Results in LIMS	

I. Policy: The following procedure will be followed for entering results into LIMS for generating the notes and report.

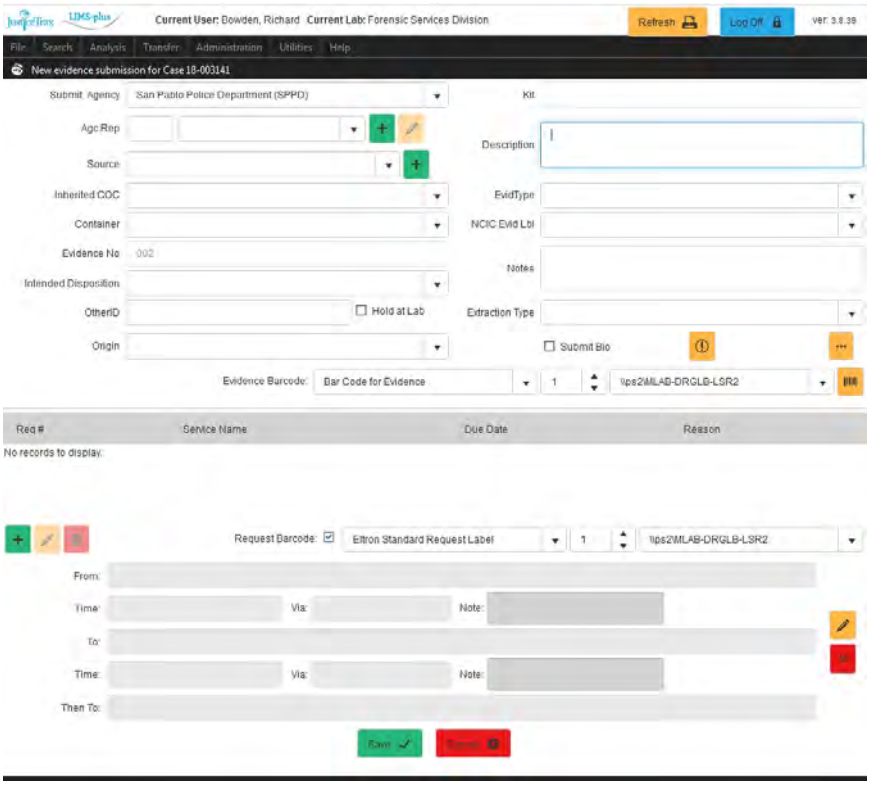
A. Item description and itemization

1. In the Request Tab of the case:
   a. Right-click on the request.
   b. Select "Edit Findings"
2. Create new items or use existing ones:
   a. For requests on new submissions that do not have sub-items: create items as outlined in steps C through E. Items should only be created one level below the submission.
   b. For existing evidence that has been previously analyzed and sub-itemized in the drug section: use the existing items. Make sure that the items that are to be analyzed are related to the new request (this should already have been done by the clerks). Skip to step F.
   c. For existing evidence that has been analyzed in Latent Prints (or other Criminalistics sections) where they have already created sub-items:
      i. create new ones as outlined in C though E. Items for Drug Section should only be created one level below the submission. The clerks should already have unrelated the existing Criminalistics items.
      ii. If the items created by another unit are only one level below the submission and the item description meets the drug section requirements, the existing items may be used. Relate the items to the drug request.

      NOTE: Drug section analyzes the contents (suspected controlled substance) of each item. Other sections are analyzing fingerprints, marks, DNA, etc. most likely from the packaging. Entering two items (one for the packaging and one for the contents) allows for separate descriptions and itemization schemes that may better meet each section's requirements.
      The "Other ID" field is used to designate the officer's assigned item number which will link the two pieces of evidence together. See QA.09.
3. In the Edit Findings screen (Controlled Substances Analytical Module):
   a. Right-click on the submission.
   b. Select "Itemize"

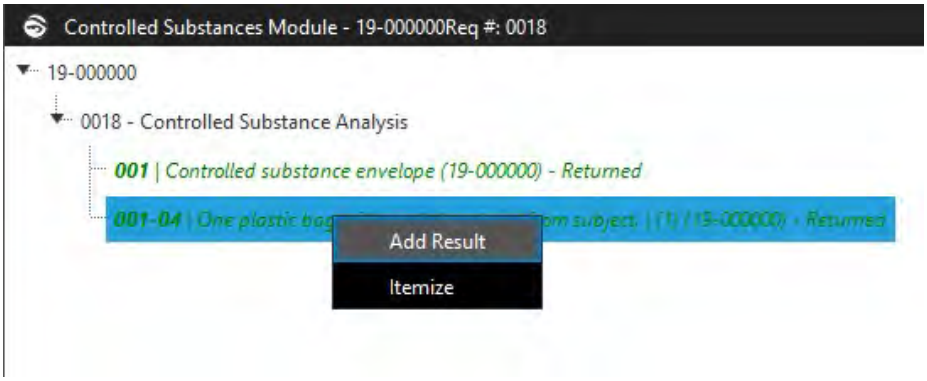


4. In the Description field enter:
    a. The item description (including number, type of packaging, and location).
5. In Other ID enter:
    a. The agency item number (if indicated).
    b. NOTE: The number in the "Evidence Barcode" field should be zero, or a page of barcode script will print on the default printer.



B. Results and Notes

1. In the Edit Findings screen (Controlled Substances Analytical Module):
    a. Right-click on the newly created item.
    b. Select "Add result"



2. In the "Analysis Notes" field enter:
    a. The bench notes related to the analysis of the item will appear only in the notes printout, and include:
        i. detailed packaging (all packaging for each item),
        ii. description of item (including color, texture, appearance),
        iii. notes on weight (indicate net, estimated, gross and weight calculations),
        iv. tests done (presumptive and confirmatory tests and the results of each test),
        v. note comments (any comments about repackaging, not examined, etc.),
        vi. discrepancies (any discrepancy should be initialed by another analyst). Also check the "Inventory Discrepancy" checkbox in the request extended data form.
        vii. and the final result (indicate what analyte(s) are present).
3. The analyst is responsible for selecting the correct substance and schedule.
    a. Consult the California Health & Safety Code, Drug Monographs, CopWare, DEA website, or other resources for determining if a substance is scheduled in California or is Federally scheduled.
4. In the Result field enter:
    a. The final result analyte. **Use the pull-down menu to select the correct analyte, if present in the pick-list**.
    b. If additional analytes are found present in an item, they should each be added as a different result from the pull-down menu pick-list.
        i. NOTE: The final report may sort additional analytes first by schedule (lowest to highest i.e., I to V) and then sort the names alphabetically.
        ii. Analytical notes and report notes are tied to the final result analyte entry. If the order of report comments or analysis notes sorts strangely on the notes or final report, try moving them to a different analyte.
    c. If an analyte is not in the menu selection a generic result must be chosen and the result must be manually entered the Result Notes field
        i. If the analyte is controlled and confirmed, select "Other Controlled Substance" and manually enter the drug name
        ii. If the analyte is controlled and not confirmed, select "See comment" and manually enter the drug with additional notes
        iii. If the analyte is not controlled, select "Not controlled" and manually enter the drug with additional notes
5. In the "+/-" field enter:
    a. The schedule override (as a number) if needed.
    b. Select schedule "57" as the schedule for synthetic cannabinoids
    c. Select schedule "75" for synthetic cathinones

d. Select schedule "90" when the drug is not controlled under California CSA but it is controlled federally.

6. In the "Result Notes" field enter:

   a. Any comments if needed. These notes or comments will appear on the report. Examples are:

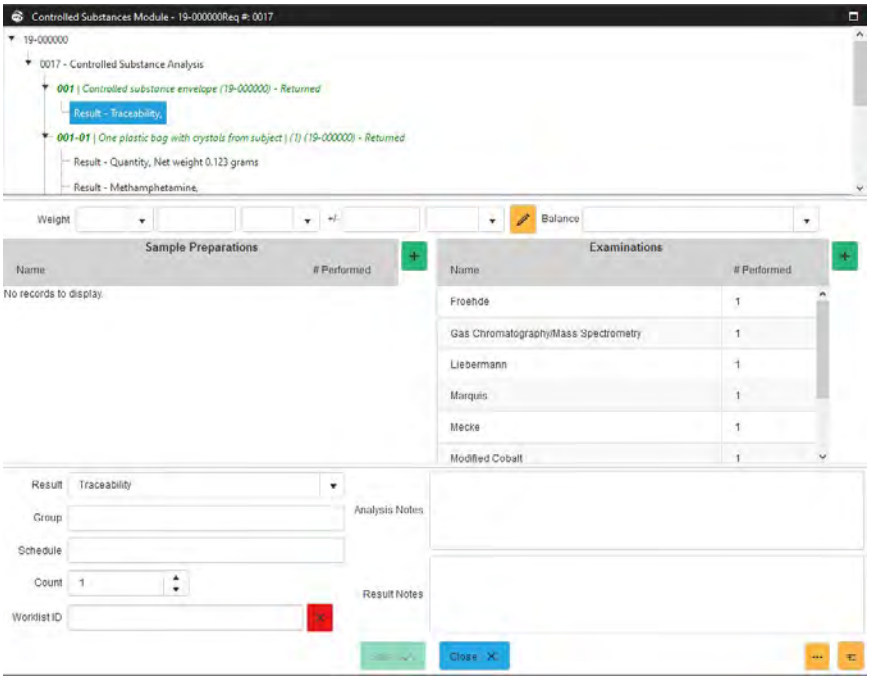
      i. Appearance and markings are consistent with a reference

      ii. One pill was analyzed and contained the above result

      iii. Presumptive tests only

      iv. The substance is non-controlled in California but is Federally scheduled

      v. Items not labeled on internal packaging; unable to assign officer's item numbers



7. If multiple items are present:

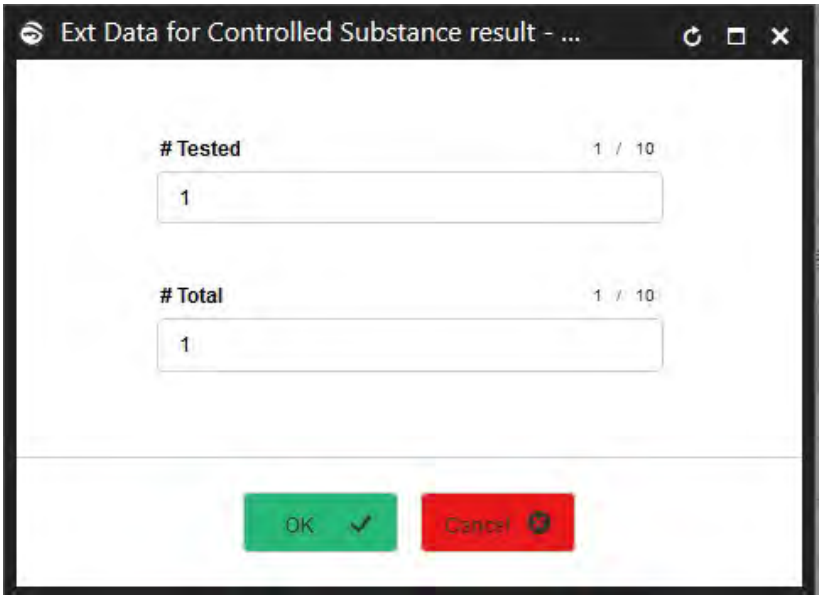
   a. Click the ellipsis ("…") button in the lower right corner

   b. In the # Tested field enter:

      i. The number of packages that were analyzed. This defaults to 1.

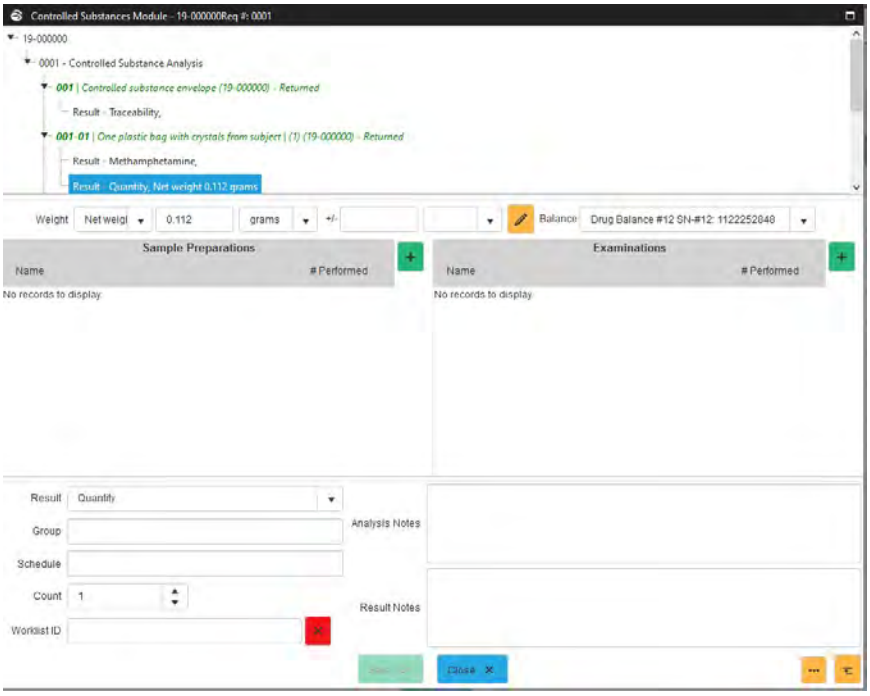
   c. In the # Total field enter:

      i. The total number of packages present. This defaults to 1.



C. Weights or Other Quantity

1. To add weights or other quantity information to an item:
    a. In the Edit Findings screen (Controlled Substances Analytical Module):
    b. Right-click on the item and select Add Result.
2. In the Result field enter:
    a. "Quantity"
3. In the first Weight field pick-list enter:
    a. The type of quantity involved (net weight, total estimated weight, etc.)
4. In the second Weight field enter:
    a. The numeric quantity as a number.
        i. NOTE: fractional quantities should be given as a decimal (ie "1.25" NOT "1-1/4"-crystal cannot read fractions)
        ii. If a measurement is below 0.020 grams, leave this field blank
    b. All digits should be used.
    c. If the balance is connected to the computer, either the "Cal/Menu" print button on the balance, or the F12 key on the computer keyboard can be used to send the numeric weight result to the cursor position on screen. The balance settings must be properly configured and the software running in order to send over the weight.
5. In the third Weight field pick-list enter:
    a. The units (grams, milliliters, pills, etc)
    b. If a measurement is below 0.020 grams, select "residue" for this field. Residue is defined in DRG.41.
6. In the last pick-list on the Weight row enter:
    a. The Balance or other traceable instrument used to derive the quantity.
        i. the balance may be entered if reporting residue
    b. NOTE: every "Net Weight" needs to have a balance.



c. NOTE: There should be a separate weight result for each item tested. This is in addition to any final analyte results with notes. There should be an additional result for total weight or other total quantity if needed.

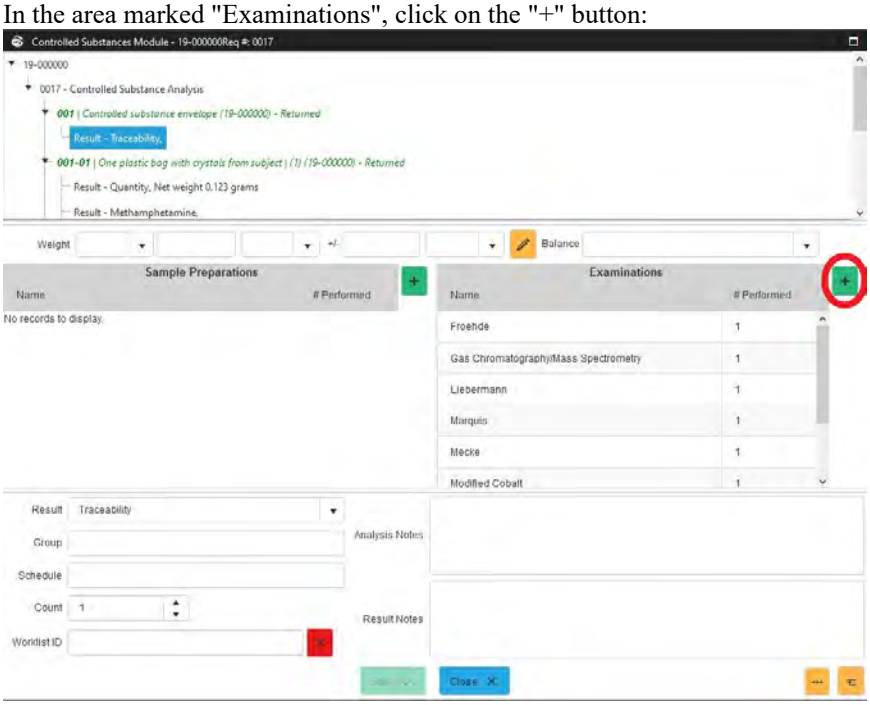
D. Traceability

1. Traceability is kept in two different ways--once for the overall request to track lot numbers, and once on each tested item to display the methods used in analysis.

2. Once per request on the first submission, add a new result.

   a. Enter the analyte as "Traceability".

   b. In the area marked "Examinations", click on the "+" button:



   i. Select a test performed.

   ii. ALL analytical techniques used for analysis should be listed here once.

      1. Exact color test name

2. Exact instrumental analysis name
3. "Reference" - to indicate a pharmaceutical reference was used

iii. In the large "Notes" field, enter in the traceability information for the examination:

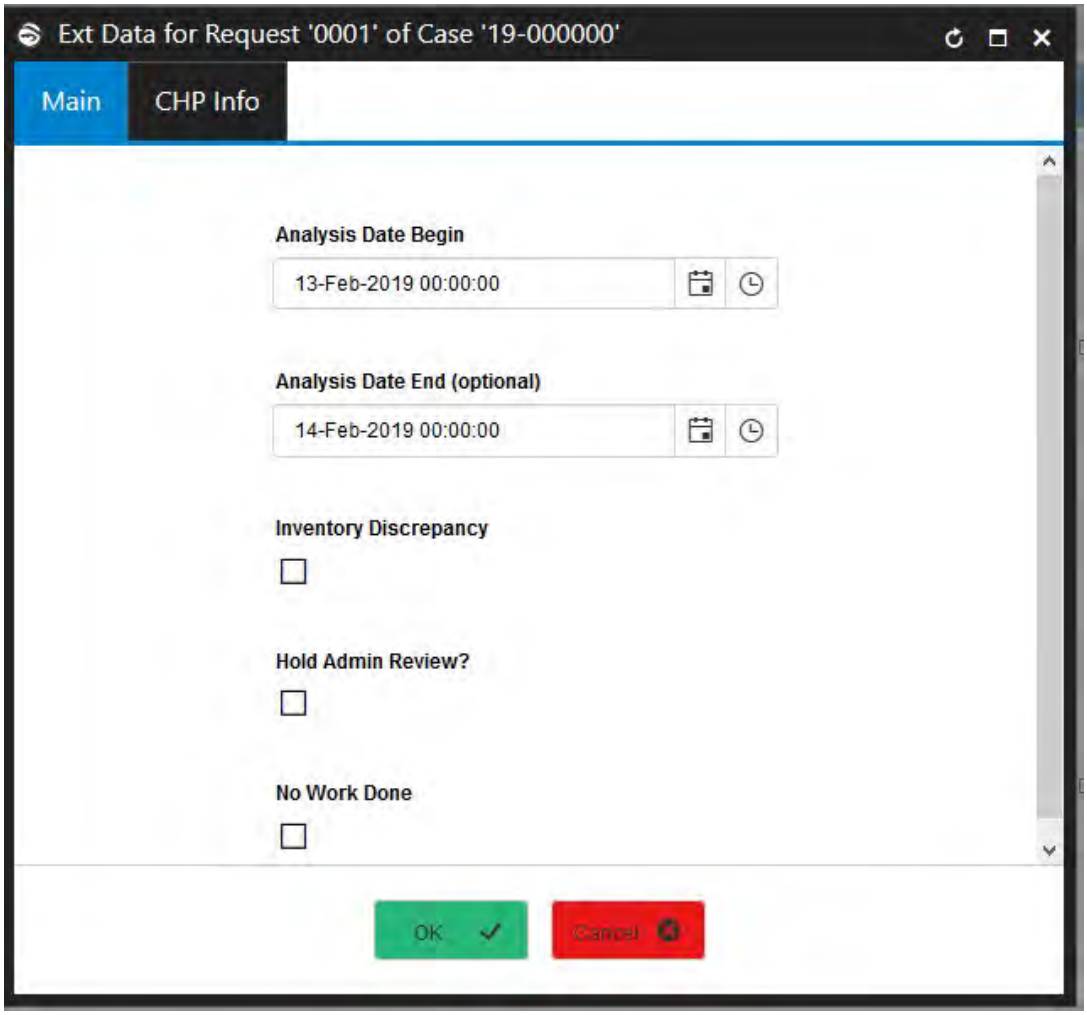
1. For color tests, enter in the Lot number of the solution. If multiple Lot numbers were used, separate each with a comma or a new line entry.
2. Entering the Lot number in analyst's notes section is also sufficient for traceability
3. For GC/MS or FTIR or other instruments that compare the unknown with a standard, the Lot number of the standard can be entered
4. The Lot number of the standard on the instrumental print out is also sufficient for traceability
5. For Reference, enter the pharmaceutical reference used such as pill-id.webpoisoncontrol.org or Amera-Chem
6. Entering the exact reference in the analyst's notes section is also sufficient for traceability

iv. All techniques chosen will appear on the notes with the added lot numbers/traceability information.

3. Once per each analyzed item, add a new result
   a. Enter the analyte as "Traceability".
   b. In the "Analysis Notes" field, add the names of the color tests, instruments, and other methods used to analyze the item. These names should match the ones selected above for the overall request traceability.
   c. An analyst can use auto-text to help automate and standardize the entries.
   d. All techniques listed will appear on the report and notes for each item.

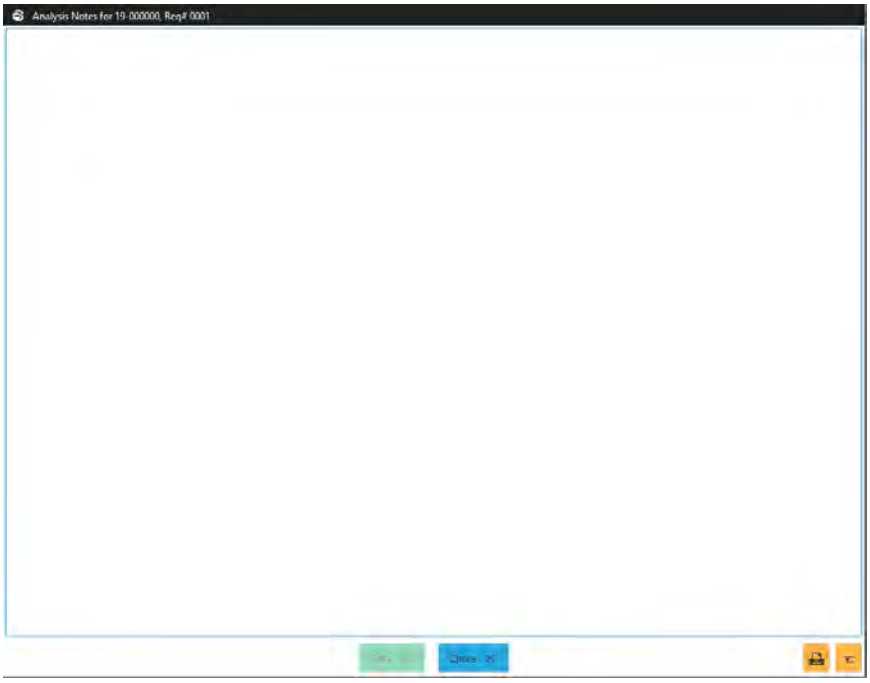
E. Analysis Date Range

1. To enter the dates of analysis (dates will appear on the report)
   a. In the Request Tab of the case:
      i. Right-click on the request
      ii. Select "Additional Data"
      iii. Enter the "Analysis Date Begin" and "Analysis Date End"
         1. If analysis was started and completed on the same day, then only the "Analysis Date Begin" is required
         2. Even though the time is displayed, it is not used.



F. Reports for No Work Done

1. To generate a report where no work is done:
    a. In the Request Tab of the case:
        i. Right-click on the request.
        ii. Select "Additional Data"
        iii. Check the "No Work" check box.
2. Edit findings and itemize evidence as in step A above:
    a. Each submission will need one item in order to get the chain of custody to print properly on the report.
    b. Since the items are not examined list the description as "Not opened, not examined."
3. Edit findings for each itemized evidence and add "Not examined" as the result as in step B above
4. Add "Traceability" Result and choose "None" from the Available Examinations.
5. In the Request Tab of the case:
    a. Right-click on the request.
    b. Select "Edit Lab Notes"
    c. In the large blank, add a narrative related to this request that will appear on the final report.
        i. The narrative could include: who requested the change, give the name and title if known, the reason why no work was required, and the disposition of the evidence.



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/26/2016	**NUMBER:** DRG.39 - Referee Analysis and Discoveries
	RELATED ORDERS: FSD.31 - Subcontracting & Externally Directed Analysis, DRG.38 - Entering Results in LIMS, FSD.45 - Discovery Requests for Records, CLER.DAT.12 - Discoveries and Subpoena Duces Tecum, TOX.10 - Case File Images, CLER.DAT.07 - Subpoenas	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD/LAB Supplemental: 5.8.1.1.1**	
CHAPTER: Procedures	**SUBJECT:** Referee Analysis and Discoveries	

I. Policy: The Controlled Substance Unit will not subcontract with another laboratory, for analysis that the unit does not have the technical capability to perform.

A. The laboratory may provide the requesting party with a list of laboratories that may be capable of performing the requested work.

B. The laboratory will not make any recommendations nor advise the client on selection of the outside laboratory.

II. Policy: Referee Analysis is analysis performed by an outside laboratory per a request from the subject*or the defense counsel. *If the subject is representing him or herself, then he/she may make the request. See FSD.31 for more information.

A. The Crime Laboratory will prepare the sample for transportation to the desired laboratory (referee laboratory) for a fee that must be paid by the subject or his/her attorney.

1. The cost of any analysis performed by the referee laboratory must be paid by the subject or his/her attorney.

B. **Conditions Required**:

1. The following conditions should be met before Forensic Service Division staff sends any solid dosage drug evidence to an outside laboratory for referee analysis:

2. A written documentation is sent to the Forensic Services Division by the subject's attorney requesting evidence be sent to another laboratory for referee analysis. This letter should include:

a. The Forensic Services Division laboratory number and/or agency and agency case number and subject name.

b. The mailing information of the referee laboratory that the evidence will be sent to.

c. A sample preparation and handling fee if required, paid to the Forensic Services Division (refer to the most current fee schedule) by the subject or his/her attorney before the evidence is sent.

d. For the Public Defender's Office in Contra Costa County, our laboratory can bill a County Org Number, therefore a check is not required. However, a written authorization to bill the Public Defender's Office should be obtained, along with the correct County Org Number to be charged if needed.

3. **For Solid Dosage Drug evidence, an authorization from the District Attorney's Office or a Court Order is required before any evidence can be sent for referee analysis**.

a. It is the responsibility of the subject or his/her attorney to acquire such authorization. A letter of authorization (or some written documentation) from the District Attorney or a copy of the Court Order should accompany any written request for referee analysis. The letter of authorization should specify which item(s) the District Attorney is authorizing to be sent for referee analysis.

C. **Preparing The Evidence**:

1. The following is the recommended procedure for preparing evidence to be forwarded for referee analysis:

2. It is the responsibility of the requesting party (subject's attorney) to arrange for the evidence to be sent to the Contra Costa County Crime Lab (if the evidence is outside the Crime Lab). The evidence must be received by the Crime Lab in a sealed condition.

3. After the appropriate documentation is received by the Forensic Services Division:

a. The evidence should be transferred to the laboratory staff member performing the evidence split.

b. The accompanying paperwork should be given to the laboratory staff member. If feasible, the person who originally examined the evidence should re-open the Controlled Substance Submission and split a portion of the appropriate item(s).

c. On the original Controlled Substance Envelope the chain of custody should reflect that the laboratory staff member received the Controlled Substance Envelope, split the item(s) inside the Controlled Substance Envelope to be sent to another laboratory and returned the original Controlled Substance Envelope back to its storage location (agency, evidence room, Property, etc.) as indicated below:

Evidence Received From	**Evidence Delivered To**	**Date**
Evidence	Lab Staff Member	5/31/06
Split Item X (agency #) Initials and date	Bay Area Forensics via Golden State Overnight	5/31/06
Lab Staff Member	Evidence	5/31/06

d. The evidence is then opened and a portion of the item(s) to be split is weighed. The split evidence should be packaged (typically into a zip-lock plastic bag), sealed, and marked (with the laboratory number, item/sub-item number, initials and date). The original item should be re-sealed (with initials and date).

e. Typically the laboratory sends a reasonable amount of the available sample. Laboratory staff can split 50-200 milligrams (or 1-3 milliliters for liquid samples) depending on the amount of sample we have to begin with. The amount of substance sent should be documented in LIMS. See DRG.38.

f. **If the sample size is small, such that the entire sample must be sent, it has to be authorized by the District Attorney's office.**

4. The split item(s) are placed into a Controlled Substance Envelope marked "DUPLICATE" and sealed with Evidence Tape.

a. All the agency provided case related information on the original Controlled Substance Envelope should be copied onto the "DUPLICATE" envelope. The original Laboratory number should be written at the top of the "DUPLICATE" Controlled Substance Envelope. The chain of custody should not be duplicated. The first line of the chain of custody on the "DUPLICATE" Controlled Substance Envelope should reflect the item(s) have been split and are being sent to a referee laboratory (as indicated below):

Evidence Received Form	**Evidence Delivered To**	**Date**
Split Item X (agency #)	Bay Area Forensics	5/31/06
Initials and date	via Golden State Overnight	

5. A copy of the attorney's written request for referee analysis should be stapled to the "DUPLICATE" Controlled Substance Envelope. It is recommended to include some notation to the referee laboratory that the cost of any analysis requested by the subject's attorney MUST be billed to the attorney and NOT to the Contra Costa County Crime Lab. The report of analysis and/or any questions regarding analysis should be directed to the attorney requesting the analysis.

6. Fill out an OLA Request Form. This form can be obtained from another unit that routinely performs OLA analysis (ALC.38 .)

7. If necessary, fill out a Billing Sheet; this form is forwarded to Sheriff's Office Accounting for proper billing of the requesting party.

8. Please refer to the Division Manual for required documentation for tracking when releasing evidence for referee analysis or outside laboratory analysis (OLA).

D. **LIMS Procedure**

1. OPEN the laboratory number.

2. Under the EVIDENCE tab, right click on the description of the item that is to be split (eg. 001-02)

3. This will open the EVIDENCE MENU for that item, select ITEMIZE EVIDENCE

4. In the DESCRIPTION field, indicate: "*Split 100 mg of Item X, forwarded to Bay Area Forensics via Golden State Overnight (Attorney's name) request, Initials and date*"

5. In the NOTES field indicate: Referee Analysis

6. Click APPLY to create the new split item*

    a. * For laboratory cases that were generated before the LIMS upgrade to electronic reports, the sub-itemization (or split/derivative evidence) will be the "second level" (001-01). For laboratory cases after the LIMS upgrade, the item to be split has already been itemized in the "second level" (001-01) and the sub-itemization (or split/derivative evidence) will be in the "third level" (001-01-A).

7. Under the CASE INFO tab, and in the SYNOPSIS field indicate: "*Split 100 mg of Item X, forwarded to Bay Area Forensics via Golden State Overnight (Attorney's name) request, Initials and date*"

8. Under the EVIDENCE tab, select the new split item (eg. 001-02-A), and click the BAR CODE ICON in the lower right coroner, and select REGISTER.

9. Scan the DUPLICATE barcode (these small barcodes can be found in the alcohol or toxicology section).

10. After the DUPLICATE barcode has been registered and associated with that split item, attach the DUPLICATE barcode to the "DUPLICATE" Controlled Substance Envelope.

11. TRANSFER the "DUPLICATE" Controlled Substance Envelope in LIMS, to the referee laboratory it is being sent to:

    a. **via "Split Chain of Custody"**

    b. **notes "Via Golden State Overnight"**

12. TRANSFER the original Controlled Substance Envelope back to a storage location.

E. **How To Send The Evidence/Split**

1. The following is the recommended procedure for forwarding a split item for referee analysis (after it has been properly packaged and sub-itemized in LIMS):

2. The "DUPLICATE" Controlled Substance Envelope should be placed into a manila mailing envelope (these can be located in the alcohol section because they commonly send samples to referee labs).

3. The mailing envelope should be labeled appropriately with the address of the referee laboratory along with the Crime Laboratory's return address. It is recommended that the mailing envelope be sealed with Evidence Tape.

4. The mailing envelope should be sent via Golden State Overnight.

5. All written documentation from the subject's attorney and/or District Attorney regarding the request for referee analysis should be filed with the laboratory report. Along with the electronic notes (in the DESCRIPTION field of the EVIDENCE tab, and the SYNOPSIS field under the CASE INFO tab)

6. A notes-to-file page may be hand written and attached to the laboratory report, or the electronic notes may be printed and attached to the laboratory report as notes-to file. The notes-to file should include:

    a. The date of the split

    b. The weight of item(s) that was split

    c. The name of the attorney requesting the referee analysis

    d. The referee laboratory where the split item(s) were sent and the method of shipment (courier, Golden State Overnight, Fed Ex, etc.)

III. The Controlled Substances Unit Staff shall comply with all reasonable and legitimate Discovery Requests.

A. All discovery requests are routed to the Forensic Services Division via the District Attorney's Office. These requests typically pertain to documents related to the analysis of samples or records kept in the normal course of Laboratory business. See FSD.45 for more information on discoveries.

B. The Controlled Substances Unit provides "basic discovery" or "extensive discovery" records.

C. A "basic discovery" is a pre-set package that consists of:

1. Copy of laboratory report and notes

2. Chain of Custody

D. An extensive discovery is not a pre-set package. It may be a request for more detailed documentation to include, but not limited to the Examination Records, Instrument Records, Equipment used and their Calibration Records, Standard Operating Procedures, Proficiency Records, etc.

1. If the discovery information sought appears to be unreasonable or irrelevant, a Supervisor or designee may contact the District Attorney's office for assistance in obtaining a modification or quashing the discovery. The District Attorney's office should review the discoveries for relevance, before sending the request to the laboratory.

E. Discovery Procedures

1. The Clerical staff will create a discovery request in LIMS and image the request, report with notes, and chain of custody (CLER.DAT.12)

2. The analyst within the unit will review the discovery request and determine if further information is needed.

3. The discovery requests may be completed electronically and posted via ARIES.

    a. The electronic files of the records requested will be gathered and uploaded into LIMS. If cocatenation is desired, detailed procedures on how to cocatenate .pdf documents can be found in "Electronic Batch Documents" (TOX.10).

    b. In the LIMS imaging module, right-click each image to be released as part of the discovery, and select "Send to iResults". A check mark will appear next to the "Send to iResults" menu.

c. The discovery request will be marked as "Draft Complete" by the analyst completing the discovery.

d. The completed discovery will be checked and marked "Admin Reviewed" by a Supervisor or designee.

e. The electronic discovery records will be accessible via ARIES for the District Attorney's office to retrieve. There is a 24 hour lag from the time the case has been Admin Reviewed before the records will be accessible to the DA's office.

4. Any records not able to be uploaded into LIMS will be provided outside of ARIES. Form FSDF.19 (Discovery and Crime Scene Materials Receipt Form) can be used to document the release of records.

5. Any "RUSH" discoveries may need to be provided as paper or faxed copy. The "RUSH" discoveries need to be approved by the Supervisor to assess the exigency of the circumstances (FSD.45).

F. See FSD.45 and CLER.DAT.07 for handing Civil Discoveries and Subpoena Duces Tecum.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 06/10/2013	**NUMBER:** DRG.40
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.9.1, 5.9.2**	
CHAPTER: Procedures	**SUBJECT:** Reanalysis for Destruction	

I. Policy: The following procedure will be followed for reanalysis of cases scheduled for destruction.

A. The reanalysis of cases scheduled for destruction is an additional check of the laboratory's procedures to ensure the quality and validity of test results. (ISO/IEC 17025:2005 5.9.1)

B. Periodically, the Sheriff's Office Property will schedule a destruction of drug evidence.

1. Sheriff's Office Property will send a list of laboratory numbers related to Controlled Substance analysis.

2. The Supervisor or Manager will review the list and randomly pick a number of cases for reanalysis, and let Property know which cases will be retested.

3. Sheriff's Office Property will send those cases to the Laboratory.

C. The cases for destruction will be given new request number under the original Laboratory number.

1. The cases for destruction will be logged in under the service type "Reanalysis for Destruction"

2. This service type prevents the results from being automatically released onto the Automated Regional Information Exchange System (ARIES) and prevents them from getting billed to the requesting agency.

3. The clerical staff will relate the items to the new request.

4. The Supervisor or Manager will let the clerical staff know which analyst will be performing the reanalysis.

5. The clerical staff will assign the cases to the analyst selected and also provide the analyst with a copy of the original report.

D. The analyst will follow the Division procedures for transferring evidence.

E. The analyst will open the evidence and reweigh and reanalyze by presumptive testing ONLY the items previously examined.

1. The analyst will record the **date, weight and results of the presumptive testing** for each item previously examined.

2. If any item does NOT presumptively test positive for the controlled substance originally identified, the analyst will take that item to confirmation.

F. The analyst will turn in the report to the Supervisor or Manager. The Supervisor or Manager will review the results of the reanalysis to ensure the validity of the test results. They will also review the weights to ensure consistency between the original weight and the reexamined weight.

1. As there can be considerable gain or loss in the weights of some controlled substances depending on packaging and storage conditions (eg. plant materials, tar heroin, cocaine base), the Supervisor or Manager will evaluate any changes in weight and determine if there is a change in weights that cannot be explained by packaging and storage conditions.

2. If the results of the original analysis and/or the original weights and the reanalysis and/or reweighing do not agree with each other, the Supervisor or Manager will evaluate the extent of the technical issue and may open a corrective action. (ISO/IEC 17025:2005 5.9.2).

3. Following the review by Supervisor or Manager, if no unexplained discrepancies are noted, the evidence is returned to the Evidence and Property Section for destruction. A list of these retested cases will be stored in the Managers records and or in LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 08/28/2013	**NUMBER:** DRG.41
	RELATED ORDERS: DRG.33 - Case Examination Protocols & Sample Selection, DRG.42 - Uncertainty Budget for Reported Drug Weights, UM.01 - Uncertainty of Measurement Drug Weights Budget, DRG.11 - Reports, DRG.18 - Balances, DRG.04 - Purchasing and Ordering Supplies	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.1.1, 5.1.2, 5.4.6.2, 5.4.6.3**	
CHAPTER: Uncertainty	**SUBJECT:** Uncertainty of Measurement	

I. Policy: The Controlled Substance Unit has assessed estimated uncertainty for drug balances and the associated net weights of substances weighed on the balances. (ISO/IEC 17025:2005 5.4.6.2)

A. Drugs weights are considered to be a measurement that matters as legal enhancements may be charged if certain weight limits are exceeded.

1. See DRG.33 for more information about enhancements.

B. All components of uncertainty for weighing suspected controlled substances which are of importance have been taken into account and the reporting of results will not give the wrong impression of uncertainty. (ISO/IEC 17025:2005 5.4.6.2, 5.4.6.3)

1. Refer to DRG.42 and UM.01 for specific information including the sources contributing to the uncertainty.

C. Only net weights will have an associated uncertainty reported. The uncertainty for net weights will be reported in the "Annex to the Drug Report".

1. See DRG.11 for more information

2. The weight of the item based on the indication of the balance will be reported and the associated uncertainty will be reported. **Examples** include:

a. Net Weight: 0.065 grams +/-0.011 grams

b. Net Weight: 2.650 grams +/-0.062 grams

c. Net Weight: 156.98 grams +/-0.41 grams

3. For balances 1, 7, 8 and 12 the Manufacturer's specifications indicate the minimum quantity that should be weighed is 0.020 grams (20 milligrams). Substances below 20 milligrams will be reported as "residue".

D. Gross weights, estimated weights and volumes will be reported without an associated uncertainty.

1. A statement included in the "annex to the report" will reflect that.

E. **Uncertainty** can be defined as:

1. Value that characterizes possible dispersion error around an assigned calibration or measurement value.

2. Technical use of the word "uncertainty" indicates a level of confidence in the result or the test being performed or the measurement.

3. Uncertainty of a measured value is an interval around that value such that any repetition of the measurement will produce a new result that lies within this interval. This uncertainty interval is assigned by the laboratory following established principles of uncertainty estimation.

4. The laboratory has attempted to take into account the extent to which the following factors contribute to the total uncertainty of measurement for weights in the uncertainty budget. (ISO/IEC 17025:2005 5.1.1, 5.1.2)

    a. Human Factors

    b. Accommodation and Environmental Conditions

    c. Test and Calibration Methods and Validation

    d. Equipment

    e. Sampling

    f. Handling of Test and Calibration Items

F. **Traceability** refers to an unbroken chain of comparisons using acceptable and documented methods to national or international standards (SI) with each comparison having stated uncertainties. The measurement is what is traceable.

G. **Elements of Traceability:**

1. An unbroken chain of comparisons: an unbroken chain of comparisons going back to national (NIST) or international (SI) standards.

    a. See "Balance Traceability" diagram in DRG.42.

2. Measurement uncertainty: the measurement uncertainty for each step of the traceability chain must be calculated and reported so that an overall uncertainty may be estimated.

    a. See DRG.42 for details.

3. Documentation: each step of the chain must be performed according to documented procedures, and the results must be documented.

    a. Detailed procedures on documentation are included in the relevant documents of the Technical Unit Manual.

4. Competence: the laboratory performing calibrations in the chain must supply evidence of technical competence (e.g., ISO/IEC 17025 accreditation).

5. Reference to SI units: where possible the chain of comparisons must end at the primary standards for the realization of the SI units (eg. BIPM).

    a. Heusser Neweigh, is the Laboratory approved external vendor for calibrations of the weight reference standards and balances. The vendor is accredited by A2LA and meets ISO/IEC 17025 subcontractor requirements for maintaining traceability. See DRG.04.

6. Recalibration at appropriate intervals: calibration must be repeated at appropriate intervals depending on the uncertainty required.

    a. See DRG.18 for details.

7. Measurement Assurance: An evaluation process that validates and verifies steps 1-6 listed above.

    a. The process uncertainty is included in DRG.42.

    b. The Laboratory performs monthly calibration checks of the balances.

H. The Controlled Substance Unit has assessed the uncertainty for qualitative identification of substances. Following an appropriately structured analytical scheme will effectively result in no uncertainty in reported identifications. *Reference: SWGDRUG Recommendations, 5th Edition, 2010-01-29, PART III B - Methods of Analysis/Drug Identification*

1. Qualitative analysis or the identification of seized drugs requires the combination of methods to form an analytical scheme.

2. Individual methods have limitations and, consequently, uncertainty. Uncertainty of qualitative methods is not typically expressed in numerical terms.

3. Understanding these limitations enables the laboratory or analyst to build an appropriate analytical scheme to correctly identify a drug or chemical.

4. It is expected that an appropriate analytical scheme will effectively result in no uncertainty in reported identifications.

5. Relevant limitations of an analytical scheme (e.g., inability to differentiate isomers, unavailability of reference material) may be documented and included in the report.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 07/19/2019	**NUMBER:** DRG.42 - Uncertainty Budget for Reported Drug Weights
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.6**	
CHAPTER: Uncertainty	**SUBJECT:** Uncertainty Budget for Reported Drug Weights	

I. The following is a detailed explanation of the uncertainty budget for drug weights.

A. The balances in the Controlled Substance Unit are used to weigh out suspected controlled substances for the purpose of reporting the net weight.

1. Balances 1, 7, 8 and 12 have been grouped as they are from the same manufacturer, have the same model number and similar characteristics and display resolution.

2. Balances 1, 7, 8, and 12 have different uncertainties based on two threshold weight limits, **equal to or below 28 grams and above 28 grams**. These thresholds were selected based on data the Laboratory gathered during the measurement assurance process study.

3. Balance13 has its own estimated measurement uncertainty budget.

B. **NIST 8-step approach to estimating uncertainty:**

1. **Specify the measurement process**

y = (mx+b) +/- U*
where:
y is the balance indication,
m is the sensitivity of the weighing device,
x is the applied load,
b is the zero offset, and
U is the assigned measurement uncertainty
Ideally, b = 0 if the balance indication was properly zeroed, and m ~ 1 because the balance indicates one mass unit for each mass unit applied.
***reference NIST IR 6919**

2. **Identify and characterize the uncertainty sources**

a. The Laboratory used "fishbone diagrams" and used brainstorming techniques to identify possible sources of error.

b. See "Fishbone Diagram" at the bottom of the document.

3. **Quantify uncertainty measurements**

a. The Laboratory uses "grams" for the estimated measurement uncertainty SI units.

4. **Convert factors to standard uncertainties**

a. The Laboratory converted factors to standard uncertainties, one standard deviation equivalents, based on the distribution (normal or rectangular distribution) and multiplier of the "source of " data.

5. **Calculate combined standard uncertainties**

a. The Laboratory uses the "root sum square" equation.

6. **Expand the uncertainty by "k"**

a. The coverage factor is the multiplier used to establish the confidence level reported.

b. The Laboratory uses a coverage factor of k=3, approximately 99.73.

7. **Evaluate the expanded uncertainty**

a. The Laboratory evaluated the data and used Pareto charts to help visualize the significance of the contributing sources of uncertainty. The Laboratory plans to reevaluate the budget on an annual basis. If there is a change in the measurement process or the measurement instruments, the quarterly measurement assurance will be evaluated to determine if the changes are significant enough to require a full budget reevaluation.

8. **Report the uncertainty**

a. The estimated measurement uncertainty for net weighing of controlled substances will be reported by the Laboratory in accordance with the procedures in the *Controlled Substance Unit SOP*. The report will state that upon request, additional work may be done to obtain a net weight with associated estimated measurement uncertainty for any previously reported gross or estimated weights.

b. Weight results will be reported as indicated on the balance. Measurement uncertainty estimates will be reported to two significant digits, rounding up unless the third digit is a zero ("GUM rounding").

c. The estimated uncertainty of the measurement has been calculated with approximately a 99.7% confidence using the root sum squares method. The uncertainty estimate includes type A uncertainty components,assuming a normal distribution, and type B uncertainty components.

i. Estimated Controlled Substances Measurement Uncertainties:

1. Drug Balance (#1, 7, 8, 12: PB303-S) Budget: weights under 28 grams (any weighing media): ± 0.013 grams

2. Drug Balance (#1, 7, 8, 12: PB303-S) Budget: weights over 28 grams (any weighing media): ± 0.36 grams

3. Drug Balance (#13: EP4102) Budget: ± 0.31 grams

C. The following is an explanation of each line item:

1. **Line 1: Check weight**

The Laboratory performs a monthly check at two different masses for each balance.

- Balances 1, 7, 8 and 12 use the 100 mg and 10 gram reference standards.
- Balances 13 uses the 50 gram and 1000 gram reference standards.

a. Drug Balance (#1, 7, 8, 12: PB303-S) Budget below 28 g--Any Weigh Media: The Laboratory includes the calibration uncertainty of the reference standard closest to an enhancement value. (eg. the enhancement weight for Heroin is approximately half an ounce). The 10 gram reference standard was used in the estimated measurement uncertainty budget for the higher end.

b. Drug Balance (#1, 7, 8, 12: PB303-S) Budget above 28 g--Any Weigh Media: The Laboratory includes the uncertainty of the largest reference standard used in the monthly checks. The 10 g reference standard calibration uncertainty was used in the Laboratory's estimated measurement uncertainty budget.

c. Drug Balance (#13: EP4102) Budget: The Laboratory includes the uncertainty of the largest weight that is checked monthly. The Laboratory includes the 1000 gram reference standard in the estimated measurement uncertainty budget.

The Laboratory evaluates the ISO 17025 compliant calibration certificates from Rice Lake for all reference standards available for use. The most recent calibration data was used.

For the estimated uncertainty budget, the uncertainty is expressed as mass (g). The data is derived from a calibration certificate therefore it is a Type B uncertainty component and the Expanded Multiplier = 2, as stated on the certificate, and the distribution is normal (Divisor = 1)

2. **Line 2: Balance Reproducibility, Monthly Checks**

The Laboratory includes reproducibility by evaluating the monthly internal check data. The Laboratory calculates the standard deviation for the same reference standard that was used in "Line Item #1" for the reasons stated above.

The Laboratory evaluates monthly check data beginning with the first professional calibration (data kept in the Balance Log). This check encompasses multiple analysts and a variety of environmental conditions over an extended period of time. The standard deviation of the value obtained for the reference standard is calculated.

a. Drug Balance (#1, 7, 8, 12: PB303-S) Budget above 28 g - Any Weigh Media: The 10 gram check is evaluated. The largest standard deviation is included in the estimated measurement uncertainty budget.

b. Drug Balance (#1, 7, 8, 12: PB303-S) Budget below 28 g - Any Weigh Media: The 100 mg check is evaluated. The largest standard deviation is included in the estimated measurement uncertainty budget.

c. Drug Balance (#13: EP4102) Budget: The standard deviation for the 1000 gram check weight is included in the estimated measurement uncertainty budget.

For the estimated uncertainty budget, the uncertainty is expressed as mass (g). The data is derived from an internal measurements therefore it is a Type A uncertainty component and the Expanded Multiplier = 1, and the distribution is normal (Divisor = 1)

3. **Line #3: Temperature Shifts in the Laboratory**

The Laboratory includes the temperature uncertainty for a 10 °C shift in temperature. This is due to fact that the building is climate controlled and should be between 65-75 °C. The Laboratory took the sensitivity drift in ppm/°C from the manufacturer's technical data sheets for each model of balance. For Balance #13, the manufacturer's technical data was not obtainable. The lab uses an estimate obtained from a balance of similar capacity.

For the estimated measurement uncertainty budget, the uncertainty is expressed as mass (g). The data is derived from a manufacturer's data applied to a temperature range therefore it is a Type B uncertainty component and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor = sq. root of 3)

4. **Line #4: Instrument Readability at "zero" &**
Line #5: Instrument Readability at "load"

The Laboratory includes the readability of the drug balances. The resolution varies by model of the balance. Instrument readability is calculated by dividing the resolution of the balance by 2 x sq. root of 3.

a. Drug Balance (#1, 7, 8, 12: PB303-S) Budget above 28 g - Any Weigh Media,

b. Drug Balance (#1, 7, 8, 12: PB303-S) Budget below 28 g - Any Weigh Media, and

c. Drug Balance (#13: EP4102) Budget
The resolution is 0.01 grams.

For the estimated measurement uncertainty budget, the uncertainty is expressed as mass (g). The data is derived from a calculation using the resolution of the balance, it is a Type B uncertainty component and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor = sq. root of 3).

Note: The readability of the balance at "zero" and "load" are both included as there are rounding errors associated with each weighing event in the process of weighing suspected controlled substances.

5. Line #6: Balance Calibration The Laboratory uses the estimated measurement uncertainty (expanded) from the most recent ISO 17025 compliant calibration certificate from Heusser-Neweigh. For the four balances (#1, 7, 8 and 12) at drug stations, the largest uncertainty is included.

   For the estimated measurement uncertainty budget, the uncertainty is expressed as mass (g). The data is derived from a calibration certificate therefore it is a Type B uncertainty component and the Expanded Multiplier = 2, as stated on the certificate, and the distribution is normal (Divisor = 1)

6. **Line #7: Balance Process Uncertainty**

   The Laboratory staff conducts measurement assurance to assess the uncertainty due to the process weighing casework samples. Static weighing (taring, removing the weighing media and loading the balance) is associated with a greater uncertainty than dynamic weighing (taring, leaving the weighing media on the balance and loading the balance). For the estimated measurement uncertainty budget, the uncertainty is expressed as mass (g). The data is derived from laboratory data therefore it is a Type A uncertainty component and the Expanded Multiplier = 1, and the distribution is normal (Divisor = 1).

   a. **Balances 1, 7, 8 and 12**

      For balances 1, 7, 8 and 12 the process uncertainty is assessed around the 1 ounce enhancement weight as well as weights around 1 gram. The measurement assurance (MA) data provides a threshold for uncertainty below 1 gram and above 1 gram.

      i. Drug Balance (#1, 7, 8, 12: PB303-S) Budget above 28 g - Any Weigh Media: The lab created approximately 1 oz weight is evaluated in an ongoing MA. The largest standard deviation is included in the estimated measurement uncertainty budget.

      ii. Drug Balance (#1, 7, 8, 12: PB303-S) Budget below 28 g - Any Weigh Media: The lab created approximately 1 gram weight is evaluated in an ongoing MA. The largest standard deviation is included in the estimated measurement uncertainty.

   b. **Balance 13**

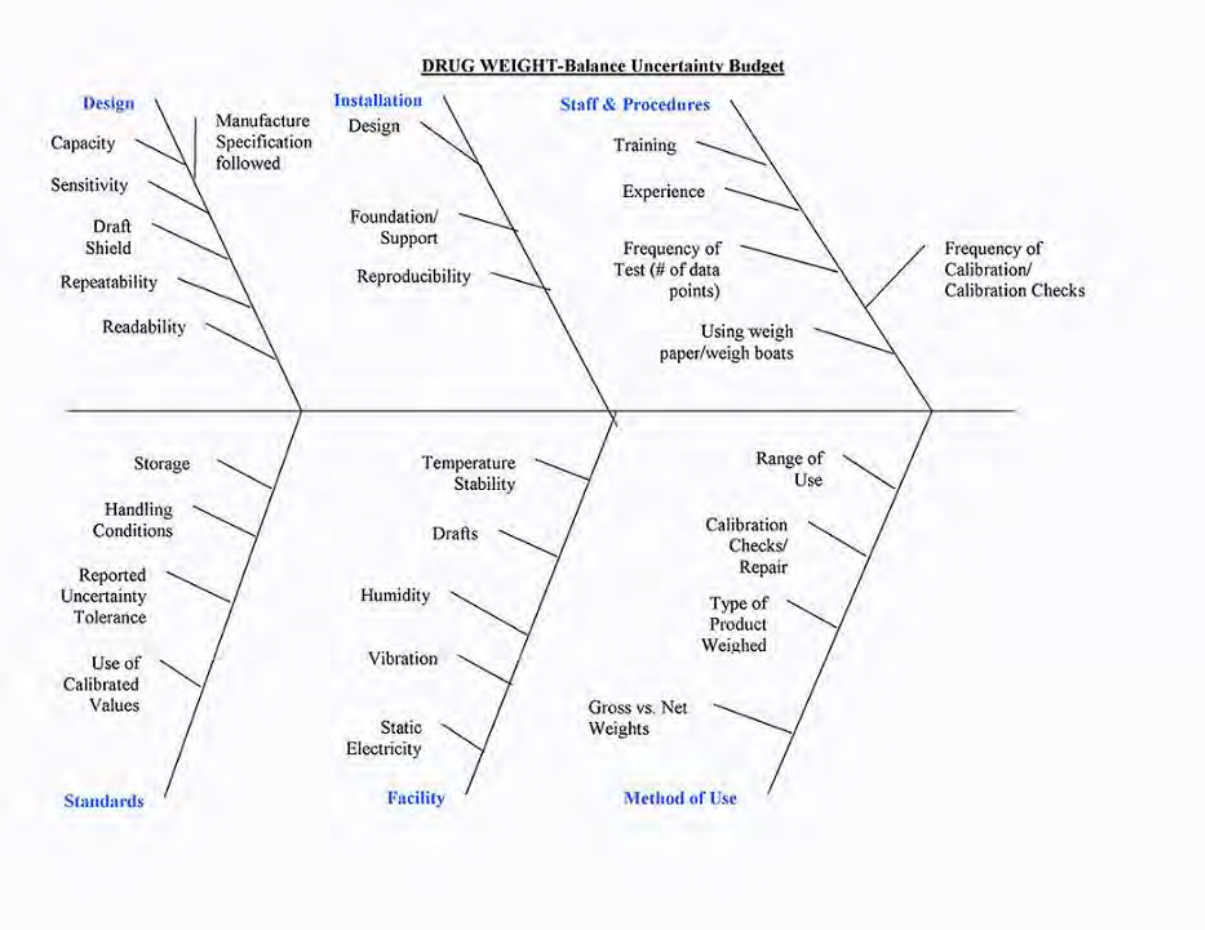
      For balance 13 the process uncertainty is assessed around the enhancement weight of 1 ounce as well larger weights that may be encountered in casework, is around 1 lb. The standard deviation for the larger weight, (~ 1 lb), was greater than that of the smaller weight (~33 grams); thus the larger weight used during the study is included in the estimated measurement uncertainty budget (~1 lb). The different weighing media (metal bowls) typically used on this balance are evaluated.

      i. Drug Balance (#13: EP4102) Budget: The lab created ~1 lb weight was evaluated using metal bowls. The largest standard deviation is included in the estimated measurement uncertainty budget.

7. **Line #8: Limit of non-linearity error**

   The linearity is incorporated as the "tolerance" based on monthly checks performed on each balance. The manufacturer's specifications were evaluated and an administrative laboratory established allowable deviation was derived for each specific balance.

   For the estimated measurement uncertainty budget, the uncertainty is expressed as mass (g). The data is Type B uncertainty with the Expanded Multiplier = 1 and the distribution is rectangular (Divisor = sq. root of 3).



II. Drug Balance

A. Explanation of Fishbone Diagram

The purpose a fishbone diagram is to attempt to identify and characterize possible sources of uncertainty. The following explanation details where these sources are accounted for in the Laboratory's estimated measurement uncertainty budget. The Laboratory attempts to account for each source on the fishbone diagram with at least one line item. There is not always a one-to-one relationship between the fishbone diagram and the line items.

1. **Design**:
   a. Capacity
      i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2
   b. Sensitivity
      i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2
   c. Draft Shield
      i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2
   d. Reproducibility
      i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7
   e. Readability

i. Evaluated from the balance Readability at 0 and Readability at Load from Line Item #4 and 5

f. Manufacturer's Specification Followed

i. addressed in Technical Unit Manual

2. **Installation**:

a. Design

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

b. Foundation/Support

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

c. Reproducibility

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

3. **Staff: & Procedures**

a. Training (different staff)

i. Evaluated from Process uncertainty given under Line Item #7. Instructions for use in Technical Unit Manual

b. Experience (different staff)

i. Evaluated from Process uncertainty given under Line Item #7

c. Frequency of Test (# of data points generated during studies)

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

d. Frequency of Calibration/Calibration Checks

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Balance Calibration data given under Line Item #6

e. Using weigh paper/wax paper/weigh boats

i. Evaluated Process uncertainty from Line Item #7 Line

4. **Standards**:

a. Storage

i. As addressed under Technical Unit Manual for reference standards or check weights

b. Handling Conditions

i. As addressed under Technical Unit Manual for reference standards

c. Reported Uncertainty Tolerance

i. Limit of Non-Linear Error was evaluated from Allowable tolerance for monthly check given under Line Item #8

d. Use of Calibrated Values

i. Evaluated from monthly checks done on the Drug balances given under Line Item #1 (Reference Standard Check Weight)

5. **Facility**:

a. Temperature Stability

i. Evaluated from the monthly Drug balance checks for reproducibility given under Line Item #2, the Effect of Changes in room Temperature on Balance under Line Item #3 and the Process uncertainty given under Line Item #7

b. Drafts

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

c. Humidity

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

d. Vibration

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

e. Static Electricity

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

6. **Method of Use**

a. Range of Use

i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Process uncertainty from Line Item #7

b. Calibration Checks/Repair

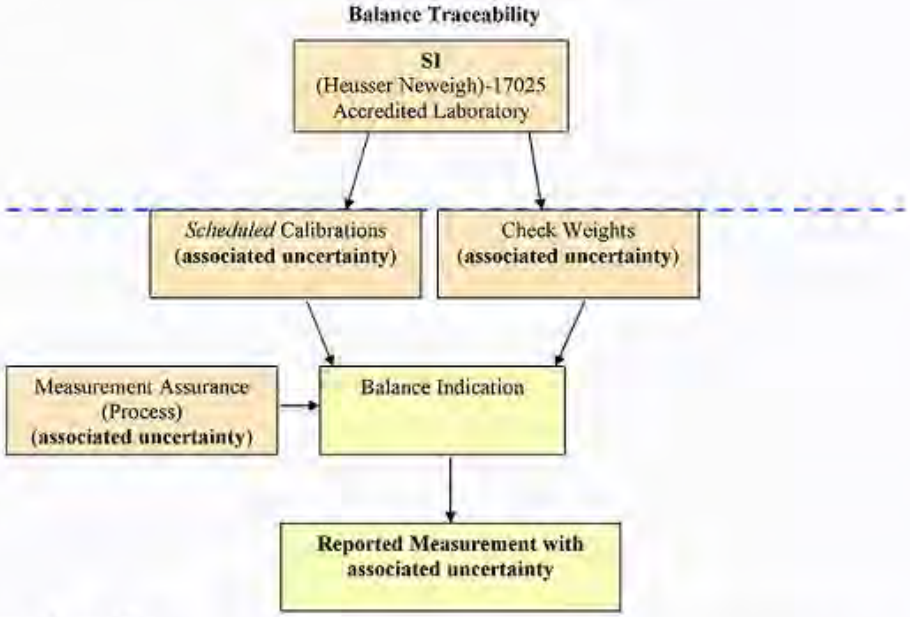
i. Evaluated from monthly checks done on the Drug balances as given under Line Item #2 and the Balance Calibration data given under Line Item #6

c. Type of Product Weighed

i. Evaluated from Process uncertainty given under Line Item #7

d. Gross versus Net Weights-

i. As addressed in Technical Unit Manual



Elements of traceability

1. **An unbroken chain of comparisons**: an unbroken chain of comparisons going back to national (NIST) or international (SI) standards.
   - See "Balance Traceability" diagram for traceability back to NIST via Heusser Neweigh
2. **Measurement uncertainty**: the measurement uncertainty for each step of the traceability chain must be calculated and reported so that an overall uncertainty may be estimated.
   - See the uncertainty budget which takes into account all estimated uncertainty at each step along the traceability chain.
3. **Documentation**: each step of the chain must be performed according to documented procedures, and the results must be documented.
   - See Laboratory records for documentation. The reference for each element or line item in the uncertainty budget has been given.
4. **Competence**: the laboratory performing steps in the chain must supply evidence of technical competence (e.g., ISO/IEC 17025 accreditation).
   - Heusser Neweigh, the Laboratory approved external vendor for calibration, is ISO/IEC 17025 accredited for weight reference standard and balance calibrations.
5. **Reference to SI units**: where possible the chain of comparisons must end at the primary standards for the realization of the SI units (eg. BIPM).
   - Heusser Neweigh, the Laboratory approved external vendor for calibration, is ISO/IEC 17025 accredited by A2LA and has established traceability to the appropriate SI units.
6. **Recalibration at appropriate intervals**: calibration must be repeated at appropriate intervals depending on the uncertainty required.
   - The Laboratory has Standard Operating Procedures (SOP) for recalibration of balances and reference standards (check weights) at regular intervals.
7. **Measurement Assurance**: validates and verifies 1-6 above
   - The Laboratory evaluated process uncertainty and included the uncertainty due to the process of weighing in the budget.
   - The Laboratory checks the calibration of the balances at regular intervals (monthly checks).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 07/17/2018	**NUMBER:** DRG.43 - Training: General Information
	RELATED ORDERS: MONO.MAR - Analysis of Marijuana, MONO.PHEN - Analysis of Phenethylamines, MONO.ANALOGS - Drug Analogs, MONO.COC - Analysis of Caines, MONO.BEN - Analysis of Benzodiazepines, MONO.LSD - Analysis of Lysergic Acid Diethylamide (LSD), MONO.PCP - Analysis of PCP, MONO.TRY - Analysis of Tryptamines, MONO.STE - Analysis of Steroids, MONO.GHB - Gamma-Hydroxybutyric Acid (GHB), MONO.OPI - Analysis of Opiates, MONO.BAR - Analysis of Barbituates, DRG.06 - Controlled Substance Literature References, DRG.44 - Training: Barbituate, DRG.45 - Training: Benzodiazepine, DRG.46 - Training: Caines, DRG.47 - Training: GHB, DRG.48 - Training: LSD, DRG.49 - Training: Marijuana, DRG.50 - Training: Opiates, DRG.51 - Training: PCP, DRG.52 - Training: Phenethylamine Analog, DRG.53 - Training: Phenethylamine, DRG.54 - Training: Steroid DRG.55 - Training: Tryptamine, DRG.56 - Training: Miscellaneous Compounds & No Common Controlled Substances, DRG.57 - Training: General Controlled Substance Competency, DRGF.29 - Controlled Substance Training & Authorization	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC: 17025:2005**	
CHAPTER: Training	**SUBJECT:** Training: General Information	

I. Policy: The training protocol for controlled substance analysis will be used to train Criminalists in knowledge, skills and abilities prior to being authorized to perform casework analysis.

A. General Information

1. Due to the educational requirements, the Training Manual requires that the trainee already possess a thorough knowledge of scientific technique, chemical principles, and instrumentation.

2. It is intended to acquaint the trainee with the more common controlled substances, cutting agents, precursors, and byproducts in use at the present.

3. The trainee is expected to become familiar with all the methods of analysis for each controlled substance encountered in these exercises.

   a. **Use very small amounts of drugs in these exercises**. Pure compounds of many of these drugs are hard to acquire and typically results/data can be obtained with a few grains of the material.

b. Closely examine every piece of glassware or disposable lab equipment used in an analysis to rule out any contamination.

c. When possible practical hands-on training will be provided for each technique expected to use during casework

4. The drug analysis training program includes many controlled substances that are commonly found in the drugs currently seen on the streets. Drugs trends may shift over time and often come back into fashion based upon cost, availability, supply and demand. Because recreational use, abuse and manufacturing of drugs is constantly changing, the Training Manual must also change regularly to keep up with any trends.

5. The trainee is encouraged to ask questions of the analyst's trainer and others.

6. The trainee must use the laboratory literature references and personal resources as well as any formal training.

7. The trainee must use pharmaceutical references when identifying licit pills, capsules, and tablets:

a. Trainee will learn the proper note taking and report writing procedures for pharmaceuticals.

b. Trainee will learn the limitations of certain types of illicit pills, capsules and tablets.

c. The trainee will learn the proper steps for presumptive and confirmatory identification.

B. Safety

1. The trainee will use appropriate personal protective equipment to comply with the safe handling of chemicals, biohazards and Sharps hazards.

2. Some drugs or solvents will absorb through the skin. Other drugs are fine powders and form small dust clouds, which could be inhaled, if not handled gently.

3. Although unlikely to occur, be extremely careful with loaded syringes (prepackaged) and any other sharps. Safety protection is the responsibility of the criminalist.

4. The trainee will review the appropriate Forensic Services Division Safety Manual (SAF.01 to SAF.34) procedures that are applicable to the work being done in the Controlled Substances Unit.

C. Educational Requirements:

1. Analysts working in the Controlled Substance discipline shall possess a baccalaureate or an advanced degree in a natural science, criminalistics or a closely related field.

D. Time-frame and Training Binder

1. Training is intended to be self-paced. The trainee should utilize the time allowed for training effectively and diligently.

2. This training protocol will require eight to ten weeks to complete, not including the competency samples. To successfully complete the training and competency samples, the trainee must allow sufficient time for this training. The time frame

indicated for each section, is the maximum time that it should take to complete that section.

3. Any schedule deviations must be addressed as soon as possible with the Manager/Supervisor and instructor so that adjustments may be made.

4. A training binder must be prepared during the course of this training protocol. This training binder should include the following for each group of compounds tested:

    a. Appropriate notes obtained from instructor

    b. Results of all screening tests

    c. Gas Chromatography/Mass Spectrometry (chromatograms and spectra)

    d. IR spectra

    e. Reading list

    f. Record of training including in-house training and any classes or meetings attended.

5. This training binder shall be turned in and reviewed prior to issuing the competency samples.

    a. The supervisor will evaluate the training binder to determine the readiness of trainee to take the competency.

    b. The training binder will be evaluated for:

        i. Completeness of each module (required substances tested)

        ii. Acceptability of Chromatographic, Mass Spectra, and Infrared Spectroscopy data

        iii. Reading list

        iv. Successful completion of questions from each module

        v. Documentation of any practice or mock casework completed

E. References Utilized During Training

1. Controlled Substance Monographs

    a. Marijuana (MONO.MAR)

    b. Phenethylamines (MONO.PHEN)

    c. Phenethylamine Analogs (MONO.ANALOGS)

    d. Caines (MONO.COC) (Note: Review special criteria for reporting cocaine salt vs. cocaine base and the need to compare unknown FTIR spectra to both salt and base forms)

    e. Benzodiazepines (MONO.BEN)

    f. LSD (MONO.LSD) (Note: Review special criteria for reporting LSD or LAMPA by comparing to a standard with both LSD and LAMPA)

    g. PCP and Dissociative Anesthetics (MONO.PCP)

    h. Tryptamines (MONO.TRY)

i. Steroids (MONO.STE)

j. GHB (MONO.GHB)

k. Opiates (MONO.OPI)

l. Barbiturates (MONO.BAR)

2. Training Modules

a. Barbiturate (DRG.44)

b. Benzodiazepines (DRG.45)

c. Caines (DRG.46)

d. GHB (DRG.47)

e. LSD (DRG.48)

f. Marijuana (DRG.49)

g. Opiates (DRG.50)

h. PCP (DRG.51)

i. Analogs (DRG.52)

j. Phenethylamines (DRG.53)

k. Steroids (DRG.54)

l. Tryptamines (DRG.55)

m. Miscellaneous & No Common Controlled Substances (DRG.56)

3. Literature References (see drug monographs and DRG.06)

4. Training authorization checklist(s) to document progression and authorization to perform specific tasks (see DRGF.29).

5. Controlled Substance Procedures

F. Training Goals:

1. To develop skills in the area of controlled substance analysis culminating in the ability to perform casework independently

2. To understand and implement the policies and procedures in the Controlled Substance and Division manual to perform casework in accordance with approved policies and procedures

3. To gain expertise and knowledge and use of instrumentation culminating in the ability to troubleshoot and perform routine maintenance on instrumentation (DRG.19)

4. To gain expertise in the area of controlled substance analysis enabling analysis of complex casework

5. To gain expertise in courtroom testimony through knowledge and experience

G. Effectiveness of Training:

1. The training programs may evolve as needed with the addition of new instrumentation and/or new techniques, the effectiveness of the training program will be evaluated when the Controlled Substance Unit Manual is periodically evaluated and additions or deletions to the training program will be documented. The following are the training actions and can be used to evaluate the effectiveness of training:

    a. On-the-job training as indicated in the documented training program

    b. Review of Unit SOP as well as training materials indicated in the documented training program

    c. Practical and written exercises as indicated in the documented training program

    d. Competency testing prior to assuming casework responsibilities

    e. 100% technical and administrative review of casework

    f. Goals set for the analyst to increase responsibility, technical expertise, knowledge and skills as indicated in the documented training program

    g. Mock court exercises

    h. Court training and court critiques

    i. On-going training, including outside training classes

    j. Feedback from the trainee regarding in-house and outside training

    k. Yearly performance evaluation that includes setting goals for the analyst, review of SOQ, and training binder. This assessment reviews analyst goals for development and evaluates the effectiveness of training actions and if further training actions are needed.

    l. Review of mock practice casework will be done prior to the start of a competency test.

        i. Practice casework will mimic the flow of evidence, analysis of evidence, entering results into LIMS, and generating a report.

        ii. Practice casework should be provided at the conclusion of larger drug modules to ensure understanding and allow the analyst to practice using drug unit instrumentation and LIMS. Practice casework for smaller modules may be combined.

        iii. A single lab number may be used to document practice case work (with different requests for each module).

        iv. Feedback will be provided on each practice request that is completed by the reviewer/trainer.

    m. Review of the Training Assessment Questions will be done prior to the start of a competency test.

2. **Training Assessment Questions:** The following questions will be answered and given to the Trainer/Supervisor for review to assess whether the knowledge acquired during training was sufficient to begin the trainee's competency test.

a. The questions and practical exercises below may be expanded upon by the Supervisor/Trainer or designee.

b. The Training Assessment Questions are open book, however, the analyst trainee will answer each question **in their own words**.

c. The trainer will assess the trainee's knowledge and understanding from the Training Assessment Questions to determine if the trainee is ready for the competency. An unsuccessful assessment will require further remedial training in the areas that were deficient.

d. The criminalist will receive written feedback from their trainer.

e. **Questions:**

i. **Evidence Handling/Case Examination**

1. Explain the difference between item and unit.
2. Define the following abbreviations:
    1. ZLPB
    2. PB
    3. MARQ
    4. CS
    5. CF
    6. MDMA
    7. REP
    8. PSB
    9. CM
    10. CAP
    11. EST
    12. LSD
    13. EXT
    14. ROTH
    15. 6-MAM
3. Describe the procedure in examining multiple item cases and items with multiple units.
4. Explain how the charge(s), location of evidence, and evidence appearance may or may not influence the analysis of the evidence.
5. What is a proper seal on evidence?
6. How is an improper seal remediated?

7. How would you handle a discrepancy with evidence?
8. What special steps should be taken for a case that is considered a biohazard?
9. How is a laboratory report and notes packet distributed upon request by an attorney?

ii. Sample Preparation

1. Describe how a solvent used to extract the unknown affects the recovery of the compound and chromatography.
2. Describe when to basify a sample to extract phenethylamines in a solvent like petroluem ether or chloroform.
3. Describe how to prepare liquid substances for GC/MS analysis.

iii. Presumptive and Confirmatory Analysis

1. Define presumptive test and give examples.
2. Which color tests would you use for the following compounds, Methamphetamine, Cocaine, and Heroin. Why?
3. What does the Rothera reagent test for?
4. What are the botanical features of Cannabis leaves?
5. Why must the injection port and the oven be heated?
6. Define relative retention time.
7. How does the split ratio of the method affect the results?
8. Define mass spectrum, relative abundance, base peak and molecular ion.
9. How are the items (mass spectrum, relative abundance, base peak and molecular ions) evaluated to help identify compounds?
10. What criteria must be met to call solid or liquid substances "No common controlled substances detected"?

iv. **General Knowledge?**

1. Give the rationale on how drugs are scheduled.
2. Explain and give examples of why same drugs are in multiple schedules.
3. Differentiate between Cocaine Base and Cocaine Salt. (differences in schedule, chemistry, reactions, results from analysis etc.)
4. Classify the following drugs with the appropriate drug categories.(Drug Categories are: Depressants, Stimulants, Hallucinogens, Dissociative Anesthetics, Narcotics, Inhalants, Cannabis, Not controlled)
    1. Methamphetamine

2. Cocaine
3. Heroin
4. Secobarbital
5. Hydromorphone
6. Lorazepam
7. Methylenedioxyamphetamine
8. Carisprodol
9. LSD
10. Ketamine
11. Codeine
12. DMSO
13. GHB

H. Competency Test:

1. See DRG.49 and DRG.57 for specific information regarding the Competency Tests.

I. Maintenance of skills and re-training:

1. An analyst can maintain their skills by:

a. Routine performance of casework

i. Analysts should endeavor to analyze a wide variety of types of casework when possible. Supervisor may assign/re-assign casework to ensure opportunities are available to all analysts.

ii. If an analyst has not done any casework for an extended period of time, the supervisor may require refresher training and/or a proficiency test.

1. This may depend on the amount of previous experience of analyst, length of absence from casework, number and significance of changes implemented in the unit during the absence, emergence of new drugs, and discussion between analyst and supervisor about readiness to perform all types of casework.

2. Refresher training may include review of relevant policies, analysis of case-like materials, observation of or by another experienced analyst.

b. Professional development can include training and workshops related to controlled substance analysis or instrumentation

c. Reading literature

d. Participation in a professional organization related to controlled substance analysis

2. Maintenance of skills can be monitored through multiple sources

    a. Annually, a proficiency test is required when working in the drug unit; this is a demonstration of maintenance of skills.

    b. Casework is 100% technically and administratively reviewed. Repeated instances of cases being returned for failing to follow policy guidelines or requiring further analysis could indicate a need for refresher or remedial training.

    c. Courtroom testimony monitoring from court critiques or observation by others with technical knowledge in controlled substances.

3. If technical issues arise from a proficiency test, courtroom testimony monitoring or 100% technical review of casework, the Manager or Supervisor may require remedial training in any of the areas listed below. The remedial training will be documented and may include:

    a. Repeating a subject area in part or in its entirety

    b. Review of relevant policies and procedures

    c. Analysis of case-like materials

    d. Observation of analyst by supervisor or another experienced analyst

    e. Proficiency or competency exam

J. New Equipment and/or Methodologies

1. Training will be provided on any new equipment or methodology.

2. A competency will be given when **new** equipment and/or methodologies are introduced to the laboratory that are significantly different from equipment and/or methodologies that the analyst was previously deemed competent and authorized to use for casework.

3. The need for a competency will be evaluated by the Supervisor/Manager.

4. The extent of the competency will be evaluated by the Supervisor/Manager. At minimum the competency will include:

    a. An examination of sufficient unknowns to cover the anticipated spectrum of casework and evaluate the individual's ability to perform proper testing methods.

        i. Passing criteria may depend on the type of equipment or methodology being used. The supervisor will advise the analyst of the criteria prior to administering the competency.

    b. A written report will be generated to demonstrate the individual's ability to properly convey results.

    c. A written or oral exam to assess the individual's knowledge of the category of testing or task being performed. The exam will test both technical knowledge and the ability to provide court testimony.

K. Scope of Training:

1. Marijuana

2. General Controlled Substance Analysis
    a. Phenethylamines
    b. Caines
    c. Opiates
    d. Tryptamines
    e. Benzodiazepines
    f. Lysergic Acid Diethylamide (LSD)
    g. Phencyclidine and Analogs
    h. Amphetamine Analogs
    i. Barbiturates
    j. Steroids
    k. GHB
    l. Miscellaneous Compounds
3. Theory and Operation of the equipment and/or software used for confirmatory analysis including:
    a. **Gas Chromatograph/Mass Spectrometer**:
        i. Gas Chromatography/Mass Spectrometry (GC/MS) is a specific method of identification for most solid dosage drugs.
        ii. A sample is passed through a gas chromatographic column, effecting a separation of the components of the sample. The individual compounds then move into the mass spectrometer source where they are bombarded by electrons, producing charged ions. The ions of interest are positively charged fragments of the original compound.
        iii. The ions are then separated, through a mass filtering process, according to their mass-to-charge ratios (m/z) and then collected by a detector. In the detector, the ions are converted to a proportional electrical current.
        iv. The data system records the magnitude of these electrical signals as a function of m/z and converts this information into a mass spectrum. The mass spectrum is a record of the different ions (m/z) and the relative numbers of each ion (abundance). These spectra are characteristic for individual compounds, giving specificity for most types of drug substances.
        v. Confirmation of an unknown spectrum is done by direct comparison with a known or reference spectrum
        vi. Limitations and Benefits of GCMS:
            1. MS can not differentiate between optical isomers (e.g. Pseudo/Ephedrine)
            2. Due to certain method parameters (inlet temperature causing structural changes; GHB->GBL) certain compounds can not be

identified.

3. Depending on the structure of the molecule, the amount and type of fragmentation will vary. Due to this, some drugs do not exhibit a molecular ion using electron impact mass spectrometry.

4. Due to instrument parameters, types of instrument tunes, and abundances of signals, compound spectra can vary in ion proportions. Consider the type of instrument, tunes, reference source, and dilutions to make proper comparisons of spectral data. Analyzing standards on same instrument, with the same methods, and dilution within close proximity of the unknown analysis will give the best comparable data to evaluate identification.

b. **Fourier Transform Infrared Spectrophotometer**:

i. Infrared spectroscopy (IR) is a specific method of identification in most instances and is therefore a desirable analytical tool for the forensic drug chemist.

ii. This method of spectral analysis is based on the molecular vibrational energies of an organic compound. Infrared light containing wavelengths from 4000 cm-1 to 400 cm-1 is generated and passed through the sample. When the frequency of light matches a frequency of vibration within the molecule, absorption occurs. The absorptions are translated electronically and recorded on a data system. The resulting spectrum will have characteristic bands corresponding to each different vibration among atoms in the molecule.

iii. The IR spectrum of an unknown compound can be compared to the IR spectrum of a known or reference spectrum for confirmation.

iv. The Fourier Transform Infrared Spectrophotometer (FTIR) collects the composite spectrum in the time domain and mathematically transforms it to the frequency domain.

v. Spectra may be collected using an Attenuated Total Reflectance (ATR) accessory and compared to standards also collected utilizing the ATR.

vi. Limitations and Benefits:

1. All case samples submitted may not be pure enough to perform analysis.

2. An extra cleanup procedure may be necessary to prepare sample for analysis by FTIR (see DRG.29).

3. Ready Checks and background checks must be run to ensure instrument is in working order for each analysis.

4. Some samples are routinely more pure than other. Samples like Methamphetamine often require little preparation to examine the substance, thereby speeding up the analysis time.

c. **Stereomicroscope (Marijuana only)**

i. Adjusting the coarse and fine focus

ii. Adjusting the object on the stage to obtain the characteristics desired within view

iii. Proper care and maintenance of the stereomicroscope

4. Theory and Use of equipment used for weighing:

   a. Balances (See DRG.18)

   b. Residues (See DRG.41)

   c. Measurement Traceability and Uncertainty of Measurement (See FSD.28 and DRG.41)

5. Theory and Use of **chemical presumptive tests (color tests)**

   a. Many substances give distinct color results when tested with various chemical reagents. In many cases, the color reaction produced is not specific to a single drug but rather a class of drugs.

   b. The Laboratory uses presumptive color tests to both indicate classes of drugs which may be present in a sample as well as eliminate classes of drugs.

   c. Color test results are generally immediate and the immediate color reaction is what should be noted.

   d. Care should be taken as the color obtained from any test may vary with the age of the reagent, the amount of drug used, the conditions of the test and the presence of extraneous material in the test sample that may give color test results or mask color test results.

   e. Very small amounts of material are generally needed to produce positive color test results. Although some exceptions may apply.

6. Proper **evidence handling** procedures including (DRG.09):

   a. opening evidence

   b. selection of items to examine

   c. marking of items

   d. storage of evidence

   e. disposition of evidence

7. Proper **note-taking and recordation** of examination records (DRG.10)

   a. recording handwritten and/or electronic notes (use of LIMS)

8. Proper **report writing**

   a. entering results into LIMS (DRG.38)

9. Court Procedures

   a. Presentation **of Evidence in Court**

      i. Trainer should provide an overview of court expectations beyond technical knowledge - such as communicating effectively, appropriate clothing and demeanor

1. Formal training classes may be available

ii. Analyst may observe testimony of another experienced analyst

iii. Analyst will participate in a mock court

b. Controlled substance evidence is most typically used in criminal proceedings and are classified in different schedules (I-V)

i. Trainee should be shown resources to determine the schedule of a controlled substance and related charges

1. Monographs may contain some information related to criminal charges and California offense codes as well as scheduling information

ii. Differences can exist between California and federal law

1. Federal law has procedures for the emergency scheduling of substances on a temporary basis. Federal scheduling of substances may change more frequently than California scheduling.

iii. Substances not specifically scheduled may fall under an analog law

c. **Legal Proceedings**

i. Subpoenas and Discoveries

ii. Business record/official record/public record

1. Custodian of records

2. Confrontation Clause - Melendez-Diaz

iii. Criminal Proceedings

1. Juvenile Court

2. Preliminary Hearings

3. 402 Hearings

4. Trials

iv. Civil Proceedings

1. Depositions

2. Trials

v. Expert Witness

1. Voir Dire

2. Role of the expert witness in court

3. Evidence admissibility (Frye, Daubert)

10. Application of **Ethics** in Forensic Science

a. Controlled Substances are considered to have a greater potential for theft or abuse

i. Common issues in controlled substance analysis include dry labbing, theft and use of controlled substances

ii. Trainer should review issues related to laboratory scandals involving controlled substance analysis and the impact on the court system

iii. Because of the sensitive issues related to controlled substances, analyst should be diligent in reporting any unauthorized access or discrepancies in amounts of standards or evidence

iv. For more information about ethics training see FSD.21.

11. **General Knowledge** of Forensics

a. Analysts should develop a general knowledge of other forensic disciplines that may process drug evidence or often be related to drug evidence such as:

i. Latent prints

ii. Biology/DNA

iii. Toxicology

1. Toxicology involves drugs, uses similar instrumentation and is often related to drug cases. Analyst should have an understanding of the differences in analysis, how instruments are used and reporting of results for toxicology evidence compared to drug evidence.

iv. Firearms

b. This knowledge may be obtained from a variety of sources

i. Formal education in Criminalistics or Forensic Science

ii. Supplemental reading of general forensic texts

iii. Observation of analysts in other disciplines at the laboratory

iv. Certification that has a general knowledge requirement

L. The training program may be abbreviated for analysts with previous experience in drug analysis.

1. It is at the discretion of the Supervisor or Manager to abbreviate the training program based on previous experience.

2. If the program is abbreviated, the previous experience will be documented.

3. Successful completion of the competency test is required before assuming casework responsibilities

4. Practical exercises and answers to the Training Assessment Questions (in DRG.57) will be reviewed and the analyst will be provided written feedback by the Supervisor or designee prior to starting the competency.

5. At minimum the competency will include:

a. A Test of Knowledge (closed book) will be provided with the following criteria:

i. Refer to DRG.57 for the scoring criteria for evaluation of the Test of Knowledge.

b. An examination of sufficient unknowns to cover the anticipated spectrum of casework and evaluate the individual's ability to perform proper testing methods.

c. A written report will be generated to demonstrate the individual's ability to properly convey results.

d. A written or oral exam to assess the individual's knowledge of the category of testing or task being performed and the ability to provide court testimony.

M. Authorization for the Controlled Substances Unit.

1. The use of the authorization checklist in conjunction with the documented training program is the manner in which management can ensure the competence of all who operate specific equipment, perform tests, and sign reports.

2. Training must be done in accordance with the documented training program.

3. The training checklist(s) will document an analyst's competence to operate specific equipment, perform tests, evaluate results, sign test reports.

4. A checkmark in the "analyst" column indicates that the analyst has completed training in area indicated. A checkmark in the "Trainer" column indicates who provided and supervised the training.

5. Personnel will be qualified on the basis of appropriate education, training as described in the training manual, and successful completion of competency tests that demonstrate skills acquired.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 03/16/2018	**NUMBER:** DRG.44 - Training: Barbituate
	RELATED ORDERS: MONO.BAR - Analysis of Barbituates, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRGF.29 - Controlled Substance Training & Authorization	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005: 5.2, 5.2, 5.2, 5.5**	
CHAPTER: Training	**SUBJECT:** Training: Barbituate	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for barbiturates analysis.

A. Barbiturate Modules (approximately 2 days)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.BAR and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for barbiturates.

   b. Criminalist will perform screening tests on all of the following, if the laboratory has reference materials available:

      i. Phenobarbital *

      ii. Secobarbital *

      iii. Amobarbital *

      iv. Aprobarbital

      v. Barbital

      vi. Butabarbital *

      vii. Butalbital

      viii. Hexobarbital

      ix. Pentobarbital *

      x. Thiopental

xi. Hydantoin

xii. Diphenlyhydantoin

c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.BAR

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS**

a. Criminalist will produce acceptable GC/MS spectra of controlled drugs marked with an *, if the laboratory has reference materials available

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

4. **Module IV: Pharmaceutical References**
   a. Instructor will demonstrate the use of the pharmaceutical references and proper documentation.
   b. How to document use of reference collection in notes and report
      i. see DRG.34 for guidelines for presumptive and confirmatory identification
      ii. see DRG.38 for instructions of the proper entry into LIMS
5. **Module V: Study Topics**
   a. Criminalist will answer Study Topics in MONO.BAR
6. **Module VI: Competency Test**
   a. The barbiturates may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.
7. **Miscellaneous**
   a. The theory and use of balances:
      i. proper weighing technique, see DRG.18
      ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report
      iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)
      iv. the location of balance logs
   b. Proper itemization of evidence, see DRG.38
8. **Authorization**
   a. See DRGF.29 to see the Barbiturate Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 03/16/2018	**NUMBER:** DRG.45 - Training: Benzodiazepine
	RELATED ORDERS: MONO.BEN - Analysis of Benzodiazepines, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005: 5.2, 5.2, 5.2, 5.5**	
CHAPTER: Training	**SUBJECT:** Training: Benzodiazepine	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for benzodiazepine analysis.

A. Benzodiazepine Modules (approximately 2 days)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.BEN and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for Diazepam and Chlordiazepoxide.

   b. Criminalist will perform screening tests on all of the following, if the laboratory has reference materials available:

      i. Diazepam *

      ii. Chlordiazepoxide *

      iii. Prazepam

      iv. Flurazepam *

      v. Lorazepam

      vi. Oxazepam *

      vii. Clonazepam *

      viii. Halazepam *

      ix. Chlorazepate

      x. Alprazolam *

xi. Temazepam *

c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.BEN

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS**

a. Criminalist will produce acceptable GC/MS spectra of all controlled drugs marked with an *, if the laboratory has reference materials available

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17

2. see DRG.19

4. **Module IV: Pharmaceutical References**

   a. Instructor will demonstrate the use of the pharmaceutical references and proper documentation.

   b. How to document use of reference collection in notes and report

      i. see DRG.34 for guidelines for presumptive and confirmatory identification

      ii. see DRG.38 for instructions of the proper entry into LIMS

5. **Module V: Study Topics**

   a. Criminalist will answer Study Topics in MONO.BEN

6. **Module VI: Competency Test**

   a. The benzodiazepines may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

7. **Miscellaneous**

   a. The theory and use of balances:

      i. proper weighing techniques: (see DRG.18)

      ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

      iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

      iv. the location of balance logs

   b. Proper itemization of evidence, see DRG.38

8. **Authorizations**

   a. See DRGF.29 for Benzodiazepine Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 03/25/2019	**NUMBER:** DRG.46 - Training: Caines
	RELATED ORDERS: MONO.COC - Analysis of Caines, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, DRG.30 - FTIR Spectrometer Maintenance	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ISO/IEC ANAB: 2017**	
CHAPTER: Training	**SUBJECT:** Training: Caines	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for performing caine analysis.

A. Caines Module (approximately 1-2 weeks)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.COC bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for cocaine salt and cocaine base

   b. Criminalist will perform screening tests on all of the following, if the laboratory has reference materials available:

      i. Cocaine *

      ii. Tetracaine

      iii. Mepivicaine

      iv. Benzoylecgonine *

      v. Ecognine *

      vi. Benzocaine

      vii. Piperocaine

      viii. Procaine

      ix. Lidocaine

c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.COC

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS and FTIR**

a. Criminalist will produce acceptable GC/MS spectra of all drugs listed above marked with *, if the laboratory has reference materials available

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis and proper annotation

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17

2. see DRG.19

b. Criminalist will produce acceptable IR spectra of cocaine salt and cocaine base

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29 for both UATR, KBr pellet, and vapor cell sample preparation.

2. Analyst will document practice presumptive identification for at least one cocaine sample using KBr pellet sample preparation.

3. see MONO.COC for clean-up procedures and distinguishing between cocaine salt and cocaine base as well as annotation of peaks

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17

2. see DRG.30

4. **Module IV: Making Cocaine Base**

a. Instructor may demonstrate the procedure(s) by which cocaine base is illicitly produced.

b. Criminalist may prepare a small portion of cocaine base using one of the methods demonstrated by the instructor.

5. **Module V: Study Topics**

a. Criminalist will answer Study Topics in MONO.COC

6. **Module VI: Competency Test**

a. The caines may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

7. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

8. **Authorizations**

a. See DRGF.29 Caines Training Authorization Checklist

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/26/2016	**NUMBER:** DRG.47 - Training: GHB
	RELATED ORDERS: MONO.GHB - Gamma-Hydroxybutyric Acid (GHB), DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, DRG.30 - FTIR Spectrometer Maintenance	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.2.1, 5.2.2, 5.2.5, 5.5.3 ASCLD-LAB International Supplemental 2011: 5.2.1.1, 5.2.1.2, 5.2.1.3, 5.2.6.1.1, 5.2.6.2.1, 5.2.6.2.2, 5.2.7, 5.3.6, 5.9.4.1, 5.9.5**	
CHAPTER: Training	**SUBJECT:** Training: GHB	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for performing analysis of GHB and related drugs. (Supplemental 5.2.1.1)

A. GHB Module (approximately 2 days)

1. **Module I: Reading**
   a. Criminalist will review material in MONO.GHB and its bibliography.
2. **Module II: Color Tests**
   a. Instructor will demonstrate screening tests
   b. Criminalist will perform screening tests
      i. the theory and use of Color Tests: benefits and limitations of presumptive color tests
      ii. what constitutes a positive reaction
         1. see MONO.GHB
      iii. how to document the results of the color test in casework
         1. see DRG.10
      iv. how to make the reagents

1. see DRG.13

v. how to check and verify the reagents and how to document that information

1. see DRG.13

2. see DRGF.13 and DRGF.28

vi. the laboratory procedure for routinely checking the reliability of the reagents

1. see DRG.13

3. **Module III: GC/MS and FTIR**

a. Criminalist review GC/MS data for GHB and Analogs

b. Criminalist may produce GC/MS data for GHB both **underivatized** and **derivatized** (refer to MONO.GHB)

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17

2. see DRG.19

c. Criminalist may be instructed to produce acceptable spectra by FTIR

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module IV: Study Topics**

a. Criminalist will answer Study Topics in MONO.GHB

5. **Module V: Competency Test**

a. GHB or related compounds may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

6. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

7. **Authorizations**

a. See DRGF.29 GHB Training Authorization Checklists.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/26/2016	**NUMBER:** DRG.48 - Training: LSD
	RELATED ORDERS: MONO.LSD - Analysis of Lysergic Acid Diethylamide (LSD), DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, DRG.30 - FTIR Spectrometer Maintenance	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.2.1, 5.2.2, 5.2.5, 5.5.3 ASCLD-LAB International Supplemental 2011: 5.2.1.1, 5.2.1.2, 5.2.1.3, 5.2.6.1.1, 5.2.6.2.1, 5.2.6.2.2, 5.2.7, 5.3.6, 5.9.4.1, 5.9.5**	
CHAPTER: Training	**SUBJECT:** Training: LSD	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for performing analysis of LSD and related compounds. (Supplemental 5.2.1.1)

A. LSD Modules (approximately 2 days)

1. **Module I: Reading**
   a. Criminalist will review material in MONO.LSD and its bibliography.
2. **Module II: Color Tests**
   a. Instructor will demonstrate screening tests for LSD.
   b. Criminalist will perform screening tests on the following:
      i. LSD
      ii. LAMPA
         1. the theory and use of Color Tests: benefits and limitations of presumptive color tests
         2. what constitutes a positive reaction
            1. see MONO.LSD
         3. how to document the results of the color test in casework
            1. see DRG.10

4. how to make the reagents
    1. see DRG.13
5. how to check and verify the reagents and how to document that information
    1. see DRG.13
    2. see DRGF.13 and DRGF.28
6. the laboratory procedure for routinely checking the reliability of the reagents
    1. see DRG.13

3. **Module III: GC/MS and FTIR**
    a. Criminalist will produce acceptable GC/MS spectra of the drugs listed above
        i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS
        ii. how to run a sample on the GC/MS
            1. see DRG.25
        iii. how to set up a sequence on the GC/MS
            1. see DRG.25
        iv. what standards are run (how often)
            1. see DRG.12
        v. how to perform data analysis
            1. see DRG.25
        vi. how to use the libraries
            1. see DRG.34
        vii. how to document the results of the analysis in casework
            1. see DRG.10
        viii. maintenance
            1. see DRG.17
            2. see DRG.19
    b. Criminalist may be instructed to produce acceptable spectra by FTIR
        i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR
        ii. how to run a sample on the FTIR
            1. see DRG.28
        iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module IV: Study Topics**

a. Criminalist will answer Study Topics in MONO.LSD

5. **Module V: Competency Test**

a. LSD or related compounds may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

6. **Miscellaneous**

a. LSD samples are typically prepared as "dosage units" for consumption.

i. the number of blotter papers, window panes, cubes or other "dosage units" should be included on the report

ii. the estimated size of the "dosage unit" should be included in the notes

b. Proper itemization of evidence, see DRG.38

7. **Authorizations**

a. See DRGF.29 LSD Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/23/2019	**NUMBER:** DRG.49 - Training: Marijuana
	RELATED ORDERS: MONO.MAR - Analysis of Marijuana, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Training: Marijuana	

I. Policy: The marijuana training program will be used for training Criminalists in the knowledge, skills and abilities necessary for performing casework on suspected marijuana (plant material) and samples suspected to contain cannabinoids.

A. Marijuana Modules: (approximately 1-2 weeks)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.MAR and its bibliography

2. **Module II: Botanical Features**

   a. Instructor will review Botanical Features of Marijuana

   b. Instructor will demonstrate botanical characteristics of marijuana plant (microscopic and macroscopic) and demonstrate Duquenois-Levine test.

3. **Module III: Stereomicroscopy and Color Tests**

   a. Examination of Marijuana and Botanicals: Criminalist will examine botanical standards and marijuana samples selected from cases in order to develop the ability to distinguish marijuana from other commonly encountered green plant material.

   b. Instructor will demonstrate the Duquenois-Levine test.

   c. Duquenois-Levine test will be performed on samples:

      i. the theory and use of Color Tests: benefits and limitations of presumptive color tests

      ii. what constitutes a positive reaction

         1. see MONO.MAR

iii. how to document the results of the color test in casework

1. see DRG.10

iv. how to make the reagents

1. see DRG.13

v. how to check and verify the reagents and how to document that information

1. see DRG.13

2. see DRGF.13 and DRGF.28

vi. the laboratory procedure for routinely checking the reliability of the reagents

1. see DRG.13

d. Stereomicroscopy will be performed on samples: The theory and use of Stereomicroscope will include:

i. the benefits and limitations of steromicroscope

ii. the morphological features on the leaf necessary for a positive identification

1. see MONO.MAR

iii. how to document the results of the analysis in casework

1. see DRG.10

iv. instructions for use:

1. place the sample to be examined on the viewing surface

2. turn on the light

3. adjust the magnification and resolution until the sample is clear

4. a positive microscopic result is the presence of both clothing and cystolithic hairs

e. A number of plant fragments may be provided to be identified using only the stereo-microscope.

f. The use of mock practice casework to mimic the different casework sample types submitted

i. see DRG.43 and DRG.10

4. **Module IV: GC/MS**

a. Criminalist will use the GC/MS to confirm Cannabinoids: Samples will be analyzed by GC/MS and the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry) will be covered:

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

5. **Module V: Study Topics**

a. Criminalist will answer Study Topics in MONO.MAR

6. **Module VI: Competency Test**

a. The analyst will complete a Test of Knowledge (closed book) which will be assessed by the following criteria:

i. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 10 questions = 10 points per question). Trainee must receive ≥ 80% score on the Test of Knowledge to pass the written exam. Scores below 80% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.

b. The analyst will examine unknown competency samples.

i. A number of case-like items will be provided to evaluate the analyst's ability to correctly identify controlled substances using the proper presumptive and confirmatory tests, and to properly document their examination results in a lab report.

1. To successfully complete case-like samples, all controlled substances must be identified. Appropriate presumptive and confirmatory testing will be documented in same manner as casework analysis. See DRG.43.

c. If the analyst does not successfully complete the competency, it will be documented in a QA Action. Remedial training will occur in which the trainer will demonstrate those techniques which resulted in the missed identification.

The analyst will then review those techniques for the appropriate compound(s). The analyst must then complete a second set of competency samples (the number of samples to be determined by the Manager/Supervisor). The second set of competency samples will need to be successfully completed as listed in the criteria above.

d. A laboratory report will be created by the Criminalist properly documenting the results of the analyses of unknowns. The laboratory report will be reviewed by the Trainer and/or Supervisor to ensure the correct procedures and techniques were used to identify the unknowns.

e. The analyst will complete a practical exercise for courtroom testimony with the Supervisor, Trainer, or designee.

f. Following the successful completion of competency test, the analyst may begin analysis of cases upon authorization from the Manager/Supervisor.

g. The analyst's first fifty (**50**) stereomicroscopic marijuana identifications must be contemporaneously reviewed (or verified) by a competency tested analyst who will be identified with their initials and date (or electronic equivalent) near the recorded results in the case notes.

7. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

8. **Authorizations**

a. See DRGF.29 Marijuana Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 03/16/2018	**NUMBER:** DRG.50 - Training: Opiates
	RELATED ORDERS: MONO.OPI - Analysis of Opiates, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005: 5.2, 5.2, 5.2, 5.5**	
CHAPTER: Training	**SUBJECT:** Training: Opiates	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for performing Opiates analysis.

A. Opiates Module (approximately 1-2 weeks)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.OPI and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for heroin (powder and tar if available), morphine, and codeine.

   b. Criminalist will perform screening tests on all of the following, if the laboratory has reference materials available:

      i. Heroin (white powder, brown powder and tar if available)*

      ii. Morphine*

      iii. Codeine*

      iv. Hydrocodone* (aka dihydrocodeinone)

      v. Hydromorphone

      vi. Oxycodone*

      vii. Ethylmorphine

      viii. Didhydrocodeine*

      ix. Thebaine*

x. Papaverine*

xi. 6-monacetylmorphine*

xii. Oxymorphone*

xiii. Apomorphine

xiv. Acetylcodeine

xv. Methadone*

xvi. Meperidine*

xvii. Fentanyl*

c. The theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.OPI

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS**

a. Criminalist will produce acceptable GC/MS spectra of controlled drugs marked with an *, if the laboratory has reference materials available

b. Criminalist will perform an acceptable qualitative chromatographic analysis of **opium** for review by the instructor. Such analysis will include reference materials-standards. (refer to MONO.OPI for laboratory minimum criteria for what constitutes Opium)

i. The theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

4. **Module IV: Pharmaceutical References**

a. Instructor will demonstrate the use of the pharmaceutical references and proper documentation.

b. How to document use of reference collection in notes and report

i. see DRG.34 for guidelines for presumptive and confirmatory identification

ii. see DRG.38 for instructions of the proper entry into LIMS

5. **Module V: Study Topics**

a. Criminalist will answer Study Topics in MONO.OPI

6. **Module VI: Competency Test**

a. The opiates may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

7. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

8. **Authorizations**

a. See DRGF.29 Opiates Training Authorization Checklists.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/26/2016	**NUMBER:** DRG.51 - Training: PCP
	RELATED ORDERS: MONO.PCP - Analysis of PCP, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, DRG.30 - FTIR Spectrometer Maintenance	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.2.1, 5.2.2, 5.2.5, 5.5.3 ASCLD-LAB International Supplemental 2011: 5.2.1.1, 5.2.1.2, 5.2.1.3, 5.2.6.1.1, 5.2.6.2.1, 5.2.6.2.2, 5.2.7, 5.3.6, 5.9.4.1, 5.9.5**	
CHAPTER: Training	**SUBJECT:** Training: PCP	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for performing analysis of PCP and related compounds. (Supplemental 5.2.1.1)

A. Phencyclidine (PCP) and Disassociative Anesthetics (approximately 2 days)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.PCP and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for PCP.

   b. Criminalist will perform screening tests on the following, if the laboratory has reference materials available.

      i. PCP (Phencyclidine)*

      ii. PCC (Piperidinocyclohexanecarbonitrile)*

      iii. Ketamine*

   c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

   d. what constitutes a positive reaction

      i. see MONO.PCP

   e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS and FTIR**

a. Criminalist will produce acceptable GC/MS spectra of controlled drugs listed above marked with an *

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17

2. see DRG.19

b. Criminalist may be instructed to produce acceptable spectra by FTIR

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module IV: Study Topics**

a. Criminalist will answer Study Topics in MONO.PCP

5. **Module V: Competency Test**

a. PCP or related compounds may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

6. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report i

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

7. **Authorizations**

a. See DRGF.29 PCP Training Authorization Checklist.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/26/2016	**NUMBER:** DRG.52 - Training: Analogs
	RELATED ORDERS: MONO.ANALOGS - Drug Analogs, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.2.1, 5.2.2, 5.2.5, 5.5.3 ASCLD-LAB International Supplemental 2011: 5.2.1.1, 5.2.1.2, 5.2.1.3, 5.2.6.1.1, 5.2.6.2.1, 5.2.6.2.2, 5.2.7, 5.3.6, 5.9.4.1, 5.9.5**	
CHAPTER: Training	**SUBJECT:** Training: Analogs	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for phenethylamine analog analysis. (Supplemental 5.2.1.1)

A. Phenethylamine Analogs (approximately 2 days)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.ANALOGS and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for MDA and MDMA.

   b. Criminalist will perform screening tests on the following, if the laboratory has reference materials available.

      i. MDMA (3,4-methelenedioxymethamphetamine)

      ii. MDA (3,4-methelenedioxyamphetamine)

      iii. 2,5-DMA (2,5-dimethoxyamphetamine)

      iv. MDE (3,4-methylenedioxyethylamphetamine)

      v. DOB (2,5-dimethoxy-4-bromoamphetamine)

      vi. STP/DOM (2,5-dimethoxy-4-methylamphetamine)

      vii. 2CT-7

      viii. BZP (Benzylpiperazine)

ix. cathinone

x. methcathinone

xi. ethylone

xii. methylone (MDMC)

xiii. fluoroamphetamine

xiv. fluoromethamphetamine

c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.ANALOGS

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS and FTIR**

a. Criminalist will produce acceptable GC/MS spectra of all controlled drugs listed above that the Laboratory has available

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

b. Criminalist may be instructed to produce acceptable spectra by FTIR

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module IV: Study Topics**

a. Criminalist will answer Study Topics in MONO.ANALOGS

5. **Module V: Competency Test**

a. The phenethylamine analogs may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

6. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

7. **Authorizations**

a. See DRGF.29 Analog Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 07/13/2018	**NUMBER:** DRG.53 - Training: Phenethylamine
	RELATED ORDERS: MONO.PHEN - Analysis of Phenethylamines, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRG.28 - FTIR Analytical Procedures, DRG.29 - FTIR Spectrometer Sample Prep and Cleanup, DRG.30 - FTIR Spectrometer Maintenance	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC: 17025:2005**	
CHAPTER: Training	**SUBJECT:** Training: Phenethylamine	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for phenethylamine analysis.

A. Phenethylamine Modules (approximately 1-2 weeks)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.PHEN and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for amphetamine and methamphetamine

   b. Criminalist will perform screening tests on all of the following:

      i. Amphetamine *

      ii. Methamphetamine*

      iii. Ephedrine*

      iv. Phenylpropanolamine

      v. Caffeine

      vi. Phenmetrazine

      vii. Phendimetrazine *

      viii. Pseudoephedrine

      ix. Diphenhydramine

      x. Methylphenidate *

xi. Niacinamide

xii. Phentermine*

xiii. Mephentermine*

1. the theory and use of Color Tests: benefits and limitations of presumptive color tests
2. what constitutes a positive reaction
    1. see MONO.PHEN
3. how to document the results of the color test in casework
    1. see DRG.10
4. how to make the reagents
    1. see DRG.13
5. how to check and verify the reagents and how to document that information
    1. see DRG.13
    2. see DRGF.13 and DRGF.28
6. the laboratory procedure for routinely checking the reliability of the reagents
    1. see DRG.13

3. **Module III: GC/MS and FTIR**

a. Criminalist will produce acceptable GC/MS spectra of all drugs marked with an * in addition to caffeine and niacinamide.

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis and proper annotation

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

b. Criminalist may be instructed to produce acceptable spectra by FTIR

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module V: Study Topics**

a. Criminalist will answer Study Topics in MONO.PHEN

5. **Module V: Competency Test**

a. The phenethylamines may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

6. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

7. **Authorizations**

a. See DRGF.29 Phenethylamines Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/27/2016	**NUMBER:** DRG.54 - Training: Steroid
	RELATED ORDERS: MONO.STE - Analysis of Steroids, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.2.1, 5.2.2, 5.2.5, 5.5.3 ASCLD-LAB International Supplemental 2011: 5.2.1.1, 5.2.1.2, 5.2.1.3, 5.2.6.1.1, 5.2.6.2.1, 5.2.6.2.2, 5.2.7, 5.3.6, 5.9.4.1, 5.9.5**	
CHAPTER: Training	**SUBJECT:** Training: Steroid	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for steroid analysis. (Supplemental 5.2.1.1)

A. Steroid Modules (approximately 2 days)

1. **Module I: Reading**

   a. Criminalist will review material in MONO.STE and its bibliography.

2. **Module II: Color Tests**

   a. Instructor will demonstrate screening tests for steroids.

   b. Criminalist will perform screening tests on all of the following:

      i. Testosterone *

      ii. Androsterone *

      iii. Oxymetholone

      iv. Nandrolone phenpropionate *

      v. Methandrostenolone *

      vi. Androstene 38, 178-diol Dipropionate

      vii. Methandriol

      viii. 17A-Methyltestosterone *

      ix. 19-Nortestosterone *

x. 19-Nortestosterone 17-Decanoate

xi. Stanozolol

xii. Testosterone Propionate *

xiii. Methenolone Acetate

xiv. Dihydroandrosterone

xv. Norethandrolone

xvi. Oxandrolone

xvii. Androstenediol

xviii. Boldenone Undecylenate

xix. Fluoxymesterone

xx. 5-Androstene 3, 17B -Diol *

xxi. Boldenone *

xxii. 4-Chlorotestosterone 17-acetate

xxiii. Mesterolone

xxiv. Testosterone 17B-Cypionate

xxv. Dihydrotestosterone Benzoate

xxvi. Testesterone Enanthate

c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.STE

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: GC/MS and FTIR**

a. Criminalist will produce acceptable GC/MS spectra of all drugs marked with an *

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

b. Criminalist may be instructed to produce acceptable spectra by FTIR

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module IV: Study Topics**

a. Criminalist will answer Study Topics in MONO.STE

5. **Module V: Competency Test**

    a. The steroids may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

6. **Miscellaneous**

    a. Steroid samples are typically received as liquids or pills

    b. Proper itemization of evidence, See DRG.38

    c. Analytical procedures, See DRG.34

7. **Authorizations**

    a. See DRGF.29 Steroid Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Controlled Substances Technical Unit Manual**	**REVISION DATE:** 10/27/2016	**NUMBER:** DRG.55 - Training: Tryptamine
	RELATED ORDERS: MONO.TRY - Analysis of Tryptamines, DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.2.1, 5.2.2, 5.2.5, 5.5.3** **ASCLD-LAB International Supplemental 2011: 5.2.1.1, 5.2.1.2, 5.2.1.3, 5.2.6.1.1, 5.2.6.2.1, 5.2.6.2.2, 5.2.7, 5.3.6, 5.9.4.1, 5.9.5**	
CHAPTER: Training	**SUBJECT:** Training: Tryptamine	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for Tryptamine analysis. (Supplemental 5.2.1.1)

A. Tryptamine Modules (approximately 3 days)

1. **Module I: Reading**
   a. Criminalist will review material in MONO.TRY and its bibliography.
2. **Module II: Color Tests**
   a. Instructor will demonstrate screening tests for tryptamines
   b. Criminalist will perform screening tests on all of the following:
      i. Psilocybin *
      ii. Psilocin *
      iii. Bufotenine *
      iv. Tryptamine
      v. Harmine
      vi. Harmaline
      vii. DMT * (Dimethyltryptamine)
      viii. DET * (Diethyltryptamine)
      ix. Ibogaine *

x. AMT (Alpha-Methyl-Tryptamine)

xi. 5-MeO-DIPT (5-Methoxy-N,N-diisopropyltryptamine)

xii. 5-MeO-AMT (5-Methoxy-alpha-methyltryptamine)

xiii. 5-MeO-DMT (5-Methoxy-n,n-dimethyltryptamine)

xiv. 5-MeO-MiPT (5-Methoxy-N-methyl-N-isopropyltryptamine)

c. the theory and use of Color Tests: benefits and limitations of presumptive color tests

d. what constitutes a positive reaction

i. see MONO.TRY

e. how to document the results of the color test in casework

i. see DRG.10

f. how to make the reagents

i. see DRG.13

g. how to check and verify the reagents and how to document that information

i. see DRG.13

ii. see DRGF.13 and DRGF.28

h. the laboratory procedure for routinely checking the reliability of the reagents

i. see DRG.13

3. **Module III: Botanical Features and Extraction Procedures**

a. Instructor will demonstrate the botanical characteristics of psilocybin containing mushrooms

b. Criminalist will examine the botanical characteristics of psilobycin containing mushrooms, making notes and sketches as necessary.

c. Instructor will demonstrate the extraction procedure(s) necessary to isolate psilocybin and psilocin from the plant material.

d. Criminalist will perform an extraction procedure on a known sample, perform screening tests on it.

4. **Module IV: GC/MS and FTIR**

a. Criminalist will produce acceptable GC/MS spectra of all drugs marked with an *

i. The theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17
2. see DRG.19

b. Criminalist may be instructed to produce acceptable spectra by FTIR

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

5. **Module V: Study Topics**

a. Criminalist will answer Study Topics in MONO.TRY

6. **Module VI: Competency Test**

a. The tryptamines may be included in the Competency Test for Controlled Substances following the completion of training on all the different drug groups.

7. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, see DRG.38

8. **Authorizations**

a. See DRGF.29 Tryptamine Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 03/25/2019	**NUMBER:** DRG.56 - Training: Miscellaneous Compounds & No Common Controlled Substances
	RELATED ORDERS: DRGF.29 - Controlled Substance Training & Authorization, DRG.10 - Case Records, DRG.13 - Reagent Preparation, DRGF.13 - Stock Reagent Preparation and Verification Log, DRGF.28 - Working Reagent Usage and Testing Log, DRG.25 - GC-MS Using the Software, DRG.12 - Reference Materials, DRG.34 - Analytical Procedures - General, DRG.17 - Calibration/Maintenance of Equip. & Environ. Changes, DRG.19 - GC-MS Routine Maintenance, DRG.18 - Balances, DRG.38 - Entering Results in LIMS, DRG.57 - Training: General Controlled Substance Competency	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ISO/IEC ANAB: 2017**	
CHAPTER: Training	**SUBJECT:** Training: Miscellaneous Compounds & No Common Controlled Substances	

I. Policy: The training program will be used for training Criminalists in the knowledge, skills and abilities necessary for analysis of miscellaneous compounds. Miscellaneous Controlled Compounds, or compounds not encountered during training, may be encountered in casework. These compounds may be identified by Criminalists if an appropriate analytical scheme is followed. Occasionally, samples are encountered in which no common controlled substance is detected; these samples are identified as "No Common Controlled Substance".

A. Miscellaneous Compounds and No Common Controlled Substances (approximately 1 day)

1. **Module I: Reading**

a. There is no monograph for Miscellaneous Compounds or "No Common Controlled Substances". Clarke's or other references may be used for structure or solubility information regarding the Miscellaneous Compounds.

b. Some long-eluting compounds are encountered in casework. If the DEA.m or other shorter method is used, the compounds may be seen in a later data file (e.g. blank) at the wrong retention time. Using longer, hotter methods such as GEN.m may allow them to be identified in the correct data file.

i. sildenafil (non-controlled) (GEN.m or steroid.m)

ii. tadalafil (non-controlled) (GEN.m or steroid.m)

iii. quetiapine (non-controlled) (GEN.m or steroid.m)

iv. buprenorphine (schedule V) (GEN.m or steroid.m)

v. mitragynine (GEN.m or opiate.m or steroid.m)

2. **Module II: Color Tests**

a. Instructor will demonstrate screening tests for Methaqualone and any other Miscellaneous Compounds.

b. Criminalist will perform screening tests on all of the following, if the laboratory has reference materials available:

i. aspirin *

ii. acetaminophen *

iii. methaqualone *

iv. modafanil *

v. diphenhydramine

vi. guaifenesin

vii. levamisole*

viii. caffeine *

ix. niacinamide

x. dimethyl sufone (DMSO) *

c. Instructor will explain color tests used to call a sample "No Common Controlled Substance"

i. the theory and use of Color Tests: benefits and limitations of presumptive color tests

ii. what constitutes a positive reaction

iii. how to document the results of the color test in casework

1. see DRG.10

iv. how to make the reagents

1. see DRG.13

v. how to check and verify the reagents and how to document that information

1. see DRG.13

2. see DRGF.13 and DRGF.28

vi. the laboratory procedure for routinely checking the reliability of the reagents

1. see DRG.13

3. **Module III: GC/MS & FTIR**

a. Criminalist will produce acceptable GC/MS spectra of controlled drugs and non controlled substances marked with an *, if the laboratory has reference materials available

b. Instructor will explain solvents and GC/MS methods used to call a sample "No Common Controlled Substance" including using adequate amount of

solid samples (25-35 mg) and minimizing the amount of solvent used for dilution (5-8 drops). See DRG.34.

i. the theory and use of GC/MS (Gas Chromatography/Mass Spectrometry): benefits and limitations of GC/MS

ii. how to run a sample on the GC/MS

1. see DRG.25

iii. how to set up a sequence on the GC/MS

1. see DRG.25

iv. what standards are run (how often)

1. see DRG.12

v. how to perform data analysis

1. see DRG.25

vi. how to use the libraries

1. see DRG.34

vii. how to document the results of the analysis in casework

1. see DRG.10

viii. maintenance

1. see DRG.17

2. see DRG.19

c. Criminalist will produce acceptable IR spectra of controlled substances

i. the theory and use of FTIR (Fourier Transform Infra Red) Spectrophotometry: benefits and limitations of FTIR

ii. how to run a sample on the FTIR

1. see DRG.28

iii. how to prepare samples for analysis

1. see DRG.29 for both UATR, KBr pellet, and vapor cell sample preparation.

2. Analyst will document practice presumptive identification for at least one sample using vapor cell (volatile: ethanol, acetone, chloroform) sample preparation.

3. see MONO.COC for clean-up procedures and annotation of peaks

iv. how to run standards (how often)

1. see DRG.12

v. how to document the results of the analysis in casework

1. see DRG.10

vi. maintenance

1. see DRG.17
2. see DRG.30

4. **Module IV: Study Topics**

a. Criminalist may answer the following questions:

i. Explain why color tests may not match an analyte that you found on the GC/MS.

ii. What criteria would you use to evaluate a library match on GC/MS? On IR?

iii. You identify a substance by library match on GC/MS. What steps would you take to identify whether it is a controlled substance?

iv. You identify a substance by library match on GC/MS. How would you see whether the lab has a standard present to confirm?

v. What steps should be taken during sample preparation to ensure that you are likely to detect substances that may be present in low concentrations?

vi. What type of instrumental analysis must be done to report out "No Common Controlled Substances Detected"?

5. **Module V: Competency Test**

a. There is a combined competency test for "General Controlled Substance" analysis. See DRG.57.

6. **Miscellaneous**

a. The theory and use of balances:

i. proper weighing techniques: (see DRG.18)

ii. uncertainty/accuracy of the balance-how the results are recorded in the notes and on the report

iii. laboratory procedures for routinely checking the accuracy of the balances (see DRG.18)

iv. the location of balance logs

b. Proper itemization of evidence, See DRG.38

7. **Authorizations**

a. See DRGF.29 for Miscellaneous Compounds & No Common Controlled Substances Training Authorization Checklist.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 01/17/2019	**NUMBER:** DRG.57 - Training: General Controlled Substance Competency
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 6.2**	
CHAPTER: Training	**SUBJECT:** Training: General Controlled Substance Competency	

I. Policy: The general controlled substance training program will culminate in a competency that will test the Criminalist's knowledge, skills and abilities that are necessary for performing casework on samples suspected to contain controlled substances.

A. Criminalist may begin performing case work after successful completion of competency and upon authorization from the Manager/Supervisor.

1. The **General Controlled Substance Analysis Competency Test** may include drugs from the following groups:

   a. Phenethylamines

   b. Caines

   c. Opiates

   d. Tryptamines

   e. Benzodiazepines

   f. Lysergic Acid Diethylamide(LSD)

   g. Phencyclidine and Analogs

   h. Amphetamine Analogs

   i. Barbiturates

   j. Steroids

   k. GHB

   l. Miscellaneous Compounds

   m. No controlled Substance

2. In the competency, the Criminalist will receive 20 samples provided by the Manager/Supervisor or designee.

   a. Case samples or previously analyzed proficiency/competency samples may be used when any of the following steps are taken:

i. When previous case samples are used from our training stock, then a sample will be repackaged and renamed.

ii. The identifying information of a previously used Proficiency sample will be coded by assigning it a different Agency Case #. For e.g. a previously used ACN like CTS12-564 will be assigned an internal coded ACN with the unit and date - DRG-060412, ALC-060512 or TOX-060512 etc.

iii. Ensure any identifying information is obscured and re-name the sample.

iv. Place a portion into a separate container and re-name the sample.

3. Criminalist will analyze each of the samples to the fullest extent necessary to either:

   a. Identify the controlled substance(s) present

   b. Determine that no common controlled substances was detected

4. To successfully complete the competency samples, the criminalist must:

   a. All controlled substances must be identified. Appropriate presumptive and confirmatory testing will be documented in same manner as casework analysis. See DRG.43

   b. If a drug identification is missed or incorrect drug identification is made, then remedial training will occur and it will be documented in a QA Action.

5. If the criminalist does not successfully complete the competency samples due to "a" or "b" above, the instructor will demonstrate those techniques which resulted in the missed identification. The criminalist will then review those techniques for the appropriate compound(s). The criminalist must then complete a second set of competency samples (the number of samples to be determined by the Manager/Supervisor). The second set of competency samples will need to be successfully completed as listed in the criteria "a" and "b" above.

6. **Written Report for General Controlled Substance Analysis Competency Test**

   a. The Criminalist will prepare a written report of the results of the Competency Test to demonstrate the individual's ability to properly convey the results and conclusions of the analysis.

   b. The report should be generated in the same manner in which reports are generated for casework purposes.

7. **General Controlled Substance Analysis Competency Test of Knowledge**

   a. The Criminalist will complete a written examination as a Test of Knowledge.

      i. The Test of Knowledge is a closed book test.

      ii. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 25 questions = 4 points per

question). Trainee must receive ≥ 80% score on the Test of Knowledge to pass the written exam. Scores below 80% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.

iii. The criminalist will receive written feedback from their trainer/Supervisor/Manager.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 10/31/2019	**NUMBER:** DRG.58 - Health and Safety
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB:**	
CHAPTER: Health and Safety	**SUBJECT:** Health and Safety	

I. Policy: These guidelines in conjunction with the *Forensic Services Division Safety Manual* will be followed to ensure employee safety within the laboratory.

A. Wear appropriate personal protective equipment when handling chemical and bio-hazardous materials. Consult the *Forensic Services Division Safety Manual* for further information. Safety Data Sheets (SDS), located in the laboratory technical units, should be consulted whenever using an unfamiliar chemical.

B. The following personal protection equipment should be worn at all times when working with or near hazardous substances or activities:

1. Laboratory coat
2. Latex or nitrile gloves
3. Safety glasses or hood shield when mixing and preparing reagents

C. It is the responsibility of the analysts working within the lab to be familiar with the Division's Safety Manual and to comply with all safety requirements.

D. Special care will be taken with samples that may contain fentanyl or its analogs.

1. Nitrile gloves will be used.
2. Item packaging will be closed and workstation surfaces will be cleaned when leaving for a break or finishing analysis.
3. Fine particulate or friable samples that can create an aerosol hazard pose additional consideration for protective equipment.
    a. Items will be opened in a hood.
    b. N95 respirators will be worn
4. Some samples may not pose an aerosol threat such as tar-like substances, pills, and patches. Nitrile gloves should be worn and care should be taken with their handling. Double gloving can be performed as well.

E. When using "Sharps" or "Sharps Biohazard" bins for disposing of glassware or other "sharps", the bin should not be filled past the "fill line" indicated on the bin.

F. All bins need to be labeled appropriately (regardless of any markings on the bags inside the bins). This includes: "Biohazard", "Chemical Waste" and "Debris Waste".

1. typically, "chemical waste" consists of large amounts of chemicals like:
    a. corrosive acid inorganic waste or "acid waste"
    b. flammable organic waste or "organic waste"
    c. corrosive basic inorganic waste or "basic waste"
2. typically, hazardous waste solids or "debris waste" contains items with chemical residue (eg. slides, pipettes, spot plates etc).
3. biohazard waste consists of biohazard materials (eg. blood soaked gloves).
    a. gloves or "wipes" with small amounts of blood may be placed in the trash cans

G. Any larger container (e.g. 50 gallon drum) used to temporarily hold the bags of waste should also be labeled appropriately. This includes: "Biohazard", "Chemical Waste" and "Debris Waste".

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** DRG.59 - List of Forms
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Forms	**SUBJECT:** List of Forms	

I. Policy: The following are forms used in the Controlled Substance Unit. Forms may be controlled (required for use) or non-controlled (suggested for use but not required).

A. Controlled forms are located on PowerDMS and must be used.

1. Controlled Substance Training and Authorization (DRGF.29)

B. Non-controlled forms are located on PowerDMS or maintained within the Controlled Substance Unit and the minimum information that must appear on the form is listed below.

1. Stock/Working Reagent Preparation and Testing Log (DRGF.13)
   a. Name of reagent
   b. Identity and lot numbers of chemicals
   c. Analyte used for verification
   d. Initials of person who prepared reagent and performed verification
   e. Retest date
   f. Initials, date and method of verification for retests
2. Balance Calibration Check Log (DRGF.02)
   a. Date and Initials of person checking balance
   b. Instrument number and/or serial number
   c. Reference standards used to check balance
3. Balance Maintenance Log (DRGF.03)
   a. Date and Initials of person performing maintenance
   b. The service needed or service performed/repair details
4. GC/MS Weekly Check Log (DRGF.06)
   a. Date and Initials of person performing weekly check
   b. Instrument number and/or serial number

c. Indication when autotune was performed, septum was changed, liner was changed, and the pump oil was checked

d. Relative Retention Time (RRT) for target analyte(s)

5. GC/MS Service/Maintenance Log (DRGF.07)

a. Date and Initials of person performing maintenance

b. Instrument number and/or serial number

c. The service needed or service performed with repair details

d. If outside technician responded, what maintenance was performed

6. FTIR Weekly Check Log (DRGF.05)

a. Date and Initials of person performing weekly ready checks, and an indication of whether the check was successful

7. FTIR Service/ Maintenance Log (DRGF.04)

a. Date and Initials of person performing maintenance

b. The service needed or service performed with repair details

c. If outside technician responded, what maintenance was performed

8. Microscope Maintenance Log (DRGF.08)

a. Date and Initials of person performing maintenance

b. The service needed or service performed with repair details

9. Software Log (DRGF.12)

a. Date and Initials of person filling out log

b. Name and unique identifier of software

c. Indication if a validation or verification was performed

10. Reference Material Verification Log (DRGF.09)

a. Date and Initials of person checking reference material

b. The manufacturer of the reference material

c. The Lot identification number/vial number of the reference material

d. The method used for verification

11. DPT Training Sample Verification Log

a. Assigned lot number/vial number

b. For each case used to create sample:

i. Agency and case number

ii. Item number and net weight

iii. For cases not previously analyzed - the date of verification, analyst, tests performed, and results

iv. For case previously analyzed the by laboratory - LIMS case number

12. Drug Usage Log (DRGF.10)

a. Date and Initials of person using the reference material

b. The name, vial number and location of the reference material being used

c. The weight taken and any comments for the reason for use

13. Report Review Checklist (DRGF.11)

a. Date and Signature of person performing the technical and/or administrative review

b. The laboratory number

c. The elements that are being reviewed, which should correspond to the elements in the Controlled Substance policy on Technical and Administrative Review

14. Telephone Log

a. The laboratory number, initials and date and pagination

b. The name of the caller and the summary of the conversation

c. If necessary, reference to a specific agency case number

15. Log of Quality Corrections (DRGF.27)

a. Description of non-conformity

b. Action or correction taken

c. Analyst/Date

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substance Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** DRG.60 - Test Quality and Corrections
	RELATED ORDERS: DRG.40 - Reanalysis for Destruction, DRG.34 - Analytical Procedures - General, DRG.10 - Case Records, FSD.15 - Non-Conforming Work and QA Actions	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.6**	
CHAPTER: Quality Assurance	**SUBJECT:** Test Quality, Corrections, and Measurement Assurance	

I. The Controlled Substance Unit has quality procedures in place to ensure the reliability of test results.

A. **Assuring the Quality of Test Results**

1. The procedure for monitoring the validity of results can be found in DRG.34 and DRG.10
2. There is a 100% technical and administrative review by qualified personnel to ensure any trends are detectable as stated in DRG.14
3. The monitoring of all test results include but are not limited to the following:
   a. Use of reference materials or quality control materials. See DRG.12 References
   b. Use of alternative instrumentation that has been calibrated to provide traceable results. See DRG.18
   c. Functional check(s) of measuring and testing equipment. See DRG.18, DRG.19, and DRG.30
   d. Use of check or working standards with control charts, where applicable. See DRG.60 Measurement Assurance
   e. Intermediate checks on measuring equipment. See DRG.18, DRG.19, and DRG.30
   f. Replicate tests or calibrations using the same or different methods. See DRG.18
   g. Retesting of retained items. See DRG.40
   h. Review of reported results via technical and administrative review. See DRG.14
   i. Intralaboratory comparisons. See DRG.15

4. The validity and quality of test results are ensured in a variety of ways. If any issues arise from monitoring the quality control procedures listed above, the Supervisor or Manager will make a determination of the extent of the problem and take planned action. The following includes some, but not all, planned actions to correct any significant technical problems:

Mechansim of Assuring Quality	Potential Actions to be Taken
Regular use of verified reference materials for confirmation purposes	If reference materials are found to be unacceptable due to deterioration or contamination they will not be used for casework. The use of Standards is specified in the procedure, and their use is recorded in the case record. See DRG.34 and DRG.10 respectively.
Participation in externally provided proficiency tests	If a significant technical issue arises from the results of proficiency testing, the Supervisor or Manager will determine the extent of the issue, and if necessary open a corrective action to ensure the accurancy and validity of casework. See FSD.15.
100% technical review of casework	If a significant technical issue arises from 100% technical review of casework, the Supervisor or Manager will determine the extent of the issue and may open a corrective action that may entail: halting casework, retraining of an analyst, or rewriting of procedures. If the issue is not technically significant, the analyst will be given back the case for correction to ensure the correctness of test results.
Retesting of test items scheduled for destruction- see DRG.40	If a significant technical issue arises from reviewing the results of the retesting of items scheduled for destruction eg. the results of the retesting or reweighing do not correspond to the original analysis, the Supervisor or Manager will determine the extent of the issue and may open a corrective action that may entail: halting casework, retraining of an analyst, or rewriting of procedures.

B. **Procedures and Test Methods**

1. For procedures in the testing methods of drug analysis, see DRG.34
2. For test data interpretations data, see DRG.34
3. For method, software, and equipment validations and performance checks prior to use in casework see DRG.16 and DRG.32
4. For instruction on the use and operation of equipment see DRG.17, DRG.18, DRG.19, DRG.25, and DRG.28
5. Sampling procedures can be found in DRG.33
6. The comparison of an unknown to a known require the evaluation of the unknowns items to identify characteristics suitable for comparison. Requirements for comparisons can be found in DRG.34

C. **Environmental Conditions**

1. Environmental factors that may influence results can be found in DRG.17

2. Other items are as follows:

   a. For access to and use of areas affecting laboratory activities, see DRG.02

   b. Prevention of contamination, interference, or adverse influences on laboratory activities, see DRG.09 and DRG.18

   c. Effective Separation between areas with incompatible laboratory activities see DRG.17

   d. Incorporating good housekeeping measures within the laboratory see DRG.17

3. As stated in DRG.17, there are no environmental conditions in the technical requirements for testing drugs that need to be documented or monitored

D. **Measurement Assurance**

1. **General Information**:

   a. Measurement Assurance samples will be recorded in a manner where trends are detectable and the data will be reviewed statistically. See Measurement Assurance below for the procedures.

   b. Evaluation of Measurement Assurance data will be performed quarterly

   c. The evaluation should include at least the previous three months of data.

   d. Data should only be inclusive of the lab-created measurand in use.

   e. Minitab software may be used to perform a statistical evaluation; however statistical analysis may be performed using other software as well (eg. Access). The instructions included are for using Minitab.

   f. The measurement assurance should be documented and maintained within the unit.

   g. If there is a change in the measurement process or the measurement instruments, the quarterly measurement assurance will be evaluated to determine if the changes are significant enough to require a full budget reevaluation.

2. **Collection of Data:**

   a. Every person assigned to the drug section should weigh:

      i. Once per month

      ii. On balances 1, 7, 8, 12 and 13

   b. Do a minimum of (2) weighings for each type of weight

      i. For balances #1, 7, 8, 12 (the small drug balances):

         1. Approximately 1-gram object.

         2. Approximately 1-ounce object

         3. Approximately 300-gram object

      ii. For balance #13 (the large drug balance):

         1. Approximately 1-ounce object

2. Approximately 1-pound object

c. Procedure

i. Follow the procedure outlined in DRG.18

ii. Add the entries to the "Drug Section Ongoing Balance Measurement Assurance.mdb" database (see location below).

3. **Analysis**:

a. Open the database:
L:\LAB\MUIR\1-MUIR ALL\Uncertainty Budget Committee\Measurement Assurance\Drug Section Ongoing Balance Measurement Assurance.mdb

b. Open the f_Export form

c. Enter a date range of one year.

d. Press each button to export each balance type at each weight range.

e. NOTE: Each time the files are exported, they will re-write over the older export. If the files need to be saved, they should be renamed and moved to another location.

f. Go to a computer with Minitab and Open Minitab

g. File | Open Worksheet

h. Change the filter to “Excel (*.xls, *.xlsx)”

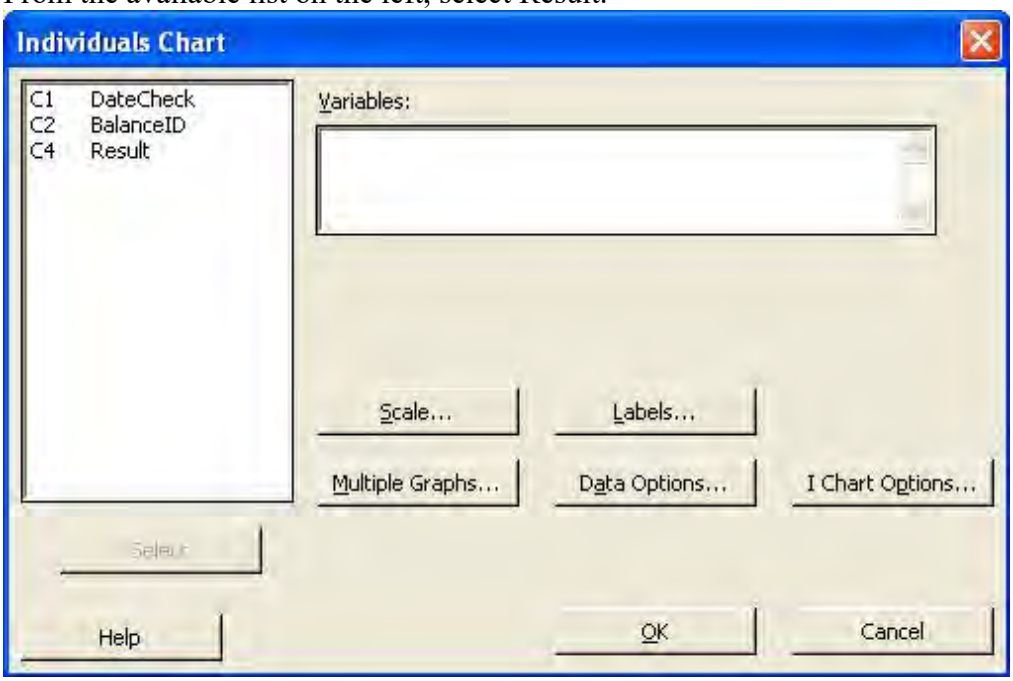
i. Each .xls file will be exported in the folder:
L:\LAB\MUIR\1-MUIR ALL\Uncertainty Budget Committee\Measurement Assurance\DatabaseExports

j. Open one of the exported .xls files

k. Stat | Control Charts | Variables Charts for Individuals | Individuals

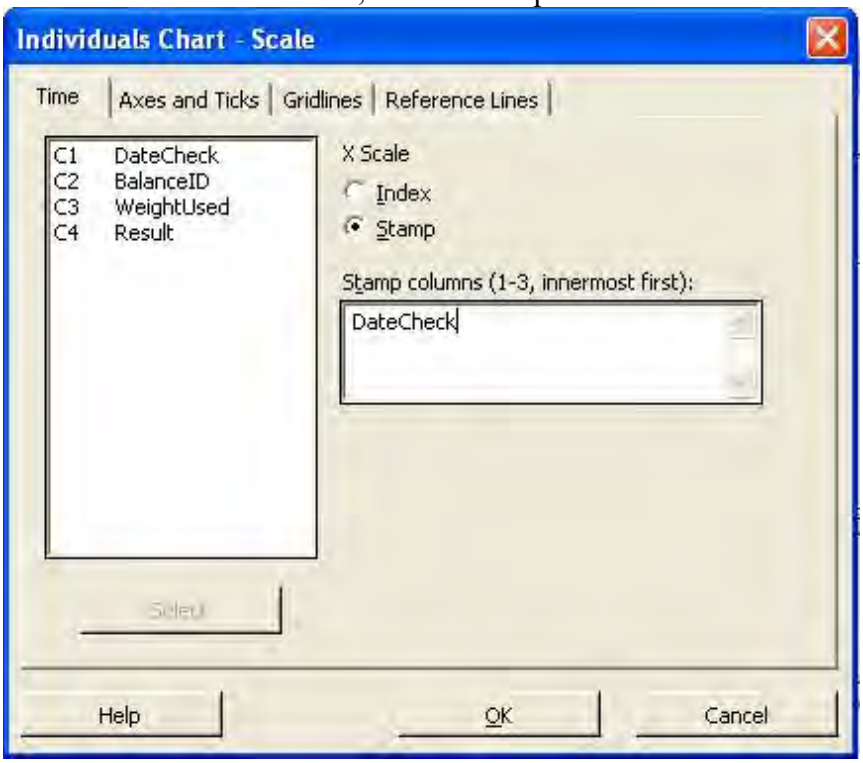
l. In the Individuals Chart window click on the variables box:

i. From the available list on the left, select Result.



m. Click the scale button:

i. On the X Scale radio button, choose Stamp



n. Click in the Stamp Columns box. From the available list on the left, choose DateCheck



o. Click OK

p. On the Individuals Chart window, click on the Labels button

   i. Enter in an appropriate title for the balance type, weight type, and date range

q. Click OK

r. On the Individuals Chart window, click on the I Chart Options button

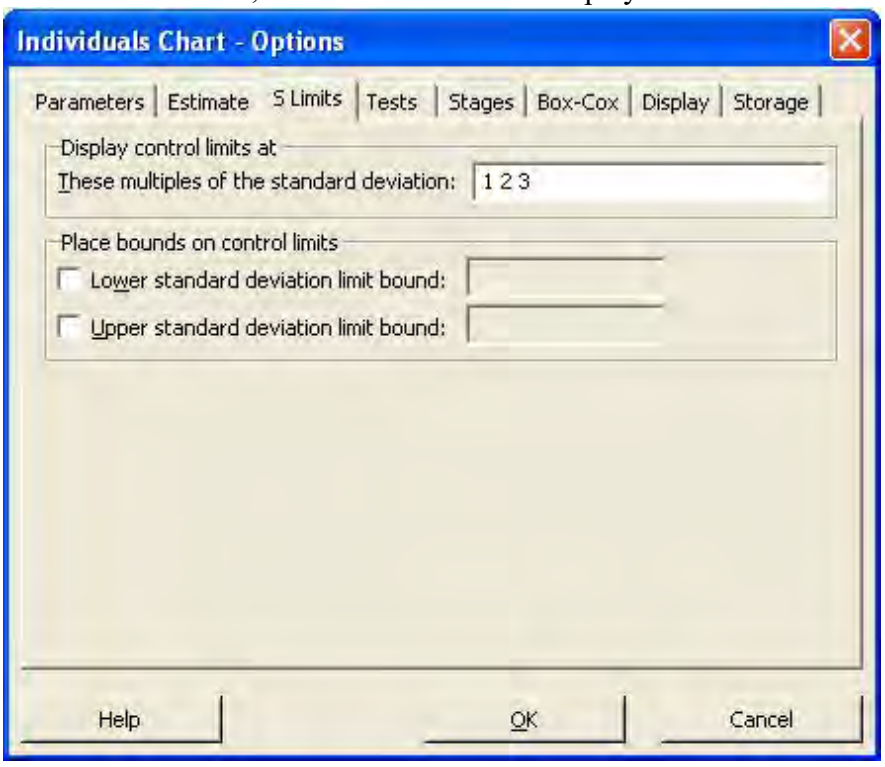
s. On the parameters tab, enter the standard deviation given in the chart below. The standard deviation used is obtained from the Process Measurement Assurance data from the Drug Balance Uncertainty Budgets.

Balance	Weight	Standard Deviation
1, 7, 8, 12	~1 g	0.002709434
1, 7, 8, 12	~28 g	0.120069575
1, 7, 8, 12	~300 g	0.120069575
13	~28 g	0.092819492
13	~450 g	0.092819492

   i. If a new weight measurand is created that does not fall within the levels listed above, there will not be a defined standard deviation until adequate data has been collected and evaluated. The standard deviation parameter can be left blank, minitab will estimate the standard deviation to be used in the control chart from the existing data.

t. Leave the Mean blank

u. On the S Limits tab, enter "**1 2 3**" in the display control limits blank



v. Click OK

w. On the Individuals Chart window, click OK

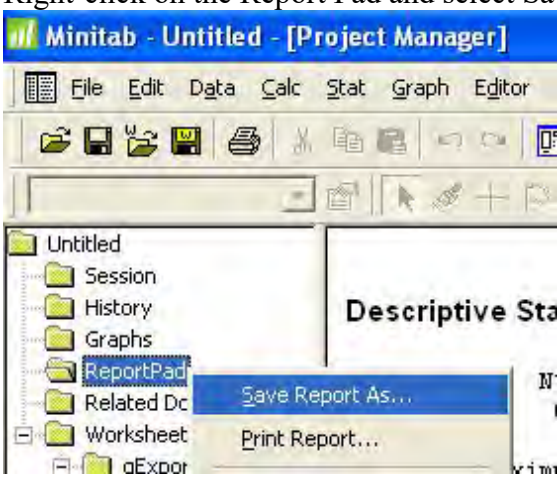
x. Right-click on the generated chart. Choose Append to Report

y. Repeat the above Minitab steps for each exported excel file (for each type of balance for each weight range)

z. When all reports are done:

i. Window | Project Manager

ii. Right-click on the Report Pad and select Save Report As



iii. Save the Rich Text File (.rtf) with the date in the file name in the folder: `L:\LAB\MUIR\1-MUIR ALL\Uncertainty Budget Committee\Measurement Assurance\Archives\`

aa. Any discussion of points that fall outside acceptable parameters should be included in the write-up. See Criteria below

4. **Evaluation**:

a. The graph is a plot of the measured value of the lab-created weight against the historical standard deviation. The limit lines correspond to k=1, k=2 and k=3 of the historical standard deviation. This evaluation should be performed for:

i. Balance # 1, 7, 8, 12 for approximately 1 gram

ii. Balance # 1, 7, 8, 12 for approximately 28 grams

iii. Balance # 1, 7, 8, 12 for approximately 300 grams

iv. Balance # 13 for approximately 28 grams

v. Balance # 13 for approximately 450 grams

5. **Criteria**:

a. It is expected that most data points will fall within the first 2 limits lines.

b. If points fall beyond the 3rd limit line (k=3), then a written explanation should be included with the measurement assurance documentation. The written explanation should address potential sources of variation and actions taken, if necessary.

i. Possible sources of variation that may be evaluated include:

1. Typographical errors

2. Potential issues with the measurand (leaking, etc.)

3. Recent instrument calibrations, repairs or changes in equipment

4. Issues with one analyst or a specific balance or measurand

5. Issues with multiple analysts, multiple balances or multiple measurands

6. Evaluate if the data point(s) would be outside of the reported uncertainty for that balance

7. Evaluate if the deviation appears to be a trend. Analyst may need to evaluate longer time period to determine historical trend or persistent issue.

8. The evaluation will be documented by the analyst preparing the measurement assurance quarterly report with their initials and date of preparation indicating that the criteria was met and/or that a note was made for any potential issues or extenuating circumstances.

ii. Possible actions to be taken:

1. Perform a check of the balance with the stainless steel weights. This check should be logged in the Balance Check Log and results of the check included in the write up (eg. Balance passed check)

2. If there is any indication that the balance is not working properly, it should be promptly removed from service

3. Make a new measurand if the measurand is compromised or determined to be the source of the variation

4. Notify Supervisor/Manager that the uncertainty budget may need to be evaluated or instrument may need to be removed from service

E. **QA Action-Correction (QAC)**

1. **See FSD.15 for information about Division Level Corrective Actions.**

2. An action taken to correct non-conforming work that has already occurred. The action taken to correct the nonconformity will be based on the severity of the non-conformance. QAC-3 is the least significant, QAC-2 is somewhat significant, and QAC-1 is the most significant non-conformity. Refer to FSD.15 for explanation of the types of QA Actions.

   a. Non-conformity: any aspect of testing or work product that does not conform to laboratory policies, procedures, or the agreed requirements of the customer.

3. **QAC-3:** an action taken to correct a non-conformity when the significance of the non-conforming work is minimal and is unlikely to reoccur. The correction is readily apparent and can be made quickly. The action will be taken immediately, often by the person observing the non-conformity. The non-conformity or action may or may not be documented. Examples may include:

   a. A mis-shot on the instrument for case sample.

      i. Correction would be to fix any apparent issue and re-analyze.

   b. Typographical error or data entry error that can be fixed before released.

   c. No n-tricosane in blank, correction would be to add n-tricosane and re-shoot

4. **QAC-2:** action taken to correct a non-conformity when the non-conforming work is of some significance and the investigation demonstrates that the non-conformity did not affect the validity and accuracy of the test result. QAC-2 corrections are actions made to prevent non-conformity in casework from being reported and will be documented. QAC-2 issues will be documented and maintained within the Drug Unit. The correction will be made. All QAC-2's will be brought to the Supervisor's attention. The documentation will be evaluated by a Supervisor/Manager monthly. The Supervisor will evaluate for issues or patterns of problems that may need to be elevated to a QAC-1. Examples of a QAC-2 may include:

   a. Expired and/or non-verified reagents, chemicals or standards used when it was determined the accuracy or quality of the result is not in question

   b. Equipment calibration or checks not occurring as scheduled (GC/MS, FTIR, balances, check weights) when it was determined the accuracy or quality of the result is not in question

   c. Measurement Assurance not occurring as scheduled

   d. Quarterly or Annual drug inventory not occurring as scheduled

   e. Documented procedures not followed when it was determined the accuracy or quality of the result is not in question

f. Persistent problems identified during checking of reports (this would be determined by the Technical Reviewer)

5. **QAC-1:** an action taken to correct a problem or error resulting in erroneous results or conclusions issued for casework, proficiency testing or court testimony, when evidence is compromised or if the problem or error could recur. These issues must be documented immediately by a Supervisor/Manager, who must use the QA Action Procedure. The correction should be made as soon as possible. The action may involve stopping casework, re-training, competency testing, re-writing procedures, etc. Examples of non-conformities that would likely immediately rise to a Quality Action Correction-1:

   a. A technical problem or error results in erroneous results or conclusions being reported in casework.

   b. A technical problem or error results in an unsuccessful proficiency test.

   c. Erroneous court testimony is identified.

   d. Evidence is compromised.

   e. A non-conformity is identified in an audit.

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substance Technical Unit Manual	**REVISION DATE:** 02/02/2016	**NUMBER:** DRG.61 - Drug Presumptive Testing (DPT) Training
	RELATED ORDERS:	
APPROVED BY: Shana Meldrum & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Drug Presumptive Testing (DPT) Training	

I. Policy: The following is general information about Drug Presumptive Testing (DPT) Training. Both the Laboratory and the District Attorney's Office are responsible for administration of the DPT program and training law enforcement personnel.

A. **Personnel Authorized to Provide Training**

1. Persons authorized to train law enforcement personnel are those that are competent to perform drug analysis and have successfully completed the DPT class.

B. **Personnel Authorized to Perform NIK Testing Under DPT Program**

1. Only qualified law enforcement personnel should perform presumptive tests on suspected controlled substances under the DPT program.
2. Qualified law enforcement personnel shall have successfully completed the approved training course designed for the NIK tests used. The course will consist of classroom lecture and practical experience performing NIK testing.
3. A person who successfully completes the DPT training course shall be issued certificate of completion

C. **Training Course**

1. The instructor shall cover the following:
   a. How to properly utilize NIK kits
   b. The scope of drugs covered under the DPT program
   c. The approved polydrug testing scheme
   d. How to properly document the use of NIK kits on the approved forms
   e. How to properly obtain gross weights
   f. How to properly package and submit evidence
   g. How to properly convey knowledge of controlled substance identification in court
   h. Limitations of NIK testing
2. Forms used, DPT Manual and Verification Study are made available to all students via ARIES.

D. **Written examination**

1. The written exam consists of at least 35 questions.

2. The individual must pass with a score of 80% correct answers.

E. **Practical examination**

1. The practical exam consists of students being given known substances and performing presumptive testing to obtain the correct result and correct gross weight.

2. The practical examination is successfully complete when the student demonstrates to the instructor correct hands-on use of the NIK kit.

F. **Records**

1. The laboratory will maintain a record of all trained law enforcement personnel.

G. **DPT Program Manual**

1. The responsibilities and obligations of all parties can be found in the DPT Manual available on ARIES.

2. The purpose of the DPT manual is to outline the procedural and reporting requirements for conducting the Presumptive Test during the investigation of narcotics related incidents for the common drugs of abuse in Contra Costa County.

3. The DPT manual is intended to be a supplement to the 8 hour Course taught by the Contra Costa County Crime Lab and District Attorney's Office.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substance Technical Unit Manual	**REVISION DATE:** 12/20/2017	**NUMBER:** DRG.62- Case File Images
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Evidence Handling	**SUBJECT:** Case File Images	

I. Policy: The following is the procedure for adding electronic images. These Instructions are intended to be a guide for usage and slight variations may be made for file names, names of folders, etc.

A. Instructions for adding **single images** to the LIMS

1. Printouts from instrument software can be converted to electronic images for use in case notes by printing through an application such as JusticeTrax Imaging.

   a. When printing from an application, the printer should be set to JusticeTrax Imaging and Printer Properties set for the desired image.

   b. .TIF files:

      i. .TIF file format must be used if Imaging or Batch Imaging will be used to send the file to LIMS.

      ii. The following JusticeTrax Imaging printer settings are adequate for imaging the majority of text documents, however settings may be changed to meet the needs of the user and image (ie. colors, pictures, storage locations).

         1. Device Settings tab - select "Portrait" and "Low Resolution 200 x 200 DPI"

         2. File Formats tab - select "TIFF Packed (*.tif)", "1 bit"

         3. File Formats tab - each page saved as separate file ("Create Multipage Image" should be unchecked or "Save each page as a separate file" should be checked)

         4. Filename Generation tab - "C:\Temp". Temp folders on most instrument computers will be accessible from LIMS computers.

         5. Start Application tab - uncheck the "Disable Messaging Interface"

         6. File format is dictated by LIMS requirements, settings such as resolution and color depth should be used to minimize file sizes.

   c. .JPG files:

i. .JPG files can also be used if the images are manually inserted into LIMS. .JPG files cannot be used with Indexer or Batch Indexer. In general, .JPG files are smaller in size than .TIF files.

ii. The JusticeTrax Imaging printer settings are similar to the .TIF settings with the following differences:

1. File Format tab - select "JPEG (*.jpg)"

2. File Format tab - select "24 bits"

2. In general, images from the instruments are added into JusticeTrax using a program called JusticeTrax Indexer.

a. Indexer or Batch Indexer can only use .TIF files.

b. The indexer will automatically add annotations with the username on each image based on the person logged in. Font size and position can be adjusted to ensure it does not overwrite important information or detail

i. If the person performing the data analysis is different from the person closing the case, the analysts's initials, or secure electronic equivalent, must appear on the images. In Drug Analysis, the person performing the analysis is usually the person generating the report.

1. The person performing the data analysis must be logged into the indexer.

2. The annotation can be anywhere on the page, but the font size should be large enough to be visible.

c. Each page must be a separate image.

d. If indexer is open when printing from JusticeTrax Imaging, the image may automatically appear in the application.

e. Alternatively, select File > Load File from Disk and navigate to a saved image.

f. Type the laboratory number into the Locate field to search for requests associated with that laboratory number.

g. Select the appropriate request.

h. Enter the image name including prefix and number into the Enter Image Name field. See "Image name prefix" below.

i. Hit the Save button.

j. Analysis images in the notes should be ordered by item, this may require renaming images in LIMS.

i. Renaming an image will not alter the secure username attached to the image.

ii. Anyone can add images, however once in LIMS images may be renamed or edited by either the person who entered the image or the person assigned to the case.

3. Images that do not require initials can be added to a case through the LIMS Imaging module.

    a. In Drug Analysis, the person performing the analysis is the person completing the report. Secure initials are not required on the image (every notes page will be initialed when complete).

    b. Images must have been saved in an appropriate format and accessible from the computer being used.

    c. The case is accessed in LIMS.

    d. The LIMS-Imaging module can be accessed from the image button. This can be seen in case view or edit findings.

    e. Select the desired request and add images (Image > Insert New Image).

    f. In the dialog box that opens, navigate to the saved images.

    g. Select the image to be added. If the Image >"Allow multiple images on Add" is activated, multiple images can be added at once.

    h. An image name can be entered, LIMS automatically adds the date/time and iterates the images.

    i. Rename the images as needed.

4. Adding **multiple images** to the case file

    a. JusticeTrax Batch Imaging can upload multiple images to LIMS using a Directory (text files within a folder for each image) or a Batch File (a single text file that lists all images).

    b. See TOX.10 and BA.43 for further information.

5. Image name prefix

    a. Specific prefixes are used to order images when displayed in crystal reports; within each prefix, images are ordered in alphanumeric order (eg DATA01 before DATA02 before DATA03).

    b. The prefix "REP" will make images appear in the report instead of the notes.

    c. In the notes, images will appear in the following order: "EVID", "IMG", "DATA", ENV, (any other name).

        i. The prefix "EVID" is used to create smaller thumbnail sized images directly after the body of the report.

        ii. The prefix "IMG" is used for request notes, emails, or other information that is to appear at the beginning of the nearly full-sized images.

        iii. The prefix "DATA" is used for instrumental data images. "DATA" images will appear nearly full-page size.

        iv. The prefix "ENV" is used for scans of the envelope or request form. "ENV" iamges will appear nearly full-page size.

B. Instructions for photographs in LIMS

1. Photographs of evidence may be added to LIMS for verification of discrepancies or to aid in the description of evidence. These photographs are not to be used as evidence. If photographs are used as evidence see FSD.42.01 .

    a. File sizes should be kept to around 1 MB or less. Acceptable file types are TIF packed (8-bit or less) or JPEG.

    b. The image size must fit on a single page of the crystal report. If the image spans multiple pages, adjust the settings on the camera or crop the picture.

    c. A ruler or reference scale can be added to give perspective on size. It is not critical that the scale be in sharp focus or calibrated.

    d. Due to color corrections/variability of cameras, monitors and printers, colors in the picture may appear differently than as described by the analyst.

    e. The intended purpose is not to provide high resolution pictures or fine detail. Resolution and detail must only be adequate for the intended purpose.

        i. For example, if the purpose is verification of the number of pills submitted, there must be enough resolution for the reviewer to be able to count the number of pills. Markings on the pill do not need to be visible.

2. An analyst may use any type of device (USB camera, iPad, digital camera, etc) that can produce pictures of the appropriate size and resolution. Instructions are provided below for the use of the Ipevo Point 2 View USB camera and Presenter software.

    a. The camera connects to the computer via a USB cable and should be set in the stand at an appropriate height to obtain the desired view of the evidence. The camera may also be handheld.

    b. Open the Presenter software. This provides a live view of the camera.

    c. The default location to save pictures can be set to a specific location (ie C:\temp) under Settings - General - File Save Location.

    d. The resolution of the image should be set to 1024x768 and rotated into portrait view.

    e. The camera can automatically determine the appropriate exposure, or it can be manually adjusted.

    f. The camera has auto focus and can be set to continuous or single on the camera. Focus can also be manually adjusted from the software.

        i. The Autofocus switch is on the camera. If set to continuous it will automatically adjust when the image changes.

        ii. If set to Single Focus, the camera may not automatically adjust focus when the view changes. The Focus button on the camera or in the software will reset the focus of the camera.

        iii. Manual focus can be used if autofocus does not achieve the desired result, or to focus on a specific object in the picture.

    g. Moving the camera closer to the object will zoom in on the item. The software also allows for a digital zoom.

h. Once the desired image is achieved, the picture is taken by using the snapshot button in the software or on the camera. The picture is saved to the specified location.

i. The picture can be added to LIMS by the method described above. If the picture is of a single item, the item number can be added to the image name for identification.

j. If the prefix "EVID" is used, the image will print in thumbnail style with three pictures across the page.

k. If the prefix "DATA' is used it will print as a full page with the instrumental data.

l. The camera can also function as a scanner.

i. Presenter must be in TWAIN mode.

1. 

ii. Open the LIMS Imaging module. Select the "Scan New Image" button.

iii. Select the Ipevo Presenter Virtual Scanner as the source.

iv. The picture will be added to LIMS. (It will not be saved to the designated location on the computer as the snapshot will)

3. The image may be altered within the LIMS Imaging Module.

a. If the picture was taken in landscape mode, rotate to portrait (landscape pictures may not view correctly in the Crystal report).

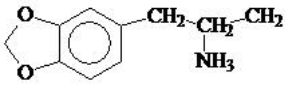
b. If the image contains multiple items, annotations can be added to clearly mark each item.

c. Once all changes are made, use Image - Burn Annotation on Current Page to save the changes.

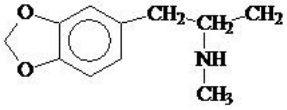
END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monographs	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.ANALOGS - Drug Analogs
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Drug Analogs	**SUBJECT:** Drug Analogs	

I. Policy: Below is general information regarding Amphetamine Analogs.



MDA



MDMA

A. This volume does not pretend to be all inclusive. As this sentence is being read there may be a new analog being devised. An excellent source of information concerning Amphetamine analogs as well as other analogs is Microgram published by the DEA. They normally provide such information as color tests, crystal tests, GC data, UV data, and IR data. Hundreds of compounds can be produced by making slight modifications to the phenethylamine molecule. Some of these analogues are pharmacologically active and differ from one another in potency, speed of onset, duration of action, and capacity to modify mood, with or without producing overt hallucinations. The drugs are usually taken orally, sometimes snorted, and rarely injected. Because they are produced in clandestine laboratories, they are seldom pure and the amount in a capsule or tablet is likely to vary considerably.

B. **3,4-Methylenedioxymethamphetamine** (MDMA, Ecstasy) was first synthesized in 1912 but remained in relative obscurity for many years. In the 1980s, MDMA gained popularity as a drug of abuse resulting in its final placement in Schedule I of the federal CSA. In California, MDMA is not scheduled. It is an analog of MDA, which is schedule I in California.

1. MDMA produces both amphetamine-like stimulation and mild mescaline-like hallucinations. It is touted as a "feel good" drug with an undeserved reputation of safety. MDMA produces euphoria, increased energy, increased sensual arousal, and enhanced tactile sensations. However, it also produces nerve cell damage that can result in psychiatric disturbances and long-term cognitive impairments. The user will often experience increased muscle tension, tremors, blurred vision, and hyperthermia. The increased body temperature can result in organ failure and death.

2. MDMA is usually distributed in tablet form and taken orally at doses ranging from 50 to 200 mg. Individual tablets are often imprinted with graphic designs or commercial logos, and typically contain 80-100 mg of MDMA. After oral administration, effects are felt within 30 to 45 minutes, peak at 60 to 90 minutes, and last for 4 to 6 hours. Analysis of seized MDMA tablets indicates that about 80 percent of all samples actually contain MDMA. About 10 percent of the MDMA-positive samples also contain MDA (3,4-methylenedioxyamphetamine) and MDEA (3,4-methylenedioxyethylamphetamine), while another 10 percent contain amphetamine, methamphetamine, or both. Fraudulent MDMA tablets frequently contain combinations of ephedrine, dextromethorphan, and caffeine or newer piperazine compounds.

C. A number of "New Hallucinogens" phenethylamine, tryptamine, cathinone, piperazine and other analogues have been encountered on the illicit market.

1. While these drugs are not specifically listed under the CSA, individuals trafficking in these substances can be prosecuted under the **Analogue Statute 11401 of the CSA**. The ever-increasing number of these types of hallucinogens being encountered by law enforcement is a testament to the efforts of individuals to engage in profitable drug enterprises while trying to avoid criminal prosecution.



Assorted MDMA tablets

D. **Phenethylamine Analogs**

1. From a chemical point of view all amphetamine-type stimulants are related to the Beta-phenethylamine molecule (2-PEA). This molecule is the basic element of the body neurotransmitters (such as dopamine and adrenaline) that convey the neuronal information of the central and peripheral nervous system.
2. The relatively simple structure of 2-PEA can be designed in many ways, so that it is very difficult to calculate the exact number of all possible derivatives with similar pharmacological effects.
3. Amphetamine itself might be called the prototype ('mother') psychostimulant. It was first synthesised in 1887 but was not used for medical purposes until the early 1930s, when it was found that it increased blood pressure, stimulated the central nervous system, cured bronchodilatation (asthma) and was useful in treating an epileptic seizure disorder.The abuse of this drug started at the same time.
4. The most common amphetamine derivatives currently known from the illicit drug market can be classified in the following three categories:
    a. **non-ring substituted amphetamine derivatives** such as Amphetamine, Methamphetamine, Ethylamphetamine, Dimethylamphetamine, N-Hydroxyamphetamine, N-Hydroxymethamphetamine, Phenethylamine (PEA), (+) Cathine, (-) Cathinone, Methcathinone, Amfepramone, and Amphetaminil;
    b. **methylenedioxy-amphetamines** such as MDA, MDMA, MDE, MDDMA, N-Hydroxy-MDA, N-Hydroxy-MDMA, MBDB, BDB, MMDA, FLEA, 6(2)-Cl-MDMA;
    c. **ring and side-chain substituted amphetamines** such as 2 C-B, 2 C-T, 2 C-T2, 2 C-T7, 2 C-C, 2 C-l, TMA-2, DOM, DOB, DOC, DOI, DOET, Diethoxybromoamphetamine (all 2,4,5-ringsubstituted orientation) and PMA (4-MA), DMA (2,5-DMA), TMA, PMMA, 4-MTA, AL and MAL (all other ringsubstituted orientation).
        i. **2C-T7** 2,5, dimethoxy-4-propylthiophenethylamine
        ii. **2CB** 4-bromo-2,5, dimethoxyphenethylamine
        iii. **2C-T-2** 2,5-Dimethoxy-4-ethylthiophenethylamine
        iv. **2C-I** 4-Iodo-2,5-dimethoxy-phenethylamine
        v. **2C-T-21** 2,5-Dimethoxy-4(2-fluoroethylthio)phenethylamine
        vi. **2C-E** 2,5-Dimethoxy-4-ethylphenethylamine
        vii. **2C-C** 2,5-Dimethoxy-4-cholorophenethylamine
        viii. **DOB** 4-bromo-2,5, dimethoxy-phenyl-2-aminopropane
        ix. **Nexus** bromo-2,5, dimethoxyphenethylamine HCl
5. These are only examples of possible derivatives, for further information you have to look at the established literature, see the table below for a list of some substituted amphetamines.

Standard Name	Chemical Name	# of Subs
Amphetamine	α-Methyl-2-phenylethylamine	0
Methamphetamine	N-Methylamphetamine, 1R,2S-	1
Ethylamphetamine	N-Ethylamphetamine	1
Propylamphetamine	N-Propylamphetamine	1
Isopropylamphetamine	N-iso-Propylamphetamine	1
Phentermine	α-Methylamphetamine	1
Phenylpropanolamine PPA	β-Hydroxyamphetamine, 1R,2S-	1
Cathine	β-Hydroxyamphetamine, 1S,2S-	1
Cathinone	β-Ketoamphetamine	1
Ortetamine	2-Methylamphetamine	1
2-Fluoroamphetamine 2-FA	2-Fluoroamphetamine	1
3-Methylamphetamine 3-MA	3-Methylamphetamine	1
3-Fluoroamphetamine 3-FA	3-Fluoroamphetamine	1
Norfenfluramine	3-Trifluoromethylamphetamine	1
4-Methylamphetamine 4-MA	4-Methylamphetamine	1
para-Methoxyamphetamine PMA	4-Methoxyamphetamine	1
para-Ethoxyamphetamine	4-Ethoxyamphetamine	1
4-Methylthioamphetamine 4-MTA	4-Methylthioamphetamine	1
Norpholedrine α-Me-TRA	4-Hydroxyamphetamine	1
para-Bromoamphetamine PBA, 4-BA	4-Bromoamphetamine	1
para-Chloroamphetamine PCA, 4-CA	4-Chloroamphetamine	1
para-Fluoroamphetamine PFA, 4-FA, 4-FMP	4-Fluoroamphetamine	1
para-Iodoamphetamine PIA, 4-IA	4-Iodoamphetamine	1
Dimethylamphetamine	N,N-Dimethylamphetamine	2
Benzphetamine	N-Benzyl-N-methylamphetamine	2
Selegiline	N-Methyl-N-propargylamphetamine, R-	2
Mephentermine	N-Methyl-α-methylamphetamine	2
Phenpentermine	α,β-Dimethylamphetamine	2
Ephedrine EPH	β-Hydroxy-N-methylamphetamine, 1R,2S-	2
Pseudoephedrine PSE	β-Hydroxy-N-methylamphetamine, 1S,2S-	2
Methcathinone	β-Keto-N-methylamphetamine	2
Ethcathinone	β-Keto-N-ethylamphetamine	2
Clortermine	2-Chloro-α-methylamphetamine	2
Methoxymethylamphetamine MMA	3-Methoxy-4-methylamphetamine	2
Fenfluramine	3-Trifluoromethyl-N-ethylamphetamine	2
Dexfenfluramine	3-Trifluoromethyl-N-ethylamphetamine, S-	2
4-Methylmethamphetamine 4-MMA	4-Methyl-N-methylamphetamine	2
Para-methoxymethamphetamine PMMA	4-Methoxy-N-methylamphetamine	2
para-Methoxyethylamphetamine PMEA	4-Methoxy-N-ethylamphetamine	2
Pholedrine	4-Hydroxy-N-methylamphetamine	2
Chlorphentermine	4-Chloro-α-methylamphetamine	2
para-Fluoromethamphetamine PFMA, 4-FMA	4-Fluoro-N-methylamphetamine	2
Xylopropamine	3,4-Dimethylamphetamine	2
α-Methyldopamine α-Me-DA	3,4-Dihydroxyamphetamine	2
Methylenedioxyamphetamine MDA	3,4-Methylenedioxyamphetamine	2
Dimethoxyamphetamine DMA	2,5-Dimethoxyamphetamine	2
Nordefrin α-Me-NE	β,3,4-Trihydroxyamphetamine, R-	3
Oxilofrine	β,4-Dihydroxy-N-methylamphetamine	3
Aleph	2,5-dimethoxy-4-methylthioamphetamine	3
Dimethoxybromoamphetamine DOB	2,5-Dimethoxy-4-bromoamphetamine	3
Dimethoxychloroamphetamine DOC	2,5-Dimethoxy-4-chloroamphetamine	3
Dimethoxyfluoroethylamphetamine DOEF	2,5-Dimethoxy-4-fluoroethylamphetamine	3
Dimethoxyethylamphetamine DOET	2,5-Dimethoxy-4-ethylamphetamine	3
Dimethoxyfluoroamphetamine DOF	2,5-Dimethoxy-4-fluoroamphetamine	3
Dimethoxyiodoamphetamine DOI	2,5-Dimethoxy-4-iodoamphetamine	3
Dimethoxymethylamphetamine DOM	2,5-Dimethoxy-4-methylamphetamine	3
Dimethoxynitroamphetamine DON	2,5-Dimethoxy-4-nitroamphetamine	3
Dimethoxypropylamphetamine DOPR	2,5-Dimethoxy-4-propylamphetamine	3
Dimethoxytrifluoromethylamphetamine DOTFM	2,5-Dimethoxy-4-trifluoromethylamphetamine	3
Methylenedioxymethamphetamine MDMA	3,4-Methylenedioxy-N-methylamphetamine	3
Methylenedioxyethylamphetamine MDEA	3,4-Methylenedioxy-N-ethylamphetamine	3
Methylenedioxyhydroxyamphetamine MDOH	3,4-Methylenedioxy-N-hydroxyamphetamine	3
2-Methyl-MDA	3,4-Methylenedioxy-2-methylamphetamine	3
5-Methyl-MDA	4,5-Methylenedioxy-3-methylamphetamine	3
Methoxymethylenedioxyamphetamine MMDA	3-Methoxy-4,5-methylenedioxyamphetamine	3
Trimethoxyamphetamine TMA	X,X,X-Trimethoxyamphetamine	3
Dimethylcathinone	β-Keto-N,N-dimethylamphetamine	3
Diethylcathinone	β-Keto-N,N-diethylamphetamine	3
Bupropion	β-Keto-3-chloro-N-tert-butylamphetamine	3
Mephedrone 4-MMC	β-Keto-4-methyl-N-methylamphetamine	3
Methedrone PMMC	β-Keto-4-methoxy-N-methylamphetamine	3
Brephedrone 4-BMC	β-Keto-4-bromo-N-methylamphetamine	3
Flephedrone 4-FMC	β-Keto-4-fluoro-N-methylamphetamine	3

Ganesha	2,5-Dimethoxy-3,4-dimethylamphetamine	4
Dimethoxymethylenedioxyamphetamine DMMDA	2,5-Dimethoxy-3,4-methylenedioxyamphetamine	4
FLEA MDMHA	3,4-Methylenedioxy-N-methyl-N-hydroxyamphetamine	4
Methoxymethylenedioxymethamphetamine MMDMA	3-Methoxy-4,5-methylenedioxy-N-methylamphetamine	4
EDMA MDMC	3,4-Ethylenedioxy-N-methylamphetamine	4

E. The following **tryptamines** may be encountered in illicit pills (see tryptamine section for analysis):

1. **AMT**, alpha methyl tryptamine
2. **DPT**, N,N-Dipropyltryptamine
3. **DIPT**, N,N-Diisopropyltryptamine
4. **5-MeO-DIPT, Foxy, Roxy**,n,n-diisopropyl-5-methoxytryptamine
5. **5-MeO-DET**, 5-Methoxy-N,N-diethyltryptamine
6. **5-MeO-DET**, 5-Methoxy-N,N-dimethyltryptamine
7. **5-MeO-AMT**, 5-Methoxy-alpha-methyltyrptamine
8. **4-MeO-MIPT**, 4-Methoxy-N-methyl-N-isopropyltryptamine
9. **5-MeO-MIPT** 5-Methoxy-N-methyl-N-isopropyltryptamine
10. **5-MeO-MIPT**, N-Methyl-N-isopropyltryptamine
11. **4-OH-DIPT**, 4-Hydroxy-N,N-diisopropyltryptamine

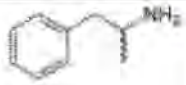
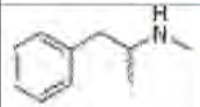
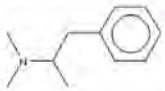
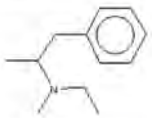
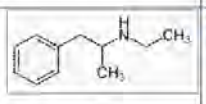
F. The following **piperazines** may be encountered in illicit pills:

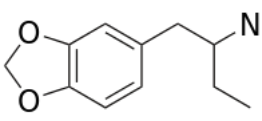
1. **BZP**, n-benzylpiperazine
2. **2-MeOPP**, 2-methoxyphenylpiperazine
3. **2-MePP**, 2-methylphenylpiperazine
4. **3-ClPP** (or m-CPP), 3-chlorophenylpiperazine
5. **TFMPP,** 1-3 trifluromethylpiperazine

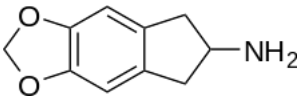
G. Peyote is a small, spineless cactus, *Lophophora williamsii*, whose principal active ingredient is the hallucinogen mescaline (3, 4, 5-trimethoxyphenethylamine). From earliest recorded time, peyote has been used by natives in northern Mexico and the southwestern United States as a part of their religious rites.

1. The top of the cactus above ground--also referred to as the crown--consists of disc-shaped buttons that are cut from the roots and dried. These buttons are generally chewed or soaked in water to produce an intoxicating liquid. The hallucinogenic dose of mescaline is about 0.3 to 0.5 grams and lasts about 12 hours. While peyote produced rich visual hallucinations that were important to the native American peyote users, the full spectrum of effects served as a chemically induced model of mental illness. Mescaline can be extracted from peyote or produced synthetically. Both peyote and mescaline are listed in the CSA as Schedule I hallucinogens.
2. Many chemical variations of mescaline and amphetamine have been synthesized for their "feel good" effects. 4-Methyl-2,5-dimethoxyamphetamine (DOM) was introduced into the San Francisco drug scene in the late 1960s and was nicknamed STP; an acronym for "Serenity, Tranquility, and Peace." Other illicitly produced analogues include 4-bromo-2,5-dimethoxyamphetamine (DOB) and 4-bromo-2,5-dimethoxyphenethylamine (2C-B or Nexus). In 2000, para-methoxyamphetamine (PMA,) and para-methoxymethamphetamine (PMMA) were identified in tablets sold as Ecstasy. PMA, which first appeared on the illicit market briefly in the early 1970s, is associated with a number of deaths in both the United States and Europe.
    a. The following tables include information on how various substances will be reported by the Laboratory. See DRG.38 Section *I.* I.for information on entering special schedules in LIMS.

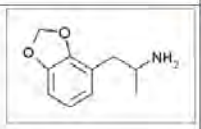
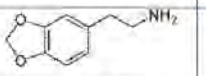
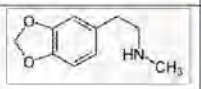
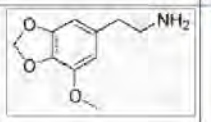
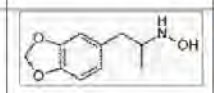
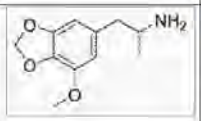
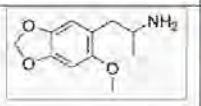
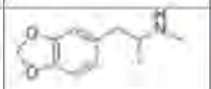
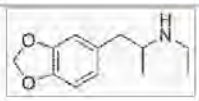
Phenethylamines

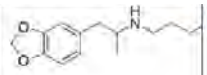
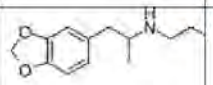
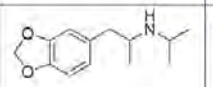
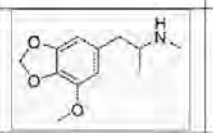
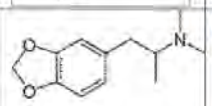
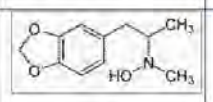
Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Repo
Amphetamine	II		alpha-methylphenethylamine amfetamine **CAS Registry Number:** 300-62-9		Schedule
Methamphetamine	II		N-methylamphetamine, Methylamphetamine desoxyephedrine **CAS Registry Number:** 537-46-2		Schedule
(DMA)	II	I	Dimethylamphetamine, N,N-dimethylamphetamine, dimetamfetamine **CAS Registry Number:** 4075-96-1		Schedule
N-Ethylmethamphetamine	II		N-ethyl,N-methylamphetamine **CAS Registry Number:** 119290-77-6		Schedule
N-Hydroxymethamphetamine			N-**Hydroxy**methamphetamine		Non Cont
N-Hydroxyamphetamine			N-**Hydroxy**amphetamine		Non Cont
Ethylamphetamine or NEA		I	Etilamfetamine, *N*-ethylamphetamine **CAS Registry Number:** 457-87-4		Schedule Federally

Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporting
BDB			1,3-Benzodioxolylbutanamine 3,4-methylenedioxybutanphenamine MDB		Non Controlled

	3,4-methylenedioxy-α-ethylphenethylamine		
MDAI	5,6-methylenedioxy-2-aminoindane		**Non Controlled**

Substituted Methylenedioxyphenethylamines

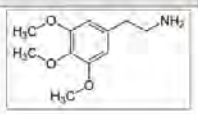
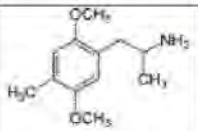
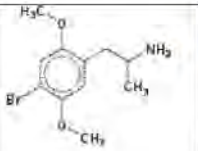
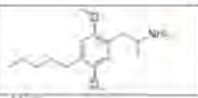
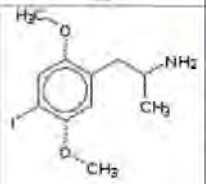
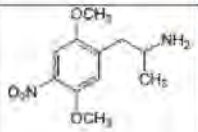
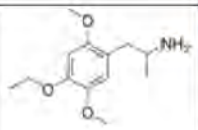
Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporti
(MDA)	I	I	3,4-methylenedioxyamphetamine		Scheduled 2.5 times mo potent that mescaline[1]
(2,3-MDA)			**2,3-**Methylenedioxyamphetamine, ORTHO-MDA		Analog of M
(MDPEA)			3,4-Methylenedioxy**phenethylamine**		Non Control
(MDMPEA)			Methylenedioxymethylphenethylamine, 3,4-Methylenedioxy-*N*-**methylphenethylamine**		Non Control
(MMDPEA)			3-methoxy-4,5-methylenedioxy**phenethylamine**, 5-Methoxy-MDPEA		Non Control
(MDOH, MDH or NOHMDA or N-Hydroxy-MDA)		I	**N-Hydroxy**-3,4-methelenedioxyamphetamine 3,4-Methylenedioxy-*N*-hydroxyamphetamine		Scheduled Federally
(MMDA)	I	I	**5-methoxy**-3,4-methylenedioxyamphetamine **CAS Registry Number:** 13674-05-0		Scheduled 1.7 times mo potent that mescaline[1]
(MMDA-2)			**2-Methoxy-4,5-**methelenedioxyamphetamine **CAS Registry Number:** 23693-18-7		Analog of M 8 times more that mescalin
(MDMA)		I	3,4-methylenedioxy**meth**amphetamine **CAS Registry Number:** 42542-10-9		Analog of M
(N-Hydroxy-MDMA)			**N-Hydroxy**-3,4-methelenedioxy**meth**amphetamine	No structure available	Non Control
(MDE or MDEA)		I	3,4-methylenedioxy**ethyl**amphetamine 3,4-methylenedioxy-*N*-ethylamphetamine,		Analog of M
			Methylenedioxyethylamphetamine **CAS Registry Number:** 14089-52-2		

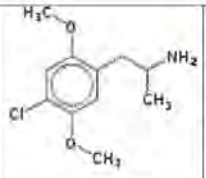
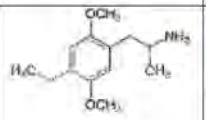
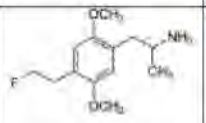
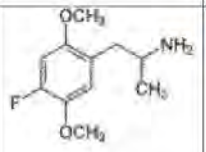
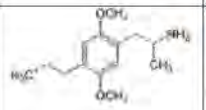
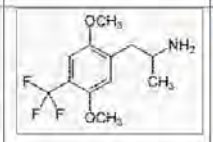
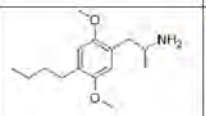
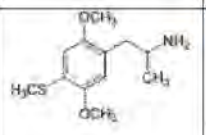
MDBU			3,4-methylenedioxy-**N-butyl**amphetamine, Methylenedioxybutylamphetamine		**Non Control**
(MDPR)			3,4-Methelendioxy-**N-propyl**amphetamine Methylenedioxypropylamphetamine		**Non Control**
(MDIP or MDIPR or MDIPA)			3,4-Methylenedioxy-*N*-**isopropyl**amphetamine, Methylenedioxyisopropylamphetamine		**Non Control**
MMDMA			**4,5**-Methylenedioxy-**3-methoxy**-*N*-**methyl**amphetamine		**Non Control**
MDDM, MDDMA			3,4-Methylenedioxy-*N*,*N*-**dimethyl**amphetamine		**Non Control**
MDMOH, MDMHA FLEA			3,4-Methylenedioxy-*N*-**methyl**-*N*-**hydroxy**amphetamine		**Non Control**

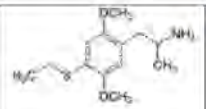
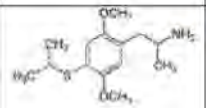
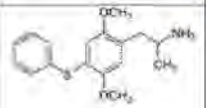
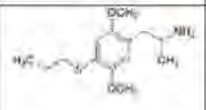
(1) **Hallucinogens: An Update,** National Institute on Drug Abuse Research Monograph Series. NIH Publication No. 94-38

Dox

DOx is a term used to refer to a chemical class of substituted amphetamine derivatives featuring methoxy groups at t 5- positions of the phenyl ring, and a substituent such as alkyl or halogen at the 4- position of the phenyl ring.

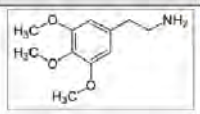
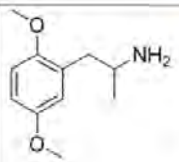
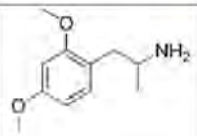
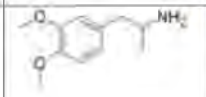
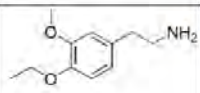
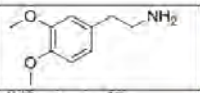
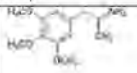
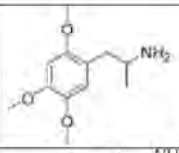
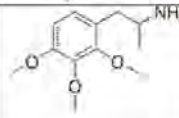
Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporti
Mescaline	I	I	3,4,5-trimethoxyphenethylamine **CAS Registry Number:** 54-04-6		Scheduled
(DOM or STP)	I	I	4-methyl-2,5-dimethoxyamphetamine **CAS Registry Number:** 26011-50-7		Scheduled 50 times mor potent that mescaline$_1$ 80 times mor potent than mescaline$_2$
(DOB)			2,5-Dimethoxy-4-**bromo**-amphetamine **CAS Registry Number:** 64638-07-9		Analog of D STP 150 times mo potent that mescaline$_1$ 150-500 time potent than mescaline$_2$
(DOAM)			2,5-Dimethoxy-4-**amyl**amphetamine		Analog of D STP
(DOI)			2,5-dimethoxy-4-**iodo**-amphetamine		Analog of D STP 150 times mo potent that mescaline$_1$
(DON)			2,5-Dimethoxy-4-**nitro**-amphetamine, Dimethoxynitroamphetamine		Analog of D STP 80 times mor potent that mescaline$_1$
(MEM)			2,5-Dimethoxy-4-**ethox**-yamphetamine		Analog of D STP 10 times mor potent that mescaline$_1$

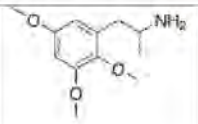
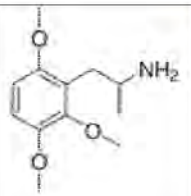
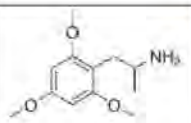
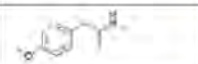
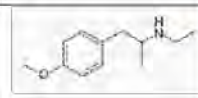
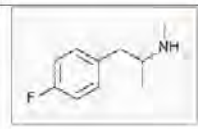
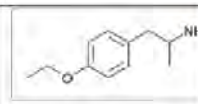
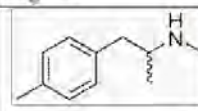
(DOC)			2,5-Dimethoxy-4-**chloro**-amphetamine 4-**chloro**-2,5-dimethoxyamphetamine		**Analog of D STP** 150 times mo potent that mescaline$_1$
(DOET)		I	2,5-Dimethoxy-4-**ethyl**-amphetamine 4-**ethyl**-2,5-dimethoxyamphetamine		**Analog of D STP** 80 times mor potent that mescaline$_1$ 100 times mo potent than mescaline$_2$
(DOEF)			2,5-Dimethoxy-4-**fluoroethyl**-amphetamine Dimethoxyfluoroethylampheta mine		**Analog of D STP** 100 times mo potent that mescaline$_1$
DOF			2,5-Dimethoxy-4-**fluoro**-amphetamine		**Analog of D STP**
(DOPR)			2,5-Dimethoxy-4-**propyl**-amphetamine 4-**n-propyl**-2,5-dimethoxyamphetamine,		**Analog of D STP** 80 times mor potent that mescaline$_1$ 80 times mor potent than mescaline$_2$
(DOTFM)			2,5-Dimethoxy-4-**trifluoromethyl**-amphetamine Dimethoxytrifluoromethylamph etamine		**Non Control**
(DOBU)			2,5-Dimethoxy-4-**butyl**-amphetamine 4-**n-butyl**-2,5-dimethoxyamphetamine		**Analog of D STP** 40 times mor potent than mescaline$_2$
(ALEPH or PARADOT)			2,5-dimethoxy-4-**methylthio**-amphetamine 4-methylthio-2,5-dimethoxyamphetamine,		**Analog of D STP** 40 times for p than mescalir

(ALEPH-2)			2,5-Dimethoxy-4-**ethylthio**-amphetamine		Non Control
Aleph-4			2,5-Dimethoxy-4-**isopropylthio**-amphetamine		Non Control
Aleph-6			2,5-Dimethoxy-4-**phenylthio**-amphetamine		Non Control
Aleph-7			2,5-Dimethoxy-4-**propylthio**-amphetamine		Non Control

(1) **Hallucinogens: An Update,** National Institute on Drug Abuse Research Monograph Series. NIH Publication No. 94-38
(2) **Analytical Profiles of the Hallucinogens**, CND Analytical Inc

Substituted Phenethylamines

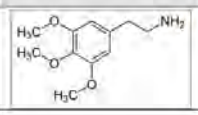
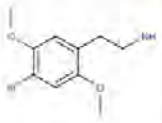
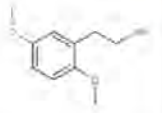
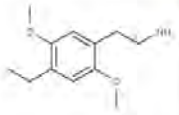
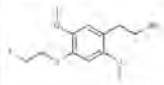
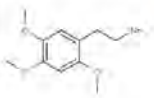
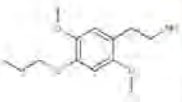
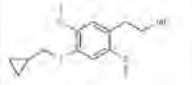
Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporti
Mescaline	I	I	3,4,5-trimethoxyphenethylamine		Scheduled
(DMA)	I	I	2,5-DMA 2,5-dimethoxyamphetamine		Scheduled 2.5 times mo potent that mescaline$_1$ 10 times mo potent than mescaline$_2$
(2,4-DMA)			2,**4**-Dimethoxyamphetamine		Non Control
(3,4-DMA)			**3,4**-Dimethoxyamphetamine		Non Control <1 times mo potent that mescaline$_1$
(MEPEA)			**4-Ethoxy-3-**methoxy**phenethylamine** 3-Methoxy-4-ethoxyphenethylamine		Non Control
(DMPEA)			**3,4**-Dimethoxy**phenethylamine**		Non Control
(TMA)	I	I	3,4,5-trimethoxyamphetamine 1-(3,4,5- Trimethoxyphenyl)propan-2-amine,		Scheduled 1.7 times mo potent that mescaline$_1$ 20 times mo potent than mescaline$_2$
(TMA-2)			**2**,4,5-trimethoxyamphetamine 1-(2,4,5- Trimethoxyphenyl)propan-2-amine,		Analog of T 10 times mo potent that mescaline$_1$
(TMA-3)			**2,3,4**-trimethoxyamphetamine 1-(2,4,5-Trimethoxyphenyl)propan-2-amine,		Non Control

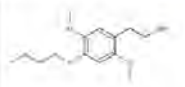
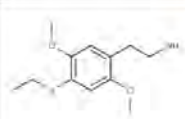
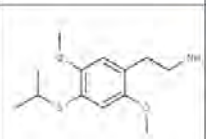
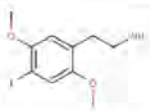
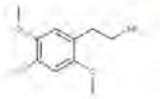
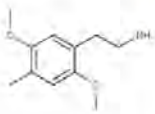
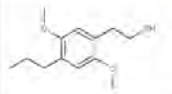
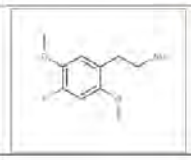
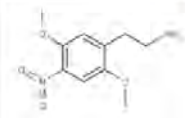
(TMA-4)			**2,3**,5-trimethoxyamphetamine 1-(2,3,5-Trimethoxyphenyl)propan-2-amine,		**Non Control**
(TMA-5)			**2,3,6**-trimethoxyamphetamine 1-(2,3,6-Trimethoxyphenyl)propan-2-amine,		**Non Control**
(TMA-6)			**2,4,6**- trimethoxyamphetamine 1-(2,4,6-Trimethoxyphenyl)propan-2-amine,		**Non Control**
(PMA or 4-MA)	I	I	4-methoxyamphetamine, para-methoxyamphetamine		**Scheduled** 5 times more that mescalin
(PMMA)			4-methoxy**meth**amphetamine, para-methoxymethamphetamine		**Non Control**
(PMEA)			*para*-Methoxy**ethyl**amphetamine 4-Methoxy-*N*-**ethyl**amphetamine		**Non Control**
(PFMA, 4-FMA)			*para*-**Fluorometh**amphetamine 4-Fluoro-*N*-methylamphetamine 4-Fluoromethamphetamine		**Non Control**
(4-ETA)			***para*-Ethoxy**amphetamine, 4-ethoxyamphetamine		**Non Control**
(4-MTA)			4-**Methylthio**amphetamine		**Non Control**
(4-MMA)			4-**Methylmeth**amphetamine 4-Methyl-*N*-methylamphetamine		**Non Control**

(1) **Hallucinogens: An Update,** National Institute on Drug Abuse Research Monograph Series. NIH Publication No. 94-38
(2) **Analytical Profiles of the Hallucinogens**, CND Analytical Inc.

2C (psychedelics)

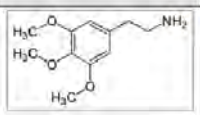
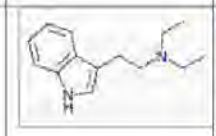
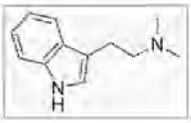
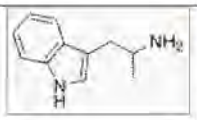
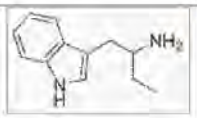
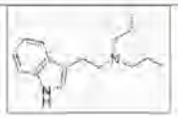
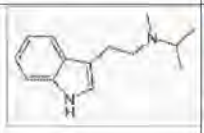
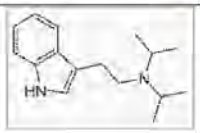
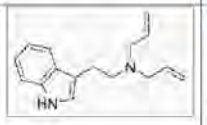
2C is a general name for the family of psychedelic phenethylamines containing methoxy groups on the 2 and 5 positio benzene ring.

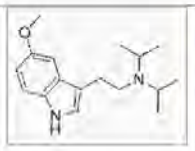
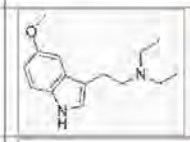
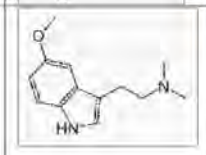
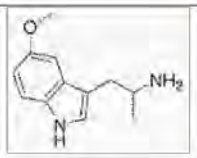
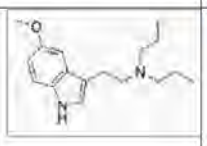
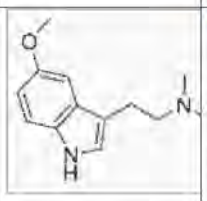
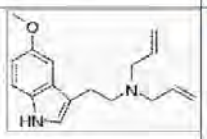
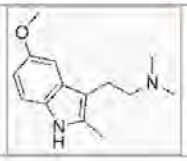
Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporti
Mescaline	I	I	3,4,5-trimethoxyphenethylamine		Scheduled
(2C-B or Nexus)		I	2,5-dimethoxy-4-**bromo**phenethylamine 4-bromo-2,5, dimethoxyphenethylamine Bromodimethoxyphenethylamin e		Controlled Federally 16 times mor potent that mescaline[1]
(2C-H)			2,5-Dimethoxyphenethylamine		Non-controll
(2C-E)			2,5-Dimethoxy-4-**ethyl**phenethylamine		Non-controll 24 times mor potent that mescaline[1]
(2C-T-21)			2,5-Dimethoxy-4**(2-fluoroethylthio)**phenethylamin e		Non-controll 30 times mor potent that mescaline[1]
(2C-T)			**2**-(2,5-dimethoxy-4-**(methylthio)**phenyl)ethanamine 4-methylthio-2,5-dimethoxyphenethylamine		Non-controll 4 times more that mescalin
(2C-T-7)		I	2,5, dimethoxy-4-**propylthio**phenethylamine		Controlled Federally 15 times mor potent that mescaline[1, 4]
2C-T-8			2,5-dimethoxy-4-**cyclopropylmethylthio**-phenethylamine		Non-controll 8 times more that mescalin

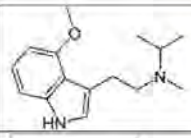
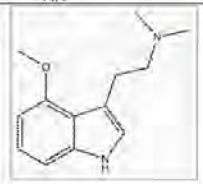
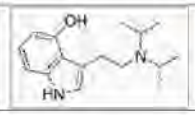
2C-T-9			2,5-dimethoxy-4-***tert*-butylthio-**phenethylamine		**Non-controll** 4 times more that mescalin
(2C-T-2)			2,5-Dimethoxy-4-**ethylthio**phenethylamine		**Non-controll** 16 times mor potent that mescaline[1]
2C-T-4			2,5-dimethoxy-4-**isopropylthio-**phenethylamine		**Non-controll** 20 times mor potent that mescaline[1]
(2C-I)			2,5-Dimethoxy-4-**iodo**phenethylamine 4-Iodo-2,5-dimethoxy-phenethylamine		**Non-controll** 16 times mor potent that mescaline[1, 3]
(2C-C)			2,5-Dimethoxy-4-**choloro**phenethylamine		**Non-controll** 10 times mor potent that mescaline[1]
2C-D			2,5-dimethoxy-4-**methyl**phenethylamine		**Non-controll** 8 times more that mescalin
2C-P			2,5-dimethoxy-4-**propyl**phenethylamine		**Non-controll** 40 times mor potent that mescaline[1]
2C-F			2,5-dimethoxy-4-**fluoro**phenethylamine		**Non-controll** <1 times mor potent that mescaline[1]
2C-N			2,5-dimethoxy-4-**nitro**phenethylamine		**Non-controll** 2 times more that mescalin

(1) **Hallucinogens: An Update,** National Institute on Drug Abuse Research Monograph Series. NIH Publication No. 94-38
(3) **4-Iodo-2,5-Dimethoxyphenethylamine (Street Names: 2C-I, i)**. Drug Enforcement Administration, Drug & Chemical Evaluation Section. February 2011.
(4) **2,5-Dimethoxy-4(n)-Propylthiophenethylmine (Street Names: 2C-T-7, Blue Mystic, T7, Beautiful, Tripstay, Tweet Mescaline)**. Drug Enforcement Administration, Drug & Chemical Evaluation Section. February 2011.

Substituted Tryptamines

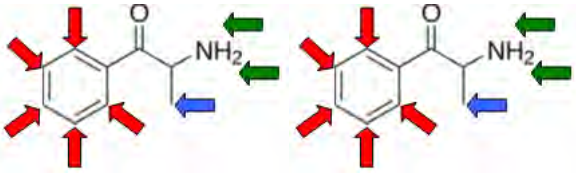
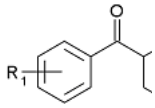
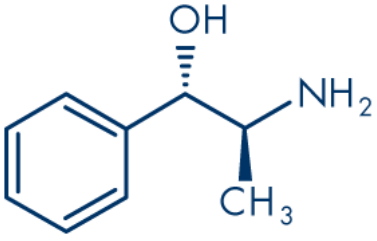
Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporti
Mescaline	I	I	3,4,5-trimethoxyphenethylamine		Scheduled
(DET)	I	I	*N,N*-diethyltryptamine, diethyltryptamine		Scheduled 1 times more that DMT[1]
(DMT)	I	I	N, N-dimethyltryptamine, Dimethyltryptamine		Scheduled See literature reference[6]
(AMT)		I	**alpha**methyltryptamine, α-Methyltryptamine		Scheduled Federally See literature reference[7]
(AET or ET or TRIP)		I	**Alpha**-ethyltryptamine		Scheduled Federally
(DPT)			N,N-Di**propyl**tryptamine , Di**propyl**tryptamine		Analog of DI 1 times more that DMT[1] See literature reference[9]
(MiPT)			N-Methyl-N-isopropyltryptamine, **Methylisopropyl**tryptamine		Analog of DI DMT 4 times more that DMT[1]
(DiPT)			N,N-Di**isopropyl**tryptamine, diisopropyltryptamine		Analog of DI 2 times more that DMT[1]
(DALT)			*N,N*-di**allyl**tryptamine		Analog of DI 1 times more that DMT[1]

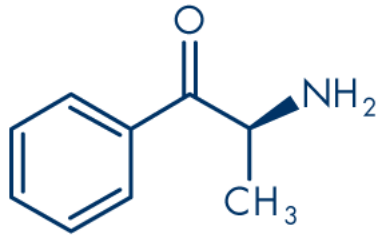
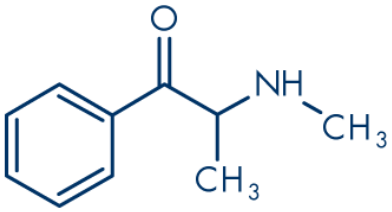
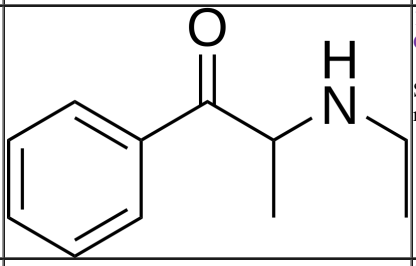
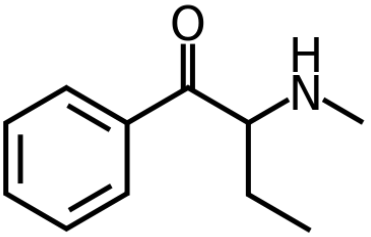
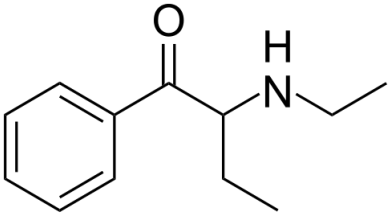
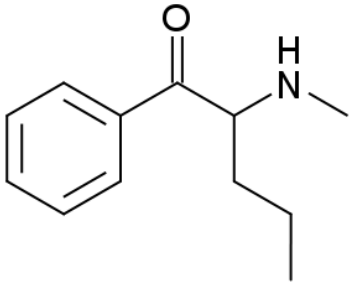
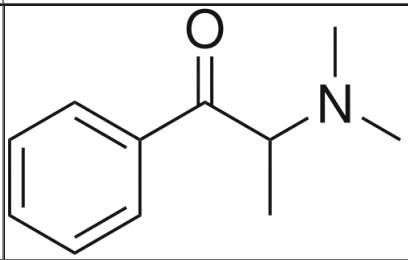
(5-MeO-DIPT or Foxy or Roxy)		I	**5-methoxy-diisopropyl**tryptamine, n,n-diisopropyl-5-methoxytryptamine		**Analog of DI based on cou decision: US Richard Les Klecker**[5] 7 times more that DMT[1] See literature reference[8, 9]
(5-MeO-DET)			**5-Methoxy**-N,N-diethyltryptamine		**Non Control**
(5-MeO-DMT)		I	**5-Methoxy**-N,N-dimethyltryptamine		**Federally Scheduled** 10 times mor potent that D See literature reference[9]
(5-MeO-AMT)			**5-Methoxy-alpha**-methyltyrptamine		**Non Control** See literature reference[9]
(5-MeO-DPT)			**5-methoxy**-N,N-Di**propyl**tryptamine		**Non Control**
(5-MeO-MIPT)			5-Methoxy-N-**methyl**-N-**isopropyl**tryptamine		**Non Control** 15 times mor potent that D See literature reference[9]
(5-MeO-DALT)			N,N-**diallyl-5-methoxy**tryptamine		**Non Control**
(5-MeO-2 or *N,N*-TMT or 5-MeO-TMT, 5-MeO-2-TMT)			**5-Methoxy**-2,*N,N*-**tri**methyltryptamine		**Non Control**

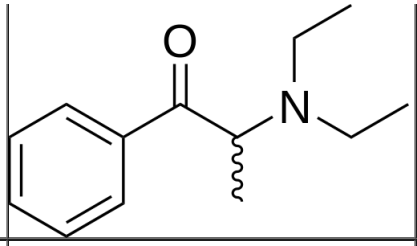
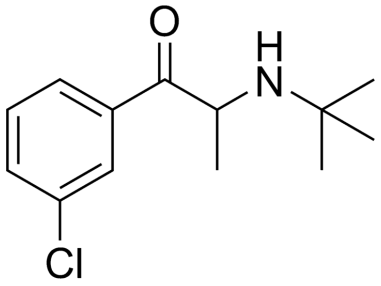
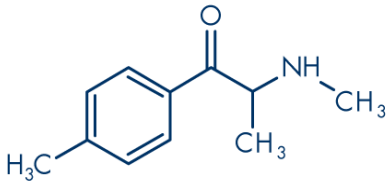
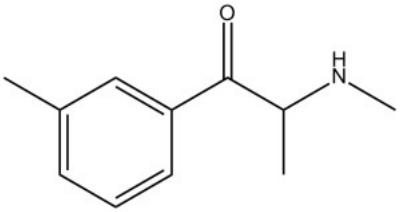
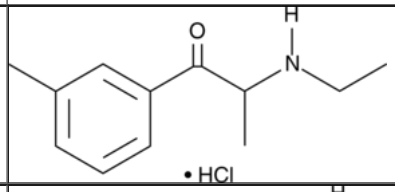
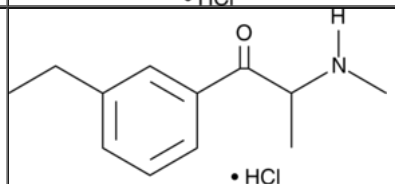
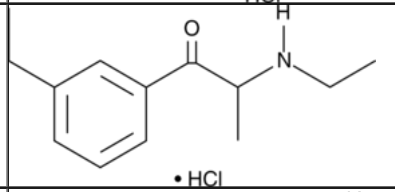
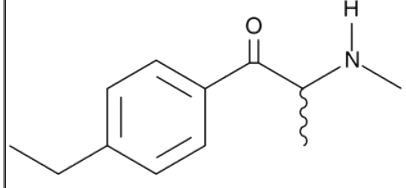
(4-MeO-MIPT)			**4-Methoxy**-N-methyl-N-**isopropyl**tryptamine		Non Control 3 times more that mescalin
(4-MeO-DMT)			**4-Methoxy**-N,N-dimethyltryptamine		Non Control
(4-OH-DIPT)			**4-Hydroxy**-N,N-di**isopropyl**tryptamine		Non Control 4 times more that mescalin

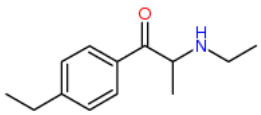
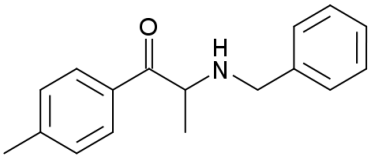
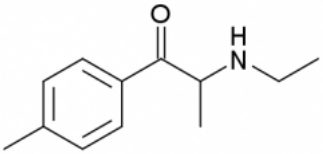
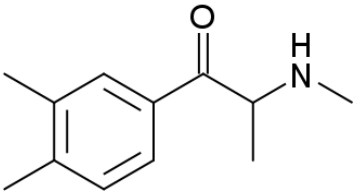
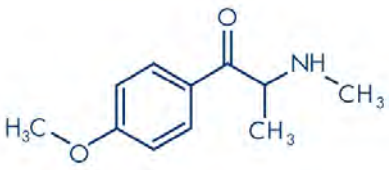
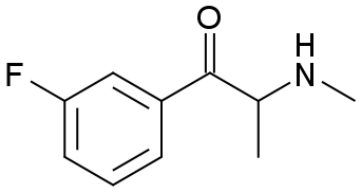
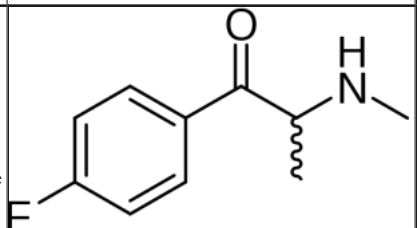
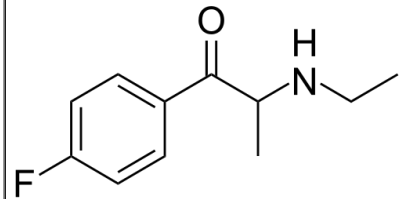
(1) **Hallucinogens: An Update,** National Institute on Drug Abuse Research Monograph Series. NIH Publication No. 94-38
(5) **United States Controlled Substance Analogue Act Upheld**. Journal of the Clandestine Laboratory Investigating Chem Association. Volume 14, No. 1, January 2004
(6) **N,N-Dimethyltryptamine (DMT)**. Drug Enforcement Administration, Drug & Chemicals of Concern. October 2010.
(7) **Alpha-Methyltryptamine (Street Name: Spirals)**. Drug Enforcement Administration, Drug & Chemical Evaluation Se August 2011.
(8) **5-Methoxy-N,N-Diisopropyltryptamine (Street Names: Foxy or Foxy Methoxy)**. Drug Enforcement Administration, Chemical Evaluation Section. August 2011.
(9) **Analytical Profiles for Five "Designer" Tryptamines**. DEA Microgram Journal, Volume 1. January-June 2003

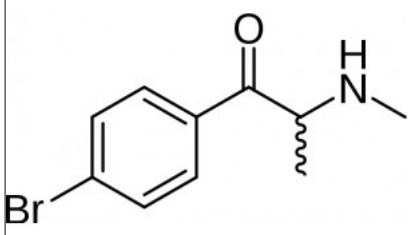
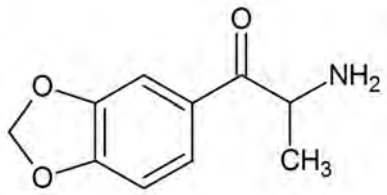
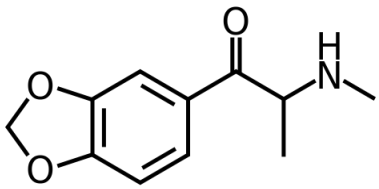
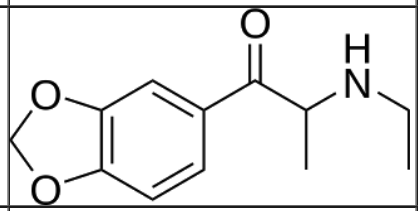
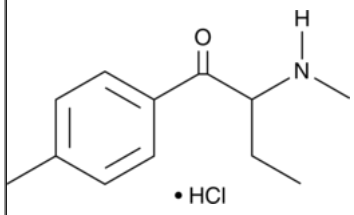
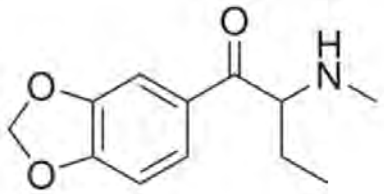
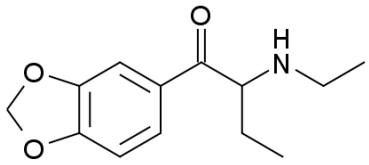
Substituted Cathinones & Cathinone Type Substances

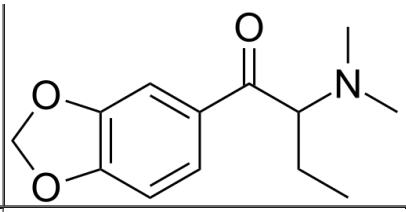
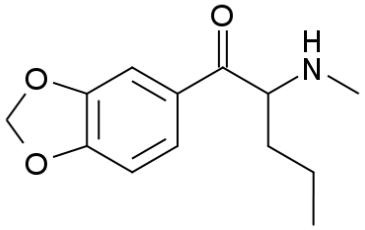
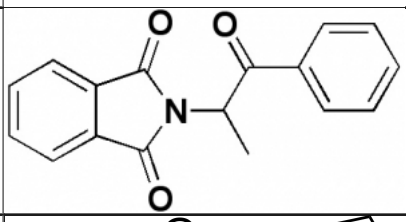
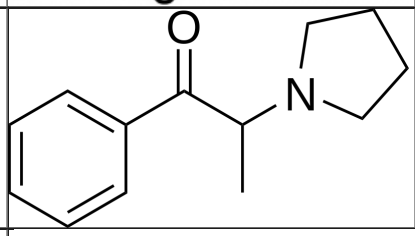
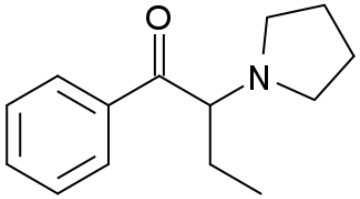
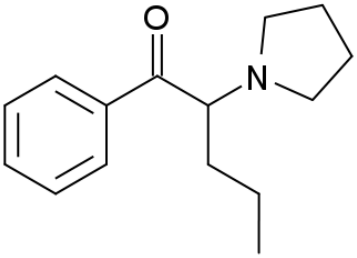
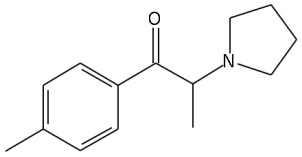
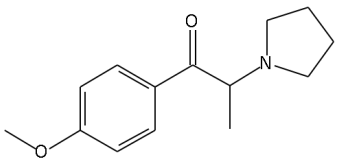
11375.5 States:			**Cathinone**		
2-amino-1-phenyl-1-propanone (cathinone) or variation in any of the following ways: **(A) By substitution in the phenyl ring to any extent with alkyl, alkoxy, alkylenedioxy, haloalkyl, or halide substituents, whether or not further substituted in the phenyl ring by one or more other univalent substituents.** **(B) By substitution at the 3-position with an alkyl substituent.** **(C) By substitution at the nitrogen atom with alkyl, dialkyl, or benzyl groups, or by inclusion of the nitrogen atom in a cyclic structure.**					
Drug	CA Sch.	Synonyms	Structure	Reporting	R_1
khat	II			Scheduled See literature reference [10, 11]	
(+) cathine	IV	β-hydroxy-amphetamine d-norpseudoephedrine		Scheduled	
(-) cathinone	II	β-keto-amphetamine		Scheduled See literature reference [12, 13, 14, 15]	H

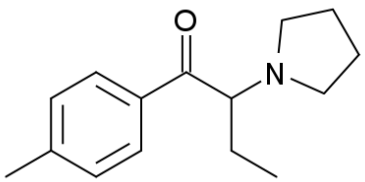
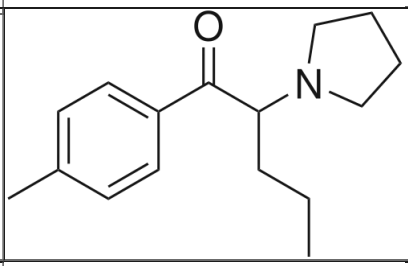
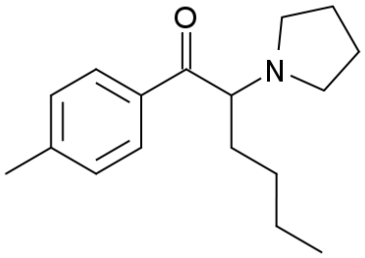
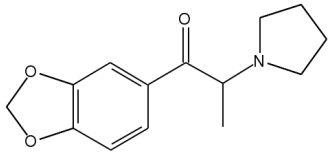
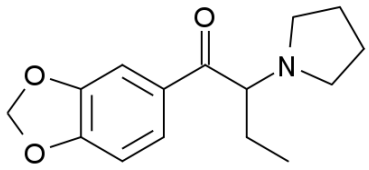
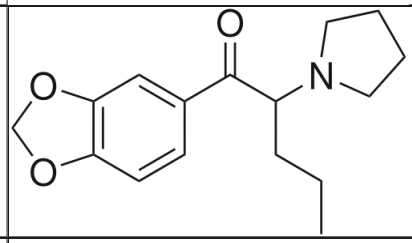
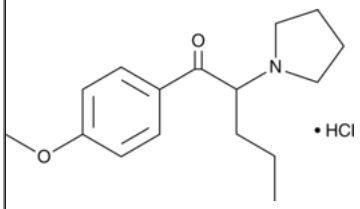
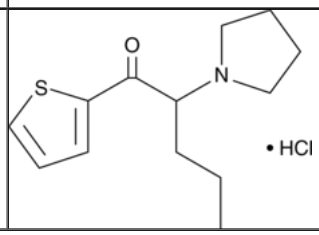
					
methcathinone		N-methylcathinone ephedrone		Analog of Cathinone See literature reference [12, 13]	H
ethcathinone		N-ethylcathinone ethylpropion ETH-CAT		11375.5 described: C-alkyl See literature reference [12]	H
buphedrone		N-ethylbuphedrone		11375.5 described: B-alkyl C-alkyl	H
NEB		N-ethylbuphedrone		11375.5 described: B-alkyl C-alkyl	H
pentedrone		2-(methylamino)-1-phenylpentan-1-one α-methylamino-valerophenone		11375.5 described: B-alkyl C-alkyl	H
dimethylcathinone		β-keto-N,N-dimethyl-amphetamine dimethylpropion methamfepramone dimepropion		11375.5 described: C-alkyl	H
diethylpropion		β-Keto-N,N-diethyl-amphetamine amfepramone		11375.5 described: C-alkyl	H

		diethylcathinone		See literature reference [13]	
bupropion		amfebutamone Marketed as: Wellbutrin, Budeprion, Prexaton, Elontril, Aplenzin		Non-controlled prescription drug 11375.5 1(b):	3-Cl
mephedrone	I	4-methylmethcathinone 4-MMC PMMC β-keto-4-methoxy-N-methylamphetamine 4-methylephedrone		11375.5 described: A-alkyl	4-Me
3-MMC		3-methylmethcathinone		11375.5 described: A-alkyl C-alkyl	3-Me
3-MEC		3-methylethcathinone		11375.5 described: A-alkyl C-alkyl	3-Me
3-EMC		3-ethylmethcathinone		11375.5 described: A-alkyl C-alkyl	3-Et
3-EEC		3-ethylethcathinone		11375.5 described: A-alkyl C-alkyl	3-Et
4-EMC		4-ethylmethylcathinone		11375.5 described: A-alkyl C-alkyl	4-Et
4-EEC		4-ethylethcathinone		11375.5 described: A-alkyl C-alkyl	4-Et

					
benzedrone		4-MBC		11375.5 described: A-alkyl C-alkyl	4-Me
4-MEC		4-methylethcathinone		11375.5 described: A-alkyl C-alkyl	4-Me
3,4-DMMC		3,4-dimethyl- methcathinone		11375.5 described: A-alkyl + univalent substitution C-alkyl	3,4-dimethyl
methedrone		paramethoxy- methcathinone		11375.5 described: A-alkyl C-alkyl	4-MeO
3-FMC		3-fluoromethcathinone		11375.5 described: A-halide C-alkyl	3-F
flephedrone		β-keto-4-fluoro-N- methylamphetamine 4-FMC 4-fluoromethcathinone		11375.5 described: A-halide C-alkyl	4-F
4-FEC		4-fluoroethcathinone		11375.5 described: A-halide C-alkyl	4-F
brephedrone		β-keto-4-bromo-N- methylamphetamine 4-BMC		11375.5 described: A-halide C-alkyl	4-Br

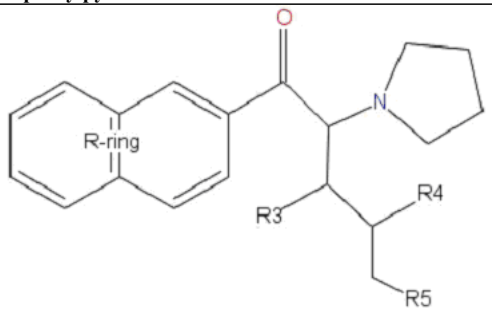
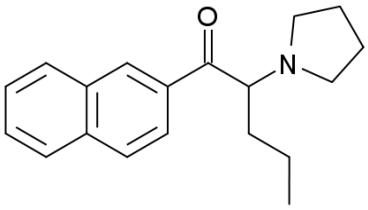
					
bk-MDA		3,4-methylenedioxy-cathinone MDC		11375.5 described: A-alkenedioxy	3,4-methylenedioxy
methylone		3,4-methylenedioxy-N-methylcathinone		11375.5 described: A-alkenedioxy C-alkyl	3,4-methylenedioxy
ethylone		3,4-methylenedioxy-N-ethylcathinone MDEC bk-MDEA		11375.5 described: A-alkenedioxy C-alkyl	3,4-methylenedioxy
4-MeMABP		4-methylbuphedrone 2-methylamino-1-(4-methylphenyl)-butan-1-one BZ-6378 4-MePB 4-methyl-N-methylbutio-phenone		11375.5 described: A-alkyl B-alkyl C-alkyl	4-Me
butylone		β-keto-N-methylbenzodioxolyl-propylamine bk-MBDB		11375.5 described: A-alkylenedioxy B-alkyl C-alkyl	3,4-methylenedioxy
eutylone		β-keto-ethylbenzodioxolyl-butanaime N-methyl-1,3-bezodioxoly-butanamine EBDB		11375.5 described: A-alkylenedioxy B-alkyl C-alkyl	3,4-methylenedioxy
bk-DMBDB		β-keto-N,N-dimethyl-1,3-benzodioxybutanamine dibutylone		11375.5 described: A-alkylenedioxy B-alkyl C-dialkyl	3,4-methylenedioxy

					
pentylone		β-keto-methylbenzodioxoyl-pentanamine bk-methyl-K bk-MBDP		11375.5 described: A-alkylenedioxy B-alkyl C-alkyl	3,4-methylenedioxy
α-phthalimido-propiophenone		phthalimidopropio-phenone		11375.5 described: C-inclusion of nitrogen in a cyclic structure	H
α-PPP		α-pyrrolidinopropio-phenone		11375.5 described: C-inclusion of nitrogen in a cyclic structure	H
α-PBP		α-pyrrrolidinobutio-phenone		11375.5 described: C-inclusion of nitrogen in a cyclic structure	H
α-PVP		α-pyrrrolidinopentio-phenone α-pyrrolidinovalero-phenone O-2387 β-ketone-prolintane		11375.5 described: B-alkyl C-inclusion of nitrogen in a cyclic structure	H
4-MePPP		4'-methyl-α-pyrrolidinopropio-phenone MPPP MαPPP		11375.5 described: A-alkyl C-inclusion of nitrogen in a cyclic structure	4-Me
MOPPP		4'-methoxy-α-pyrrolidinopropio-phenone		11375.5 described: A-alkoxy C-inclusion of nitrogen in a cyclic structure	4-MeO
MPBP		4'-methyl-α-pyrrolidinobutio-		11375.5 described: A-alkyl	4-Me

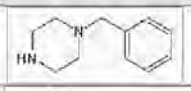
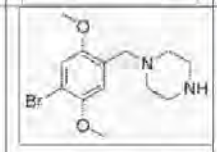
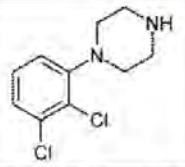
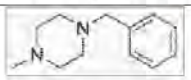
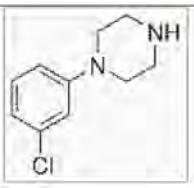
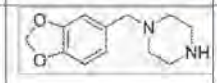
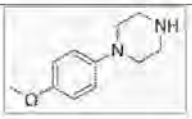
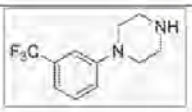
		phenone		B-alkyl C-inclusion of nitrogen in a cyclic structure	
Pyrovalerone		Centroton 4-methyl-β-ketone-prolintane Thymergix O-2371 Valerophenone		11375.5 described: A-alkyl B-alkyl C-inclusion of nitrogen in a cyclic structure	4-Me
MPHP		4'-methyl-α-pyrrolidinohexio-phenone		11375.5 described: A-alkyl B-alkyl C-inclusion of nitrogen in a cyclic structure	4-Me
MDPPP		3',4'-methylenedioxy-α-pyrrolidinopropio-phenone		11375.5 described: A-alkylenedioxy C-inclusion of nitrogen in a cyclic structure	3,4-methylenedioxy
MDPBP		3',4'-methylenedioxy-α-pyrrolidinobutio-phenone		11375.5 described: A-alkylenedioxy B-alkyl C-inclusion of nitrogen in a cyclic structure	3,4-methylenedioxy
MDPV		methylenedioxypyro-valerone		11375.5 described: A-alkylenedioxy B-alkyl C-inclusion of nitrogen in a cyclic structure See literature reference [13, 19, 20]	3,4-methylenedioxy
MOPVP		4-MeO-α-PVP 4-methoxy-α-pyrrolidinovalero-phenone 4-methoxy-2-(1-pyrrolidinyl)-valerophenone		11375.5 described: A-alkoxy B-alkyl C-inclusion of nitrogen in a cyclic structure	4-MeO
α-PVT		α-pyrrolidinopentio-thiophenone		Non-controlled thiophenyl NOT described in 11375.5	thiophen-2-yl instead of phenyl

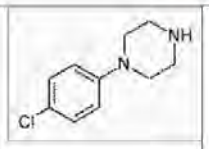
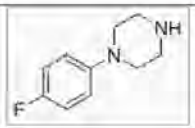
(10) **KHAT**, Drug Enforcement Administration, Drug & Chemical Evaluation Section. August 2011.
(11) **KHAT**. EMCDDA Website. Drug Profiles.

(12) **Analytical Profiles of Methcathinone Related Compounds**. Presentation November 2009.
(13) **Synthetic Cathinones**. EMCDDA Website. Drug Profiles
(14) **Cathinone: An Investigation of Several N-Alkyl and Methylenedioxy-Substituted Analogs**. Pharmacology Biochemistry and Behavior, Vol. 58, No. 4, pp.1109-1116, 1997
(15) **The Characterization of some 3,4-methelenedioxycathinone (MDCATH) Homologs**. Forensic Science International. 87 (1997) 9-53.
(16) **4-Methylmethcathinone (Mephedrone)**, Drug Enforcement Administration, Drug & Chemical Evaluation Section. October 2011.
(17) **Characterization of Three Methcathinone Analogs: 4-Methylmethcathinone, Methylone and bk-MBDB**, Microgram Journal, Volume 7, Number 2, December 2010.
(18) **Analytical Profiles of the beta keto amphetamines (bkMDMA, bkMDEA and bkMBDB)**. Presentation August 2008.
(19) **The Characterization of 3,4-Methylenedioxypyrovalerone (MDPV)**, Microgram Journal, Volume 7, Number 1, March 2010.
(20) **3,4-methylenedioxypyrovalerone (MDPV)**, Drug Enforcement Administration, Drug & Chemical Evaluation Section. October 2011.

11375.5 States:			**Naphthylpyrovalerone**					
Naphthylpyrovalerone: **(R-Ring) whether or not further substituted in the naphthyl ring to any extent with alkyl, alkoxy, alkylenedioxy, haloalkyl, or halide substituents, whether or not further substituted in the naphthyl ring by one or more other univalent substituents** **(R3, R4, or R5) whether or not further substituted in the carbon chain at the 3-, 4-, or 5-position with an alkyl substituent**								
Drug	CA Sch.	Synonyms	Structure	Reporting	**R-Ring**	**R_3**	**R_4**	**R_5**
naphyrone		O-2482 naphthylpyrovalerone		11375.5 described:	H	H	H	H

Piperazines

Drug	CAL Sched.	FED Sched.	Synonyms	Structure	Reporti
1-Benzylpiperazine (BZP)		I	BZP		Federal Schedul
4-Bromo-2,5-dimethoxy-1-benzylpiperazine (2C-B-BZP)			2C-B-BZP		Non Contr
2,3-Dichlorophenylpiperazine (DCPP)			2,3-Dichlorophenylpiperazine		Non Contr
1,4-Dibenzylpiperazine (DBZP)			Dibenzylpiperazine		Non Contr
4-Methyl-1-benzylpiperazine (MBZP)			Methylbenzylpiperazine		Non Contr
3-Chlorophenylpiperazine (mCPP)			*meta*-Chlorophenylpiperazine		Non Contr
3,4-Methylenedioxy-1-benzylpiperazine (MDBZP)			Methylenedioxybenzylpiperazine		Non Contr
4-Methoxyphenylpiperazine (MeOPP)			Para-Methoxyphenylpiperazine, MeOPP, pMPP, 4-MPP; Paraperazine		Non Contr
3-Trifluoromethylphenylpiperazine (TFMPP)			Trifluoromethylphenylpiperazine		Non Contr
2-methoxyphenylpiperazine (2-MeOPP)				No structure available	Non Contr
2-methylphenylpiperazine (2-MePP)				No structure available	Non Contr

4-Chlorophenylpiperazine (pCPP)			*para*-Chlorophenylpiperazine		Non Contr
4-Fluorophenylpiperazine (pFPP)			Para-Fluorophenylpiperazine		Non Contr

II. Analysis

A. Presumptive Tests

1. Four color tests are extremely useful for screening Amphetamine analogs. These tests are Marquis, Mecke, Froehde, and Rothera's. Rothera's is used for screening secondary amines. Marquis reagent produced a variety of colors with the analogs tested. Mecke and Froehde produced green colors in general, though there are exceptions. Of the seven analogs tested, only two, MDMA and n.n-DMA, produced positive blue reactions with Rothera's. The orange Marquis and blue Rothera's produced by n,n-DMA are the same reactions produced by Methamphetamine. Liebermann is useful for detecting cathinone analogs, many will give a bright yellow color. A supplemental color test, Modified Cobalt Thiocyanate (COSCN), while not necessary for the identification of the type of Phenethylamine, should be performed in conjunction with the other tests.
2. For reagent recipes, see DRG.13 - Reagent Preparation.
   a. **Marquis** Procedure: Add a toothpick full of questioned material to one drop of the test reagent. Note the color formed.
   b. **Mecke's** Test: Procedure: Add a toothpick full of questioned material to one drop of the test reagent. Note the color formed.
   c. **Froehde's** Test: Procedure: Add a toothpick full of questioned material to one drop of the test reagent. Note the color formed.
   d. **Liebermann** Test: Procedure: Add a toothpick full of questioned material to one drop of the test reagent. Note the color formed.
   e. **Secondary Amine Test (Rothera)** Procedure: Add a toothpick full of questioned material to one drop of solution a. Add a drop of solution b. Next add one drop of solution c. A bright blue color indicates a secondary amine. Note the color formed

B. Confirmatory Analysis

1. The GC/MS can be used for confirmation. The recommended procedure for running a sample is as follows:
   a. Solvent Extraction
      i. Take a small quantity of the powder or liquid to be analyzed.
      ii. Basify the sample (for phenethylamine analogs)
      iii. Extract out with Petroleum Ether, $CHCl_3$ or suitable solvent based on the analyte characteristics and solubility information.
      iv. There may be a "salting" effect of Phenethylamines when extracted in methanol resulting in unacceptable chromatography (significant peak tailing), if this occurs Petroleum Ether should be used.
      v. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the sample then a basic chloroform extract should be used.
      vi. Add a suitable internal standard, like n-Tricosane.
   b. Analysis
      i. The commonly used methods on the GC/MS are dea.m, meth.m, and GEN.m. Following a positive screening color test indicating a possible class of drugs, dea.m or meth.m can be used. GEN.m is used for unknowns.
      ii. Inject on the GC/MS. Use the smallest amount of sample and injection volume to get good spectra for positive ID.
      iii. Always inject a blank solvent containing the internal standard like n-Tricosane, before injecting the unknown sample onto the GC/MS.
      iv. If the sample has a weak response, concentrate the sample or inject a larger volume. Molecular ion is essential for a positive ID.
      v. Due to similarities in the mass spectra and retention time, it may not be possible to distinguish some positional isomers.
      vi. The GC/MS data is in PowerDMS.
2. Infrared Spectroscopy (FTIR) is a means of positively identifying a sample. The major drawback is that the sample must be almost completely free of any diluents or must be readily cleaned-up. This clean-up can take the form of a solvent extraction.
   a. It may be possible to distinguish isomers using IR that could not be differentiated by GC/MS.

Color Test Chart				
Compound	**Marquis**	**Mecke's**	**Froehde**	**Rothera's**
2,5-DMA	yellow	green	green	neg
MDMA	purple to black	blue-green	green to blue/black	blue
MDA	purple to black	blue-green	blue-green	neg
n,n-DMA	orange	slow yellow	neg	brownish
MDE	purple-black	blue-green	blue green to blue	neg
STP (DOM)	yellow	lime green	lime green	neg

Note: BZP, n-benzylpiperazine will produce a blue Rothera's
Tryptamines generally produce a purple/lavender pDMBA

(neg = Negative)

Compound	Marquis	Mecke	Froehde	Rothera	M-CoSCN	Liebermann
cathinone	NR	NR	NR	NR	NR	y
MDPV	y	y	y	NR	NR	y
3-MEC	NR	NR	NR	NR	light blue - fades	y-orng
2-MEC	NR	NR	NR	NR	NR	y-orng
4-MEC	NR	NR	NR	NR	NR	y
pentylone	y	y	y	NR	blue - fades	y
4-EEC	NR	NR	NR	NR	NR	y
PVP	NR	NR	NR	NR	blue	light y
bk-MDDMA	y	y	y	NR	NR	light y-brn
2,3-MDMC	pur	g	g	NR	NR	gray -> g
3,4-DMEC	NR	NR	NR	NR	NR	y-orng
3,4-MDMC	y	y	y	NR	NR	y-g
mephedrone	NR	NR	NR	NR	NR	y
methcathinone	NR	NR	NR	NR	NR	y
methoxetamine	NR	NR	NR	NR	NR	orng-brn
2-fluoromethamphetamine	light orng	NR	NR	blue	NR	orng
3-fluoromethamphetamine	NR	NR	NR	blue	NR	orng
4-fluoromethamphetamine	NR	NR	NR	blue	NR	orng
2-fluoroamphetamine	orng	NR	NR	NR	NR	orng
3-fluoroamphetamine	NR	NR	NR	NR	NR	orng
4-fluoroamphetamine	NR	NR	NR	NR	NR	orng
6-APB	light pur	dark g	pur	NR	NR	brn -> pur
DPT	light y-orng	dark g-brn	NR	NR	NR	brn-orng
4-bromo-2,5-DMA	y-g	y-g	y-g	NR	NR	y-g
ethylone	light y	light y	light y	NR	NR	y-g

Compound	**RRT DEA**	**RRT Meth**
cathinone	0.492	0.555
MDPV	0.935	0.946
3-MEC	0.612	0.68
2-MEC	0.589	0.658
4-MEC	0.62	0.689
pentylone	0.804	0.844
4-EEC	0.673	0.738
PVP	0.761	0.811
bk-MDDMA	0.745	0.798
2,3-MDMC	0.702	0.762

3,4-DMEC	0.69	0.752
3,4-MDMC	0.724	0.781
mephedrone	0.588	0.658
methcathinone	0.517	0.582
methoxetamine	0.825	0.861
2-fluoromethamphetamine	0.426	0.473
3-fluoromethamphetamine	0.428	0.476
4-fluoromethamphetamine	0.43	0.478
2-fluoroamphetamine	0.39	0.427
3-fluoroamphetamine	0.393	0.432
4-fluoroamphetamine	0.395	0.433
6-APB	0.6	0.669
DPT	0.909	0.924
4-bromo-2,5-DMA	0.782	0.828

I. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. Is 3,4-methylenedioxymethamphetamine listed as a controlled substance on the California Health and Safety code. If yes, locate it. If no, how is it a controlled substance?
2. What is the Controlled substance Analog law? What is its Offense Code listed under the CSA? What are the two main requirements for a drug to be defined as an analog? Do both the requirements need to be met? Explain
3. What color tests should one use as presumptive tests for a suspected MDMA pill? What color reaction should one expect for each?
4. What is the chemical name for STP or DOM? What is the structural similarity between STP and MDA?

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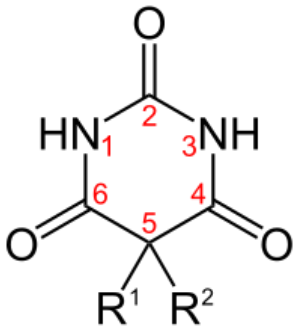
P. See References listed in table above.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.BAR - Analysis of Barbituates
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Barbiturates	**SUBJECT:** Analysis of Barbiturates	

I. Policy: Below is general information regarding Barbiturates.

A. 

Barbituric acid (R_1=R_2=H)

Amobarbital (R_1=ethyl, R_2=isoamyl, R_3=H)
Secobarbital (R_1=allyl, R_2=methylbutyl, R_3=H)
Pentobarbital (R_1=ethyl, R_2=methylbutyl, R_3=H)
Barbital (R_1=R_2=ethyl, R_3=H)
Methohexital (R_1=allyl, R_2=isohexyne, R_3 Mephobarbital (R_1=ethyl, R_2=phenyl, R_3=methyl)
Phenobarbital (R_1=ethyl, R_2=phenyl, R_3=H)

B. Barbiturates were commonly prescribed sedatives before physicians began to replace them with Benzodiazepines.

C. Most, if not all, Barbiturates may be tentatively identified by their appearance. To confirm the identity of the pills, substances suspected of being Barbiturates generally are screened using a battery of color tests then confirmed using chromatographic techniques.

D. Barbiturates were very popular in the first half of the 20th century. In moderate amounts, these drugs produce a state of intoxication that is remarkably similar to alcohol intoxication. Symptoms include slurred speech, loss of motor coordination, and impaired judgment. Depending on the dose, frequency, and duration of use, one can rapidly develop tolerance, and physical and psychological dependence on barbiturates. With the development of tolerance, the margin of safety between the effective dose and the lethal dose becomes very narrow. Although many individuals have taken barbiturates

therapeutically without harm, concern about the addiction potential of barbiturates and the ever-increasing number of fatalities associated with them led to the development of alternative medications. Today, less than 10 percent of all depressant prescriptions in the United States are for barbiturates.

E. Barbiturates were first introduced for medical use in the early 1900s. More than 2,500 barbiturates have been synthesized, and at the height of their popularity, about 50 were marketed for human use. Today, about a dozen are in medical use. Barbiturates produce a wide spectrum of central nervous system depression, from mild sedation to coma, and have been used as sedatives, hypnotics, anesthetics, and anticonvulsants. The primary differences among many of these products are how fast they produce an effect and how long those effects last. Barbiturates are classified as ultrashort, short, intermediate, and long-acting.

F. The ultrashort-acting barbiturates produce anesthesia within about one minute after intravenous administration. Those in current medical use are the Schedule IV drug methohexital (Brevital™), and the Schedule III drugs thiamyl (Surital™) and thiopental (Pentothal™). Barbiturate abusers prefer the Schedule II short-acting and intermediate-acting barbiturates that include amobarbital (Amytal™), pentobarbital (Nembutal™), secobarbital (Seconal™), and Tuinal (an amobarbital/secobarbital combination product). Other short and intermediate-acting barbiturates are in Schedule III and include butalbital (Fiorinal™), butabarbital (Butisol™), talbutal (Lotusate™), and aprobarbital (Alurate™). After oral administration, the onset of action is from 15 to 40 minutes, and the effects last up to six hours. These drugs are primarily used for insomnia and preoperative sedation. Veterinarians use pentobarbital for anesthesia and euthanasia.

G. Long-acting barbiturates include phenobarbital (Luminal™) and mephobarbital (Mebaral™), both of which are in Schedule IV. Effects of these drugs are realized in about one hour and last for about 12 hours, and are used primarily for daytime sedation and the treatment of seizure disorders.

H. This is an outline of the procedures presently in use at this laboratory. The tests and their implications are discussed. The specific instructions on how to perform the tests are provided in the individual sections of this manual.

II. Policy: Below is information regarding screening Barbiturates.

A. Markings and Appearance

1. The first screening test is a physical examination of the material in question. A tablet or capsule can usually be tentatively identified using the Physician's Desk Reference, one of the many commercial pharmaceutical catalogs available, or by phoning the manufacturer or Poison Control. If the material is submitted as a powdered or ground tablet, then it should be analyzed using color tests and instrumental analysis.

B. Color Tests

1. Two color tests are useful for screening Barbiturates; Dille-Koppanyi and Zwikker's.

2. Dille-Koppanyi will produce a purple color with all Barbiturates, Glutethimide and Hydantoin. The Dille-Koppanyi test will separate the Barbiturates into two categories. Most of the Barbiturates will produce a color with the first step of the color test and some upon the addition of the second reagent.

3. Hydantoin, Glutethimide, and Thiobarbiturate can be distinguished from Barbiturates using the Zwikker's test.

4. Zwikker's test consists of two stages; the first being a color reaction and the second being an organic extraction. After the extraction step, Barbiturates will produce a purple organic layer, Thiobarbiturate a green layer and Hydantoin produces no extractable color.

    a. Dille-Koppanyi:

        i. Reagents:

            1. 1% cobaltous acetate in methanol

            2. 5% isopropylamine in methanol

        ii. Procedure: Add a toothpick full of questioned material to one drop of solution a. Most Barbiturates form a purple color at this point. Next add one drop of solution b. The formation or persistence of a purple color indicates the presence of a Barbiturate, Glutethimide or Hydantoin.

        iii. Indicate the color formed (for step 1 and 2)

    b. Zwikker's:

        i. Reagents:

            1. 0.5% $CuSO_4$ in H_20

            2. 5% pyridine in Chloroform ($CHCl_3$)

        ii. Procedure: Add a toothpick full of questioned material to three to four drops of solution a in a test tube or shell vial. Add two to three drops of solution b and shake gently.

        iii. Indicate the color of the organic phase (lower layer).

COLOR CHART TEST			
	KOPPANYI		
Compound	Step 1	Step 2	ZWIKKER
Allobarbital*	Negative	purple	purple
Amobarbital*	purple	purple	purple

Aprobarbital*	purple	purple	purple
Barbital*	Negative	purple	purple
Butabarbital*	purple	purple	purple
Butobarbital*	purple	purple	purple
Butalbital*	Negative	purple	purple
Cyclopentobarbital*	Negative	purple	purple
Diphenylhydantoin	Negative	purple	N.E.C.**
Hexethal*	purple	purple	purple
Hexobarbital*	Negative	purple	purple
Hydantoin	Negative	purple	N.E.C.**
Mephobarbital*	purple	purple	purple
Pentobarbital*	purple	purple	purple
Phenobarbital*	Negative	purple	purple
Secobarbital*	purple	purple	purple
Thiobarbiturate*	purple	purple	green
Vinbarbital*	purple	purple	purple

*Controlled Substance

**N.E.C. (No Extractable Color)

III. Policy: Below is information regarding confirmation of Barbiturates.

A. The GC/MS can be used to confirm Barbiturates. The recommended procedure for running a sample is as follows:

1. Solvent Extraction

   a. Take a small quantity of the powder or liquid to be analyzed.

   b. Extract out with methanol or suitable solvent based on the analyte characteristics and solubility information.

   c. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard

2. Analysis

   a. The commonly used method on the GC/MS is GEN.m and dea.m

   b. As a routine,1 µl is injected on the GC/MS

   c. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS

   d. On occasion the samples may be weak. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a lager volume of sample may need to be injected on the GC/MS

e. The GC/MS data is attached.

3. GC/MS Data of Retention Time/Relative Retention Time

Compound	Retention Time	Relative Retention Time
Amobarbital	7.60	0.732
Aprobarbital	7.09	0.683
Barbital	6.33	0.610
Diphenylhydantoin	10.68	1.029
Hexobarbital	8.43	0.812
Hydantoin	5.66	0.545
Pentobarbital	7.73	0.744
Phenobarbital	8.94	0.860
Secobarbital	8.02	0.73

a. Note: Retention times may vary based on the concentration of the compound injected on the GC/MS. Generally, highly concentrated samples have slightly increased Retention Time

IV. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. List the two major mass spectral ions that are common in all three compounds: amobarbital, barbital and pentobarbital.

2. What is the color test for barbiturates? Give the expected positive color reaction.

3. What chemical compound are barbiturates derived from?

4. List the short acting, intermediate acting and long acting barbiturates? Define their schedules as listed in CSA.

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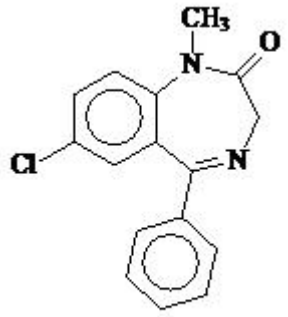
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.BEN - Analysis of Benzodiazepines
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Benzodiazepines	**SUBJECT:** Analysis of Benzodiazepines	

I. Policy: Below is general information regarding Benzodiazepines.

A. 

DIAZEPAM

B. 

CHLORDIAZEPOXIDE

C. The most commonly prescribed tranquilizers are Benzodiazepines. This class includes but is not limited to, Diazepam (Valium) and Chlordiazepoxide (Librium). Benzodiazepines are of forensic interest because they are commonly abused and are controlled under the California Health and Safety Code.

D. Benzodiazepines were first marketed in the 1960s. Touted as much safer depressants with far less addiction potential than barbiturates, today these drugs account for about one out of every five prescriptions for controlled substances. Although benzodiazepines produce significantly less respiratory depression than barbiturates, it is now recognized that benzodiazepines share many of the undesirable side effects of the barbiturates. A number of toxic central nervous system effects are seen with chronic high-dose benzodiazepine therapy, including headaches, irritability, confusion, memory impairment, and depression. The risk of developing over-sedation, dizziness, and confusion increases substantially with higher doses of benzodiazepines. Prolonged use can lead to physical dependence even at doses recommended for medical treatment. Unlike barbiturates, large doses of

benzodiazepines are rarely fatal unless combined with other drugs or alcohol. Although primary abuse of benzodiazepines is well documented, abuse of these drugs usually occurs as part of a pattern of multiple drug abuse. For example, heroin or cocaine abusers will use benzodiazepines and other depressants to augment their "high" or alter the side effects associated with over-stimulation or narcotic withdrawal.

E. The benzodiazepine family of depressants is used therapeutically to produce sedation, induce sleep, relieve anxiety and muscle spasms, and to prevent seizures. In general, benzodiazepines act as hypnotics in high doses, anxiolytics in moderate doses, and sedatives in low doses. Of the drugs marketed in the United States that affect central nervous system function, benzodiazepines are among the most widely prescribed medications. Fifteen members of this group are presently marketed in the United States, and about 20 additional benzodiazepines are marketed in other countries. Benzodiazepines are controlled in Schedule IV of the CSA.

1. Short-acting benzodiazepines are generally used for patients with sleep-onset insomnia (difficulty falling asleep) without daytime anxiety. Shorter-acting benzodiazepines used to manage insomnia include estazolam (ProSom™), flurazepam (Dalmane™), temazepam (Restoril™), and triazolam (Halcion™). midazolam (Versed™), a short-acting benzodiazepine, is utilized for sedation, or treating anxiety and amnesia in critical care settings and prior to anesthesia. It is available in the United States as an injectable preparation and as a syrup (primarily for pediatric patients).

2. Benzodiazepines with a longer duration of action are utilized to treat insomnia in patients with daytime anxiety. These benzodiazepines include alprazolam (Xanax™), chlordiazepoxide (Librium™), clorazepate (Tranxene™), diazepam (Valium™), halazepam (Paxipam™), lorzepam (Ativan™), oxazepam (Serax™), prazepam (Centrax™), and quazepam (Doral™). Clonazepam (Klonopin™), diazepam, and clorazepate are also used as anticonvulsants.

F. Benzodiazepines are classified in the CSA as depressants. Repeated use of large doses or, in some cases, daily use of therapeutic doses of benzodiazepines is associated with amnesia, hostility, irritability, and vivid or disturbing dreams, as well as tolerance and physical dependence. The withdrawal syndrome is similar to that of alcohol and may require hospitalization. Abrupt cessation of benzodiazepines is not recommended and tapering-down the dose eliminates many of the unpleasant symptoms.

G. Given the millions of prescriptions written for benzodiazepines, relatively few individuals increase their dose on their own initiative or engage in drug-seeking behavior. Those individuals who do abuse benzodiazepines often maintain their drug supply by getting prescriptions from several doctors, forging prescriptions, or buying diverted pharmaceutical products on the illicit market. Abuse is frequently associated with adolescents and young adults who take benzodiazepines to obtain a "high." This intoxicated state results in reduced inhibition and impaired judgment. Concurrent use of alcohol or other depressant with benzodiazepines can be life threatening. Abuse of benzodiazepines is particularly high among heroin and cocaine abusers. A large percentage of people entering treatment for narcotic or cocaine addiction also report abusing benzodiazepines. Alprazolam and diazepam are the two most frequently encountered benzodiazepines on the illicit market.

II. Analysis

A. Presumptive Tests

1. The first screening test is a physical examination of the submitted material. If the material is in a tablet or capsule form, the physical appearance is usually a very

strong indication of the compound present. Due to the potential of counterfeit pills, particularly alprazolam, pills should analyzed for confirmation. If the material is submitted as a powder or ground tablet, the sample should be anlayzed by color tests and instrumental analysis.

2. The modified COSCN helps to differentiate among the various types of benzodiazepines. Those that give a color reaction will produce a blue or green color. Due to the small amounts in pharmaceutical preparations, it may not be possible to see any color reactions from pills.

3. For reagent recipes, see DRG.13 - Reagent Preparation. Note the color formed.

B. **Confirmatory Analysis**

1. The GC/MS can be used to confirm Benzodiazepines. The recommended procedure for running a sample is as follows:

a. Solvent Extraction

i. Take a small quantity of the powder or liquid to be analyzed.

ii. Extract out with methanol or suitable solvent based on the analyte characteristics and solubility information.

iii. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the sample then an acid basic chloroform extract should be used.

iv. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard

b. Analysis

i. The commonly used methods on the GC/MS are GEN.m, dea.m, and opi.m. (it should be noted that the opi.m method should be used following a positive screening test; use GEN.m for an unknown).

ii. As a routine,1 µl is injected on the GC/MS

iii. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS (n-Tricosane is commonly used).

iv. On occasion the samples may be weak such that the molecular ion of the drug is not detected. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a lager volume of sample may need to be injected on the GC/MS

v. The GC/MS data is in PowerDMS.

Compound	Retention Time	Relative Retention Time
Oxazepam	10.74	1.034
Lorazepam	11.16	1.074
Diazepam	11.31	1.089
Nordiazepam	11.68	1.124
Flunitrazepam	12.35	1.189

Nitrazepam	13.61	1.309
Chlordiazepoxide	14.25	1.372
Clonazepam	14.45	1.391

Note: Retention times may vary based on the concentration of the compound injected on the GC/MS. Generally, highly concentrated samples have slightly increased Retention Time

f. Chlordiazepoxide is not thermally stable. The temperatures used in routine GC/MS analysis cause the formation of a breakdown product that may have a greater response than chlordiazepoxide. Confirmation may require larger amounts of sample to compensate for the breakdown of the compound during analysis.

2. Infrared Spectroscopy (FTIR) is a means of positively identifying a sample. The major drawback is that the sample must be almost completely free of any diluents or must be readily cleaned-up. This clean-up can take the form of a solvent extraction.

III. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. List the common resources that may aide in identifying benzodiazepine pills by appearance and markings.

2. Is identification by appearance and markings considered a presumptive test or confirmatory test?

3. What are the screening color tests for benzodiazepines? What is the limitation of a color test on pills vs. a know benzodiazepine standard?

4. Draw or define the general structure of benzodiazepines.

5. List the common cause(s), why benzodiazepines replaced the Barbiturates prescriptions?

IV. BIBLIOGRAPHY

A. Clarke, E. G. C., "Isolation and Identification of Drugs", The Pharmaceutical Press, Volumes I and II, 1971.

B. Miller, Patsy M., "Extraction and Identification of 1, 4 Benzodiazepines", Independence, MO Crime Laboratory.

C. "Benzodiazepines Analysis by HPLC", The Supelco Reporter, Volume II, No. I, January, 1983.

D. CND Analytical, INC., "Analytical Profiles of the Benzodiazepines", 1989.

E. Health and Safety Code, State of California, Section 11375(a) & (b).

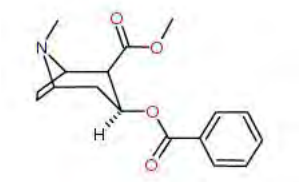
F. Drug Identification Bible, 4th Edition. Published by Amera-Chem

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.COC - Analysis of Caines
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Caines	**SUBJECT:** Analysis of Caines	

I. Policy: Below is general information regarding Caines.

A.



Cocaine (Methyl Benzoylecgonine)
C17H21NO4
MW = 303.35

1. Cocaine and Ecgonine are the only scheduled caines. Cocaine is a common controlled substance encountered in this laboratory. Ecgonine is rarely encountered alone, but may be seen in cocaine samples. Cocaine may be in a salt or a base form.

B. **Enhancements**:

1. PC 1203.073b1: Possession for sale of a substance containing 28.5 grams or more of cocaine or 57 grams or more of a substance containing cocaine.
2. PC 1203.073b5: Possession for sale of a substance containing 14.25 grams or more of cocaine base or 57 grams or more of a substance containing at least 5 grams of cocaine base.
3. H&S 11370.4a1-4ab: Penalty enhancements for substances containing cocaine where the substance exceeds 1, 4, 10, 20, 40 & 80 kg by weight.

C. The "Caines" include alkaloids produced by the coca plant and a variety of local anesthetics. Cocaine, the most potent stimulant of natural origin, is extracted from the leaves of the coca plant (*Erythroxylum coca*), which is indigenous to the Andean highlands of South America. Natives in this region chew or brew coca leaves into a tea for refreshment and to relieve fatigue, similar to the customs of chewing tobacco and drinking tea or coffee. Pure cocaine was first isolated in the 1880s and used as a local anesthetic in eye surgery. It was particularly useful in surgery of the nose and throat because of its ability to provide anesthesia, as well as to constrict blood vessels and limit bleeding. Many of its therapeutic applications are now obsolete due to the development of safer drugs. Illicit cocaine is usually distributed as a white crystalline powder or as an off-white chunky material.

1. The powder, usually cocaine hydrochloride, is often diluted with a variety of substances, the most common being sugars such as lactose, inositol, and mannitol, and local anesthetics such as lidocaine, benzocaine and procaine. levamisole, diltiazem and imidazole may also be present in samples. The adulteration increases the volume and thus multiplies profits. Cocaine hydrochloride is generally snorted or dissolved in water and injected. It is rarely smoked because it is heat labile (destroyed by high temperatures). Cocaine salt is a fine, crystalline powder that results from the extraction of the coca plant. Theoretically several different salt forms are possible, but the bulk of the powder available is the hydrochloride salt, almost to the exclusion of others. Cocaine salt is a Schedule II substance under the California Health & Safety Code.
2. Cocaine base is made from Cocaine salt and takes the form of "rock" or "crack". "Crack," the chunk or "rock" form of cocaine, is a ready-to-use freebase. On the illicit market, it is sold in small, inexpensive dosage units that are smoked. Smoking delivers large quantities of cocaine to the lungs, producing effects comparable to intravenous injection. Drug effects are felt almost immediately, are very intense, and are quickly over. Once introduced in the mid-1980s, crack abuse spread rapidly and made the cocaine experience available to anyone with $10 and access to a dealer. In addition to other toxicities associated with cocaine abuse, cocaine smokers suffer from acute respiratory problems including cough, shortness of breath, and severe chest pains with lung trauma and bleeding. It is noteworthy that the emergence of crack was accompanied by a dramatic increase in drug abuse problems and drug-related violence. Cocaine base is a Schedule I substance under the California Health & Safety Code.

D. The intensity of the psychological effects of cocaine, as with most psychoactive drugs, depends on the dose and rate of entry to the brain. Cocaine reaches the brain through the snorting method in three to five minutes. Intravenous injection of cocaine produces a rush in 15 to 30 seconds, and smoking produces an almost immediate intense experience. The euphoric effects of cocaine are almost indistinguishable from those of amphetamine, although they do not last as long. These intense effects can be followed by a dysphoric crash. To avoid the fatigue and the depression of coming down, frequent repeated doses are taken. Excessive doses of cocaine may lead to seizures and death from respiratory failure, stroke, or heart failure. There is no specific antidote for cocaine overdose.

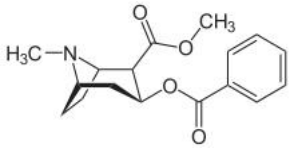


Paraphernalia used for smoking crack cocaine.

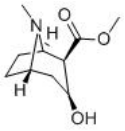


Coca plants

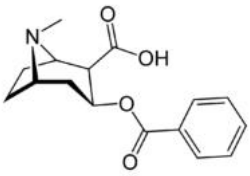
Cocaine (benzoylmethylecgonine) is a crystalline tropane alkaloid that is obtained from the leaves of the coca plant.[5] The name comes from "coca" in addition to the alkaloid suffix *-ine*, forming *cocaine*. It is a stimulant of the central nervous system, an appetite suppressant, and a topical anesthetic



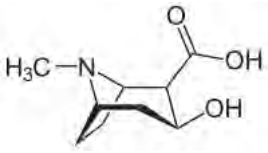
Methylecgonine (ecgonine methyl ester) An alkaloid ester extracted from the leaves of plants including coca. It is also a metabolite of cocaine



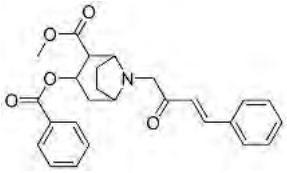
Benzoylecgonine is used as the main pharmaceutical ingredient in the prescription drug Esterom, a topical solution used for the relief of muscle pain



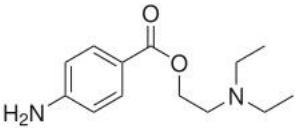
Ecgonine is an organic chemical and tropane alkaloid found naturally in coca leaves. It has a close structural relation to cocaine



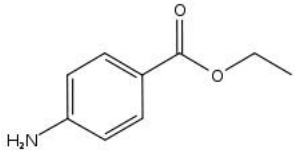
Cinnamoylcocaine Methylecgonine cinnamate is a natural tropane alkaloid found within the Erythroxylum coca plant. Its more common name, cinnamoylcocaine, reflects its close structural similarity to cocaine. It is said to be pharmacologically inactive



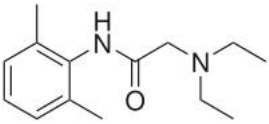
Procaine is a local anesthetic drug of the amino ester group. It is used primarily to reduce the pain of intramuscular injection of penicillin, and it was also used in dentistry



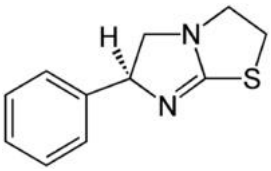
Benzocaine is a local anesthetic *commonly* used as a topical pain reliever. It is the active ingredient in many over-the-counter anesthetic ointments



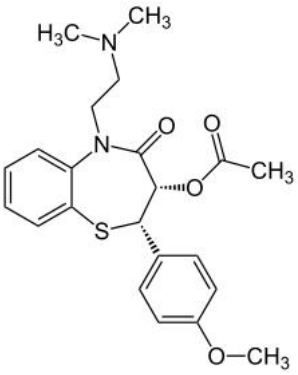
Lidocaine is a common local anesthetic and antiarrhythmic drug. Lidocaine is used topically to relieve itching, burning and pain from skin inflammations, injected as a dental anesthetic or as a local anesthetic for minor surgery



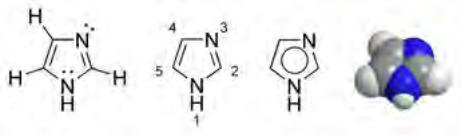
Levamisole was originally used as an antihelminthic to treat worm infestations in both humans and animals. Most current commercial preparations are intended for veterinary use as a dewormer in cattle, pigs, and sheep. However, levamisole has also gained prominence among aquarists as an effective treatment for *Camallanus* roundworm infestations in freshwater tropical fish



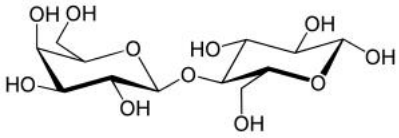
Diltiazem is a non-dihydropyridine (non-DHP) member of the class of drugs known as calcium channel blockers, used in the treatment of hypertension, angina pectoris, and some types of arrhythmia. It is also an effective preventive medication for migraine



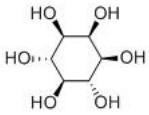
Imidazole is an organic compound with the formula $C_3H_4N_2$. This aromatic heterocyclic is a diazole and is classified as an alkaloid. The substituted imidazole derivatives are valuable in treatment of many systemic fungal infections



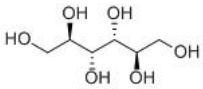
Lactose (Milk sugar) Lactose is a disaccharide sugar that is found most notably in milk and is formed from galactose and glucose



Inositol is a carbohydrate, though not a classical sugar. It is almost tasteless, with a small amount of sweetness



Mannitol is a sugar alcohol; that is, it is derived from a sugar by reduction



Cocaine: Cultivation to Product



1. Coca farmers, known as "campesinos," cultivate plants throughout the Andean region of South America.



2. Depending on the method and variety of coca used, coca plants may take up to two years to mature fully.



3. Once harvested, coca leaves are sometimes allowed to dry in the sun to keep the leaves from rotting.



4. Cocaine base processors stomp the coca leaves to macerate the leaves and help extract desired alkaloids.



5. The solution is transferred by bucket to a second plastic lined pit, where lime or cement is added.



6. Gasoline is then added to the basic solution and mixed.



7. Cocaine hydrochloride (HCl) is produced through further refining and processing the cocaine base.



8. Cocaine HCl is the final product exported from South America.



9. Crack cocaine is made in the U.S. from several basic household products and cocaine HCl.

II. Analysis

A. Presumptive Tests

1. For reagent recipes, see DRG.13 - Reagent Preparation.
2. Two color tests are routinely used in screening for Cocaine in either the salt or the base form. The two color tests are actually derivations of the same test, Cobalt Thiocyanate (COSCN). The modified version (MCOSCN) has phosphoric acid added to the solution. Both the unmodified and modified versions of COSCN are performed on suspected Cocaine samples. In combination these tests are presumptive for Cocaine in either the base or salt form.
    a. Cocaine base is insoluble in water and will give a negative result with the water-based unmodified reagent. The phosphoric acid in the modified reagent enables the base to dissolve and therefore give a positive result matching that of the salt form.
    b. Cocaine salt is freely soluble in water and will produce a "robin's egg blue" result with COSCN.

3. A positive COSCN is an indication that one of the many Caines may be present. In addition there are other structurally unrelated compounds which may give a positive result, including Phencyclidine. Ketamine may give a weak reaction where the particles turn blue, unlike the strong, precipitous blue reaction of cocaine.

4. The Marquis color test should also be run in conjunction with the COSCN tests. Marquis may produce a salmon color in the presence of Cocaine. More importantly, however, it will quickly detect the presence of Heroin and Amphetamines. Combinations of Cocaine/Methamphetamine or Cocaine/Heroin have been encountered in the past.

    a. **Marquis** Procedure: Add a toothpick full of the questioned sample powder to one drop of reagent. A salmon reaction may occur with Cocaine. Indicate the color formed

    b. **Cobalt Thiocyanat**e Procedure: Add a toothpick of the questioned material to one drop of the reagent. The production of a robin's egg blue color is a positive test. Indicate the color formed

    c. **Cobalt Thiocyanate (Modified)** Procedure: Add a toothpick of the questioned material to one drop of the reagent. The production of a robin's egg blue color is a positive test. Indicate the color formed

Color Test Chart			
Compound	**Marquis**	**MCOSCN**	**COSCN**
Cocaine base*	salmon or negative	blue	negative
Cocaine salt*	salmon or negative	blue	blue
Tetracaine	negative	negative	blue
Mepivicaine	negative	blue	blue
Benzoylecgonine	negative	blue	blue
Ecgonine*	negative	negative	negative
Benzocaine	negative	negative	negative
Piperocaine	negative	blue	blue
Procaine (free base)	negative	negative	blue
Lidocaine	negative	negative	blue
Asprin	slow strawberry pink	negative	negative
Acetaminophen	negative	negative	negative
Niacinamide	negative	negative	negative
Phencyclidine*	negative	blue	blue
Ketamine*	negative	negative	negative

*Controlled Substance

B. Confirmatory Tests

1. Color tests may give a presumptive indication of the form of cocaine, but infrared spectroscopy is required to confirm the form of cocaine (base or salt). GC/MS can only identify a substance as cocaine, it cannot distinguish between base and salt forms.

2. The GC/MS can be used to confirm Cocaine or other Caines. The recommended procedure for running a sample is as follows:

    a. Solvent Extraction

        i. Take a small quantity of the powder or liquid to be analyzed.

        ii. If the presumptive tests indicate cocaine salt is present, then extract using methanol. Cocaine salt is freely soluble in methanol and somewhat soluble in petroleum ether.

        iii. If the presumptive tests indicate cocaine base is present, then extract using petroleum ether. Cocaine base is soluble in methanol and freely soluble in petroleum ether.

        iv. **Note**: Methanol is not a suitable solvent if water is present in the sample. If it is suspected that water is present (e.g. syringe contents) then a basic chloroform extract should be performed. Typically cocaine salt is found in syringe contents. If a basic chloroform extract is performed then the sample should be reported as "cocaine", as basifying the sample would convert any salt present into base.

        v. A suitable internal standard, like n-Tricosane, may be used.

    b. Analysis

        i. The commonly used methods on the GC/MS are GEN.m, dea.m, and opiate.m. The opiate.m method is used only following a positive screening test and no indication of early eluting compounds of interest (such as methamphetamine). For a general unknown, use Gen.m.

        ii. Inject on the GC/MS. Use the smallest amount of sample and injection volume to get good spectra for positive ID. GC/MS may be used to identify Cocaine and FTIR should be used to distinguish between salt and base forms. When the form is determined, the sample should be reported as "cocaine salt" or "cocaine base". If the form cannot be determined, the sample should be reported as "cocaine".

        iii. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS.

        iv. On occasion the samples may be weak such that the molecular ion of the drug is not detected. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a lager volume of sample may need to be injected

on the GC/MS.

v. The GC/MS data is in PowerDMS.

3. Infrared Spectroscopy is a means of positively identifying a sample. The major drawback is that the sample must be almost completely free of any diluents or must be "cleaned-up". This clean-up can take the form of a solvent extraction for differential solubility of the compound of interest and the diluents and or the contaminants present in the street samples. See DRG.29 for more information about clean-up techniques.

a. Differentiation of the Base and Salt forms of Cocaine based on Absorption Regions

i. The analyst will use the FTIR to distinguish between the base and salt forms of cocaine. The sample may be analyzed directly or after a clean-up. The IR spectrum is able to give the analyst information about the base or salt form of cocaine even if it has been adulterated.

ii. There are specific absorption regions that can be used to distinguish between base and salt. There are two main absorption regions that are used to distinguish between the base and salt forms of cocaine: the 1750-1700 cm-1 and the 735-705 cm-1 regions (Morales 2000 and Raverby 1987). These regions were selected due to the fact that some common adulterants do not show absorption bands in there regions. Lidocaine, procaine, benzocaine, tetracaine, nicotinamide and caffeine were specifically evaluated in the reference article (Morales 2000). There is some difference between the average peak number observed in laboratory analysis and the reference articles (Morales 2000 and Raverby 1987), this can be explained by the data being acquired by internal reflection spectroscopy (ATR) versus absorption or transmission techniques (Koulis, et al. 2001).

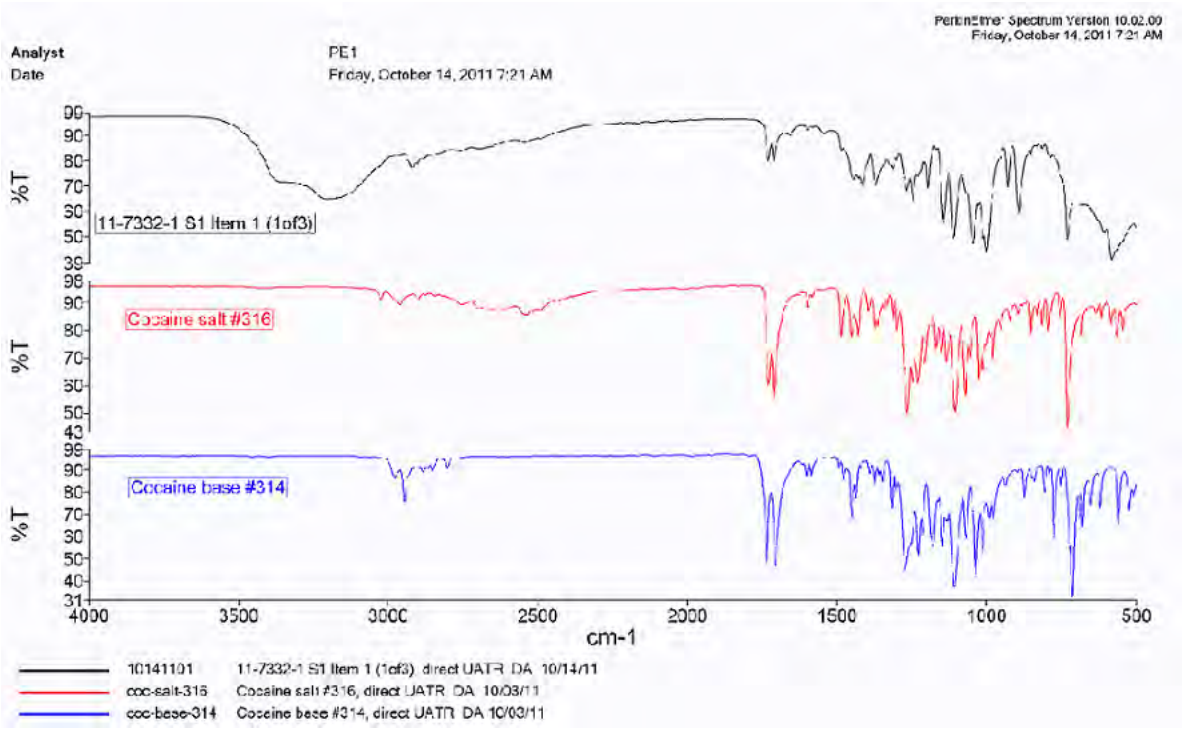
1. In the 1750-1700 cm^{-1} region, cocaine base has a carboxylic acid methyl ester carbonyl where absorption occurs around 1735.03 cm-1 and a benzoyloxy carbonyl where absorption occurs around 1706.89 cm^{-1}.

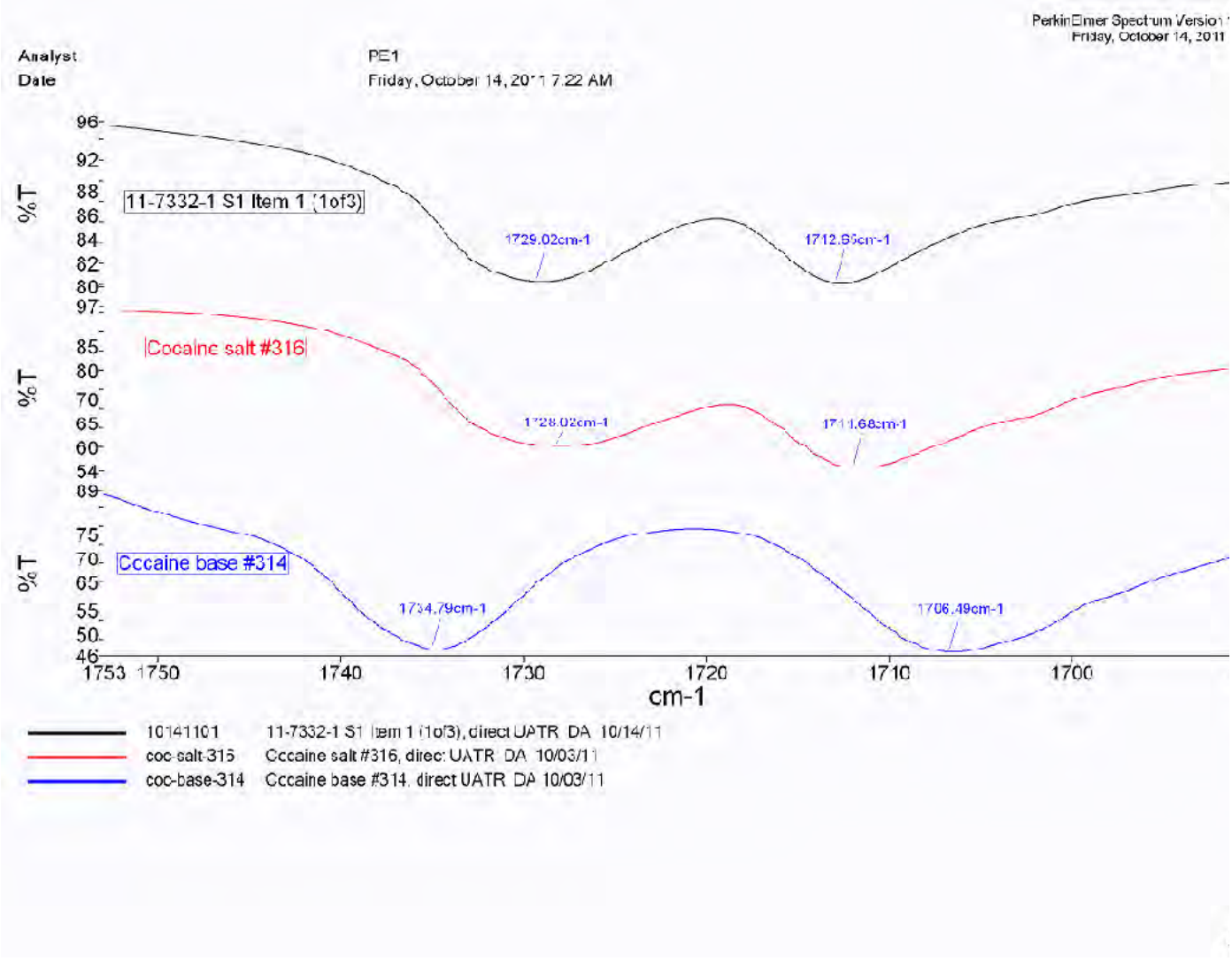
2. In the 1750-1700 cm^{-1} region, cocaine salt has two carbonyl bands where absorption occurs around 1728.20 cm^{-1} and around 1712.03 cm^{-1} respectively.

3. In the 735-705 cm^{-1} region, cocaine base has two absorption bands around 722.74 cm^{-1} and around 712.45 cm^{-1}.

4. In the 735-705 cm^{-1} region, cocaine salt has one absorption band around 730.07 cm^{-1}.

iii. For use in casework, the sample should be compared to spectra from **both** cocaine base and salt to distinguish the differences in the absorption bands, some examples are attached. It is helpful to print the entire spectrum and then "zoom" in on the two areas of interest and label the peaks accordingly to illustrate the differences between the base and salt forms of cocaine. (see example below)

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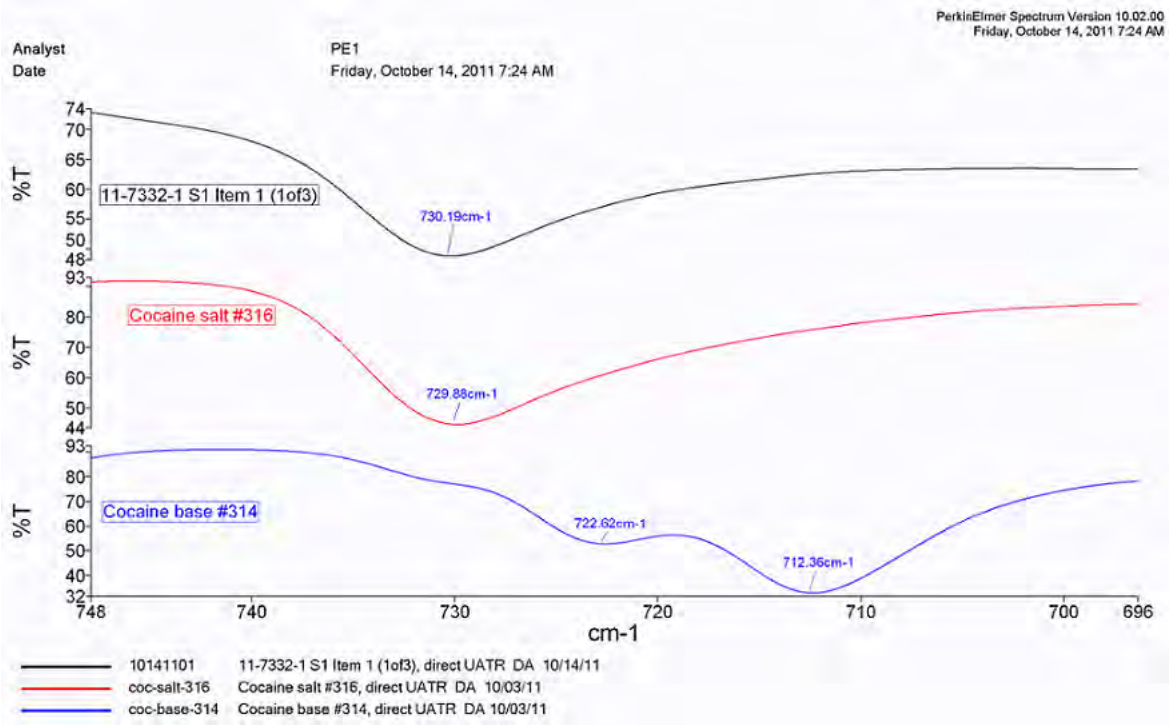
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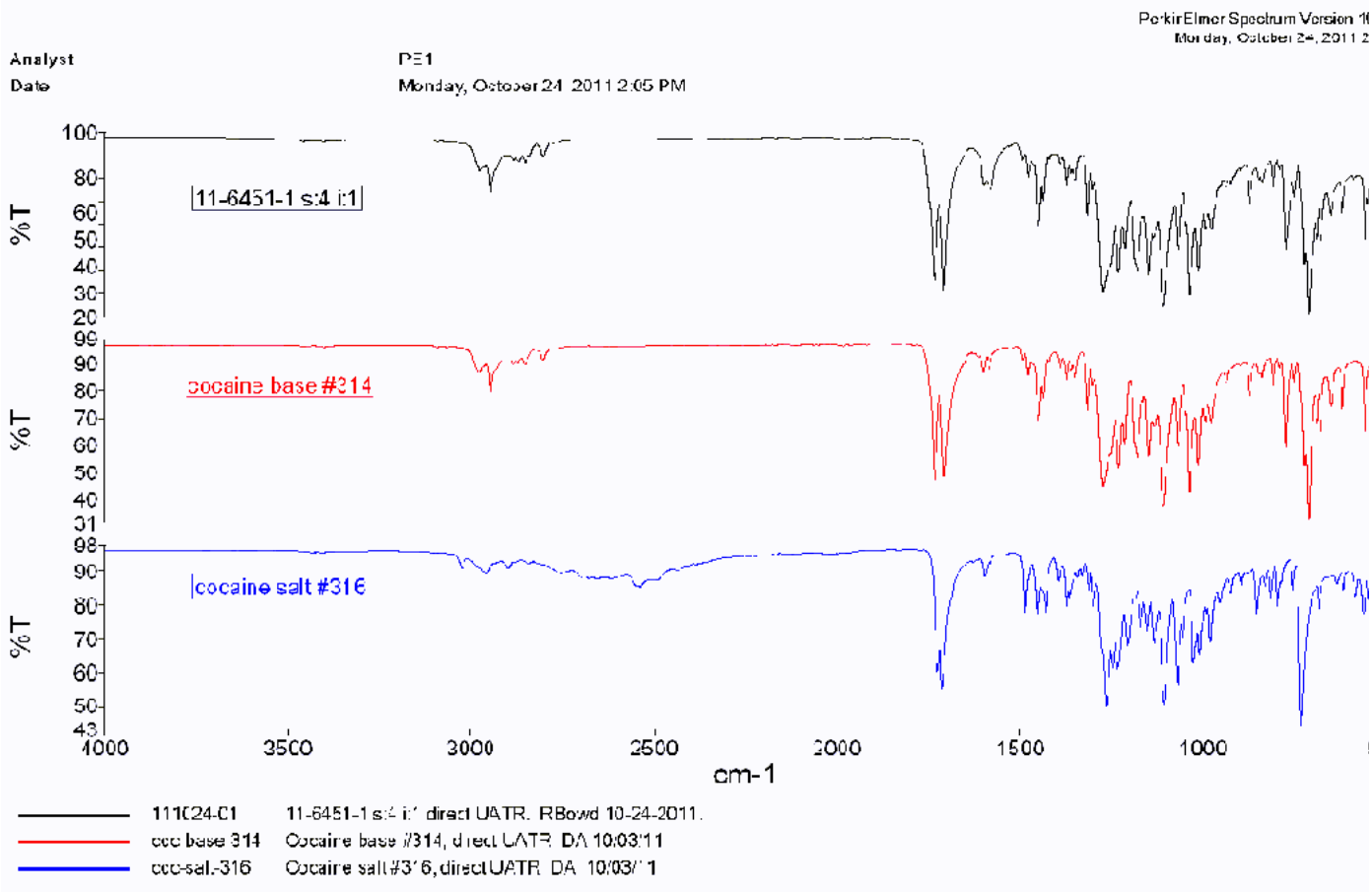
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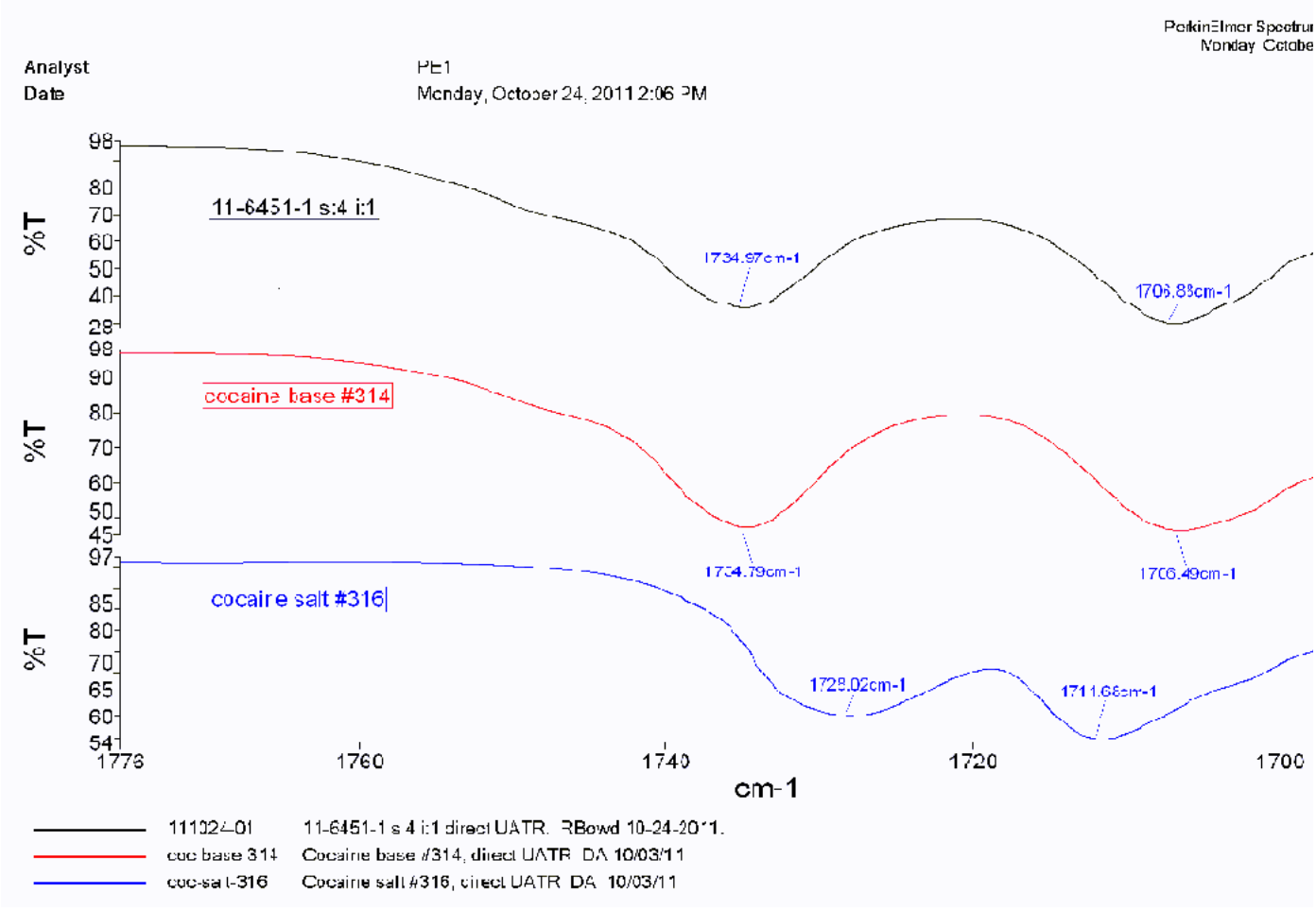
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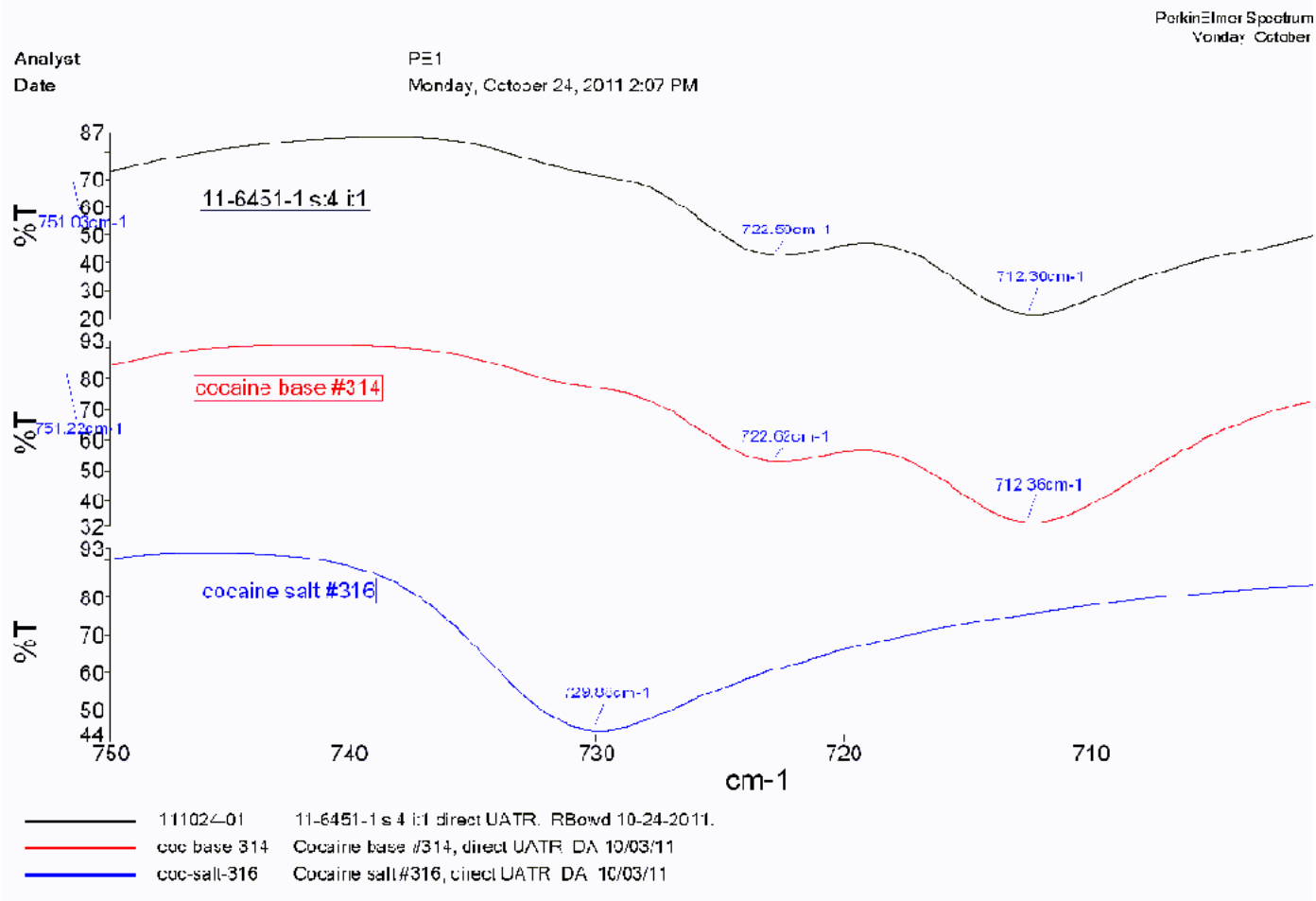
coc base 314 Cocaine base #314, direct UATR DA 10/03/11
coc-salt-316 Cocaine salt #316, direct UATR DA 10/03/11



III. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. Describe the color reaction that one would expect for Cocaine Base with the following color tests.
   a. Cobalt Thiocyanate,
   b. Modified Cobalt Thiocyanate. Explain why cocaine base reacts with one color test and not the other.
2. How is cocaine base produced from cocaine hydrochloride? How does "crack" differ from "free base"?
3. Describe the laboratory method(s) used to differentiate between cocaine salt and cocaine base.
4. Describe how you would extract for cocaine in an aqueous solution to prepare it for GC/MS analysis. Why is methanol not a recommended extraction solvent for cocaine in an aqueous solution?

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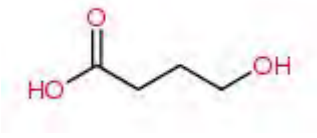
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.GHB - Gamma-Hydroxybutyric Acid (GHB)
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Gamma-Hydroxybutyric Acid (GHB)	**SUBJECT:** Gamma-Hydroxybutyric Acid (GHB)	

I. Policy: Below is general information regarding GHB.



Gamma-hydroxybutyric acid=$C_4H_8O_3$
MW=104

A. Gamma-hydroxybutyric acid was made a Schedule II controlled substance in California under Health and Safety Code in 2000. In 2002 GHB was moved to Schedule I, if no application for its use has been approved under Section 505 of the Federal Food, Drug and Cosmetic Act. If such an application for its use is not approved then it falls under Schedule III. This drug has been classified as a date rape drug along with Flunitrazepam. Previously this drug was widely sold in health food stores as a weight control drug and to induce the secretion of growth hormone for bodybuilding. GHB is structurally similar to the neurotransmitter gamma-aminobutyric acid (GABA).

B. In recent years, *gamma* hydroxybutyric acid (GHB) has emerged as a significant drug of abuse throughout the United States. Abusers of this drug fall into three major groups: (1) users take GHB for its intoxicant or euphoriant effects; (2) bodybuilders who abuse GHB for its alleged utility as an anabolic agent or as a sleep aid; and (3) individuals who use GHB as a weapon for sexual assault. These categories are not mutually exclusive and an abuser may use the drug illicitly to produce several effects. GHB is frequently taken with alcohol or other drugs that heighten its effects and is often found at bars, nightclubs, rave parties, and gyms. Teenagers and young adults who frequent these establishments are the primary users. Like flunitrazepam, GHB is often referred to as a "date-rape" drug. GHB involvement in rape cases is likely to be unreported or unsubstantiated because GHB is quickly eliminated from the body making detection in body fluids unlikely. Its fast onset of depressant effects may render the victim with little memory of the details of the attack.

C. GHB produces a wide range of central nervous system effects, including dose-dependent drowsiness, dizziness, nausea, amnesia, visual hallucinations, hypotension, bradycardia, severe respiratory depression, and coma. The use of alcohol in combination with GHB greatly enhances its depressant effects. Overdose frequently requires emergency room care, and many GHB-related fatalities have been reported.

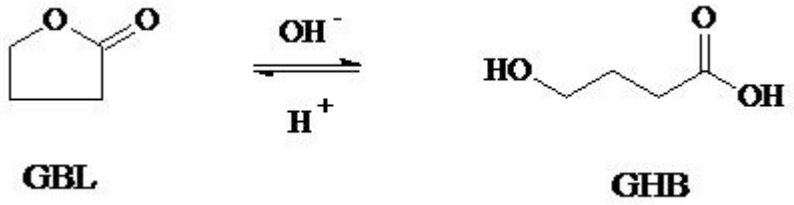
D. *Gamma* butyrolactone (GBL) and 1,4-butanediol are GHB analogues that can be used as substitutes for GHB. When ingested, these analogues are converted to GHB and produce

identical effects. GBL is also used in the clandestine production of GHB as an immediate precursor. Both GBL and 1,4-butanediol have been sold at health food stores and on various internet sites.

E. The abuse of GHB began to seriously escalate in the mid-1990s. For example, in 1994, there were 55 emergency department episodes involving GHB reported in the Drug Abuse Warning Network (DAWN) system. By 2002, there were 3,330 emergency room episodes. DAWN data also indicated that most users were male, less than 25 years of age, and taking the drug orally for recreational use.

F. GHB was placed in Schedule I of the CSA in March 2000. *Gamma* butyrolactone (GBL) was made a List I Chemical in February 2000. GHB has recently been approved as a medication (Xyrem™) for the treatment of cataplexy associated with some types of narcolepsy. This approved medication is in Schedule III of the CSA.

G. GHB is easily synthesized from gamma-butyrolactone (GBL) and 1-4, Butanediol (1-4,BD). These are controlled as the immediate precursors to GHB under the Controlled Substance Act under Schedule I.



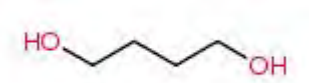
GBL GHB

H. GHB is often encountered in a liquid form. GHB is very hygroscopic and will usually be moist if it is the solid/powder form. (The potassium salt is more hygroscopic than the sodium salt). Other forms include a white paste-like material, or white waxy soap-like chunks. Liquid GHB and GBL have a slight odor of "burnt plastic". GHB is soluble in water and alcohols; it is insoluble in petroleum ether, ethyl ether, chloroform, and methylene chloride. GBL is soluble in chloroform, methylene chloride, alcohols, ether, and benzene.

I. GHB in an aqueous matrix will exist in equilibrium with its lactone. GHB will cyclize to the lactone (GBL) at the temperatures used during GC/MS analysis. To identify GHB and or GBL, they first need to be separated and then independently confirmed. Either GC or IR analysis can accomplish this.

J. The Gas Chromatography/Mass Spectrometer (GC/MS).and or the color tests may be used as a screening test. If it is necessary to confirm the presence of GHB, use FTIR or derivatize the GHB sample prior to injection on the GC/MS.

K. Below is general information regarding **1, 4 Butanediol**:



1, 4-Butanediol= $C_4H_{10}O_2$

MW= 90

1. 1,4-butanediol (BD), an analog and "pro-drug" of gamma-hydroxybutyric acid (GHB), is increasingly being added to so-called dietary, health, sleep aid, or sports (bodybuilding) supplements, and is also being sold on the Internet and on underground markets for purposes of illicit abuse.

2. BD is an important industrial solvent and precursor with numerous applications; for this reason, it is widely available. On the underground market, BD is most commonly seen in illicit dietary, health, sleep aid, or sports (bodybuilding) "supplements", and also as the primary ingredient or a major component in various "solvents" of nebulous makeup and dubious claimed applications. Soma, for example, is labeled as a dietary supplement and sold in 32 oz bottles, and is marketed as a "sleep aid". The label on the bottle itself states that 2.0 grams of BD have been added per 1 fluid oz. Although various warning and/or disclaimer labels are usually present on such products, there is no mention that BD is a Schedule I controlled substance if intended/sold for human consumption.

3. All of these various supplements and solvents are commonly obtained through Internet (usually from foreign sources) and on the underground drug market, especially at "Raves" and concerts, but also at gymnasiums and similar sports/bodybuilding venues.

4. Not surprisingly, BD (like GHB and GBL) has also been implicated in drug facilitated sexual assaults. Abusers of BD indicate that its ingestion results in some unpleasant side effects, including a hangover. Therefore, some clandestine laboratories convert BD to GBL, which is the lactone of GHB and therefore a more direct pro-drug of GHB.

L. Below is general information regarding **GBL**:

1. Gamma-Butyrolactone is a colorless liquid which is oily, has a weak odor, and is water soluble. It is actually a fairly common reagent in chemistry, and a common solvent. It can also be used as a stain remover, an aroma compound, a paint stripper, a superglue and as a solvent in some capacitors, namely aluminum electrolytic capacitors.

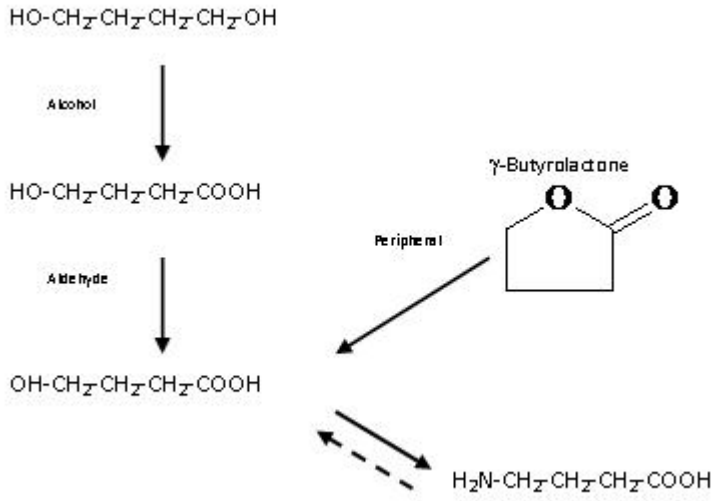
2. Gamma-Butyrolactone goes by several names, including GBL, butyrolactone, 1.4-lactone, 4-butyrolactone, 4-hydroxybutyric acid lactone, and also gamma-hydroxybutyric acid lactone. It can be found in samples of wines that are unadulterated, and it seems that this is how it is produced naturally. It can be synthesized from gamma-hydroxybutyric acid by removal of any water, or even by distillation. GBL can also be obtained through the oxidation of tetrahydrofuran.

3. Gamma-Butyrolactone is a chemical which has been used for years as a solvent. As a solvent, it has found many uses. It has been used in pesticides as well as for photochemical etching. It has been used in the electrolytes of small capacitors and batteries. It has been as a viscosity modifier in polyurethane.

4. It has found a useful place in the practice of surface etching metal coated plastics. It has also been used in organic paint disbursement products for water soluble inks. It has been used in pH regulators, in the dying of polyamide fibers and wool, and as a catalyst during curing procedures. It can also be used as a curing agent for coating systems and/or urethanes and amides.

5. In humans it acts as a prodrug for GHB, and it is used as a recreational intoxicant.

M. Both GBL and 1-4 BD are also converted to GHB in vivo as noted below:



N. Following is an outline of the procedures presently in use at this laboratory. The tests and their implications are discussed. The specific instructions on how to perform the tests are provided in the individual sections of this manual

O. Steps Taken To Identify GHB:

1. Color screening tests. Dry liquid sample if they are too diluted.
2. GC/MS using GHB.m or GEN.m as a screening tool. If butyrolactone is present then proceed with the steps below, otherwise analyze as a general unknown.
3. Dry sample completely for FTIR confirmation.
   a. The sodium salt will dry to a white substance and is amenable to FTIR
   b. The potassium salt does not dry completely and may not be detectable by FTIR
4. GC/MS confirmation using the derivatizing agents when FTIR is insufficient or unavailable.

II. II. Policy: Below is information regarding screening GHB.

A. Presumptive Tests

1. Color tests are presumptive tests and may be preformed to screen samples for the presence of GHB. GHB will not react with most of the color tests routinely used to screen samples in this laboratory. 1-4 BD does not give color test with $FeCl_3$ or Cobalt Nitrate. GBL by itself does not react with these color tests.
   a. 5% Ferric Chloride
      i. Reagent: 5 grams of ferric chloride in 100 ml of water.
      ii. Procedure: Add a toothpick full (or drop if liquid) of the questioned sample to one drop of reagent.
      iii. Indicate the color formed
      iv. NOTE: **This color test works well with both liquid and solid GHB samples**. A reddish-orange color indicates a positive with any alkaline

solution.

b. 1% Cobalt Nitrate

i. Reagent: 3.9 grams of Cobaltous Nitrate in 500 ml of Methanol.

ii. Procedure: Add a toothpick full of the questioned sample powder to one drop of reagent. A light purple color indicates a positive. KOH and NaOH give a gray color.

iii. NOTE: **This test does <u>not</u> work well with liquid samples**. If necessary, dry a couple of drops in a 58 degree C oven prior to the color test.

iv. Indicate the color formed.

B. GC/MS SCREEN

1. GHB itself is not amenable to GC/MS analysis. It either needs to be converted to its lactone form or derivatized for confirmation using GC/MS. However, GC/MS can be used as a quick screen to check the liquid or solid samples containing GHB or 1,4 butanediol.

2. Liquid Sample:

a. A liquid sample of GHB exists in equilibrium with GBL. If the sample is received in a liquid form, chloroform extract of the sample should be injected on GC/MS using GHB.m or GEN.m to check for butyrolactone. If butyrolactone is present then proceed for confirmation as listed under confirmatory steps.

i. **Gamma-Valerolactone is the internal standard used for the GHB extraction.**

1. 1% solution in water (0.1 ml valerolactone into 10 ml water)

b. If 1,4 butanediol is detected in the sample, Benzaldehyde is the recommended internal standard to be used for confirmation.

3. Solid Sample: If the sample is received in a solid form a methanol extract of a healthy amount of sample may be injected (The heat of the sample injection port converts GHB to its lactone form).

4. Note: The Sodium salt of GHB (used as the laboratory standard) is not soluble in Chloroform.

III. Policy: Below is information regarding confirmation of 1,4 butanediol.

A. A chloroform extract of the sample can be run on the GC/MS using the GHB.m or GEN.m methods.

B. Benzaldehyde is the recommended internal standard

IV. Policy: Below is information regarding confirmation of GHB.

A. Liquid Sample Prep

1. In the liquid samples GHB occurs in equilibrium with the lactone form. In order to confirm GHB, all of the lactone must be removed from the sample.

2. The following cleanup steps should be done prior to analyzing samples by FTIR or derivatizing samples for GC/MS analysis.

3. **Clean-up Procedure for Removing the Lactone from the sample**:

    a. Place approximately 2.0 ml of the case sample into a culture tube

    b. Add 0.5 ml of chloroform

    c. Vortex

    d. Centrifuge

    e. Remove the chloroform layer (can be analyzed for the presence of GBL)

    f. Add 1 ml of acetone or chloroform

    g. Vortex

    h. Centrifuge

    i. Remove the acetone or chloroform layer and discard

    j. Repeat the four above steps at least two more times

    k. Dry the remaining aqueous layer by placing the culture tube in the heating block

4. Derivatizing Samples for GC/MS Confirmation:

    a. Label clean dry culture tubes, one each with the following.

        i. "BLANK"

        ii. "STANDARD"

        iii. "Lab Number" for each case examined

    b. The tube for each case sample is the final aqueous solution from the sample preparation listed above (before drying)

    c. Add approximately 10 mg of GHB to the "STANDARD" tube

    d. Dry the samples on the heating block

    e. Prepare the Undecane (Internal Standard) by diluting 20 ul of Undecane in 1 ml of Ethyl Acetate. One drop of this solution contains 2 µl of Undecane. Add 1 drop (2 µl) to each culture tube

    f. Add 125 µl of BSTFA with 1% TMCS to each culture tube

    g. Vortex

    h. Add 2 ml (2000 µl) of Ethyl Acetate to each culture tube

    i. Vortex

    j. Cap each tube and place in a 60 degree C-heating block for 15 minutes

    k. Transfer each sample, after it has cooled, to an auto-sampler vial with a glass insert

    l. Inject 1 µl into the GC/MS using GHB.m or GEN.m

5. **Mass Spectra of GHB TCMS Derivative**

    a. The molecular ion is m/z 248, but is not always seen at lower concentrations.

    b. Ions common to TCMS derivatives include m/z 73, 147, and 243.

    c. For identification, ions m/z 117 (10%), 133 (2%), 159 (1%), 204 (5%), and 233 (10%) need to be present at the proper retention time.

    d. At high enough concentrations, the molecular ion, m/z 248 (1%) may be present.

B. Gas Chromatography/Mass Spectrometry of Underivatized sample:

1. In the following method the Gamma hydroxy butyrate (GHB) is converted to its lactone, gamma-butyrolactone (GBL). This confirmatory step follows a positive GC/MS screen for GBL listed under GC/MS screen test.

2. The lactone in the sample is first removed by approximately six washes with Chloroform as listed previously under liquid sample prep.

3. The last Chloroform extract is injected to ensure most of the lactone has been removed form the sample prior to the conversion of the GHB to the lactone using a mineral acid.

4. **Materials**:

    a. 10 ml glass test tubes

    b. conc. Sulfuric Acid

    c. 1.2 normal Potassium Hydroxide (KOH)

    d. Chloroform

    e. Distilled water

    f. Gamma-Valerolactone diluted to 1/100 in WATER for internal standard stock solution

    g. Gamma hydroxy butyrate, sodium

5. **Procedure-Conversion/Extraction of unknown sample**:

    a. Add 0.25 ml of unknown liquid to a test tube, then add 0.75 ml of WATER

    b. Add 1 ml of conc. SULFURIC ACID a drop at a time

    c. Let cool

    d. Add 1 ml of 1.2 normal KOH a drop at a time

    e. Add 0.1 ml of internal standard stock solution

    f. Add 2 ml of Chloroform

    g. Vortex 30 seconds

    h. Centrifuge, then remove the Chloroform layer for GC/MS analysis

6. **Procedure-Conversion/Extraction of GHB Standard**:

a. Take 0.1 ml of 1/100 dil. GHB standard and add to test tube

b. Add 0.9 ml of WATER

c. Add 1 ml of conc. SULFURIC ACID a drop at a time

d. Let cool

e. Add 1 ml of 1.2 normal KOH a drop at a time

f. Add 0.1 ml of internal standard stock solution

g. Vortex 30 seconds

h. Centrifuge, then remove the Chloroform layer for GC/MS analysis

7. **Procedure-Extraction of gamma-Valerolactone for blank**

a. Take 0.1 ml of internal standard stock solution and add 2.9 ml of WATER

b. Add 2 ml of Chloroform

c. Vortex 30 seconds

d. Centrifuge, then remove the Chloroform layer for GC/MS blank

C. FTIR

1. Infrared Spectrophotometry should be used only on very dry sample of GHB. The sodium salt of GHB can be dried. However the Potassium salt of GHB is hygroscopic and does not dry very well despite the time it is kept for drying.

2. The liquid sample should go through the liquid sample prep listed previously under confirmatory tests to remove most of the GBL from the sample. The liquid sample should then be dried (preferably under a stream of air to expedite the drying). The dried sample should then be used to analyze directly on ATR or prepare the KBR pellet for FTIR. Identification is made by comparison against a known spectrum.

V. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. Explain the relationship between GHB, GBL and 1-4 butanediol.

2. Describe the limitation of analyzing underivatized GHB using a GC/MS.

3. Draw the structure of the derivatized GHB when using the procedure describe in the Controlled Substance Procedures Manual.

4. Describe how GHB and GBL equilibrium in aqueous solution may be affected by the addition of a) strong alkaline solution and b) strong acidic solution.

5. What are the limitations of confirming GHB by FTIR?

6. What is the legitimate use of GHB, GBL?

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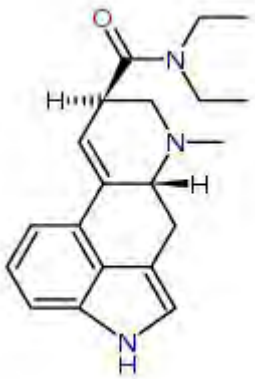
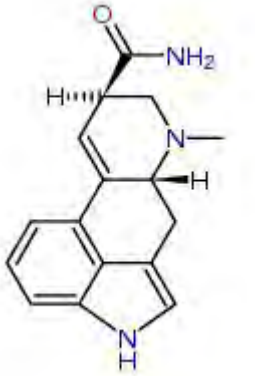
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/30/2018	**NUMBER:** MONO.LSD - Analysis of Lysergic Acid Diethylamide (LSD)
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Lysergic Acid Diethylamide (LSD)	**SUBJECT:** Analysis of Lysergic Acid Diethylamide (LSD)	

I. Policy: Below is general information regarding LSD.

A. Lysergic acid diethylamide (LSD)



B. Lysergic acid amide



C. Lysergic acid N,N-methylpropylamide (LAMPA)



D. Lysergic Acid Diethylamide (LSD) is a hallucinogen that can be encountered in this laboratory. LSD may take the form of small tablets or blotter paper.

E. In the blotter paper form, the drug is impregnated onto the paper, which is then ingested by the user. The paper is normally perforated into many small squares with a wide range of designs. Microgram is an excellent source for examples of the many designs encountered throughout the country.

F. The concentration of the drug on the paper is in the microgram range. The procedures available for the analysis of LSD in this laboratory are limited, but very selective and sensitive.

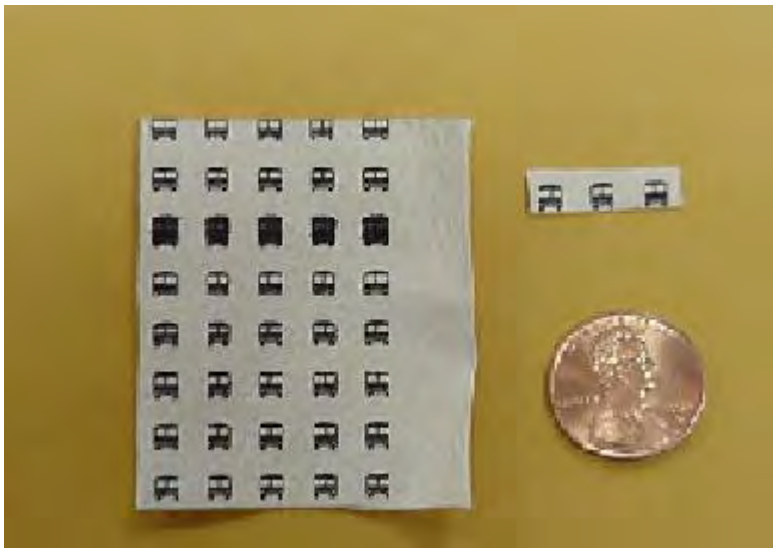
G. Lysergic acid diethylamide (LSD) is the most potent hallucinogen known to science, as well as the most highly studied. LSD was originally synthesized in 1938 by Dr. Albert Hoffman. However, its hallucinogenic effects were unknown until 1943 when Hoffman accidentally consumed some LSD. It was later found that an oral dose of as little as 0.000025 grams (or 25 micrograms, equal in weight to a couple grains of salt) is capable of producing rich and vivid hallucinations.

H. Because of its structural similarity to a chemical present in the brain and its similarity in effects to certain aspects of psychosis, LSD was used as a research tool to study mental illness. LSD abuse was popularized in the 1960s by individuals like Timothy Leary who encouraged American students to "turn on, tune in, and drop out." LSD use has varied over the years but it still remains a significant drug of abuse.

I. The average effective oral dose is from 20 to 80 micrograms with the effects of higher doses lasting for 10 to 12 hours. LSD is usually sold in the form of impregnated paper (blotter acid), typically imprinted with colorful graphic designs. It has also been encountered in tablets (microdots), thin squares of gelatin (window panes), in sugar cubes and, rarely, in liquid form.

J. Physical reactions may include dilated pupils, lowered body temperature, nausea, "goose bumps," profuse perspiration, increased blood sugar, and rapid heart rate. During the first hour after ingestion, the user may experience visual changes with extreme changes in mood. In the hallucinatory state, the LSD user may suffer impaired depth and time perception, accompanied by distorted perception of the size and shape of objects, movements, color, sound, touch, and the user's own body image. During this period, the ability to perceive objects through the senses is distorted: a user may describe "hearing colors" and "seeing sounds." The ability to make sensible judgments and see common dangers is impaired, making the user susceptible to personal injury. After an LSD "trip," the user may suffer acute anxiety or depression for a variable period of time. Flashbacks have been reported days or even months after taking the last dose.

K. The following is an outline of the procedures that may be employed for the identification of LSD. For instruction on technique, consult the appropriate section.





LSD blotter paper LSD sugar cubes



LSD blotter paper

II. Policy: Below is information regarding screening LSD.

A. Presumptive Tests

1. pDMBA (para-dimethylaminobenzaldehyde), also referred to as Van Urk's reagent, is the color test used for the presumptive screening of LSD and related compounds. In general, a purple reaction with the acidified pDMBA test occurs with indoles, pyrolles, and tryptophans and is an indication of the presence of a hallucinogen; including LSD.

2. Fluorescence: LSD is highly fluorescent. This property can be utilized in two ways.

    a. The first is a direct examination of the paper under longwave ultra violet light. If the paper fluoresces, it is an indication that LSD may be present. However, many dyes that are typically present on blotter paper may also fluoresce.

    b. The interference of this background fluorescence may be eliminated by using a second technique. This involves taking a small section of the blotter paper and placing it on a piece of filter paper. Add a drop of methanol and observe the section under longwave UV light. A leeching out effect should be observed if any LSD is present. The methanol is removing the LSD from the blotter paper and distributing it (and the fluorescence) across the filter paper. These tests for fluorescence are very sensitive. The absence of fluorescence in combination with a negative pDMBA is an excellent indication that LSD is absent.

    c. Acidified pDMBA:

        i. Reagent:

            1. 0.01g of para-dimethylaminobenzaldehyde in 18 ml of ethanol and 2 ml of concentrated Sulfuric Acid (H_2SO_4).

            2. Concentrated Hydrochloric Acid (HCl).

        ii. Procedure: Add a small section of the blotter paper or tablet to one drop of solution a. Next, add one drop of solution b. A purple color, which may be slow to form, is an indication that LSD is present.

        iii. Indicate the color formed.

    d. Ultra Violet Fluorescence:

        i. Procedure: Place the blotter paper in the UV light hood. Observe the paper under longwave UV light. Positive fluorescence indicates that LSD may be present.

        ii. Note: This technique is subject to background interference from dyes.

        iii. Place a small section of the blotter paper (approximately 1 mm square) onto a piece of filter paper and place in the UV light hood. Next add a drop of methanol to the blotter paper and observe under longwave UV light. Any leeching of fluorescence out and away from the blotter paper is an indication that LSD is present.

        iv. Note the Positive fluorescence under UV

        v. Note the Methanol leaching and Positive fluorescence

COLOR TEST CHART		

Compound	pDMBA	Ultra Violet Fluorescence
LSD	purple	positive
LAMPA	purple	positive

III. Policy: Below is information regarding confirmation of LSD.

A. The GC/MS can be used to confirm LSD. The recommended procedure for running a sample is as follows:

1. Solvent Extraction

   a. Take a small quantity of the sugarcube, blotter paper, powder or liquid to be analyzed.

   b. Extract out with methanol or suitable solvent based on the analyte characteristics and solubility information.

   c. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the sample then an Acidic Chloroform extract should be used.

      i. *Basic Chlorobutane is an acceptable alternate extraction for liquid samples.*

   d. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard. It may be necessary to use a dilute internal standard.

2. Analysis

   a. The commonly used method on the GC/MS is GEN.m.

      i. Both LSD and LAMPA will elute in the GEN.m method.

   b. **A standard that contains both LSD and LAMPA should be used for confirmation.**

      i. This is due to the substantial similarity between the mass spectra of LSD and LAMPA

   c. As a routine,1 µl is injected on the GC/MS

   d. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS (n-Tricosane is commonly used).

   e. Samples may need to be concentrated to be identified. More of the sample may need to be extracted, or a larger volume of sample may need to be injected on the GC/MS

GC/MS Data of Retention Time/Relative Retention Time		
Compound	**Retention Time**	**Relative Retention Time**
LSD	16.65	1.68
LAMPA	17.39	1.75

Note: Retention times may vary based on the concentration of the compound

injected on the GC/MS. Generally, highly concentrated samples have slightly increased retention times.

B. Infrared spectroscopy is a useful means of identifying a substance. However, most evidence material submitted must be extracted and concentrated before an acceptable infrared spectrum may be obtained.

1. Due to the low concentration of drug seen in "street samples" this is not a method choice for the confirmation of LSD.

IV. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. What is the chemical name for LSD?
2. Describe the preliminary test for suspected blotter paper containing LSD using UV light. Why is necessary to do the methanol leeching?
3. How can one distinguish the difference between LSD and its isomer LAMPA if both were analyzed using a GC/MS?
4. What is the reagent that is typically used a preliminary color test for LSD? What is the expected color reaction?
5. How would light exposure of LSD impact the concentration of the drug in the sample?
6. What are the procedures for drug extraction from liquid samples?
7. What safety precautions need to be adopted when handling LSD samples and why?

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E. Analytical Profiles of the Hallucinogens 1991, CND Analytical, Inc, Auburn, AL, U.S.A.

F. dea/pubs/abuse/8-hallu.htm

G. Drug Identification Bible, 4th Edition. Published by Amera-Chem

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substance Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.MAR - Analysis of Marijuana
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Marijuana	**SUBJECT:** Analysis of Marijuana	

I. Policy: Below is general information regarding Marijuana and Cannabinoids.

A. Marijuana is the common name for the hemp plant of the family Cannabinaceae known as Cannabis sativa. Its closest relatives are the hops (Humulus japonicus and Humulus lupulus).

B. The following legal definitions are from the 2009 California Drug Laws sections 11018 and 11006.5 respectively:

1. "Marijuana" means all parts of the plant Cannabis sativa L., whether growing or not; the seeds thereof; the resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds or resin. **It does not include** the mature stalks of the plant, fiber produced from the stalks, oil or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of the plant which is incapable of germination.

   a. **Marijuana seeds are not identified by the Laboratory.** The seeds have to be viable to be identified, which requires them to be germinated.

2. "Concentrated cannabis" means the separated resin, whether crude or purified, obtained from marijuana.

   a. **The Laboratory does not identify "concentrated cannabis"**. In samples where the plant material cannot be identified by the morphological features of the marijuana leaf (having both cystolithic and clothing hairs) the sample is identified as delta-9-THC.

C. *Cannabis sativa L*., the cannabis plant, grows wild throughout most of the tropic and temperate regions of the world. Prior to the advent of synthetic fibers, the cannabis plant was cultivated for the tough fiber of its stem. In the United States, cannabis is legitimately grown only for scientific research.

1. Cannabis contains chemicals called cannabinoids that are unique to the cannabis plant. Among the cannabinoids synthesized by the plant are cannabinol, cannabidiol, cannabidiolic acids, cannabigerol, and several isomers of tetrahydrocannabinol. One of these, delta-9-tetrahydrocannabinol (THC), is believed to be responsible for most of the characteristic psychoactive effects of cannabis. Research has resulted in development and marketing of the dronabinol (synthetic THC) product, Marinol™, for the control of nausea and vomiting caused by chemotheraputic agents used in the treatment of cancer and to stimulate appetite in AIDS patients. Marinol™ was rescheduled in 1999 and placed in Schedule III of the CSA.

2. Cannabis products are usually smoked. Their effects are felt within minutes, reach their peak in 10 to 30 minutes, and may linger for two or three hours. The effects experienced often depend upon the experience and expectations of the individual user, as well as the activity of the drug itself. Low doses tend to induce a sense of well-being and a dreamy state of relaxation, which may be accompanied by a more vivid sense of sight, smell, taste, and hearing, as well as by subtle alterations in thought formation and expression. This state of intoxication may not be noticeable to an observer. However, driving, occupational, or household accidents may result from a distortion of time and space relationships and impaired motor coordination. Stronger doses intensify reactions. The individual may experience shifting sensory imagery, rapidly fluctuating emotions, fragmentary thoughts with disturbing associations, an altered sense of self-identity, impaired memory, and a dulling of attention despite an illusion of heightened insight. High doses may result in image distortion, a loss of personal identity, fantasies, and hallucinations.

3. Three forms of cannabis--marijuana, hashish, and hashish oil--are distributed on the U.S. illicit market. Having no currently accepted medical use in treatment in the United States, they remain under Schedule I of the CSA. Today, cannabis is illicitly cultivated, both indoors and out, to maximize its THC content, thereby producing the greatest possible psychoactive effect.

4. The cannabis plant contains more than 400 chemicals and several of them are psychoactive. By far the most psychoactive is delta-9- tetrahydrocannabinol (THC), found in the plants resin. The resin is most concentrated in the flowers, but can also be found in small amounts in the vegetative leaves and stalks.

D. Marijuana varies significantly in its potency, depending on the source and selection of plant materials used. The form of marijuana known as sinsemilla (Spanish, sin semilla: without seed), derived from the unpollinated female cannabis plant, is preferred for its high THC content. Marijuana is usually smoked in the form of loosely rolled cigarettes called joints, bongs, or hollowed out commercial cigars called blunts. Joints and blunts may be laced with a number of adulterants including phencyclidine (PCP), substantially altering the effects and toxicity of these products. Street names for marijuana include pot, grass, weed, Mary Jane, and reefer. Although marijuana grown in the United States was once considered inferior because of a low concentration of THC, advancements in plant selection and cultivation have resulted in higher THC-containing domestic marijuana. In 1974, the average THC content of illicit marijuana was less than one percent. Today most commercial grade marijuana from Mexico/Columbia and domestic outdoor cultivated marijuana has an average THC content of about 4 to 6 percent. Between 1998 and 2002, NIDA-sponsored Marijuana Potency Monitoring System (MPMP) analyzed 4,603 domestic samples. Of those samples, 379 tested over 15 percent THC, 69 samples tested between 20 and 25 percent THC and four samples tested over 25 percent THC.

1. The products made from marijuana plants for psychoactive effects very in their THC content and therefore in their psychoactive potency.

   a. Low-grade marijuana is made from all the leaves of both sexes of the plant. The THC content of dried vegetative leaves may be only 1%.

   b. Medium-grade marijuana is made from dried flowering tops of female cannabis plants raised with and fertilized by male plants.

   c. High-grade marijuana is made from the flowering tops of female plants raised in isolation from male plants. The resulting marijuana is called sinsemilla, which means "without seeds". The THC content varies from 5 to11%.

2. The active oils from Marijuana that are responsible for its pharmacological activity are called cannabinoids. The phenolic character of the cannabinoids is very weak, so in solvent solutions they can be regarded as neutral.

3. Hashish consists of the THC-rich resinous material of the cannabis plant, which is collected, dried, and then compressed into a variety of forms, such as balls, cakes, or cookie-like sheets. Pieces are then broken off, placed in pipes, and smoked. The Middle East, North Africa, and Pakistan/Afghanistan are the main sources of hashish. The THC content of hashish that reached the United States, where demand is limited, averaged about five percent in the 1990s.

4. The term "hash oil" is used by illicit drug users and dealers, but is a misnomer in suggesting any resemblance to hashish. Hash oil is produced by extracting the cannabinoids from plant material with a solvent. The color and odor of the resulting extract will vary, depending on the type of solvent used. Current samples of hash oil, a viscous liquid ranging from amber to dark brown in color, average about 15 percent THC. In terms of its psychoactive effect, a drop or two of this liquid on a cigarette is equal to a single "joint" of marijuana.

5. From about 20 cannabinoids isolated from the plant, only a few are of a forensic importance.

6. Marijuana contains known toxins and cancer-causing chemicals. Marijuana users experience the same health problems as tobacco smokers, such as bronchitis, emphysema, and bronchial asthma. Some of the effects of marijuana use also include increased heart rate, dryness of the mouth, reddening of the eyes, impaired motor skills and concentration, and hunger with an increased desire for sweets. Extended use increases risk to the lungs and reproductive system, as well as suppression of the immune system. Occasionally, hallucinations, fantasies, and paranoia are reported. Long-term chronic marijuana use is

associated with an Amotivational Syndrome characterized by: apathy; impairment of judgment, memory and concentration; and loss of interest in personal appearance and pursuit of goals.

Marijuana is rolled either into cigarettes (called joints) or cigars (called blunts) for smoking.




Hashish is produced when the resin of the cannabis plant is separated from the plant material. It often appears as a dark colored gummy ball, rather hard but not brittle. The average THC content of hashish is around 8%, but can vary up to 20%.

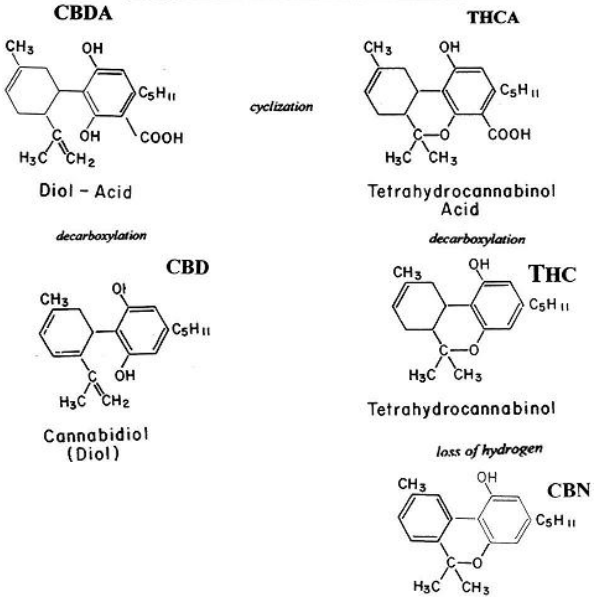
Hashish is often smoked in a pipe or rolled into a cigarette along with tobacco or lower-grade marijauna.



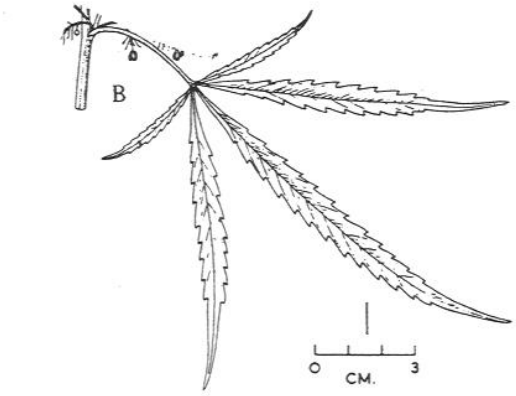
Hash oil is the most potent of the preparations made from cannabis plant. The plant is boiled in alcohol, and after filtering the solids and evaporating of water, a thick, waxy substance - hash oil is left. The THC content varies from 20 to 70%.
It can be scraped onto the inner rim of a pipe bowl for smoking or used to lace tobacco or marijuana cigarettes.



The phytochemical conversion of cannabinoids



Leaves



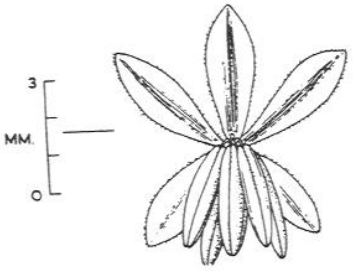
Leaves have a long stalk (6 cm) with narrow groove on the upper side. Each leaflet has a narrow elliptic blade with shallow serrated margin (saw-toothed, 4 to 14 serrations on each side), and with veins run out obliquely from the midrib to the tips of the serration

Stem



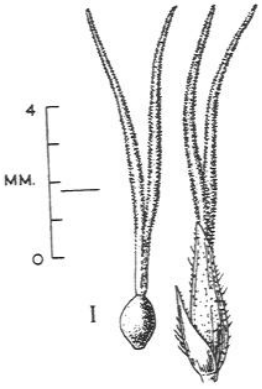
Angular with minute hairs pressed upward against the stem.

Male inflorescence



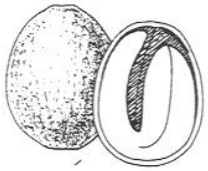
Five whitish or greenish hairy petals
Five pendulous stamens with slender filaments

Female inflorescence



Dark brown and forked stigmas, nearly every epidermis cell is extended as a unicellular papilla (microscopic view). Enwrapping the ovary is a short, green organ called bract (calyx), covered with slender hairs.

Fruit



Hard, one seeded (achene), 2.5 to 5 mm long, 3 mm wide.

Cross Section of a Bract from the Fruiting Plant.

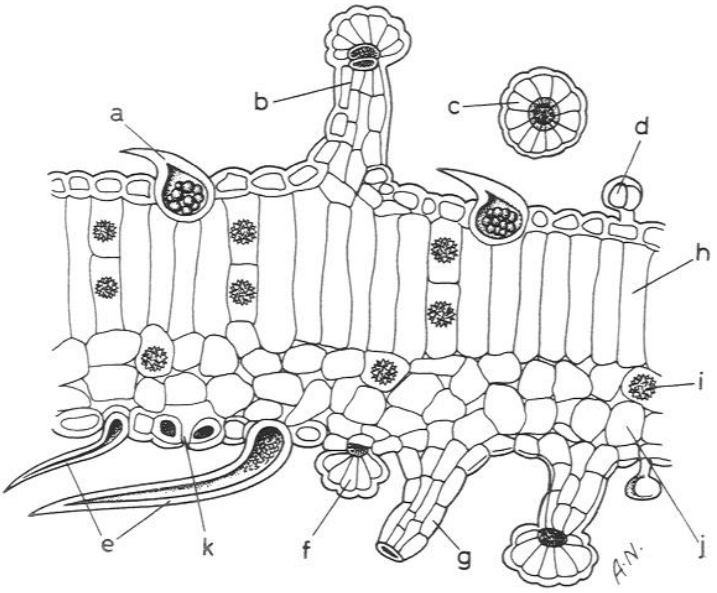


Fig. 2. Cross section of a bract from the fruiting plant.
(a) Cystolith hair
(b) Large glandular hair with several cells in head and stalk
(c) Head of one of the large glandular hairs
(d) small glandular hair with bicellular head and unicellular stalk
(e) Thick walled conical trichomes
(f) Large developing glandular hair
(g) Stalk of a large glandular hair
(h) Palisade cell
(i) Cluster crystal

II. Analysis

A. **Presumptive tests**

1. Screening or presumptive tests can give the analyst indication of the possible presence and type of compound or material.
2. For reagent recipes, see DRG.13 - Reagent Preparation.
3. The Duquenois-Levine test is a color test for the presence of cannabinoids (including THC). It can be used on material suspected of being marijuana or containing THC. The presumptive test is performed in two steps. The first being a color reaction (purple color is obtained from the condensation product of aromatic alcohol with an aldehyde) and the second, is the extraction of the color compound using chloroform. Duquenois-Levine test does not work as well on plants that are fresh and green or very young.
4. Usually material that comes to the Lab is mature and dry (ground up leaf fragments or residue from burned material). If the material is wet, it should be returned to the submitting agency for drying. Hashish and Hash Oil are perfect materials for the Duquenois-Levine test since they both have high concentration of THC.

a. **Duquenois-Levine procedure:**

i. Extract a small portion of the suspected plant material with Petroleum Ether into a disposable polystyrene beaker cup. Allow the Petroleum Ether to evaporate or decant the Petroleum Ether into another polystyrene beaker cup and allow to dry.

ii. Next, add approximately 8-10 drops of Duquenois-Levine solution to the dried residue and add approximately four drops of concentrated Hydrochloric Acid. More drops of HCL will intensify the color reaction. Allow the purple color to develop

iii. Pour the solution into a glass shell vial. Add 6-8 drops of chloroform (or enough to form a distinct bi-layer) and shake gently.

iv. A violet-purple color in the chloroform layer is a positive reaction.

v. Indicate the color formed (and extraction of color).

b. **Macroscopic Examination:** Macroscopic means using your naked eye (no magnification or other aid) or relating to observations made by the unaided eye. It includes gross visual examination of the submitted material, describing what you see. The examination (what the analyst observed) must be documented in the notes. The following are suggested descriptions for macroscopic tests:

i. **Plant material with clustered green leaves**, with the option of adding additional information: colors, presence of stalks, stems or seeds if significant. Clustered is the assumed clustering around a stem or stalk consistent with a "bud-like" structure

ii. **Plant material with loose green leaves**, with the option of adding additional information: colors, presence of stalks, stems or seeds if significant. This is the macroscopic description for loose leaves that do not appear to be attached to a stem or stalk.

iii. **Plant material with green leaves and stem**, with the option of adding young or attached leaves. This is the macroscopic description for "leaf clippings" or representative samples of plants when the leaves are often young.

iv. **Whole plant material with green leaves, stem and roots**, if all are present. This would be the macroscopic description for a whole plant

B. **Confirmatory Analysis**

1. **Microscopically:** The confirmation of the presence of Marijuana may be done using a microscope. The analyst should look for and document the following characteristic on marijuana leaves or fragments:

a. Cystolithic hairs in the form of "bear claws" on the topside of the leaf. These are unicellular hair with swollen base and curved tip. Cystoliths (knob like concentration of calcium carbonate in the cell walls) are visible as slight swellings.

i. The presence of calcium carbonate deposits around the base of the cystolithic hair.

ii. Leaves of young Marijuana plants usually have longer cystolithic hairs with minimal $CaCO_3$ bases. The lower surface of the blade may have more glandular hairs.

b. Long, unicellular, non glandular or "Clothing hairs" on underside of the leaf, often combed in one direction.

c. The presence of oil secreting glandular hairs.

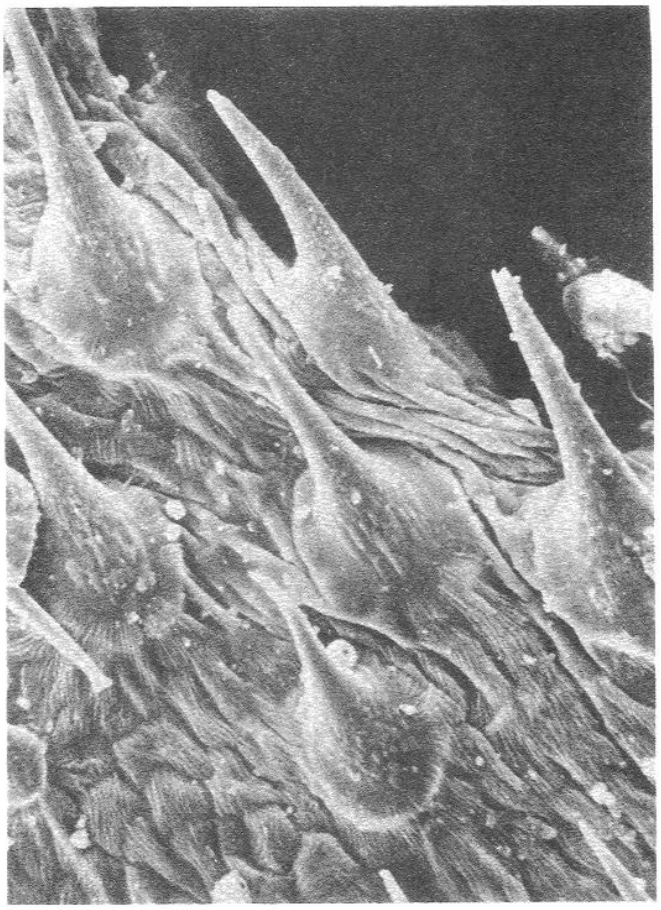
d. In some instances, an entire leaf may be available for examination. The leaf veining and serrated leaf margins are also helpful characteristics that aid its identification.

e. The examination (what the analyst observed) must be documented in the notes. The following are suggested descriptions for microscopic tests: **Cystolithic and clothing hairs consistent with marijuana are visible on the same leaf**.

f. **Caution**: an overabundance of resin may obscure some structural detail, especially in fragments.

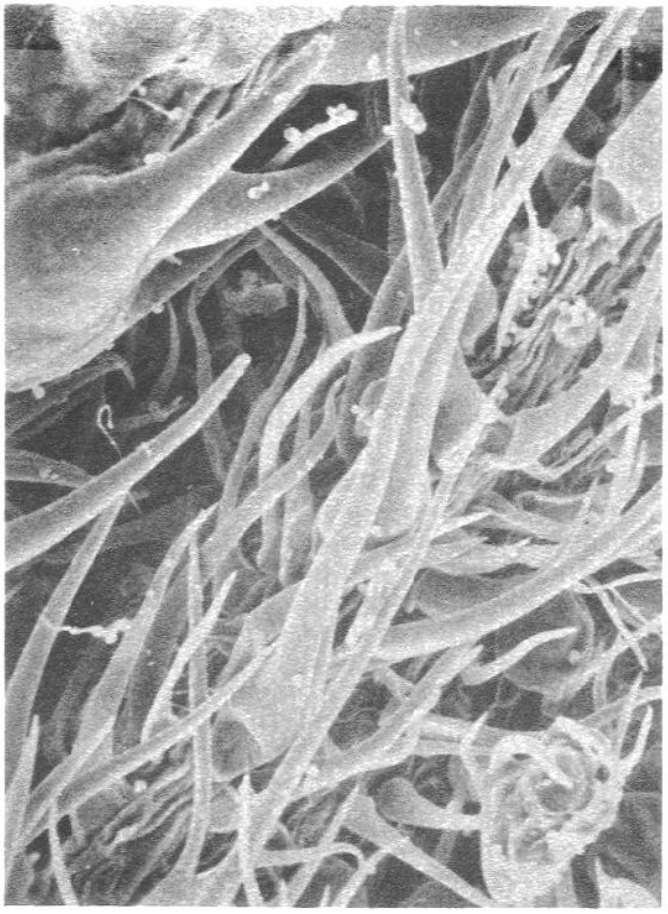
i. If distinct observable features are not present on a single leaf, GC/MS analysis must be performed.

ii. If microscopic examination is performed and the analyst CANNOT confirm the presence of marijuana, the examination and observations **MUST** be recorded in the case notes.



Photograph (Stereoscan microscope) of hairs on upper surface of leaf of *Cannabis sativa*. Magnification x380. Photograph: Sims and Stearn.

g.

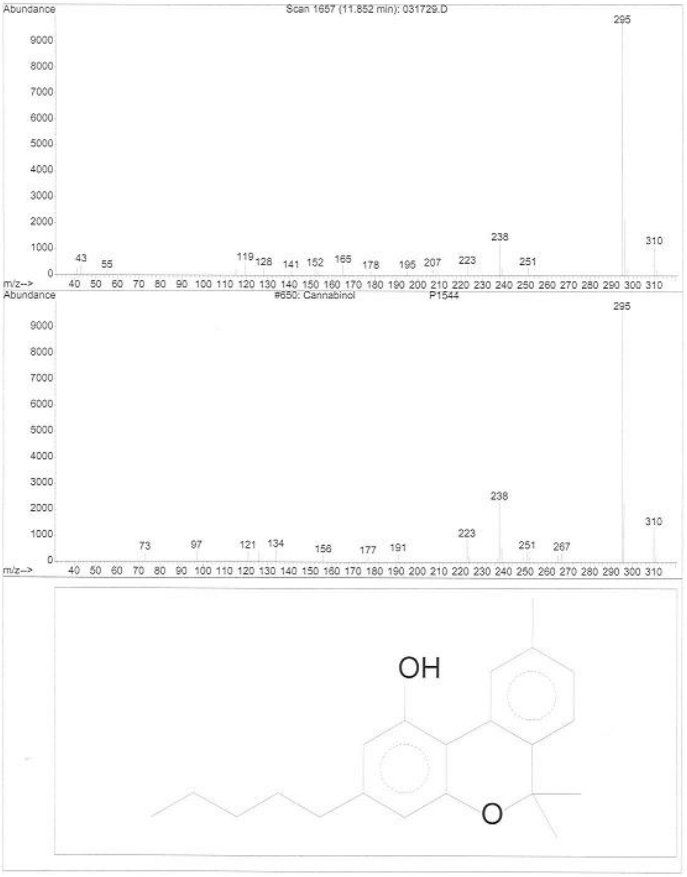


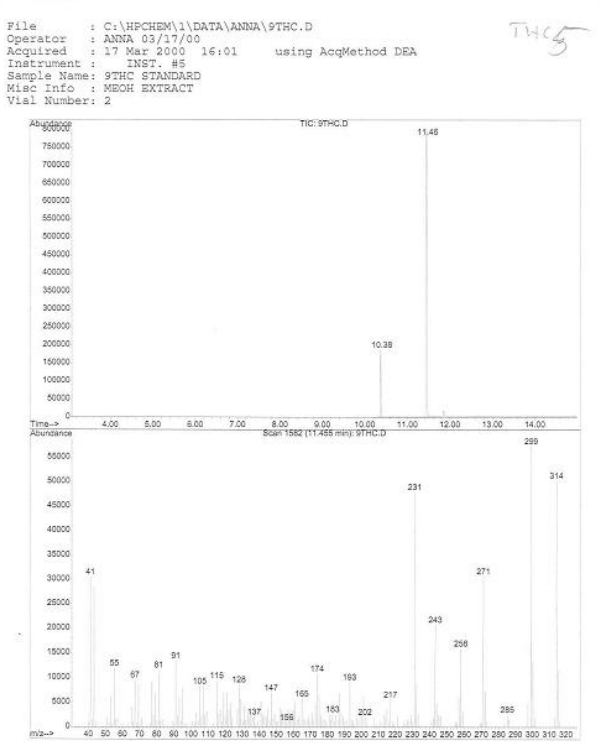
Photograph (Stereoscan microscope) of hairs on bract of *Cannabis sativa* (♀). Magnification x340. Photograph: Sims and Stearn.

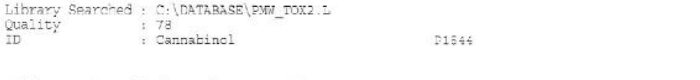
2. The GC/MS can be used to confirm cannabinoids. The recommended procedure for running a sample is as follows:
   a. Solvent Extraction
      i. Take a small quantity of the plant material, powder or liquid to be analyzed.
      ii. Extract out with methanol, petroleum ether, or suitable solvent based on the analyte characteristics and solubility information.
      iii. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the sample then an acid/ basic chloroform extract should be used.
      iv. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard
   b. Analysis
      i. The commonly used methods on the GC/MS are GEN.m, dea.m or opiate.m. Use of the opiate.m, when color tests indicate, for a faster GCMS analysis completion time. Use GEN.m for an unknown.
      ii. As a routine,1 µl is injected on the GC/MS
      iii. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS (n-Tricosane is commonly used).
      iv. On occasion the samples may be weak such that there is insufficient spectral data. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a larger volume of sample may need to be injected on the GC/MS
      v. The GC/MS data is below.

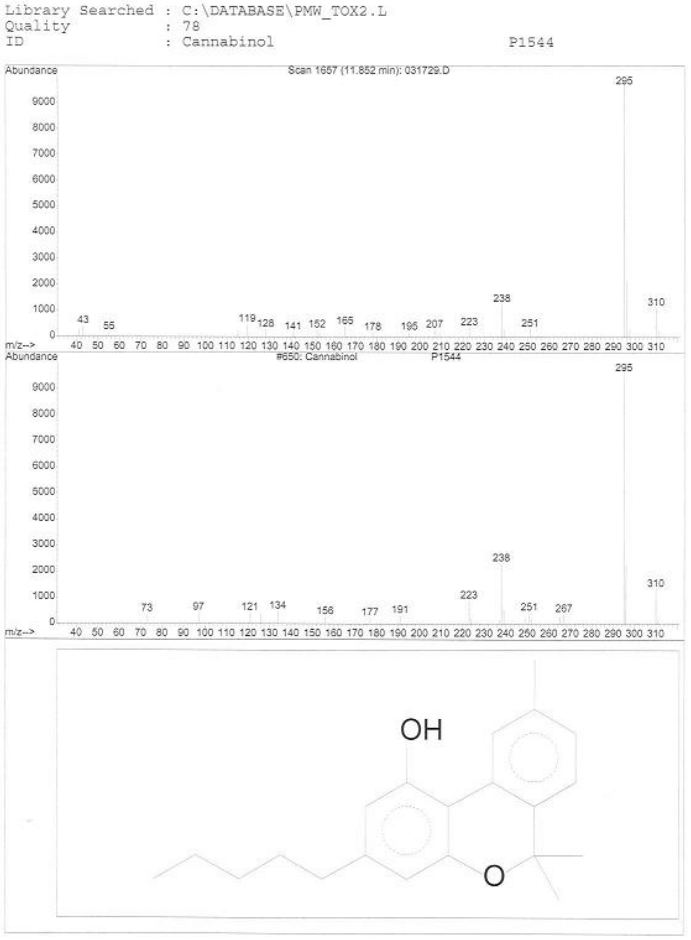
```
Library Searched : C:\DATABASE\PMW_TOX2.L
Quality          : 78
ID               : Cannabinol                    P1544
```


```
Library Searched : C:\DATABASE\PMW_TOX2.L
Quality          : 78
ID               : Cannabinol                    P1544
```



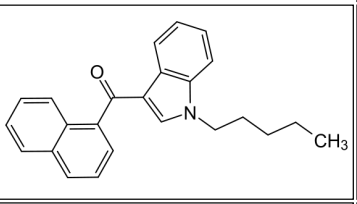
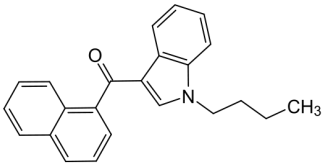
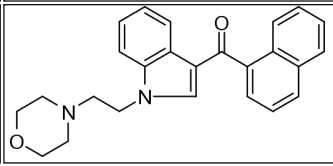
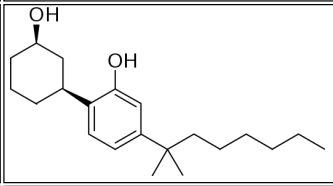
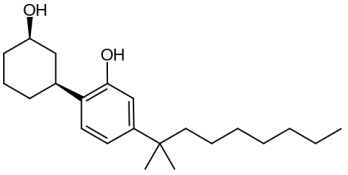




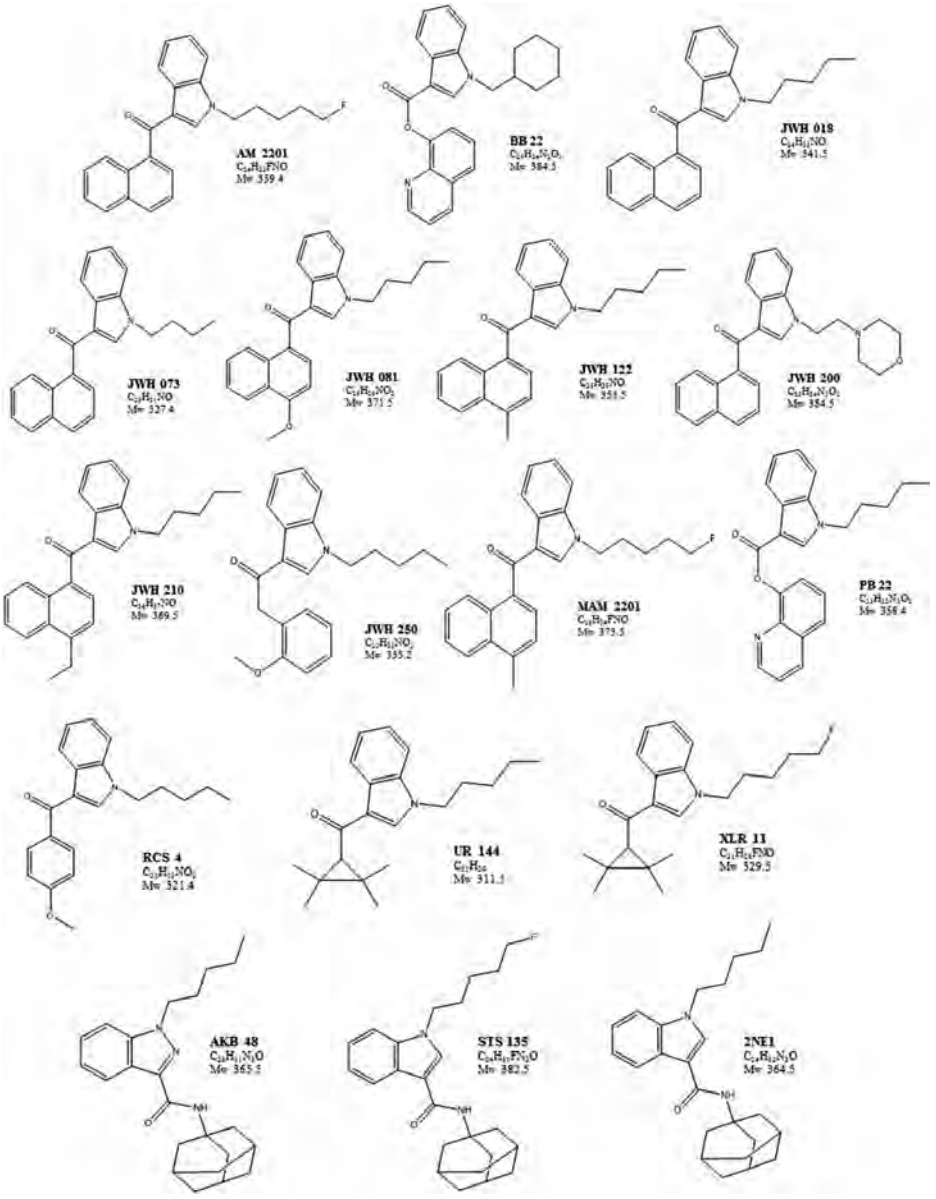
3. Cannabinoid Analogues

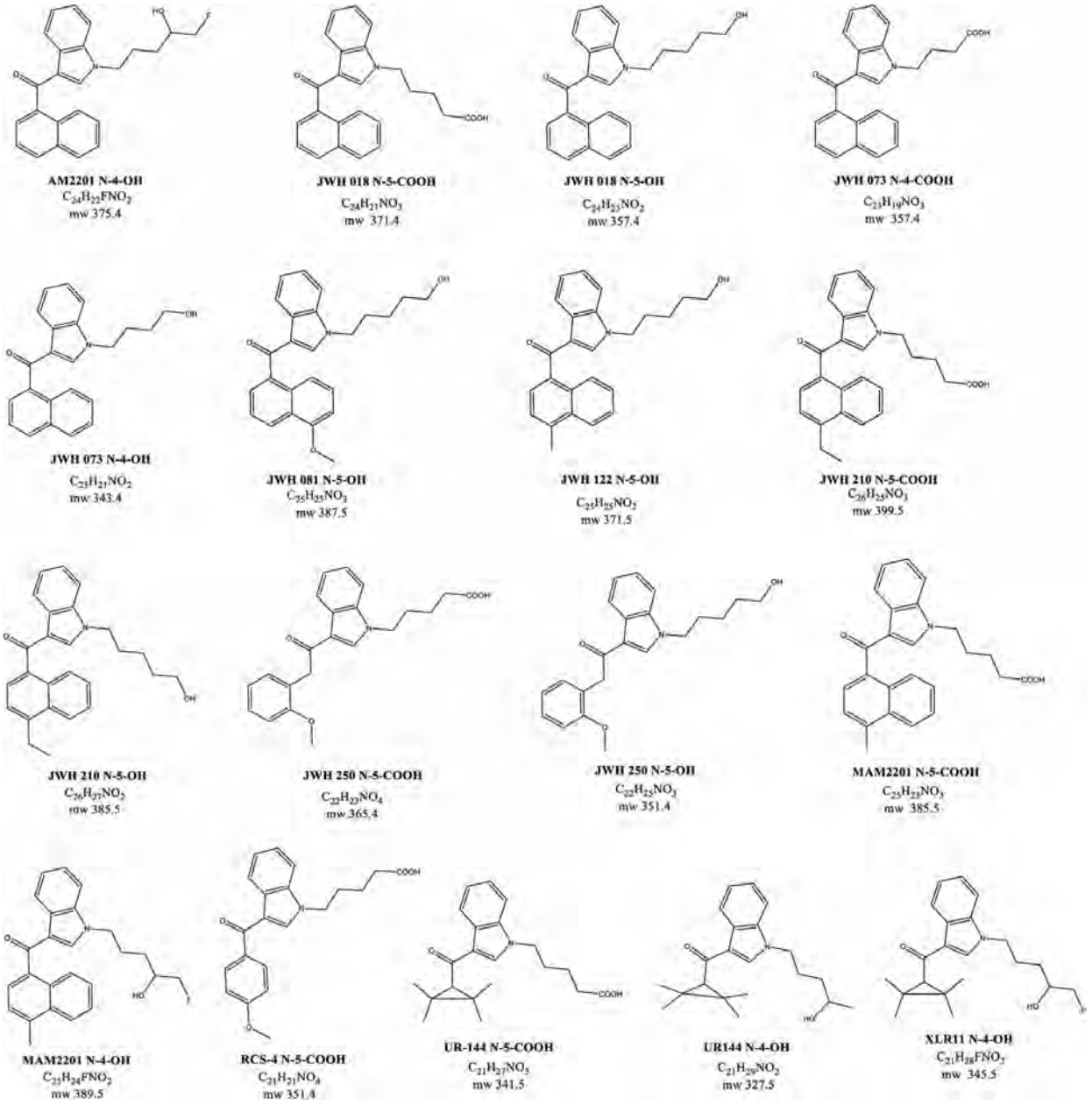
a.

11357.5 Analogues:				
Drug	**Synonym**	**Structure**	**Reporting**	**Suggested**

				Methods
1-pentyl-3-(1-naphthoyl)indole	JWH-018		11357.5 described	(Unknown possibly DEAExt.m or Steroid.m)
1-butyl-3-(1-naphthoyl)indole	JWH-073		11357.5 described	DEAExt.m or Opiate.m or Steroid.m
1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole	JWH-200		11357.5 described	Steroid.m
5-(1,1-dimethylheptyl)-2-[(1R,3S)-3-hydroxycyclohexyl]-phenol	CP-47,497		11357.5 described	DEA.m or DEAExt.m or Opiate.m or Steroid.m
5-(1,1-dimethyloctyl)-2-[(1R,3S)3-hydroxycyclohexyl]-phenol	cannabicyclohexanol CP-47,497 C8 homologue		11357.5 described	DEA.m or DEAExt.m or Opiate.m or Steroid.m

b. Other analogue reference


AM 2201
BB 22
JWH 018
JWH 073
JWH 081
JWH 122
JWH 200
JWH 210
JWH 250
MAM 2201
PB 22
RCS 4
UR 144
XLR 11
AKB 48
STS 135
2NE1



III. Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. What constitutes a positive ID for Marijuana?
2. How many steps are there in a modified Duquenois Levine test and what are the observations indicative of marijuana?
3. What are the limitations of the color test related to the age of the plant material? What is the rationale behind it?
4. What other botanical standards maintained in the lab share the characteristics of Marijuana and how are they different?
5. What is Hashish?
6. What is Hash oil?
7. What is the predominant psychoactive component in Marijuana?

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.OPI - Analysis of Opiates
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Opiates	**SUBJECT:** Analysis of Opiates	

I. Policy: Below is general information regarding Opiates.

A. **Enhancements:**

1. H&S 11352.5:

   a. Fine for possessing for sale, offering to sell or selling substance containing heroin greater than 14.25 grams.

2. H&S 11370.4a1-a6:

   a. Penalty enhancements for quantity of heroin containing 1, 4, 10, 20, 40 & 80 kg.

B. Opiates, compounds derived from Papaver somniferum, take two forms, natural and synthetic. The natural compounds are those alkaloids that are extracted from the opium poppy. Over twenty different alkaloids have been identified in opium, but only three are of significance: morphine, codeine and thebaine (Karch 1993). Examples of these compounds, in excess of twenty-five, are Morphine and Codeine. The synthetic compounds are those compounds derived from the naturally occurring alkaloids. Examples of these synthetic compounds are Heroin, Oxycodone and Oxymorphone.

C. Heroin is the most common illicit opiate encountered in this laboratory. However, many other opiates, notably Hydrodocone, Codeine and Oxycodone, make their way into this laboratory in a pharmaceutical form. Due to the potential of counterfeit pills, it may be necessary to test these pharmaceuticals to verify their narcotic content.

D. The term "narcotic," derived from the Greek word for stupor, originally referred to a variety of substances that dulled the senses and relieved pain. Today, the term is used in a number of ways. Some individuals define narcotics as those substances that bind at opiate receptors (cellular membrane proteins activated by substances like heroin or morphine), while others refer to any illicit substance as a narcotic. In a legal context, narcotic refers to opium, opium derivatives, and their semi-synthetic substitutes. Cocaine and coca leaves, which are also classified as "narcotics" in the Controlled Substances Act (CSA), neither bind at opiate receptors, nor produce morphine-like effects and are discussed in the section on stimulants. For the purposes of this discussion, the term narcotic refers to drugs that produce morphine-like effects.

E. Narcotics are used therapeutically to treat pain, suppress cough, alleviate diarrhea, and induce anesthesia. Narcotics are administered in a variety of ways. Some are taken orally, transdermally (skin patches), intranasally, or injected. They are also available in suppositories, and more recently in "troches," a form of narcotics that can be sucked like

candy. As drugs of abuse, they are often ingested orally, smoked, sniffed, or injected. Drug effects depend heavily on the dose, route of administration, and previous exposure to the drug. Aside from their medical use, narcotics produce a general sense of well-being by reducing tension, anxiety, and aggression. These effects are helpful in a therapeutic setting but contribute to their abuse. There has been a significant rise in the number of pharmaceutical narcotic pills that are abused, thus sold and possessed illegellay and submitted to the laboratory for analysis. The following data is from ***NFLIS Special Report: Opiates and Related Drugs Reported, 2009–2014*** from the DEA website:

1. From January 2009 to June 2014, an estimated 1,430,120 opiates and related drugs were reported to the National Forensic Laboratory Information System (NFLIS). The number of reports increased by 21% over this period, from 116,647 drug reports during the first half of 2009 to 140,909 during the first half of 2014.

2. Fentanyl reports increased by 259% from the second half of 2013 to the first half of 2014. This increase was especially pronounced in the South (650 reports), Northeast (649 reports), and Midwest (637 reports).

3. Acetyl fentanyl, AH-7921, and MT-45 were first reported to NFLIS in 2013, whereas mitragynine was first reported in 2010. Acetyl fentanyl increased from 6 reports during the second half of 2013 to 43 reports during the first half of 2014.

4. According to data compiled by the Centers for Disease Control and Prevention, 202,157 deaths were the result of a drug poisoning or overdose between 2009 and 2013. Of these deaths, 57% involved heroin and natural, semisynthetic, and synthetic opiates

F. Narcotic use is associated with a variety of unwanted effects including drowsiness, inability to concentrate, apathy, lessened physical activity, constriction of the pupils, dilation of the subcutaneous blood vessels causing flushing of the face and neck, constipation, nausea, vomiting, and most significantly, respiratory depression. As the dose is increased, the subjective, analgesic (pain relief), and toxic effect become more pronounced. Except in cases of acute intoxication, there is no loss of motor coordination or slurred speech as occurs with many depressants.

G. Among the hazards of illicit drug use is the ever-increasing risk of infection, disease, and overdose. Medical complications common among narcotic abusers arise primarily from adulterants found in street drugs and in the non-sterile practices of injecting. Skin, lung, and brain abscesses, endocarditis (inflammation of the lining of the heart), hepatitis, and AIDS are commonly found among narcotic abusers. While pharmaceutical products have a known concentration and purity, clandestinely produced street drugs have unknown compositions. Since there is no simple way to determine the purity of a drug that is sold on the street, the effects of illicit narcotic use are unpredictable and can be fatal. Physical signs of narcotic overdose include constricted (pinpoint) pupils, cold clammy skin, confusion, convulsions, severe drowsiness, and respiratory depression (slow or troubled breathing). Most narcotic deaths are a result of respiratory depression.

H. With repeated use of narcotics, tolerance and dependence develop. The development of tolerance is characterized by a shortened duration and a decreased intensity of analgesia, euphoria, and sedation, which creates the need to consume progressively larger doses to attain the desired effect. Tolerant users can consume doses far in excess of the dose they initially started with

I. The poppy plant, *Papaver somniferum*, is the source for **non-synthetic narcotics**. It was grown in the Mediterranean region as early as 5000 B.C., and has since been cultivated in a number of countries throughout the world. The milky fluid that seeps from incisions in the unripe seed pod of this poppy has, since ancient times, been scraped by hand and air-dried

to produce what is known as opium. A more modern method of harvesting is by the industrial poppy straw process of extracting alkaloids from the mature dried plant. The extract may be in liquid, solid, or powder form, although most poppy straw concentrate available commercially is a fine brownish powder. More than 500 tons of opium or equivalents in poppy straw concentrate are legally imported into the United States annually for legitimate medical use

1. **Opium**

    a. There were no legal restrictions on the importation or use of opium until the early 1900s. In the United States, the unrestricted availability of opium, the influx of opium-smoking immigrants from East Asia, and the invention of the hypodermic needle contributed to the more severe variety of compulsive drug abuse seen at the turn of the 20th century. In those days, medicines often contained opium without any warning label. Today, there are state, federal, and international laws governing the production and distribution of narcotic substances.

    b. Although opium is used in the form of paregoric (camphorated tincture of opium of opium) to treat diarrhea, most opium imported into the United States is broken down into its alkaloid constituents. These alkaloids are divided into two distinct chemical classes, phenanthrenes and isoquinolines. The principal phenanthrenes are morphine, codeine, and thebaine, while the isoquinolines have no significant central nervous system effects and are not regulated under the CSA.

2. **Morphine**

    a. Morphine is the principal constituent of opium and ranges in concentration from 4 to 21 percent. Commercial opium is standardized to contain 10-percent morphine. In the United States, a small percentage of the morphine obtained from opium is used directly (about 20 tons); the remaining is converted to codeine and other derivatives (about 110 tons). Morphine is one of the most effective drugs known for the relief of severe pain and remains the standard against which new analgesics are measured. Like most narcotics, the use of morphine has increased significantly in recent years. Since 1998, there has been about a two-fold increase in the use of morphine products in the United States.

    b. Morphine is marketed under generic and brand name products including MS-Contin™, Oramorph SR™, MSIR™, Roxanol™, Kadian™, and RMS™. Morphine is used parenterally (by injection) for preoperative sedation, as a supplement to anesthesia, and for analgesia. It is the drug of choice for relieving the pain of myocardial infarction and for its cardiovascular effects in the treatment of acute pulmonary edema. Traditionally, morphine was almost exclusively used by injection. Today, morphine is marketed in a variety of forms, including oral solutions, immediate and sustained-release tablets and capsules, suppositories, and injectable preparations. In addition, the availability of high-concentration morphine preparations (i.e., 20-mg/ml oral solutions, 25-mg/ml injectable solutions, and 200-mg sustained-release tablets) partially reflects the use of this substance for chronic pain management in opiate-tolerant patients

3. **Codeine**

    a. Codeine is the most widely used, naturally occurring narcotic in medical treatment in the world. This alkaloid is found in opium in concentrations

ranging from 0.7 to 2.5 percent. However, most codeine used in the United States is produced from morphine. Codeine is also the starting material for the production of two other narcotics, dihydrocodeine and hydrocodone. Codeine is medically prescribed for the relief of moderate pain and cough suppression.

b. Compared to morphine, codeine produces less analgesia, sedation, and respiratory depression, and is usually taken orally. It is made into tablets either alone (Schedule II) or in combination with aspirin or acetaminophen (i.e., Tylenol with Codeine™, Schedule III). As a cough suppressant, codeine is found in a number of liquid preparations (these products are in Schedule V). Codeine is also used to a lesser extent as an injectable solution for the treatment of pain. Codeine products are diverted from legitimate sources and are encountered on the illicit market.

i. Codeine tablets are generally reported as schedule III by the laboratory.

4. **Thebaine**

a. Thebaine, a minor constituent of opium, is controlled in Schedule II of the CSA as well as under international law. Although chemically similar to both morphine and codeine, thebaine produces stimulatory rather than depressant effects. Thebaine is not used therapeutically, but is converted into a variety of substances including oxycodone, oxymorphone, nalbuphine, naloxone, naltrexone, and buprenorphine. The United States ranks first in the world in thebaine utilization

J. The following narcotics are among the more significant substances that have been **derived** from morphine, codeine, or thebaine contained in opium

1. **Heroin**

a. First synthesized from morphine in 1874, heroin was not extensively used in medicine until the early 1900s. Commercial production of the new pain remedy was first started in 1898. It initially received widespread acceptance from the medical profession, and physicians remained unaware of its addiction potential for years. The first comprehensive control of heroin occurred with the Harrison Narcotic Act of 1914. Today, heroin is an illicit substance having no medical utility in the United States. It is in Schedule I of the CSA.

b. Four foreign source areas produce the heroin available in the United States: South America (Colombia), Mexico, Southeast Asia (principally Burma), and Southwest Asia (principally Afghanistan). However, South America and Mexico supply most of the illicit heroin marketed in the United States. South American heroin is a high-purity powder primarily distributed to metropolitan areas on the East Coast. Heroin powder may vary in color from white to dark brown because of impurities left from the manufacturing process or the presence of additives. Mexican heroin, known as "black tar," is primarily available in the western United States. The color and consistency of black tar heroin result from the crude processing methods used to illicitly manufacture heroin in Mexico. Black tar heroin may be sticky like roofing tar or hard like coal, and its color may vary from dark brown to black

c. Pure heroin is rarely sold on the street. A "bag" (slang for a small unit of heroin sold on the street) currently contains about 30 to 50 milligrams of

powder, only a portion of which is heroin. The remainder could be sugar, starch, acetaminophen, procaine, benzocaine, or quinine, or any of numerous cutting agents for heroin. Traditionally, the purity of heroin in a bag ranged from 1 to 10 percent. More recently, heroin purity has ranged from about 10 to 70 percent. Black tar heroin is often sold in chunks weighing about an ounce. Its purity is generally less than South American heroin and it is most frequently smoked, or dissolved, diluted, and injected.

d. In the past, heroin in the United States was almost always injected, because this is the most practical and efficient way to administer low-purity heroin. However, the recent availability of higher purity heroin at relatively low cost has meant that a larger percentage of today's users are either snorting or smoking heroin, instead of injecting it. This trend was first captured in the 1999 National Household Survey on Drug Abuse, which revealed that 60 to 70 percent of people who used heroin for the first time from 1996 to 1998 never injected it. This trend has continued. Snorting or smoking heroin is more appealing to new users because it eliminates both the fear of acquiring syringe-borne diseases, such as HIV and hepatitis, as well as eliminating the social stigma attached to intravenous heroin use. Many new users of heroin mistakenly believe that smoking or snorting heroin is a safe technique for avoiding addiction. However, both the smoking and the snorting of heroin are directly linked to high incidences of dependence and addiction.

e. According to the 2003 National Survey on Drug Use and Health, during the latter half of the 1990s, heroin initiation rates rose to a level not reached since the 1970s. In 1974, there were an estimated 246,000 heroin initiates. Between 1988 and 1994, the annual number of new users ranged from 28,000 to 80,000. Between 1995 and 2001, the number of new heroin users was consistently greater than 100,000. Overall, approximately 3.7 million Americans reported using heroin at least once in their lifetime.

2. **Hydromorphone**

a. Hydromorphone (Dilaudid™) is marketed in tablets (2, 4, and 8 mg), suppositories, oral solutions, and injectable formulations. All products are in Schedule II of the CSA. Its analgesic potency is from two to eight times that of morphine, but it is shorter acting and produces more sedation than morphine. Much sought after by narcotic addicts, hydromorphone is usually obtained by the abuser through fraudulent prescriptions or theft. The tablets are often dissolved and injected as a substitute for heroin. In September 2004 the FDA approved the use of Palladone™ (hydromorphone hydrochloride) for the management of persistent pain. This extended-release formulation could have the same risk of abuse as OxyContin™.

3. **Oxycodone**

a. Oxycodone is synthesized from thebaine. Like morphine and hydromorphone, oxycodone is used as an analgesic. It is effective orally and is marketed alone in 10, 20, 40, 80, and 160 mg controlled-release tablets (OxyContin™), or 5 mg immediate-release capsules (OxyIR™), or in combination products with aspirin (Percodan™) or acetaminophen (Percocet™) for the relief of pain. All oxycodone products are in Schedule II. Oxycodone is abused orally, or the tablets are crushed and sniffed or dissolved in water and injected. The use of oxycodone has increased significantly. In 1993, about 3.5 tons of oxycodone were manufactured for sale in the United States. In 2003, about 41 tons were manufactured.

b. Historically, oxycodone products have been popular drugs of abuse among the narcotic abusing population. In recent years, concern has grown among federal, state, and local officials about the dramatic increase in the illicit availability and abuse of OxyContin™ products. These products contain large amounts of oxycodone (10 to 160 mg) in a formulation intended for slow release over about a 12-hour period.

c. Abusers have learned that this slow-release mechanism can be easily circumvented by crushing the tablet and swallowing, snorting, or injecting the drug product for a more rapid and intense high. The criminal activity associated with illicitly obtaining and distributing this drug, as well as serious consequences of illicit use, including addiction and fatal overdose deaths, are of epidemic proportions in some areas of the United States.

4. **Hydrocodone**

a. Hydrocodone is structurally related to codeine but more closely related to morphine in its pharmacological profile. As a drug of abuse, it is equivalent to morphine with respect to subjective effects, opiate signs and symptoms, and "liking" scores. Hydrocodone is an effective cough suppressant and analgesic. It is most frequently prescribed in combination with acetaminophen (i.e., Vicodin™, Lortab™) but is also marketed in products with aspirin (Lortab ASA™), ibuprofen (Vicoprofen™) and antihistamines (Hycomine™). The Drug Enforcement Administration (DEA) issued a final rule rescheduling hydrocodone combination products (HCPs) into Controlled Substance Schedule II, effective October 6, 2014. Dihydrocodeinone is listed as schedule III in the California H&S Code.

b. Hydrocodone is the most prescribed opioid in the United States, including 137 million prescriptions in 2013. Despite their obvious utility in medical practice, hydrocodone products are among the most popular pharmaceutical drugs associated with drug diversion, trafficking, abuse, and addiction. In every geographical area in the country, the DEA has listed this drug as one of the most commonly diverted. Hydrocodone is the most frequently encountered opiate pharmaceutical in submissions of drug evidence to federal, state, and local forensic laboratories. Law enforcement has documented the diversion of millions of dosage units of hydrocodone by theft, doctor shopping, fraudulent prescriptions, bogus "call-in" prescriptions, and diversion by registrants and Internet fraud.

c. Hydrocodone products are associated with significant drug abuse. According to the Drug Abuse Warning Network (DAWN), an estimated 82,480 emergency department (ED) visits were associated with nonmedical use of hydrocodone in 2011. This number of ED visits represents a 107% significant increase from the number of ED visits reported in 2004 (39,846).

K. In contrast to the pharmaceutical products derived from opium, **synthetic narcotics** are produced entirely within the laboratory. The continuing search for products that retain the analgesic properties of morphine without the consequent dangers of tolerance and dependence has yet to yield a product that is not susceptible to abuse. A number of clandestinely produced drugs, as well as drugs that have accepted medical uses, fall within this category

1. **Meperidine**

a. Introduced as an analgesic in the 1930s, meperidine produces effects that are similar, but not identical, to morphine (shorter duration of action and reduced antitussive and antidiarrheal actions). Currently it is used for pre-anesthesia and the relief of moderate to severe pain, particularly in obstetrics and post-operative situations. Meperidine is available in tablets, syrups, and injectable forms under generic and brand name (Demerol™, Mepergan™, etc.) Schedule II preparations. Several analogues of meperidine have been clandestinely produced. During the clandestine synthesis of the analogue MPPP, a neurotoxic by-product (MPTP) was produced. A number of individuals who consumed the MPPP-MPTP preparation developed an irreversible Parkinsonian-like syndrome. It was later found that MPTP destroys the same neurons as those damaged in Parkinsons Disease.

2. **Dextropropoxyphene**

a. A close relative of methadone, dextropropoxyphene was first marketed in 1957 under the trade name of Darvon™. Oral analgesic potency is one-half to one-third that of codeine, with 65 mg approximately equivalent to about 600 mg of aspirin. Dextropropoxyphene is prescribed for relief of mild to moderate pain. Bulk dextropropoxyphene is in Schedule II, while preparations containing it are in Schedule IV. More than 150 tons of dextropropoxyphene are produced in the United States annually, and more than 25 million prescriptions are written for the products. This narcotic is associated with a number of toxic side effects and is among the top 10 drugs reported by medical examiners in drug abuse deaths.

3. **Fentanyl**

a. First synthesized in Belgium in the late 1950s, fentanyl, with an analgesic potency of about 80 times that of morphine, was introduced into medical practice in the 1960s as an intravenous anesthetic under the trade name of Sublimaze™. Thereafter, two other fentanyl analogues were introduced: alfentanil (Alfenta™), an ultra-short (5-10 minutes) acting analgesic, and sufentanil (Sufenta™), an exceptionally potent analgesic (5 to 10 times more potent than fentanyl) for use in heart surgery.

b. Today, fentanyls are extensively used for anesthesia and analgesia. Duragesic™, for example, is a fentanyl transdermal patch used in chronic pain management, and Actiq™ is a solid formulation of fentanyl citrate on a stick that dissolves slowly in the mouth for transmucosal absorption. Actiq™ is intended for opiate-tolerant individuals and is effective in treating breakthrough pain in cancer patients. Carfentanil (Wildnil™) is an analogue of fentanyl with an analgesic potency 10,000 times that of morphine and is used in veterinary practice to immobilize certain large animals. Illicit use of pharmaceutical fentanyls first appeared in the mid-1970s in the medical community and continues to be a problem in the United States.

c. To date, over 12 different analogues of fentanyl have been produced clandestinely and identified in the U.S. drug traffic. The biological effects of the fentanyls are indistinguishable from those of heroin, with the exception that the fentanyls may be hundreds of times more potent. Fentanyls are most commonly used by intravenous administration, but like heroin, they may also be smoked or snorted

4. **Pentazocine**

a. The effort to find an effective analgesic with less dependence-producing consequences led to the development of pentazocine (Talwin™). Introduced as an analgesic in 1967, it was frequently encountered in the illicit trade, usually in combination with tripelennamine and placed into Schedule IV of the CSA in 1979. An attempt at reducing the abuse of this drug was made with the introduction of Talwin Nx™. This product contains a quantity of antagonist (naloxone) sufficient to counteract the morphine-like effects of pentazocine if the tablets are dissolved and injected.

5. **Butorphanol**

a. While butorphanol can be made from thebaine, it is usually manufactured synthetically. It was initially available in injectable formulations for human (Stadol™) and veterinary (Torbugesic™ and Torbutrol™) use. More recently, a nasal spray (Stadol NS™) became available, and significant diversion and abuse of this product led to the 1997 control of butorphanol in Schedule IV of the CSA. Butorphanol is a clear example of a drug gaining favor as a drug of abuse only after it became available in a form that facilitated greater ease of administration (nasal spray vs. injection).

L. Narcotics Treatment

1. **Methadone**

a. German scientists synthesized methadone during World War II because of a shortage of morphine. Although chemically unlike morphine or heroin, methadone produces many of the same effects. It was introduced into the United States in 1947 as an analgesic (Dolophine™). Today, methadone is primarily used for the treatment of narcotic addiction, although a growing number of prescriptions are being written for chronic pain management. It is available in oral solutions, tablets, and injectable Schedule II formulations.

b. Methadone's effects can last up to 24 hours, thereby permitting once-a-day oral administration in heroin detoxification and maintenance programs. High-dose methadone can block the effects of heroin, thereby discouraging the continued use of heroin by addicts in treatment. Chronic administration of methadone results in the development of tolerance and dependence. The withdrawal syndrome develops more slowly and is less severe, but more prolonged than that associated with heroin withdrawal. Ironically, methadone used to control narcotic addiction is encountered on the illicit market. Recent increases in the use of methadone for pain management have been associated with increasing numbers of overdose deaths.

2. **LAAM**

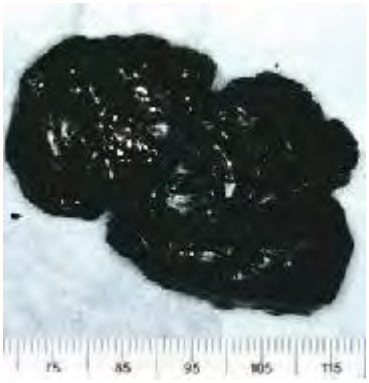
a. Closely related to methadone, the synthetic compound levo alphacetylmethadol, or LAAM (ORLMM™), has an even longer duration of action (from 48 to 72 hours) than methadone, permitting a reduction in frequency of use. In 1994, it was approved as a Schedule II treatment drug for narcotic addiction. Both methadone and LAAM have high abuse potential. Their acceptability as narcotic treatment drugs is predicated upon their ability to substitute for heroin, the long duration of action, and their mode of oral administration. Recent data regarding cardiovascular toxicity of LAAM has limited the use of this drug as a first-line therapy for addiction treatment.

3. **Buprenorphine**

a. This drug is a semi-synthetic narcotic derived from thebaine. Buprenorphine was initially marketed in the United States as an analgesic (Buprenex™). In 2002, two new products (Suboxone™ and Subutex™) were approved for the treatment of narcotic addiction. Like methadone and LAAM, buprenorphine is potent (30 to 50 times the analgesic potency of morphine), has a long duration of action, and does not need to be injected. Unlike the other treatment drugs, buprenorphine produces far less respiratory depression and is thought to be safer in overdose. Federally, all buprenorphine products are currently in Schedule III of the CSA. In California, buprenorphine is schedule V.



Heroin "China White"



Heroin "Tar"



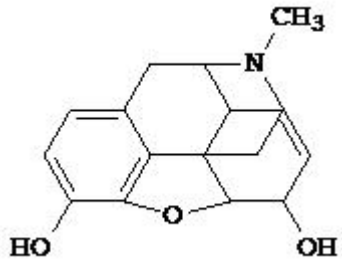
PLATE XIII.—*Papaver somniferum* (Opium Poppy). (From Jackson: *Experimental Pharmacology and Materia Medica.*)



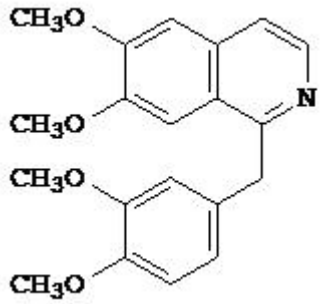
Papaver somniferum

Chemical Structures of Natural and Synthetic Opiates

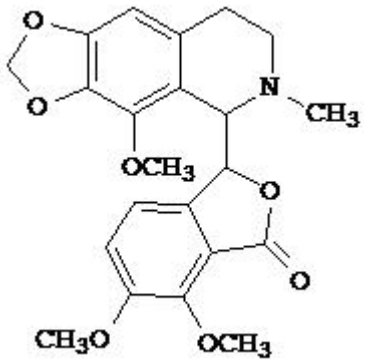
Natural



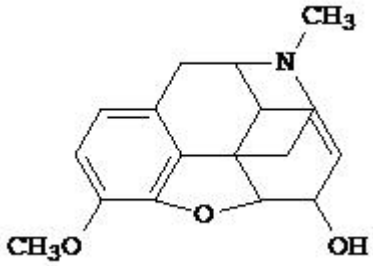
Morphine



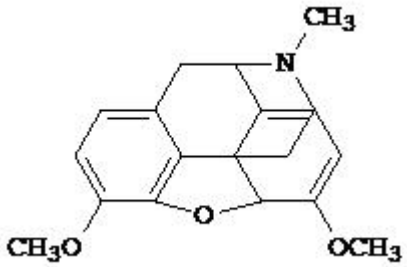
Papaverine



Noscapine

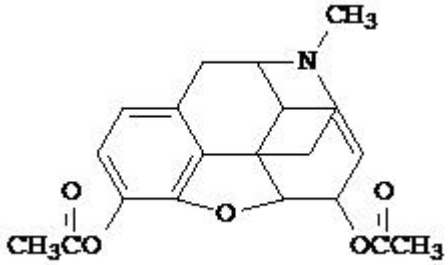


Codeine

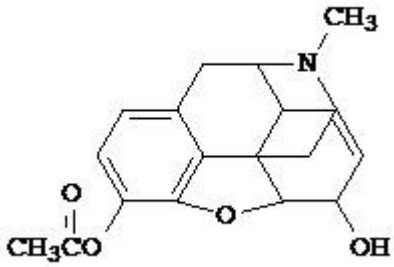


Thebaine

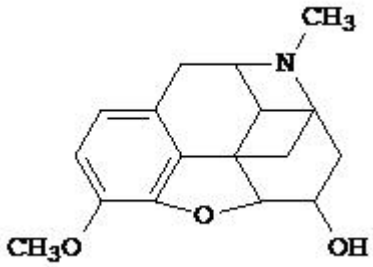
Semi-Synthetic



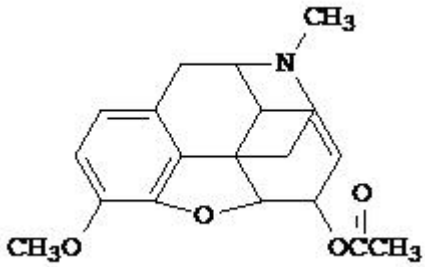
Heroin (Diacetylmorphine)



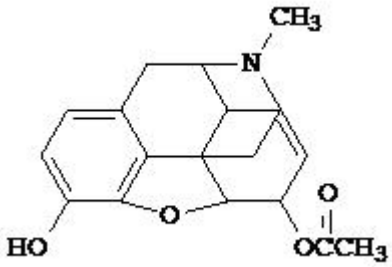
3-monoacetylmorphine



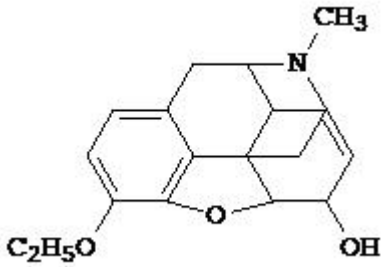
Dihydrocodeine



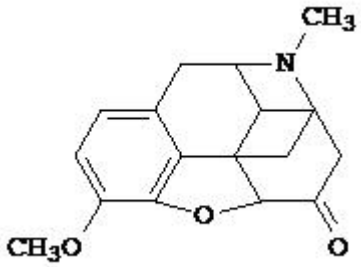
Acetylcodeine



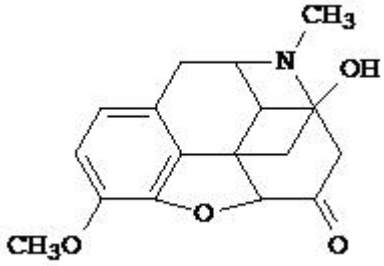
6-monoacetylmorphine



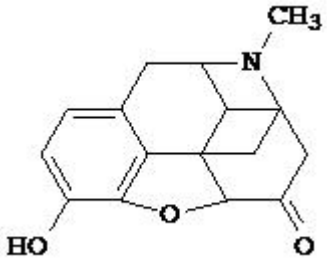
Ethylmorphine



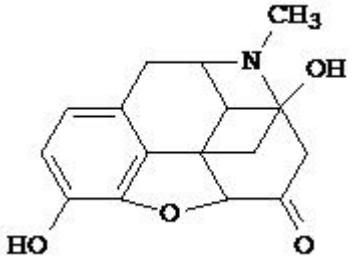
Hydrocodone (Vicodin)



Oxycodone (Percodan)

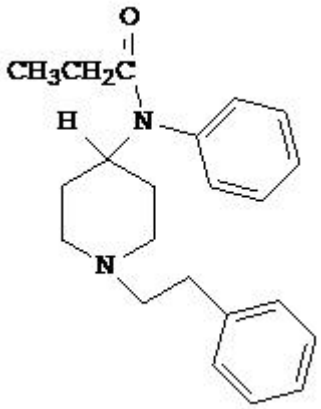


Hydromorphone (Dilaudid)

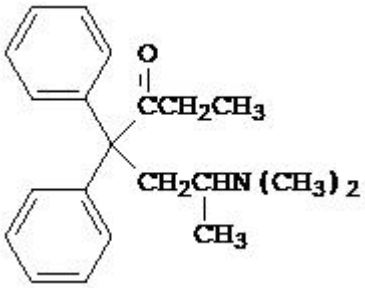


Oxymorphone (Numorphan)

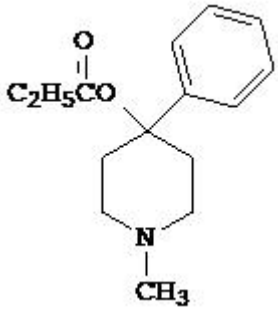
Synthetic



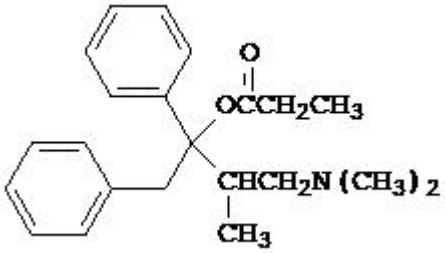
Fentanyl



Methadone



Meperidine



Propoxyphene

II. Analysis.

A. This section on Opiates will not be limited to the analysis of Heroin; analysis will be illustrated for a wide variety of Opiates that may be encountered in both illicit and pharmaceutical form.

B. **Presumptive Tests**

1. For reagent recipes see DRG.13 - Reagent Preparation.

2. There are three primary color tests that are used in screening for the wide variety of Opiates that may be encountered. The first presumptive screening test performed is the Marquis color test. Marquis reagent will form a purple color in the presence of an Opiate. Mecke's reagent, the second color test, will form a green or blue color with Opiates; although there are exceptions. The third color test, Froehde's, will produce a range of colors depending on the Opiate(s) present.

3. Codeine syrups generally contain non-narcotic ingredients that may react with Marquis, Mecke and Froehde. Common substances include promethazine and guaifenesin.

4. Nitric acid may be used. In the presence of Opiates, nitric acid will produce a yellow, orange or negative color reaction. Two other color tests, modified Cobalt Thiocyanate and Chens, will give a positive reaction with selected Opiates. It is recommended to do Modified Cobalt Thiocyanate to check for cocaine in samples that may have opiates and cocaine mixed together.

a. **Marquis** Procedure: Add a toothpick full of questioned powder to one drop of the test reagent. The formation of a purple color is indicative of an opiate. Indicate the color formed.

b. **Mecke's** Procedure: Add a toothpick full of questioned powder to one drop of test reagent. Generally blue and green colors form with Opiates, however, there are exceptions. Indicate the color formed.

c. **Froehde** Procedure: Add a toothpick full of questioned powder to one drop of test reagent. Purple, green and yellow colors form with Opiates, although there are exceptions. Indicate the color formed.

d. **Nitric Acid** Procedure: Add a toothpick full of questioned powder to one drop of test reagent. In general, orange and yellow colors will form with Opiates. Indicate the color formed.

C. **Confirmatory Analysis**

1. The GC/MS can be used to confirm Opiates. The recommended procedure for running a sample is as follows:

a. Solvent Extraction

i. Take a small quantity of the powder or liquid to be analyzed.

ii. Extract out with methanol or suitable solvent based on the analyte characteristics and solubility information.

iii. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the sample then a chloroform extract should be used.

iv. For liquid samples suspected of containing morphine, a basic chloroform extract should be performed as some morphine salts are not soluble in $CHCl_3$.

v. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard

b. Analysis

i. The commonly used methods on the GC/MS are GEN.m, dea.m, and opiate.m (it should be noted that opiate.m should only be used after a positive screening test, GEN.m should be used for an unknown or if it is suspected to also contain an early eluting compound such as methampehtamine). Buprenorphine must be run on a longer, high temperature method such as GEN.m or steroid.m.

ii. As a routine,1 µl is injected on the GC/MS

iii. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS (n-Tricosane is commonly used).

iv. On occasion the samples may be weak such that the molecular ion of the drug is not detected. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a lager volume of sample may need to be injected on the GC/MS

v. The GC/MS data is in PowerDMS.

c. **Note**: Opium samples can be identified using GC/MS if at least three major alkaloids, Morphine, Codeine and Thebaine are confirmed. Papaverine may or may not be detectable in all samples.

2. Infrared Spectroscopy (FTIR) is a means of positively identifying a sample. The major drawback is that the sample must be almost completely free of any diluents or must be readily cleaned-up. This clean-up can take the form of a solvent extraction.

3. As stated above, opiates may come in pharmaceutical form. The products found with the pharmaceutical form of opiates can affect which schedule the drug is categorized. These additional products may also dictate which extraction method and instrument method is necessary to identify relevant chromatography peaks and ion spectra.

a. For example, hydrocodone is categorized as Schedule II in the California H&S Code. However, dihydrocodeinone (also known as hydrocodone) combined with a "nonnarcotic ingredient in recognized therapeutic amounts" (e.g. acetaminophen) is categorized as Schedule III in the California H&S Code. Under these circumstances, an analyst must carefully choose the extraction method and instrument method to analyze for the nonnarcotic or other pharmaceutical products accompanying the opiate. When reporting, consideration must be made for the correct drug and schedule that will be reported, along with the data documentation (both for the narcotic and nonnarcotic findings) to support the findings.

COLOR TEST CHART				
Compound	**Marquis**	**Mecke's**	**Froehde**	**Nitric**

				Acid
Acetylcodeine	violet	GRN	YEL-GRN	light YEL
Apomorphine	purple-black	GRN-black	dark GRN-black	pinkish brown
Codeine	purple	blue-GRN	olive	light YEL
Hydrocodone	violet	blue-GRN	YEL to YEL-GRN	orange
Hydromorphone	YEL-orange/purple	YEL-olive	blue-purple	light YEL
Ethylmorphine	YEL-brown/purple	emerald GRN	YEL-GRN	negative
Heroin	violet-purple	olive	violet	orange
6-monoacetyl-morphine	violet	GRN-blue/GRN	violet	orange
Morphine	violet	GRN-blue	violet	orange
Oxycodone	YEL-purple	YEL-GRN	YEL	negative
Oxymorphone	YEL-brown to violet	YEL-olive	blue	orange
Papaverine	YEL-purple	olive	GRN	light YEL
Thebaine	red-orange	red-orange	red-orange	light YEL
Guaifenesin	pur	grn to red	grn	
Promethazine	pur to red-pur	red	red	

GRN=green
YEL=yellow

NOTE: Opium may give a purple marquis, but more often provides no distinctive colors because of the many compounds present.

GC/MS DATA OF RETENTION TIME/RELATIVE RETENTION TIME		
Compound	**Retention Time**	**Relative Retention Time**
Codeine	10.45	1.05
Ethylmorphine	10.61	1.07
Heroin	11.69	1.18
Hydrocodone	10.72	1.08
Hydromorphone	10.82	1.09
Methadone	9.37	0.95
6-monoacetyl- morphine	11.11	1.12
Morphine	10.70	1.08
Oxycodone	11.14	1.12
Oxymorphone	11.26	1.14
Papaverine	12.98	1.31
Thebaine	11.04	1.11

Note: Retention times may vary based on the concentration of the compound injected on the GC/MS. Generally, highly concentrated samples have slightly increased retention times.

SOLUBILITIES OF SOME OPIATES

		H_2O	Etoh	$CHCl_3$	Ether
Morphine	free	---	1/200	1/1500	---
	HCl	1/23	---	insol	insol
	SO_4	1/21	1/1000	insol	insol
Heroin	free	1/1700	1/30	1/1.5	1/100
	HCl	1/1.6	1/12	1/1.6	insol
Dilaudid	HCl	1/3	1/100	insol	insol
Oxymorphone	free	insol	---	---	---
Metopon	HCl	1/2	slightly sol		insol
Apomorphine	free		sol	sol	
	HCl	1/50	1/50	spar. sol	spar. sol
Codeine	free	1/120	1/2	1/2	1/50
	HCl	1/30	1/100	1/800	
	PO_4	1/4	1/450	spar. sol	spar. sol
	SO_4	1/30	1/1300	insol	insol
Thebaine	free	1/1500	1/10	1/13	1/200
	HCl	1/16			
Dihydrocodeine	tartrate	1/4.5	slightly sol		insol
	PO_4	1/3			nearly insol
Dihydrocodeinone	free	insol	sol		
	tartrate	1/10	1/150		
	HC	1/2	sol		
	PO_4	sol	insol		
Dextromethorphan	HBr	1/60	1/10	sol	insol
Oxycodone	free	insol	sol	sol	insol
	HCl	1/6	1/60	1/600	insol
Ethylmorphine	HCl	1/12	1/25	almost insol	almost insol
Dihydromorphine	free	insol	sol	sol	
	HCl	sol	slightly sol		
Papaverine	free	insol	slightly sol		slightly sol
	HCl	1/40	1/120	1/10	insol
	SO_4	1/2	1/20	1/20	1/5000
6-Monoacetylmorphine	HCl	sol			

III. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. List the opiate compounds needed to identify a suspected opium submission.
2. What is the chemical name for Heroin?
3. Define and give examples for each of the following terms:
   a. natural opiates
   b. semi-synthetic opioids

c. synthetic opioids

4. What schedule is codeine pill when it contains a non-narcotic analgesic?

5. Give examples of the legitimate administration of opiates.

6. Describe how you would extract and confirm a brown aqueous solution with the following color test results:

   a. Marquis - Purple

   b. Mecke - Green

   c. Froehde - Purple

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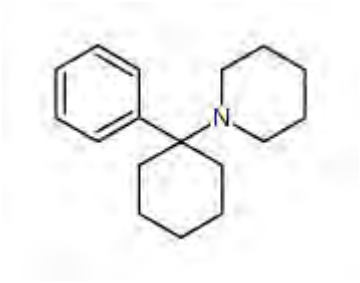
END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.PCP - Analysis of PCP
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Phencyclidine (PCP), analogs and Dissociative Anesthetics	**SUBJECT:** Analysis of PCP	

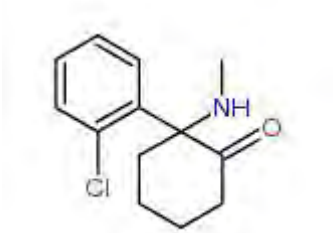
I. Policy: Below is general information regarding Phencyclidine (PCP), analogs and Dissociative Anesthetics.

A.



Phencyclidine

B.



Ketamine

C. In the 1950s, phencyclidine (PCP) was investigated as an anesthetic but, due to the side effects of confusion and delirium, its development for human use was discontinued. It became commercially available for use as a veterinary anesthetic in the 1960s under the trade name of Sernylan™ and was placed in Schedule III of the CSA. In 1978, due to considerable abuse, phencyclidine was transferred to Schedule II of the CSA and manufacturing of Sernylan™ was discontinued. Today, virtually all of the phencyclidine encountered on the illicit market in the United States is produced in clandestine laboratories.

D. PCP is illicitly marketed under a number of other names, including Angel Dust, Supergrass, Killer Weed, Embalming Fluid, and Rocket Fuel, reflecting the range of its bizarre and volatile effects. In its pure form, it is a white crystalline powder that readily dissolves in water. However, most PCP on the illicit market contains a number of

contaminants as a result of makeshift manufacturing, causing the color to range from tan to brown, and the consistency from powder to a gummy mass. Although sold in tablets and capsules as well as in powder and liquid form, it is commonly applied to a leafy material, such as parsley, mint, oregano, or marijuana, and smoked.

E. The drug's effects are as varied as its appearance. A moderate amount of PCP often causes the user to feel detached, distant, and estranged from his surroundings. Numbness, slurred speech, and loss of coordination may be accompanied by a sense of strength and invulnerability. A blank stare, rapid and involuntary eye movements, and an exaggerated gait are among the more observable effects. Auditory hallucinations, image distortion, severe mood disorders, and amnesia may also occur. In some users, PCP may cause acute anxiety and a feeling of impending doom; in others, paranoia and violent hostility; and in some, it may produce a psychosis indistinguishable from schizophrenia. PCP use is associated with a number of risks, and many believe it to be one of the most dangerous drugs of abuse.

F. Modification of the manufacturing process may yield chemically related analogues capable of producing psychic effects similar to PCP. Four of these substances have been encountered on the illicit market and have been placed in Schedule I of the CSA:

1. N-ethyl-l-phenylcyclohexylamine or PCE
2. l-(phenylcyclohexyl)pyrrolidine or PCPy
3. l-[l-(2-thienyl)cyclohexyl]piperdine or TCP
4. and l-[l-(2-thienyl)cyclohexyl]pyrrolidine or TCPy

G. Telazol™, a Schedule III veterinary anesthetic containing tiletamine (a PCP analogue), in combination with zolazepam, (a benzodiazepine), is sporadically encountered as a drug of abuse.

H. Phencyclidine, or PCP (1-(1-Phenylcyclohexyl)piperidine), listed by some as an analgesic or anesthetic, is a potent compound that is normally ingested for its hallucinogenic properties. It is not encountered often in this laboratory, although in Santa Clara County it is one of the most popular drugs of abuse.

I. Phencyclidine also has many analogs and structurally related compounds that are both controlled and non-controlled. It is therefore essential to be able to identify and distinguish PCP and its controlled analogs not only from each other, but also from the non-controlled analogs.

J. Ketamine is a rapidly acting general anesthetic. Its pharmacological profile is essentially the same as phencyclidine. Like PCP, ketamine is referred to as a dissociative anesthetic because patients feel detached or disconnected from their pain and environment when anesthetized with this drug. Unlike most anesthetics, ketamine produces only mild respiratory depression and appears to stimulate, not depress, the cardiovascular system. In addition, ketamine has both analgesic and amnesic properties and is associated with less confusion, irrationality, and violent behavior than PCP. Use of ketamine as a general anesthetic for humans has been limited due to adverse effects including delirium and hallucinations. Today, it is primarily used in veterinary medicine, but has some utility for emergency surgery in humans.

K. Although ketamine has been marketed in the United States for many years, it was only recently associated with significant diversion and abuse and placed in Schedule III of the CSA in 1999. Known in the drug culture as "Special K" or "Super K," ketamine has become a staple at dance parties or "raves." Ketamine is supplied to the illicit market by the diversion of legitimate pharmaceuticals (Ketaset™, Ketalar™). It is usually distributed

as a powder obtained by removing the liquid from the pharmaceutical products. As a drug of abuse, ketamine can be administered orally, snorted, or injected. It is also sprinkled on marijuana or tobacco and smoked. After oral or intranasal administration, effects are evident in about 10 to 15 minutes and are over in about an hour.

L. After intravenous use, effects begin almost immediately and reach peak effects within minutes. Ketamine can act as a depressant or a psychedelic. Low doses produce vertigo, ataxia, slurred speech, slow reaction time, and euphoria. Intermediate doses produce disorganized thinking, altered body image, and a feeling of unreality with vivid visual hallucinations. High doses produce analgesia, amnesia, and coma

M. This is an outline of the techniques presently in use at this laboratory. The tests and their implications are discussed. For specific instruction on technique, refer to the individual sections of the manual.



Assorted PCP Samples



Ketamine



Ketamine powder (above) is clandestinely sold at "rave" parties and is usually snorted

II. Policy: Below is information regarding screening PCP.

A. Presumptive Tests

1. The Modified Cobalt Thiocyanate (M-COSCN) test is the primary color test used for the screening of PCP and its analogs. PCP and most of its analogs will produce a positive blue reaction with the reagent. Unfortunately, it is the same reaction produced by Cocaine, both in the base and salt forms, and numerous other compounds.

   a. Cobalt Thiocyanate (Modified):

      i. Reagents: Mix by volume: 9 parts a with 3 parts b with 1 part c

         1. 2% solution of cobaltous thiocyanate in water

         2. phosphoric acid

         3. 1 gram of platinum chloride in 20ml phosphoric acid

      ii. Procedure: Add a toothpick of the questioned material to one drop of the reagent. The production of a robin's egg blue color is a positive test

      iii. Indicate the color formed

COLOR TEST CHART	
Compound	**M-COSCN**
PCP [1-(1-phenylcyclohexyl) piperidine]	positive
PCC [1-peperodinocyclohexanecarbonitrile]	positive
PCP-4-Hydroxy analog	positive
n,n-Diethyl-1-Phencyclohexamine	positive
Ketamine	negative
TCP [1-(1-(2-thienyl) cyclohexyl) piperidine]	positive

2. Note: Production of a robin's egg blue was a positive reaction. Ketamine may have a weak reaction or particles that turn blue.

3. A negative test is the production of no color; formation of any other color produced should be noted.

III. Policy: Below is information regarding confirmation of PCP.

A. The GC/MS can be used to confirm Phencyclidine (PCP) and its Analogs. The commonly used methods on the GC/MS is GEN.m or dea.m (Use GEN.m for an unknown). The recommended procedure for running a sample is as follows:

1. Solvent Extraction

   a. Take a small quantity of the powder or liquid to be analyzed.

   b. Extract out with methanol or suitable solvent based on the analyte characteristics and solubility information.

   c. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the

sample then an acid/ basic chloroform extract should be used.

d. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard

2. Analysis

a. The commonly used methods on the GC/MS is GEn.m, or dea.m

b. As a routine,1 µl is injected on the GC/MS

c. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS

d. On occasion the samples may be weak. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a lager volume of sample may need to be injected on the GC/MS

e. The GC/MS data is in the GC/MS data section of the binder.

3. GC/MS Data of Retention Times/Relative Retention Times

Compound	**Retention Time**	**Relative Retention Time**
PCP	8.21	0.83
PCC	6.29	0.63
Ketamine	7.93	0.80

a. Note: Retention times may vary based on the concentration of the compound injected on the GC/MS. Generally, highly concentrated samples have slightly increased retention times.

B. Infrared spectroscopy is a means of positively identifying a substance. However, PCP and its analogs may not be encountered in a pure enough state to allow infrared analysis without a sample clean up. IR is a very good procedure for PCC confirmation. PCC exists in a relatively pure form due to its method of manufacture.

IV. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. What is the color reaction of PCP with cobalt thiocyanate?

2. What drug class does PCP and Ketamine fall under?

3. What is the chemical name for PCP and PCC?

4. PCP and Ketamine are schedule II controlled substances, what, if any, are the legitimate uses for these drugs.

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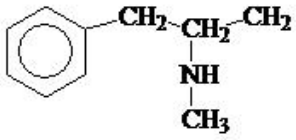
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.PHEN - Analysis of Phenethylamines
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Phenethylamines	**SUBJECT:** Analysis of Phenethylamines	

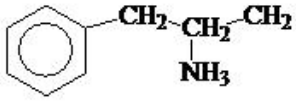
I. Policy: Below is general information regarding Phenethylamines.

A.



Methamphetamine
$C_{10}H_{15}N$, MW=149

B.



Amphetamine
$C_9H_{13}N$, MW=135

C. **Enhancements**:
PC 1203.073b2: Two ounces (of substance containing Methamphetamine) or ounce of pure Methamphetamine.
H&S 11370.4b1: Penalty enhancements for substances containing 1 kilogram
H&S 11370.4b2: Penalty enhancements for substances containing 4 kilograms
H&S 11370.4a3: Penalty enhancements for substances containing 10 kilograms
H&S 11370.4a4: Penalty enhancements for substances containing 20 kilograms
H&S 11379.8: if 11379.6 >44 lbs/105 gal

D. Methamphetamine and Amphetamine are the two most common controlled drugs of the Phenethylamine class that are encountered in this laboratory.

1. Amphetamine, dextroamphetamine, methamphetamine, and their various salts, are collectively referred to as amphetamines. In fact, their chemical properties and actions are so similar that even experienced users have difficulty knowing which drug they have taken.

2. Amphetamine was first marketed in the 1930s as Benzedrine™ in an over-the-counter inhaler to treat nasal congestion. By 1937, amphetamine was available by prescription in tablet form and was used in the treatment of the sleeping disorder, narcolepsy, and the behavioral syndrome called minimal brain dysfunction, which today is called attention deficit hyperactivity disorder (ADHD). During World War II, amphetamine was widely used to keep the fighting men going and both dextroamphetamine (Dexedrine™) and methamphetamine (Methedrine™) were readily available.

3. As use of amphetamines spread, so did their abuse. In the 1960s, amphetamines became a perceived remedy for helping truckers to complete their long routes without falling asleep, for weight control, for helping athletes to perform better and train longer, and for treating mild depression. Intravenous amphetamines, primarily methamphetamine, were abused by a subculture known as "speed freaks." With experience, it became evident that the dangers of abuse of these drugs outweighed most of their therapeutic uses.

4. Increased control measures were initiated in 1965 with amendments to the federal food and drug laws to curb the black market in amphetamines. Many pharmaceutical amphetamine products were removed from the market including all injectable formulations, and doctors prescribed those that remained less freely. Recent increases in medical use of these drugs can be attributed to their use in the treatment of ADHD. Amphetamine products presently marketed include generic and brand name amphetamine (Adderall™, Dexedrine™, Dextrostat™) and brand name methamphetamine (Desoxyn™). Amphetamines are all controlled in Schedule II of the CSA.

5. To meet the ever-increasing black market demand for amphetamines, clandestine laboratory production has mushroomed. Today, most amphetamines distributed to the black market are produced in clandestine laboratories. Methamphetamine laboratories are, by far, the most frequently encountered clandestine laboratories in the United States. The ease of clandestine synthesis, combined with tremendous profits, has resulted in significant availability of illicit methamphetamine, especially on the West Coast, where abuse of this drug has increased dramatically in recent years. Large amounts of methamphetamine are also illicitly smuggled into the United States from Mexico.

6. Amphetamines are generally taken orally or injected. However, the addition of "ice," the slang name for crystallized methamphetamine hydrochloride, has promoted smoking as another mode of administration. Just as "crack" is smokable cocaine, "ice" is smokable methamphetamine. Methamphetamine, in all its forms, is highly addictive and toxic.

7. The effects of amphetamines, especially methamphetamine, are similar to cocaine, but their onset is slower and their duration is longer. In contrast to cocaine, which is quickly removed from the brain and is almost completely metabolized, methamphetamine remains in the central nervous system longer, and a larger percentage of the drug remains unchanged in the body, producing prolonged stimulant effects. Chronic abuse produces a psychosis that resembles schizophrenia and is characterized by paranoia, picking at the skin, preoccupation with one's own thoughts, and auditory and visual hallucinations. These psychotic symptoms can persist for months and even years after use of these drugs has ceased and may be related to their neurotoxic effects. Violent and erratic behavior is frequently seen among chronic abusers of amphetamines, especially methamphetamine.

E. **Methcathinone**, known on the streets as "Cat," is a structural analogue of methamphetamine and cathinone. Clandestinely manufactured, methcathinone is almost exclusively sold in the stable and highly water soluble hydrochloride salt form. It is most commonly snorted, although it can be taken orally by mixing it with a beverage or diluted in water and injected intravenously. Methcathinone has an abuse potential equivalent to methamphetamine and produces amphetamine-like effects. It was placed in Schedule I of the Federal CSA in 1993.

F. **Methylphenidate**, a Schedule II substance, has a high potential for abuse and produces many of the same effects as cocaine and the amphetamines. The abuse of this substance has been documented among narcotic addicts who dissolve the tablets in water and inject the mixture. Complications arising from this practice are common due to the insoluble fillers used in the tablets. When injected, these materials block small blood vessels, causing serious damage to the lungs and retina of the eye. Binge use, psychotic episodes, cardiovascular complications, and severe psychological addiction have all been associated with methylphenidate abuse.

1. Methylphenidate is used legitimately in the treatment of excessive daytime sleepiness associated with narcolepsy, as is the newly marketed Schedule IV stimulant, modafinil (Provigil™). However, the primary legitimate medical use of methylphenidate (Ritalin™, Methylin™, Concerta™) is to treat attention deficit hyperactivity disorder (ADHD) in children. The increased use of this substance for the treatment of ADHD has paralleled an increase in its abuse among adolescents and young adults who crush these tablets and snort the powder to get high. Abusers have little difficulty obtaining methylphenidate from classmates or friends who have been prescribed it.

G. A number of drugs have been developed and marketed to replace amphetamines as appetite suppressants. These anorectic drugs include benzphetamine (Didrex™), diethylproprion (Tenuate™, Tepanil™), mazindol (Sanorex™, Mazanor™), phendimetrazine (Bontril™, Prelu-27™), and phentermine (Lonamin™, Fastin™, Adipex™). These substances are in Schedule III or IV of the CSA and produce some amphetamine-like effects. Of these diet pills, phentermine is the most widely prescribed and most frequently encountered on the illicit market. Two Schedule IV anorectics often used in combination with phentermine, fenfluramine and dexfenfluramine, were removed from the U.S. market because they were associated with heart valve problems.

H. For centuries, **khat**, the fresh young leaves of the *Catha edulis* shrub, has been consumed where the plant is cultivated, primarily East Africa and the Arabian Peninsula. There, chewing khat predates the use of coffee and is used in a similar social context. Chewed in moderation, khat alleviates fatigue and reduces appetite. Compulsive use may result in manic behavior with grandiose delusions or in a paranoid type of illness,

sometimes accompanied by hallucinations. Khat has been smuggled into the United States and other countries from the source countries for use by emigrants. It contains a number of chemicals, among which are two controlled substances federally, cathinone (Schedule I) and cathine (Schedule IV). In California, cathinone is schedule II and cathine is schedule IV. As the leaves mature or dry, cathinone is converted to cathine, which significantly reduces its stimulatory properties.

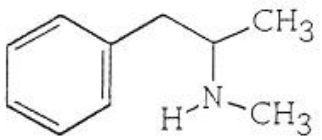






METHAMPHETAMINE

Structural Formula



$C_{10}H_{15}N$ Mol. Wt. 149.24

Other Names

N,α-Dimethylbenzeneethanamine
N,α-Dimethylphenethylamine
Desoxyephedrine
N-Methylamphetamine
l-Phenyl-2-methylaminopropane
Phenylisopropylmethylamine
Desoxyn (Hydrochloride Salt)
Methedrine (Hydrochloride Salt)
Pervitin (Hydrochloride Salt)

Methamphetamine occurs as two optical isomers, "d" and "l", or the racemic "d, l" forms. The methamphetamine of commerce was usually the "d" form. Clandestinely manufactured Methamphetamine is usually either the "d, l" or "d" form depending on the precursors used and the method of manufacture.

Of the many possible methamphetamine syntheses, only a few are frequently encountered. They are:

1. Synthesis from Phenylacetone and Methylamine using Aluminum and Mercuric Chloride.
2. Synthesis from Phenylacetone via the Leuckart method.
3. Synthesis from Ephedrine by Hydrogenation, usually via a halogenated intermediate.
4. Synthesis from Ephedrine by the Hydriodic Acid (Red Phosphorus) method.

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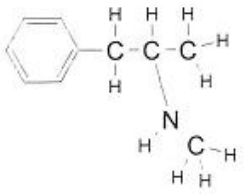
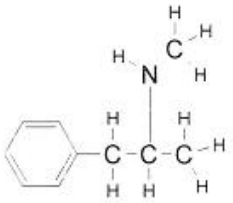
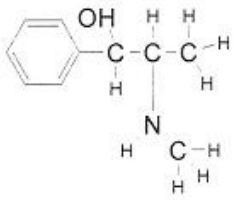
Methamphetamine Structures and Its Precursors



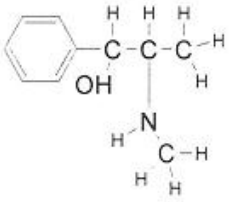
d-Methamphetamine



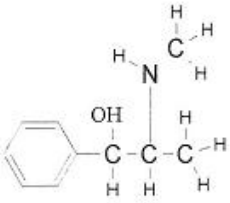
l-Methamphetamine



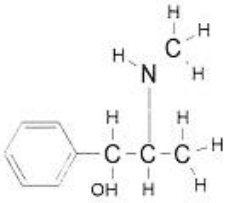
l-Ephedrine



d-Pseudoephedrine

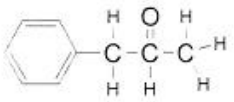


d-Ephedrine



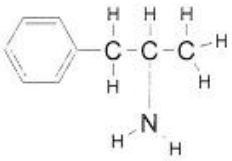
l-Pseudoephedrine

P2P by product in RP/HI

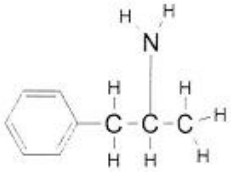


Phenyl-2-propanone (P2P)

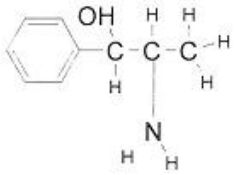
Amphetamine Structures and Its Precursors



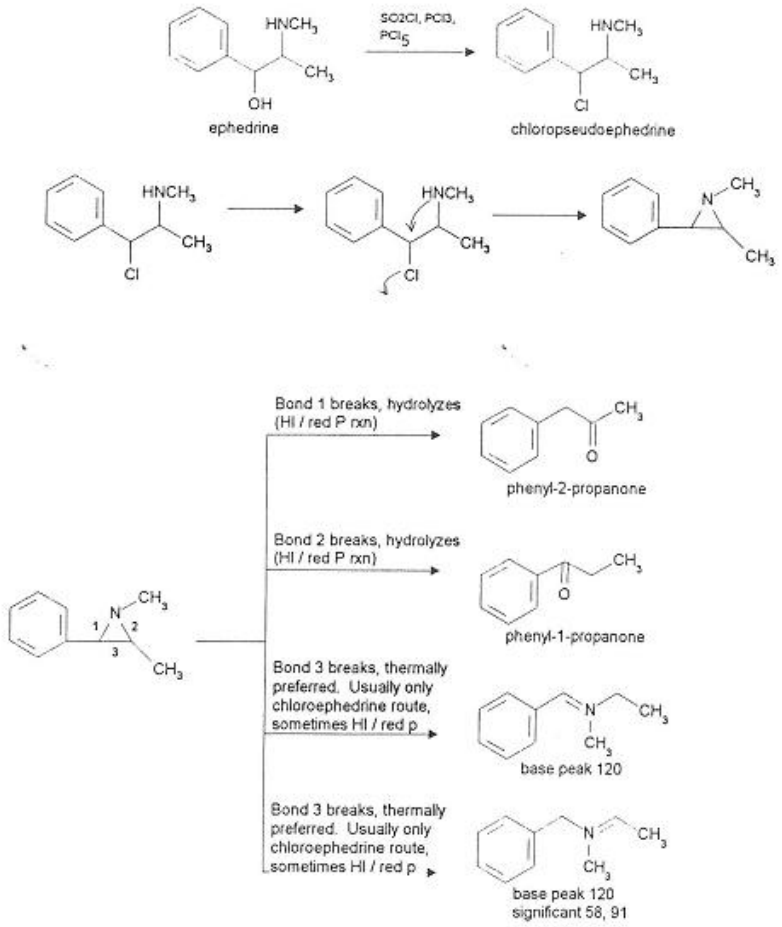
d-Amphetamine



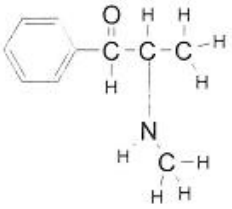
l-Amphetamine



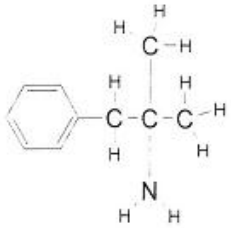
Phenylpropanolamine (see also P2P)


HNCH3
CH3
OH
ephedrine
SO2Cl, PCl3, PCl5
HNCH3
CH3
Cl
chloropseudoephedrine
HNCH3
CH3
Cl
HNCH3
CH3
Cl
N
CH3
CH3
Bond 1 breaks, hydrolyzes (HI / red P rxn)
O
CH3
phenyl-2-propanone
Bond 2 breaks, hydrolyzes (HI / red P rxn)
O
CH3
phenyl-1-propanone
N
CH3
1
2
3
CH3
Bond 3 breaks, thermally preferred. Usually only chloroephedrine route, sometimes HI / red p
N
CH3
CH3
base peak 120
Bond 3 breaks, thermally preferred. Usually only chloroephedrine route, sometimes HI / red p
N
CH3
CH3
base peak 120
significant 58, 91

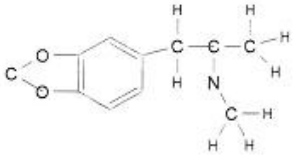
Related Compounds



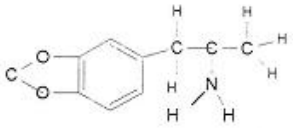
Methcathinone



Phentermine



3,4-Methylenedioxymethamphetamine



3,4-Methylenedioxyamphetamine

II. Analysis

A. Presumptive Tests

1. Color tests are presumptive tests preformed to screen samples for the presence of Phenethylamines. Presumptive tests can give the analyst some indication of the possible Phenethylamine.

2. For reagent recipes, see DRG.13 - Reagent Preparation.

3. There are three color tests that can be very useful in the identification of Phenethylamines. Two of these tests, Marquis and Rothera's (Secondary Amine), should be preformed first. An orange Marquis indicates the possible presence of a Phenethylamine. A blue Rothera's differentiates further among the types of Phenethylamine that may actually be present. Amphetamine will give an orange Marquis and a negative Rothera's, while Methamphetamine and Mephentermine are the only two common Phenethylamines that will give an orange and blue combination. Designer drug n,n-DMA will also give the same color combination.

4. A supplemental color test, Modified Cobalt Thiocyanate (COSCN), while not necessary for the identification of the type of Phenethylamine, should be performed in conjunction with Marquis and Rothera's. Occasionally a sample containing both Methamphetamine and Cocaine will be encountered; performing the modified COSCN test will quickly detect this.

    a. **Marquis** Procedure: Add a toothpick full of the questioned sample powder to one drop of reagent. An orange reaction occurs with Methamphetamine and Amphetamine. Indicate the color formed

        i. This reagent has a very short shelf-life due to the loss of formaldehyde. A new reagent should be prepared within a couple months or when the analyst has an indication that the color reaction is slower and weaker.

    b. **Rothera** (Secondary Amine Test) Procedure: Add a toothpick full of the questioned sample powder to one drop of solution 1 Add a drop of solution 2. Next add one drop of acetaldehyde

(solution 3). A bright blue color indicated a secondary amine. Indicate the color formed

c. **Modified Cobalt Thiocyanate** Procedure: Add a toothpick of the questioned material to one drop of the reagent. The production of a robin's egg blue color is a positive test for cocaine. Indicate the color formed

B. **Confirmatory Analysis**

1. The GC/MS can be used to confirm Phenethylamines. The recommended procedure for running a sample is as follows:

   a. Solvent Extraction

      i. Take a small quantity of the powder or liquid to be analyzed.

      ii. Basify the sample (Rothera 2 is typically used)

      iii. Extract out with petroleum ether or suitable solvent (like chloroform that is not miscible with water) based on the analyte characteristics and solubility information.

      iv. There may be a "salting out" effect of Phenethylamines when extracted in methanol resulting in unacceptable chromatography (significant peak tailing), if this occurs basic petroleum ether or chloroform extract should be used.

      v. It should be noted that methanol is not a suitable solvent if it is suspected that water is present in the sample. If it is suspected that water is present in the sample then a basic chloroform (or petroleum ether) extract should be used.

      vi. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard

   b. Analysis

      i. The commonly used methods on the GC/MS are GEN.m, dea.m, and meth.m. (it should be noted that the meth.m method should be used following a positive screening test; GEN.m should be used for an unknown).

      ii. As a routine,1 µl is injected on the GC/MS

      iii. Always inject a blank solvent containing the internal standard before injecting the unknown sample onto the GC/MS (n-Tricosane is commonly used).

      iv. On occasion the samples may be weak such that the molecular ion of the drug is not detected. Such samples need to be concentrated to be identified. More of the sample may need to be extracted, or a larger volume of sample may need to be injected on the GC/MS

      v. The GC/MS data is in PowerDMS.

      vi. **Note**: Care should be taken when identifying Phenethylamines by GC/MS due to their substantially similar mass spectra. Specifically Mephentermine and Dimethylamphetamine have a very similar mass spectra as well as eluting very close to one another (see GC/MS data for comparison of spectra and relative retention time). Careful comparison of mass spectra as well as relative retention time is necessary for identification of Phenethylamines by GC/MS.

      vii. **Note**: Retention times may vary based on the concentration of the compound injected on the GC/MS. Generally, highly concentrated samples have slightly increased Retention Time.

2. Infrared Spectroscopy (FTIR) is a means of positively identifying a sample. The major drawback is that the sample must be almost completely free of any diluents or must be readily cleaned-up. This clean-up can take the form of a solvent extraction

COLOR TEST CHART		
Substance	**Marquis**	**Rothera's**
Amphetamine (Adderall)*	orange	red
Methamphetamine (Desoxyn)*	orange	blue
Ephedrine (Pretz-D)	neg	red
Phentermine (Adipex-P)*	orange	red

Mephentermine (Wyamine Sulfate Injection)	orange	blue
Phenylpropanolamine (Dexatrim)	neg	red
Caffeine	neg	red
Phenmetrazine (Preludin)*	neg	red
Phendimetrazine (Bontril)*	neg	purple (bluish)
Pseudoephedrine (Sudafed)	neg	red
Diphenhydramine (Benadryl)	lemon yellow	red
Ritalin (Methylphenidate)*	neg	blue
Demerol (Meperidine)*	slow orange	red
Doxylamine Succinate (Unisom)	gray purple	red

***Controlled Substances**

GC/MS DATA OF PHENETHYLAMINES RETENTION TIME/ RELATIVE RETENTION TIME				
Compound	**Retention Time (Meth Method)**	**Relative Retention Time (Meth Method)**	**Retention Time (DEA Method)**	**Relative Retention Time (DEA Method)**
Amphetamine	4.019	0.399	4.059	0.386
Phentermine	No data	No data	4.20	0.401
Methamphetamine	4.502	0.447	4.34	0.414
Mephentermine	5.16	0.512	4.84	0.462
Phenylpropanolamine	No data	No data	5.164	0.497
Pseudoephedrine	No data	No data	5.502	0.529
Ephedrine	6.007	0.595	5.56	0.531
Phenmetrazine	No data	No data	5.978	0.574
Phendimetrazine	No data	No data	6.137	0.590
Methylphenidate	No data	No data	7.700	0.740
Diphenhydramine	No data	No data	8.448	0.812
n-Tricosane (I.S.)	variable	1.000	variable	1.000
Common Cutters				
Niacinamide	No data	No data	5.536	0.532
Caffeine	No data	No data	8.163	0.784
Dimethyl Sulfone	No data	No data	2.666	0.252

III. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. What drugs have the same color tests as Amphetamine and Methamphetamine respectively? Are these controlled?
2. What are secondary amines and what is the significance of Rothera color test in their screening?
3. What are the legitimate uses of the Amphetamine and Methamphetamine?
4. What is "ICE"
5. Why is DMSO a popular common cutter for Methamphetamine samples?
6. What is impact of "salting" on the phenethylamines Total Ion Chromatograph? How can it be mitigated?

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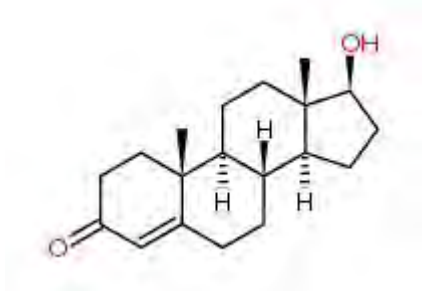
END OF DOCUMENT

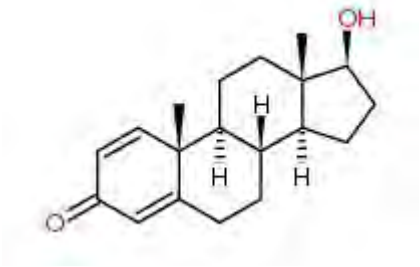
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 08/29/2018	**NUMBER:** MONO.STE - Analysis of Steroids
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2**	
CHAPTER: Steroids	**SUBJECT:** Analysis of Steroids	

I. Policy: Below is general information regarding Steroids.

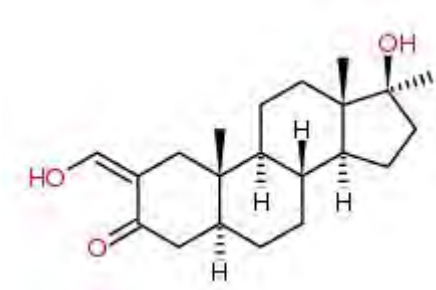
A.



Testosterone

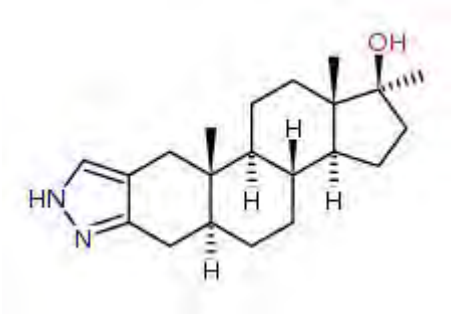


B. Boldenone



C.

Oxymetholone



D. Stanozolol

E. Anabolic steroids can promote increase in muscle mass and improved endurance. These drugs may be abused by athletes as performance enhancing drugs. These drugs are used by high school, college, professional, and elite amateur athletes in a variety of sports (e.g., weight lifting, track and field, swimming, cycling, and others) to obtain a competitive advantage. Body builders and fitness buffs take anabolic steroids to improve their physical appearance, and individuals in occupations requiring enhanced physical strength (e.g., body guards, night club bouncers, construction workers) are also known to use these drugs.

F. Concerns over a growing illicit market, abuse by teenagers, and the uncertainty of possible harmful long-term effects of steroid use, led Congress in 1991 to place anabolic steroids as a class of drugs into Schedule III of the Controlled Substances Act (CSA). The CSA defines anabolic steroids as any drug or hormonal substance chemically and pharmacologically related to testosterone (other than estrogens, progestins, and corticosteroids) that promotes muscle growth.

G. Most illicit anabolic steroids are sold at gyms, competitions, and through mail-order operations. For the most part, these substances are smuggled into the United States from many countries. The illicit market includes various preparations intended for human and veterinary use as well as bogus and counterfeit products. The most commonly encountered anabolic steroids on the illicit market include testosterone, nandrolone, methenolone, stanozolol, and methandrostenolone. Other steroids seen in the illicit market include boldenone, fluoxymesterone, methandriol, methyltestosterone, oxandrolone, oxymetholone, and trenbolone.

H. A limited number of anabolic steroids have been approved for medical and veterinary use. The primary legitimate use of these drugs in humans is for the replacement of inadequate levels of testosterone resulting from a reduction or absence of functioning testes. Other indications include anemia and breast cancer. Experimentally, anabolic steroids have been used to treat a number of disorders including AIDS wasting, erectile dysfunction, and osteoporosis. In veterinary practice, anabolic steroids are used to promote feed efficiency and to improve weight gain, vigor, and hair coat. They are also used in veterinary practice to treat anemia and counteract tissue breakdown during illness and trauma.

I. When used in combination with exercise training and a high protein diet, anabolic steroids can promote increased size and strength of muscles, improve endurance, and decrease recovery time between workouts. They are taken orally or by intramuscular injection. Users concerned about drug tolerance often take steroids on a schedule called a cycle. A cycle is a period of between 6 and 14 weeks of steroid use, followed by a period of abstinence or reduction in use. Additionally, users tend to "stack" the drugs, using multiple drugs concurrently. Although the benefits of these practices are unsubstantiated, most users feel that cycling and stacking enhance the efficiency of the drugs and limit their side effects.

J. Another mode of steroid use is called "pyramiding." With this method users slowly escalate steroid use (increasing the number of drugs used at one time and/or the dose and frequency of one or more steroids), reach a peak amount at mid-cycle and gradually taper the dose toward the end of the cycle. The escalation of steroid use can vary with different types of training. Body builders and weight lifters tend to escalate their dose to a much higher level than do long distance runners or swimmers.

K. The long-term adverse health effects of anabolic steroid use are not definitely known. There is, however, increasing concern of possible serious health problems associated with the abuse of these agents, including cardiovascular damage, cerebrovascular toxicity, and liver damage.

L. Physical side effects include elevated blood pressure and cholesterol levels, severe acne, premature balding, reduced sexual function, and testicular atrophy. In males, abnormal breast development (gynecomastia) can occur. In females, anabolic steroids have a masculinizing effect, resulting in more body hair, a deeper voice, smaller breasts, and fewer menstrual cycles. Several of these effects are irreversible. In adolescents, abuse of these agents may prematurely stop the lengthening of bones, resulting in stunted growth. For some individuals, the use of anabolic steroids may be associated with psychotic reactions, manic episodes, feelings of anger or hostility, aggression, and violent behavior.

M. A variety of non-steroid drugs are commonly found within the illicit anabolic steroid market. These substances are primarily used for one or more of the following reasons:

1. to serve as an alternative to anabolic steroids;

2. to alleviate short-term adverse effects associated with anabolic steroid use; or

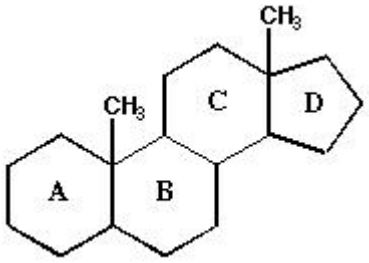
3. to mask anabolic steroid use. Examples of drugs serving as alternatives to anabolic steroids include clenbuterol, human growth hormone, insulin, insulin-like growth factor, and GHB. Drugs used to prevent or treat adverse effects of anabolic steroid use include tamoxifen, diuretics, and human chorionic gonadotropin. Diuretics, probenocid, and epitestosterone may be used to mask anabolic steroid use.

N. Over the last few years, a number of precursors to either testosterone or nandrolone have been marketed as dietary supplements in the United States. Some of these substances include androstenedione, androstenediol, norandrostenedione, norandrostenediol, and dehydroepiandrosterone (DHEA). New legislation has been introduced in Congress to add several steroids to the CSA and to alter the CSA requirements needed to place new steroids under control in the CSA

O. Presently Anabolic Steroids are classified as a Schedule III controlled substance under the California Uniform Controlled Substances Act. With the popularity of steroids increasing, criminalistic laboratories are faced with the analysis and identification of these substances.

P. Chemical Structure

1. Steroids are organic molecules whose structure is based on a tetracyclic ring system.



Cyclopentanoperhydrophenanthrene skeleton

Q. Dosage Form

1. The majority of steroids encountered will be in basically two forms:

   a. an injectable solution or

   b. solid dosage pharmaceutical form. A high demand for anabolic steroids has created a significant underground market and sophisticated counterfeit trade. As a result, markings on dosage units are not a good indicator of the actual content.

2. The analyst must be very cautious in relying on the markings and physical appearance of a possible steroid. Many of the steroids produced have been discontinued in the U.S. market; consequently, these products are being produced outside the U.S. (i.e. Mexico, some European countries).

3. Occasionally the analyst may analyze a suspected steroid to find that it differs from what the packaging indicates or contains one of the many oils associated with injectable steroids. **Suspected steroids should always be confirmed through chemical and instrumental tests.**



Injectable Solution of Nandrolone Decanoate



Injectable Solution with Syringe



Ampule of Deca Durabolin

R. The following is an analytical procedure for the analysis of anabolic steroids.

II. Policy: Below is information regarding screening Steroids.

A. Presumptive Color Tests

1. There are five possible color tests that can be used on a suspected steroid. The color tests include Marquis, Mecke, Froehde, Liebermann and concentrated Sulfuric Acid (H_2SO_4). The combination of these color tests can aid the analyst in differentiating between the various steroids that may be encountered.

2. Many of the steroid cases submitted are in the form of an injectable oil and/or in a tablet form. The analyst should be aware of the possibility of interference of the color reactions when dealing with injectable type steroids. However, steroids in tablet form seem to give adequate color reactions if the steroid concentration is sufficient.

a. Liebermann

i. Reagent: 5 g sodium nitrite in 50 mL sulfuric acid

ii. Procedure: Add a toothpick full of the questioned sample powder to one drop of reagent.

iii. Indicate the color formed

COLOR TEST CHART					
Compound	**Marquis**	**Mecke**	**Froede**	**Liebermann**	**H_2SO_4**
Testosterone	v. slow yellow	NR	NR	purple	Lt yellow
Androsterone	yellow-tan	yellow to brn	faint yellow	red-brn	v slow Lt org
Oxymetholone	yellow	yellow-brn	NR	brn-grn	NR
Nandrolone phenpropionate	org to prg-brn	NR	NR	yellow org to org	NR
Methandrostenolone	straw to dk red	brown	straw to brn	yellow-bm	straw
5-Androstene 3β,17β-diol Dipropionate	yellow to yellow-brn	yellow to red-brn	yellow	brown	yellow to burnt org
Methandriol	yellow to red-brn	yellow to red-brn	yellow	red-brn	yellow-org
17A-Methyltestosterone	yellow	yellow	yellow	burnt org	Lt yellow
19-Nortestosterone	faint yellow	NR	violet-red material	purple	NR
19-Nortestosterone 17-Decanoate	tan-brn	brn-yellow	olive gym	grn-brn	Lt brn
Stanozolol	yellow	yellow (slow)	NR	Lt org-brn	pink (slow)
Testosterone Propionate	NR	Lt yellow	NR	NR	NR
Methenolone Acetate	NR	NR	NR	NR	NR
Dihydroandrosterone	yellow	org	yellow	NR	yellow (slow)
Norethandrolone	org	brown	yellow-grn	Lt org	Lt org
Oxandrolone	yellow-grn	red-brn	Lt grn	NR	NR
Androstenediol	org	red-brn	org	NR	org
Bolasterone	org	org	yellow-grn	Lt grn	org
Boldenone Undecylenate	org	brn-green	yellow-grn	NR	Lt grn
Fluoxymesterone	brn	dark	Lt grn	NR	Lt grn

		green			
5-Androstene 3β,17β-diol	org	dark green	Lt org	NR	grn-org
Boldenone	Lt org	brown	Lt grn	NR	Lt grn
Mestanolone	yellow	red-brn	yellow-grn	NR	NR
4-Chlorotestosterone 17-Acetate	NR	NR	NR	NR	NR
Mesterolone	NR	NR	NR	NR	NR
Testosterone 17β-Cypionate	NR	NR	NR	NR	NR
Dihydrotestosterone Benzoate	NR	NR	NR	NR	NR
Testosterone Enanthate	NR	NR	NR	NR	NR

III. Policy: Below is information regarding extraction techniques of Steroids.

A. Solid Dose Steroid Tablets: Abercrombie Method

1. Pulverize several tablets (if available) with a mortar and pestle.
2. Add approximately 2 ml of methanol, or suitable solvent depending on analyte characteristics, to the pulverized tablets in a 10 ml screw-cap glass test tube.
3. Vortex to mix thoroughly.
4. Centrifuge test tube for several minutes.
5. An aliquot is taken from the methanol layer, a suitable internal standard is added (Cholesterol is routinely used as the internal standard if steroids are suspected). Stanozolol must be analyzed ONLY with n-Tricosane as I.S.
6. Analyze by GC/MS. The steroid.m method is routinely used on the GC/MS when steroids are suspected.

B. Injectable Vegetable Oils

1. Approximately 2 ml of oil is first extracted by vigorous shaking with approximately 4 ml methanol, in a screw cap glass test tube for at least 2 minutes.
2. The methanol extract, after centrifugation, is decanted and placed in the freezer compartment of a refrigerator for 15 minutes in order to precipitate co-extracted components of the oil.
3. After 15 minutes in the freezer, the methanol solution becomes cloudy and turbid and is immediately centrifuged to remove the cold-induced precipitation.
4. A suitable internal standard is added to an aliquot of the remaining clarified supernatant. See below for selection of internal standard.
5. Analyze by GC/MS. The steroid.m method is routinely used on the GC/MS when steroids are suspected.

C. Alkaline Hydrolysis of C17-Alkyl Esters

The California Controlled Substances Act requires the identification of the anabolic steroid moiety without regard to the presence of ester linkages at the C17 position. Consequently, a convenient time-saving analytical procedure involves cleavage of any C17-ester linkage to liberate the parent steroid. Typically, injectable vegetable oils contain the anabolic steroid as an alkylated ester at the C17 position. The parent steroid is identified and reported.

1. Add approximately 2-5 pellets of Potassium Hydroxide (KOH) to approximately 2 ml of the methanol extract obtained from the procedure B (above). If the methanol congeals after the addition of the KOH, add more MeOH such that the solution is liquid.
2. Allow the hydrolysis to proceed at room temperature for 15 minutes.
3. The methanol is dried under vacuum (as dry as possible-the solution may not dry completely)
4. Dissolve the residue in 1-2 ml diethyl ether.
5. The ether solution is washed with distilled water. When the water is added, the diethyl ether will be the solution on the top of the bi-layer. The top layer should be retained.
6. The diethyl ether is dried with anhydrous Sodium sulfate (Na_2SO_4) to extract any residual water. This can be done by putting a small amount of anhydrous Sodium sulfate into a Pasteur pipette plugged with glass wool and letting the diethyl ether solution run through.
7. Evaporate the diethyl ether solution under vacuum.
8. Dissolve the residue in methanol for analysis, a suitable internal standard is added. (Cholesterol is routinely used as the internal standard if steroids are suspected)
9. Analyze by GC/MS. The steroid.m method is routinely used on the GC/MS when steroids are suspected.

IV. Policy: Below is information regarding confirmation of Steroids.

A. The GC/MS instruments are programmed with the GEN.m and steroid.m methods that are routinely used in steroid analysis after the appropriate extraction procedure is performed on the sample. The steroid.m was designed for most steroids, and the GEN.m was designed for early and late eluting compounds including steroids. See the section on Extraction Techniques.

1. It should be noted that methanol is not a suitable extraction solvent if water is suspected to be present in the sample. If it is suspected that water is present, use chloroform as an extraction solvent.
2. Cholesterol is the internal standard routinely used in the analysis of most steroids with one exception, Stanozolol. Stanozolol co-elutes with cholesterol using the steroid.m method (See the GC/MS spectral data). For this steroid n-Tricosane must be used as the internal standard. If an unknown is analyzed with n-Tricosane as internal standard, the sample does not need to be rerun with Cholesterol as internal standard.
3. Inject a blank before the sample.

B. Cholesterol Internal Standard Recipe

1. 0.1 g cholesterol
2. 2 ml methanol
3. 3 ml chloroform

C. Infrared Spectroscopy (FTIR) is a means of positively identifying a sample. The major drawback is that the sample must be almost completely free of any diluents or must be readily cleaned-up. A method of clean-up can be accomplished by a solvent extraction.

V. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. What is the internal standard used in the GC/MS analysis for steroids?
2. Why is Cholesterol not acceptable internal standard for Stanozolol?
3. What are anabolic steroids? Why are they abused?
4. Define and differentiate between androgenic steroids and anabolic steroids.
5. What if any are the differences between the STERIOD.m vs. DEA.m GC/MS methods?
6. Why is it unacceptable to analyze steroids injections or pills by their markings and appearance?
7. If the laboratory does not have a standard for Testosterone Propionate, what extraction procedure can the analyst use to identify Testosterone?

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Monograph	**REVISION DATE:** 10/31/2019	**NUMBER:** MONO.TRY - Analysis of Tryptamines
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.2.**	
CHAPTER: Tryptamines	**SUBJECT:** Analysis of Tryptamines	

I. Policy: Below is general information regarding Tryptamines.

A. There exists a fair number of naturally occurring tryptamine type compounds, which have hallucinogenic activity. The most commonly used ones are Psilocybin and closely related Psilocyn. The remaining controlled tryptamine compounds are Bufotenine, Ibogaine, Dimethyltryptamine (DMT), and Diethyltryptamine (DET).

B. A number of Schedule I hallucinogenic substances are classified chemically as tryptamines. Most of these are found in nature but many, if not all, can be produced synthetically. Psilocybin and psilocyn (4-hydroxy-N,N-dimethyltryptamine) are obtained from certain mushrooms indigenous to tropical and subtropical regions of South America, Mexico, and the United States. As pure chemicals at doses of 10 to 20 mg, these hallucinogens produce muscle relaxation, dilation of pupils, vivid visual and auditory distortions, and emotional disturbances. However, the effects produced by consuming preparations of dried or brewed mushrooms are far less predictable and largely depend on the particular mushrooms used and the age and preservation of the extract. There are many species of "magic" mushrooms that contain varying amounts of these tryptamines, as well as uncertain amounts of other chemicals. As a consequence, the hallucinogenic activity, as well as the extent of toxicity produced by various plant samples, are often unknown.

C. Psilocybin is a constituent of over 40 species of mushrooms. The species fall into five genre, headed by Psilocybe and Stropharia. The other three are Panaeolus, Conocybe, and Copelandia. The two most common mushrooms encountered are *Psilocybe mexicana and Stropharia cubensis*.

D. Psilocybin is present in the mushrooms at reported levels of 0.2 to 0.4%. psilocyn is a hydrolysis product of psilocybin and occurs at trace amounts. The biogenic precursor to the psilocybin appears to be Tryptophan.

E. Dimethyltryptamine (DMT) N,N-Dimethyltryptamine has a long history of use and is found in a variety of plants and seeds. It can also be produced synthetically. It is ineffective when taken orally, unless combined with another drug that inhibits its metabolism. Generally it is sniffed, smoked, or injected. The effective hallucinogenic dose in humans is about 50 to 100 mg and lasts for about 45 to 60 minutes. Because the effects last only about an hour; the experience has been referred to as a "businessman's trip."

F. DMT is encountered as a natural constituent of the bark and leaves of a small number of trees belonging to the genus Virola as well as in the seeds of *Anadenanthera peregrina*. DMT is not active by oral ingestion. It is commonly used as a snuff. The trees are native to South America. DET is not found in nature.

G. A number of other hallucinogens have very similar structures and properties to those of DMT. Diethyltryptamine (DET) N,N-Diethyltryptamine, for example, is an analogue of DMT and produces the same pharmacological effects but is somewhat less potent than DMT. Alpha-ethyltryptamine (AET) is another tryptamine hallucinogen added to the list of Schedule I hallucinogens in 1994. Bufotenine (5-hydroxy-N,N-dimethyltryptamine) is a Schedule I substance found in certain mushrooms, seeds, and skin glands of Bufo toads. In general, most bufotenine preparations from natural sources are extremely toxic. N,N-Diisopropyl-5-methoxytryptamine (referred to as Foxy-Methoxy) is an orally active tryptamine recently encountered in the United States.

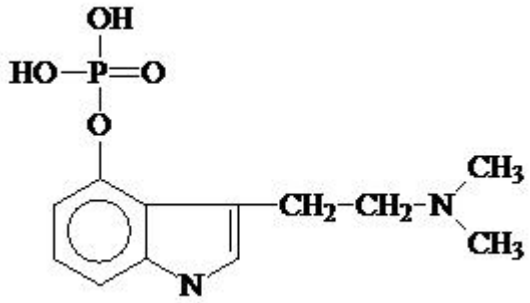
H. Bufotenine occurs in the skin glands of certain toads belonging to the species *Bufo vulgaris*. It has been isolated from the seeds of *Anadenanthera peregrina*, a small South American tree. It is found in mushrooms of the species *Amanita mappa*. Bufotenine is only active by inhalation or intramuscular injection.

I. The last of the controlled tryptamine type hallucinogens is found in an African root called *Tabernanthe iboga*. Ibogaine is one of at least twelve alkaloids present in the root. The drug is taken by eating the root.

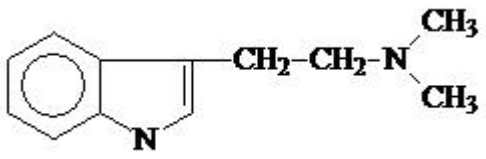
J. A related non-controlled group of substances are the Beta-carbolines. Harmine and Harmaline have been found in hallucinogenic drinks made in northern South America. The substances occur in vines of the genus Banisteriopsis, notably the species *caapi* and *inebrians*. The substances also occur in the seeds of Peganum harmala or "Syrian rue" which is an herb which grows from the Mediterranean, eastwards to northern India, Mongolia and Manchuria.

K. This is an outline, the intention of which is to describe the various techniques that are used for the analysis of Tryptamines in this laboratory. For specific instruction on technique, refer to the particular sections.

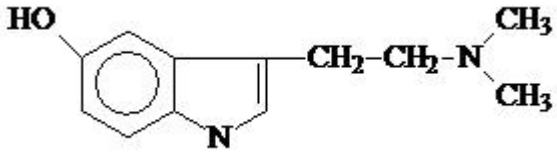
Tryptamines and Simple Indoles



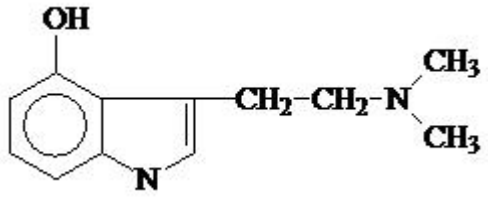
Psilocybin



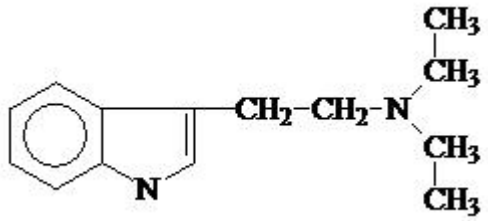
DMT



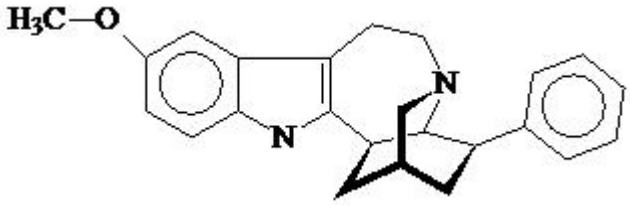
Bufotenine



psilocyn



DET



Ibogaine



Stropharia (Psilocybe) cubensis

II. Policy: Below is information regarding screening Tryptamines.

A. Physical Examination

1. One of the primary screening tests for Psilocybin containing mushrooms is a physical examination of material. Such mushrooms have a distinctive unpleasant odor and typically have bluish stains on the mushroom flesh. This blue staining may be due to an enzymatic oxidation of some indole substrate, including psilocybin, upon the breaking or bruising of the mushroom and is a fairly reliable indicator of the presence of psilocybin.

2. A detailed physical description should be included in the case notes in the description of evidence. The description may include the following: "mushroom-like material with stalks and caps-and blue staining"

B. Presumptive Tests

1. Due to the nature of the submitted evidence material and the low concentrations of most compounds of interest, an extraction of the material must be performed. The remaining screening test may be carried out on this extract. Several extraction techniques are available for use. These techniques are described in the "Sample Extraction For Mushrooms" in this volume.

2. pDMBA (para-dimethylaminobenzaldehyde), also referred to as Van Urk's reagent, is a color tests used for the presumptive screening of Tryptamines and general compounds. In general, a purple reaction with the acidified pDMBA test occurs with indoles, pyrroles, and tryptophan and is an indication of the presence of a hallucinogen, including but not limited to psilocyn, psilocybin, DMT, DET, and lysergic acid diethylamide (LSD). **Typically, acidified pDMBA is performed on the extracted material**.

3. The Weber's Test is an additional color test used for the presumptive screening of psilocyn in mushrooms. The procedure is a two-part chemical addition to a small fragment of a mushroom. In the presence of psilocyn the first solution should turn red and subsequently turn blue after the addition of the second solution. **Typically, the Weber's screening test is performed on mushroom material**.

a. Acidified pDMBA:

i. Reagent:

1. 0.01g of para-dimethylaminobenzaldehyde in 18 ml of ethanol and 2 ml of concentrated Sulfuric Acid (H_2SO_4).

2. Concentrated Hydrochloric Acid (HCl).

ii. Procedure: Add a toothpick full of questioned material (or a drop of extract) to one drop of solution a. Next, add one drop of solution b.

iii. Indicate the color formed.

b. Weber's:

i. Reagent:

1. 1-2 toothpick tips of o-Dianisidine bis(diazotized) zinc double salt (CAS # 14263-94-6) AKA Fast Blue B Salt to approximately 0.25-0.50 ml of H_2O

2. Concentrated Hydrochloric Acid

ii. Procedure: Add a toothpick full of questioned material (or a drop of extract) to one drop of solution a. Note color. Next, add one drop of solution b.

iii. Indicate the color formed.

COLOR TEST CHART			
Compound	**pDMBA + HCl**	**Weber's**	**Weber's + HCl**
Bufotenine*	Gray purple	Negative	Negative
DET*	purple	Negative	Negative
DMT*	purple	Negative	Red
Harmaline	yellow	Negative	Negative
Harmine	negative	Negative	Negative
Ibogaine*	negative	Negative	Negative
Psilocybin*	purple	Negative	Negative
Psilocyn*	gray green	Red	Blue
Tryptamine*	purple	Negative	Negative

*Controlled Substance

III. Policy: Below is information regarding extracting Mushrooms.

A. Hot Methanol Extraction

1. Chop or grind approximately 1 gram of mushroom material. Place the material in a small beaker and just cover the plant material with methanol. Heat the sample for about 10 minutes being careful not to boil away the methanol to dryness. The remaining methanol can be decanted and filtered into a test tube then blown down to concentrate. This concentrate may be used for screening and confirmatory tests. However, the addition of heat to the sample may increase the amount of non-psychoactive organic compounds present in the extract. The presence of these compounds may interfere with the isolation and identification of psilocybin and psilocyn using GC/MS. If the resulting chromatogram does not yield an acceptable peak (with baseline resolution) for psilocyn, an acid/basic chloroform clean-up should be performed on the residue.

B. Cold (or Room-Temperature) Methanol Extraction

1. Chop or grind approximately 1 gram of mushroom material. Place the material in a small beaker and just cover the plant material with methanol. Seal the beaker with parafilm. The beaker can be placed in a refrigerator or kept at room temperature. Note that refrigerators containing drug standards cannot be used for case samples. The material can be extracted for several hours (i.e., place in the morning and analyze in the afternoon) or overnight to analyze the next day.

C. Methanol Extraction with Acid/Base Chloroform Clean-up

1. Place approximately 1 gram of macerated mushroom sample in a test tube or other suitable container. Fill container to top of mushroom material with methanol. Cover container with parafilm and allow the sample to sit at room temperature overnight. Decant methanol into a small test tube and blow down to concentrate (<1/2 ml) using a stream of air. Resuspend and acidify the extract with a 0.2 N

solution of sulfuric acid. Wash the solution 2-3 times with chloroform to remove the neutral organic compounds. Make the sample basic with sodium bicarbonate and extract the psychoactive drugs 2-3 times with chloroform. Evaporate the sample to concentrate with a stream of air and use the concentrate for analysis.

D. Basic Drug Extraction

1. Place approximately 1 gram of macerated mushroom sample in a test tube or other suitable container and add 1-2 ml of water. Add 1-2 drops of 10% ammonium hydroxide. Check the pH, if the pH is between 9 and 10 then proceed to the next step; if not then adjust the pH to between 9 and 10. Vortex the sample for approximately 30 seconds. Add 1-2 ml chloroform (or methylene chloride or hexane) and vortex for approximately 30 seconds. Centrifuge the sample. Remove the organic phase and concentrate for identification.

IV. Policy: Below is information regarding confirmation of Tryptamines.

A. The GC/MS can be used to confirm Tryptamines. The recommended procedure for running a sample is as follows:

1. Solvent Extraction

a. Take a small quantity of the extracted sample to be analyzed.

b. Extract out with methanol or suitable solvent based on the analyte characteristics and solubility information.

c. Add a suitable internal standard, n-Tricosane is commonly used as an internal standard. **It may be necessary to use a dilute internal standard**.

2. Analysis

a. The commonly used method on the GC/MS is GEN.m (other methods can be used for expediency following a positive screening test). Opiate.M is recommended for extracted mushroom samples due to the greater potential for interference on GEN.M

b. As a routine,1 µl is injected on the GC/MS

c. Always inject a blank solvent containing the dilute internal standard used in the sample before injecting the unknown sample onto the GC/MS.

d. On occasion the samples may be weak such that the molecular ion of the drug is not detected. Such samples need to be concentrated to be identified. A lager volume of sample may need to be injected on the GC/MS

e. The GC/MS data is in the GC/MS data section of the binder.

3. GC/MS Data of Tryptamine Retention Time/Relative Retention Time

Compound	Retention Time	Relative Retention Time
Bufotenine	8.93	0.90
DET	8.21	0.83
DMT	7.45	0.75
Harmaline	9.53	0.96
Harmine	9.72	0.98
Ibogaine	13.62	1.37

Psilocybin	N/A	N/A
Psilocyn	8.59	0.86
Tryptamine	7.29	0.73

V. Policy: Study Topics for the analyst to review with the Trainer.

A. The trainer may review the study topics with the analyst in a written or oral format. The trainer should document that the review has occurred.

1. Describe the Weber's color test reactions encountered on psilocybe mushrooms.
2. What happens to psilocybin when it is analyzed by GC/MS? What compound(s) is/are detected?
3. Due to limitation of the GCMS to detect psilocybin, can the analyst corroborate the presence of psilocybin in the sample?
4. Describe the mass spectra that is obtained from psilocyn and bufotenine, how can one differentiate between the two compounds using GC/MS analysis?

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/21/2017	**NUMBER:** CS.01 - Overview
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Overview	

I. **The Forensic Services Division exists to provide the public with the highest quality of service in the recognition, collection, preservation, scientific analysis, and interpretation of physical evidence, and its presentation in court. The laboratory does not have a stake in the successful prosecution of a suspect: the laboratory strives to ensure that the probative value of the evidence is understood by all stakeholders in the legal system. The Forensic Services Division provides crime scene processing services to all law enforcement agencies in Contra Costa County. Besides providing full crime scene processing services, laboratory personnel may respond to assist local agencies as a technical adviser, whether for general crime scene advice or to assist at scenes requiring advanced technical expertise such as bloodstain pattern analysis, trajectory analysis, recovery of skeletal remains, etc.**

A. **Requests:** Multiple requests should be coordinated with the crime scene supervisor. Generally, once you begin to process a scene, it must be completed or held until it can be completed. Otherwise, Officer-involved requests take priority. Requests for services can be authorized by the on-call crime scene responder, Detective, Sergeant or above, or Forensic Supervisor or above.

B. **Case types** include, but are not limited to:

1. Homicides and suspicious deaths
2. Officer-involved incidents
3. Non-fatal assaults
4. Kidnappings
5. Arson (to be worked in cooperation with fire department arson inspectors or the State Fire Marshall's Office)
6. Bombings (to be worked with assistance from a bomb squad)
7. Sexual Assaults
8. Vehicle processing
9. Documentation and evidence processing of suspects and/or victims
10. Robberies
11. Burglaries (Laboratory response may depend on the circumstances and/or the value of the stolen property)

C. **Assignment During Business Hours**: The daytime Forensic Supervisor will evaluate and assign scenes requested during business hours.

1. A senior crime scene responder may fulfill this role in their absence.
2. The Crime Scene Response Assessment Form, CSF.09, may assist in evaluating the type of crime scene response.

D. **Assignment After Business Hours**: The on-call crime scene responder is required to be available Monday through Friday between the hours of 5 p.m. and 8 a.m. as well as weekends and holidays. Besides scene response, the primary on-call crime scene responder may be asked for advice from local agencies over the telephone.

1. The laboratory typically will use a two-person crime scene team of a primary crime scene responder and a secondary crime scene responder. Additional personnel may be called to a crime scene as needed.

E. **Crime Scene Vehicles**: The lab has the following crime scene response vehicles:

1. **Major Scene Vehicle:** Stored at FOB, keys available at both Summit and Muir. Contains the most equipment.
2. **Chevy Tahoes:** Basic equipment. Sufficient for most scenes, does not have power tools or removable lights. Keys are available at Summit and Muir and it is the only lab vehicle with Sheriff's Office markings and a light bar.

F. **Radio use** and proper etiquette:

1. Channels and covered areas. Use the west channel for the west side of the county, central for the central valley, and east for all calls in Martinez/Pacheco and east.

2. Listen for the Code 33 tones--a tone every 15-30 seconds. Only priority traffic is allowed while these tones sound. Call dispatch if Code 33 tones are active.
3. Wait for break in traffic before using the radio. Some traffic (e.g. 11-95s) may require intermittent communication.
4. Speak clearly with radio codes. Can call dispatch (925-646-2441) if unable to remember codes.
    1. Advise when logging on and driving to the scene.
    2. Advise when on scene.
    3. Advise when leaving scene, whether going to secondary scene or returning to the lab.
    4. Advise when off-duty and logging off.
        1. Dispatch will contact you if you do not log off.

G. **Expectations:** The crime scene response team is responsible for responding to a crime scene upon request by a law enforcement agency within the laboratory's service area. The role of the team at a crime scene will vary according to the laboratory resources,expertise available to assist the requesting agency, and the nature of the scene. Some requests involve general, comprehensive assistance and others may involve providing focused assistance in a specific area of physical evidence (bloodstain pattern analysis, trajectory analysis, chemical enhancement, etc.).

1. **Primary responder**. The primary's experience should continue to grow to where he or she can document a complex reconstruction. Able to write a clear report detailing observations, conclusions, and interpretations performed at the crime scene. The primary responder is responsible for the following duties at crime scenes:
    a. Assessing the scope of the request
    b. Providing assistance and advising law enforcement personnel on physical evidence
    c. Documentation and collection of all relevant physical evidence
    d. Preparing the crime scene report
2. **Secondary Responder** Photographs, sketching, and other support roles for the primary, including documentation and collection of physical evidence at the direction of the primary responder.
3. **Third Responder** Training role. Able to follow direction from primary or secondary responder.
    a. The role of the crime scene trainee is to provide support to the crime scene team and participate in the crime scene evaluation and processing to the extent their training, experience, and authorization allows.

H. Professional development:

1. Instructing crime scene trainees in crime scene procedures and the evaluation of crime scenes
2. Staying abreast of new developments and current crime scene investigation literature
3. Attending seminars and training in crime scene investigation
4. Researching and developing new crime scene investigation techniques

I. Note, Sheriff's Office of Emergency Services (phone 646-4461 or available through dispatch at 646-2441) has a variety of equipment and resources available to assist at crime scenes, including a search and rescue team, metal detector, cadaver or tracking dogs, portable toilets, and lights.

J. **Quality Assurance**

1. All procedures used must be generally accepted in the forensic field.
2. Any new methods developed must be validated and approved for use by the laboratory prior to use in any crime scene investigation.

K. **Safety**

1. To prevent contamination of personnel and the scene, the appropriate protective equipment should be used (e.g., gloves, Tyvek suits, shoe covers, dust masks, respirators, eye protection, etc.) See CS.08. Standard laboratory safety protocols should be followed in the field.
2. Ensure that the requesting agency understands they are responsible for providing scene security. Crime scene responders should not begin scene processing until security has been provided and should not continue processing the scene if reasonable security is not maintained.
3. Each crime scene responder that has completed safety training, working with or around chemicals, and biological material, is responsible for being aware of the hazards of those materials. The responder is responsible for knowing how to safely handle these hazardous chemicals or materials. Each responder is responsible to wear the appropriate personal protective

equipment and know when it is required. Each responder is responsible for following the safety procedures set forth in the Safety Manual.

4. A crime scene is a possible source of a variety of potentially infectious materials. Refer to the safety manual for the laboratory's safety practices.

5. Evidence collected for transport back to the laboratory should be packaged to maintain its integrity and prevent contamination of personnel or other items. Individual paper bags are often not suitable for packing exhibits of wet blood since it may seep through. Double paper bags or plastic bags may be used temporarily to contain such items while they are in transit to the laboratory.

6. Examination utensils (e.g., forceps and scissors) used in processing shall be placed in an appropriate container for subsequent disinfecting at the laboratory.

7. When using aerosol chemicals such as BlueStar, proper work practice controls and procedures must be taken to avoid chemical exposure. Note: prior to using BlueStar in the field, the requesting agency must be informed of the hazards associated with clean-up as they will assume all liability associated with its use. Chemicals currently on the carcinogen and suspected carcinogen list shall not be used on live persons. When the responder uses such chemicals proper safety precautions shall be taken (i.e., gloves and breathing apparatus will be used).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/21/2017	**NUMBER:** CS.02 - Crime Scene Management
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Procedure	**SUBJECT:** Crime Scene Management	

I. The initial actions taken by the Crime Scene Responder prior to and upon arrival at the scene are paramount to understanding the nature of the scene and the appropriate collection techniques. The primary scene responder is responsible for all forensic activity at the crime scene. The on-call supervisor will be notified prior to crime scene response.

A. **Initial Response Request**

1. Document the time and date of the request for scene processing and who made the request.
2. Document the information provided regarding the scene and the source of the information. This information should include the following:
    a. Location of the scene.
    b. Any known injuries to any individuals.
    c. Condition of the crime scene (e.g. indoor vs. outdoor, lighting, weather conditions, etc.).
    d. General type of evidence (shooting, stabbing, sexual assault, etc.).
3. Ascertain whether a search warrant or consent has been obtained or is needed.
4. Provide the requesting agency with an estimated time of arrival.
5. Attempt to determine if any specialized services or equipment may be required.
6. Obtain contact information for an investigator at the scene.
7. Notify the on-call supervisor of all call outs.
8. Notify the Officer of the Day of all non-Sheriff's Office protocol-invoked call-outs. This will typically be accomplished via a request to Dispatch to notify the Officer of the Day.

B. **Timely Response**

1. The responders on-call shall work together to determine how to respond as quickly as possible, except in circumstances where a search warrant has not been obtained or the scene is not secure.
    a. Each responder is responsible for having a camera kit, note pad, and flashlight ready for expedited response.
    b. The responder with the shortest response time, regardless if they are primary or secondary, shall respond solo to represent the laboratory at the scene and begin the documentation process.
        i. Home garaging of laboratory vehicles is approved subject to SO policy 1.07.42.
    c. The initial responder will communicate with the other responders to request additional equipment needed for the scene (e.g. Leica scanner).

C. **Primary Responder Responsibilities**

1. Upon arrival at the scene, the primary responder should contact the Lead Investigator.
2. On scene, the primary is responsible to:
    a. Coordinate all forensic activity to include the collection and preservation of any evidence.
    b. If the primary responder is functioning as a technical advisor, they are responsible for general advice and documentation of the complex activity. The primary responder should direct the client agency's personnel to collect evidence with the complex activity.

c. Communicate the need for any additional resources to the on-call supervisor.

d. Notify the on-call supervisor of all follow-up requests for the following business day and of any issues or concerns about the scene or evidence. Issues or concerns may include unusual circumstances, the inability to provide a requested service, the presence of outside experts, equipment failure, etc.

e. Notify the Lead Investigator when the team is ready to depart the scene.

3. During follow-up activities, the primary responder will coordinate the disposition of all evidence collected with the Lead Investigator.

4. The team will be responsible for replacing any consumables that have been used at the crime scene and ensuring that the Crime Scene vehicle is restocked and ready for the next call-out.

5. The evidence shall be logged into LIMS in a timely manner, but should not exceed 7 days absent exigent circumstances.

6. The primary responder will advise the on-call supervisor of any ancillary scenes (e.g. vehicles or autopsies).

7. As appropriate, the primary responder will meet with the crime scene supervisor to review the call-out.

8. The Laboratory Director shall be kept informed via the chain of command of any concerns or issues involving the processing of evidence or relationship with our client agencies.

D. **Preliminary Scene Information and Assessing the Crime Scene**

1. Document the time of arrival at the scene and personnel present.

2. Ensure that the scene has been secured appropriately.

3. Establish boundaries encompassing all potential areas of interest.

4. If the agency has not started an entry and exit log (this is the responsibility of the requesting agency), advise the agency to start one and note the advisement.

5. Document all pertinent information regarding the scene investigation and the source of the information (see CSF.01 and).

6. Establish a path of entry to be used by all personnel.

7. Conduct a walk through of the scene to identify and protect potential transitory evidence.

8. Determine level of personal protective equipment required. Personnel allowed within the scene should have specific duties and should be kept to a minimum.

9. Note any specific requests from investigators.

10. Determine if the Leica scanner should be used.

E. **Crime Scene Searches**

1. A systematic search needs to be conducted in order to locate evidence. While the information provided by the investigator may assist in the search, that information is almost never complete and the scene responder should stay alert for all types of evidence.

2. All evidence will be properly collected. When collection is not possible or warranted, the reason should be documented appropriately. Refer to the specific steps listed in each procedure

F. **Release of the Scene/Final Survey**

1. Re-contact the lead investigator to discuss your findings and describe what evidence was collected.

2. Perform a final walk-through of the scene with the lead investigator (if possible) and address any additional requests.

3. Ensure that all the evidence is accounted for and determine its final disposition.

4. Retrieve all equipment and materials generated during the investigation.

5. Consider the need for additional photographs to show the final condition of the scene (e.g. damage to walls after bullet recovery, after a vehicle is removed).

6. Document the time of departure from the scene.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 05/23/2019	**NUMBER:** CS.03 - Crime Scene Documentation and Evidence Collection
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: General Information	**SUBJECT:** Crime Scene Documentation and Evidence Collection	

I. All crime scenes will be processed with the highest quality of service in the recognition, collection, preservation, and interpretation of evidence.

A. **Photography** records the appearance and condition of the crime scene and physical evidence at the time of processing. A series of photographs will be taken to document the crime scene, unless the crime scene responder is functioning in a technical adviser role. The entire crime scene will be photographed prior to moving or collecting any evidence except under exigent circumstances (example: significant rain or a crowd threatening to breach the perimeter). The reason for and method of any movement or collection of evidence done prior to photographs will be clearly recorded in the notes. The series of photographs will include overall, medium, and close-up photographs. Generally, photographs should be taken in a progressive order as one would walk through the scene. Although sometimes unavoidable, try to avoid taking sequential photographs of completely different areas or unrelated items as much as possible.

1. **Overall photographs** show the overall condition and layout of the crime scene. The following types of overall photographs should be taken:
    a. Multiple angles to capture the layout of the scene. Include some common features or landmarks between each photograph to allow for overlapping photographs later, if needed.
    b. Landmarks (house numbers, street signs, telephone poles, etc.).
    c. Approaches, entrances, and exits to the scene.
    d. Condition of all associated vehicles.
    e. Evidence overalls, both with and without cones. Note, when the evidence is marked with cones prior to arrival, this may not be possible.
    f. Surrounding areas.
    g. The body.
    h. Area beneath the body **<u>after</u>** the Coroner's Deputy removes the body.
2. **Medium range photographs** do the same in more detail and establish the relationship between different objects. Medium range photographs should include:
    a. Landmarks necessary for orientation
    b. Perspective to show the relationship between items. This is often done by taking pictures perpendicular to each other.
3. **Close-up photographs** capture the detail of evidence, injuries, or other important features. Close-up photographs should include:
    a. The evidence.
    b. The evidence, cone, or other identifying marker and a scale.
    c. If taking a close-up photograph out of order, take a medium-range orientation photograph beforehand.
4. Tripods allow for proper photography of impression evidence and are required when slow shutter speeds or timed exposures are necessary (e.g. laser trajectory analysis, "painting with light", ambient light photography. etc.).
5. If a crowd is present, photographs of the crowd and people in it may be useful.
6. All photographs require proper lighting techniques and camera settings.

B. **Sketches:** Crime scene sketches serve to establish spatial relationships, provide an overall scene view, assist with preparation of demonstrative aides for court, and may serve as an investigative aide during interviews. In addition, sketches can clarify items of evidence in a crime scene without extraneous items such as furniture, piles of debris, etc. Determine the best perspective and method of sketching the scene. Consider items that should be included and

excluded. While a sketch made at the scene is usually drawn roughly and not to scale, the crime scene responder should attempt to make the sketch proportional to the correct spatial relationships depicted between the various items of evidence. Multiple sketches may be needed depending on the circumstances:

1. **Overview Sketch**: A sketch on one horizontal plane that shows the scene as if viewed from above. This type of sketch is used to record a "birds-eye view" of a building floor plan or exterior scene.
2. **Elevation View**: A sketch on one vertical plane that shows the scene as viewed from the side. This type of sketch depicts an orthogonal view of vertical surfaces such as walls, doors, etc., and may be used to show relative heights and positions of evidence or structures. It can be used to record vertical measurements of evidence on various exterior or interior surfaces at the scene, such as a bloodstain pattern or a bullet hole.
3. **Sectional View**: This type of sketch may be used to show details of a specific area in a scene or larger objects. Examples - the inside of an automobile or a cut-away interior view of a structure.
4. **Exploded View (Cross-Projection) Sketch**: This type of sketch is a combination of an overview and elevation sketch. It depicts the horizontal and vertical planes of a room or structure as they would appear laid out flat on the same page, with the common edges shown to allow one sketch to be easily related to the other. This may be useful for trajectories or bloodstain patterns that extend between a wall and the ceiling.
5. Pertinent measurements may be placed on the sketch or recorded on a separate page with reference points clearly defined. Example: distance between a weapon and the victim's hand.
6. The following is a list of items that must be included in a rough sketch:
    a. Compass orientation
    b. Items of evidence/markers
    c. Title describing sketch (e.g. north bedroom)
    d. "Not to scale"
    e. Case number, date, initials
    f. Measurements from reference points to items of evidence/marker may be included on the sketch or on a separate page
    g. Additional objects that enhance evidence location (e.g., furniture, geographical features, roads, etc.)
    h. Permanent reference points (if appropriate)

C. **Measurements:** Generally, all items of evidence should be measured along with overall measurements to document the layout of the scene. Measurements record the spatial relationships of objects and, when necessary, enable scale reproductions. The following measurement techniques (or a combination of techniques) may be used to record measurements, depending on the layout of the scene and availability of convenient landmarks:

1. **Rectangular coordination** is the most common form of measurement. Two measurements at right angles are made from fixed objects, such as walls, to the item. Take measurements from perpendicular lines. Example: 5 feet west of the east bedroom wall and 2 feet south of the north bedroom wall. Example: In intersections, the projection (extension) of the curblines allows for continued use of this system.
2. **Triangulation**: Taking a measurement from two fixed points for each item. Measurements are taken between two fixed objects and then from the fixed objects to the item of evidence, forming a triangle. Record the distance between the two points as well as the relative position of the measured item. Example: item #1 is 5 feet from point A, 6 feet from point B, and north of the line AB.
3. **Baseline method**: Extend a line between two fixed points and record the rectangular coordinates. Lay a tape down so that it crosses the entire room or area to be measured. Establish a reference point at each end of the tape, designated by a number or letter. The tape which runs between the two reference points becomes the baseline for all other measurements in that area. Measurements are then made from the baseline to the item of evidence. Example: the perpendicular distance from the line to each item and the distance from one of the fixed points to the point on the line corresponding to the item. Compass directions or +/- distances can be used to denote which side of the baseline a particular item of evidence was measured from.
4. **Polar coordinates**: Measure both the distance and direction (angle) that an object is from a single reference point. Example: 42 feet from the north edge of the telephone pole in a direction of 15 degrees east.

D. **General Note Taking:** Notes serve to record observations made during the processing of the crime scene and are recorded in addition to photographs. The crime scene responder will record observations, not conclusions. Multiple observations can lead to a conclusion. Notes will reflect:

1. A narrative about the crime (who, what, where, when, why, how).
2. Observations based on the senses of touch, sound, sight, and smell. **Example**: pertinent weather conditions.

3. Observations not documented by photograph or sketch. **Example**: movement of items by first responders.
4. Areas of the scene through which first responders or emergency services personnel may have traveled.
5. Altered conditions such as twilight to darkness.
6. Absence of items searched for but not found. **Examples**: weapons, personal items such as a wallet.
7. Items seemingly out of place. **Examples**: a knife on living room floor or a hammer in bathroom.
8. Transient objects. **Examples**: ice cubes in a glass on nightstand or a warm sauce pan while stove is off.
9. Items found at a scene, both those collected (recorded in the evidence inventory) and those not collected (e.g. scuff marks in soil).
10. Location and condition of items. **Examples**: clothes and magazines strewn about living room, neat living room with magazines stacked on coffee table, the trunk contained jumper cables, a FAX machine, a backpack containing a digital scale, $842 in U.S. Currency, and mail addressed to Peter Gibbons.
11. Missing items. **Example**: dusty coffee table with clean rectangular void.
12. Physical evidence. **Examples**: anything tangible that may be related to the commission of a crime, a cartridge case headstamped “R-P 40 S&W”, an off-white stain on a piece of tissue paper, etc.
13. Reference times. **Example**: time of arrival, time of departure, etc.

E. **Body Processing:** A complete set of photographs should be taken from all sides of the body with overlapping photographs from head to toe. A set of notes describing the appearance, position, and condition of the body will be taken. Describe the location and nature of all wounds. Take close-up photographs of the hands, including the condition of the fingernails. Note any decomposition.

1. Do not disturb the clothing or personal effects without permission from the Coroner’s Office.
2. Take tape lifts if appropriate.
3. Collect a GSR kit if appropriate. If trace evidence from the hands (GSR, etc.) will be collected at the autopsy rather than the scene, bag the hands prior to the body being transported to the morgue.
4. Photograph any ligatures in place.
5. When the Coroner’s deputy arrives to remove the body, photograph the other side of the body (e.g. the back if the victim is lying on his stomach).
6. After the body is removed, photograph the area that was beneath the body and the search the area for evidence.

F. **Subject (live victim or suspect) Processing:** An investigator will often request photographs and collection of a subject’s clothing. Take notes of the subject’s clothing and any injuries. Take a series of photographs to document all four sides, including:

1. Overall (head to toe) view.
2. Facial views, all four sides.
3. Front and back of hands.
4. Wounds (visible or claimed), tattoos, scars, and any additional pertinent marks.
5. Condition of clothing, blood, dirt, or other contaminants.
6. All bloodstains on clothing, skin, hair, or any other surface associated with the suspect.
7. Collect fingernail clippings if appropriate.
8. Collect a buccal swab if appropriate.
9. Have the subject stand on a piece of butcher paper and remove their clothes.
    a. Collect the clothing and the paper (fold up paper to preserve any trace evidence that may have been shed when the subject disrobed).
10. After collecting the subject’s clothing, repeat the same series of photographs.
11. Photographs will be taken orthogonally, both with and without a scale, depending upon the type of evidence being documented.
12. Ask the subject if he/she is injured anywhere and photograph any areas that are identified

G. **Vehicle Processing:** The same general documentation procedures apply to processing a vehicle. Other areas to include in the photographs:

1. License plates
2. VIN
3. Decals
4. Seats and floorboards
5. Headliner
6. Interior of glove box and center console
7. Position of controls (A/C, radio, etc.)
8. Interior of trunk
9. Interior of engine compartment, if appropriate

II. Specialized Instrumentation may be needed to locate, identify, or document evidence.

A. **Alternative Light Source (ALS)**

1. The ALS uses barrier filters to isolate the visible wavelengths of light. Darken the area and systematically vary the wavelength and filter to observe fluorescence or absorption.

B. **Leica Laser Scanner or equivalent**

1. The Leica scanner employs a 3D laser scanner and a panoramic digital camera to map the area of interest. This produces a TruView™ of the scene which allows subsequent virtual navigation of the scene and the ability to measure and annotate items.
2. The crime scene responder has the discretion on whether or not to use the Leica scanner at the scene, unless the agency requests it.
3. If deployed, the raw scanner data must be burned to disc, maintained, and communicated to the agency in the crime scene report.
    a. If any TruViews™ are created, these too should be burned to disc and maintained in the laboratory.
    b. If the TruView™ is created before the crime scene report is completed, the raw scanner data and the TruView™ may be burned onto a single disc.
4. Refer to INSCS.05, INSCS.06, and INSCS.07 for instructions on using the Leica scanner.

III. Evidence Collection: It is important that items of evidence be collected, handled, and stored in a way that will ensure their integrity. General guidelines include:

A. Protect yourself and others.

B. Consider all types of forensic evidence.

C. Begin the chain of custody.

D. Document location with notes, sketches, and photographs.

E. Mark evidence and packaging with a case identifier, initials, and date.

F. Package all evidence separately.

G. Allow wet biological stains to air-dry.

H. Obtain standards if needed for a comparison of evidence.

I. Use packaging that is appropriate for the specific type of evidence such as paper bags, envelopes, plastic bags, cardboard boxes, tamper-proof sealing, etc.

J. A proper seal ensures that evidence has not been accessed, altered, compromised, or lost during storage. Initial and date across the tape seal.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.04 - General Photography
	RELATED ORDERS: FSD.42.01,	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** General Photography	

I. Photography is one of the single best methods of crime scene and evidence documentation. Photographs taken at crime scenes are commonly used in court proceedings, for analysis, and for later reconstruction. This type of evidence memorializes the scene as it was when the incident occurred and provides a graphical illustration to the Judges and Jurors who will ultimately decide the fate of an accused. The ultimate objectives of crime scene photography is its intended eventual use as evidence in a criminal proceeding, for analysis, or to aid in the re-construction of a particular crime or law enforcement related event. The value of proper and professional crime scene and evidence photography cannot be overemphasized.

A. **Introduction**

1. Crime scene and evidence photography is a technical and structured process that requires a series of overall, intermediate, and close-up photographs. The proper compositions in crime scene photography are designed to put the scene in context with the evidence and the evidence in context with the scene. This systematic approach is essential for documentation of evidence related to the incident and the scene through photography.

B. **Equipment**

1. Digital Single Lens Reflex (SLR) camera.
2. Batteries (alkaline or lithium).
3. Recording media (memory cards).
4. Flash units.
5. Camera accessories, including cords, filters, slave units, and lenses.
6. Tripod.

C. **Operation of the Camera**

1. Refer to digital camera instruction manual for operation procedures: Canon 20D, Canon 40D, Canon 50D, and Canon 60D.
2. Images will be taken with the camera set at the highest resolution setting.
3. Only a single case will be shot on a single media at one time. If the images from one case have not been downloaded, a second “fresh” media must be employed for a second case.
4. Each photograph should be viewed while still on the camera to ensure the chosen settings were adequate. However, images should not be deleted. If an image is unacceptable, additional images should be taken. The images will be uploaded to Veripic (see QA.21) or burned onto optical disc.
5. The proper lens with appropriate aperture, shutter speed, ISO, and flash settings should be used for each photograph.
    a. The correct exposure can be accomplished by using different combinations of settings.
6. Using a flash is an essential skill in crime scene photography. Many scenes are during night and use of fill flash to illuminate shadows is required for many photos

D. **Photography as Evidence**

1. Certain types of impression evidence, including tire tracks, footwear impressions, bite marks, and fingerprint ridge detail, are examples of impression evidence that may be treated as evidence according to FSD.42.01.
    a. The salient requirements include the use of a scale, a lossless format, and burning the images to disc, entering the disc in LIMS, and treating the disc as evidence.

b. Refer to FSD.42.01 for all requirements.

E. **Photography as Documentation**

1. All the photographs taken at a crime scene are not considered to be "evidence" by the Forensic Services Division. However, their importance can not be overstated.

   a. There are countless examples of types of evidence that are best collected through use of photography. Photography, may in fact at times, be the only method of collection of certain types of evidence. Items encountered may be too fragile or difficult to physically collect without the risk of damage or destruction.

   b. Examples of these items may include an injury on human skin, tool impression evidence left at the scene of a crime, skid marks and road damage left on the pavement at the scene of a vehicular homicide, transient evidence such as ice cubes in a glass and bloodstain patterns.

2. Photographs become an important part of the investigation, and could be potentially valuable for the prosecution or defense during a criminal proceeding, even if the images are not actually used in court.

3. Photographs collected during a criminal investigation must be handled properly in order for them to maintain their value and integrity.

4. Refer to policy FSD.42.01 for specific information on handling, storage and retention of crime scene photographs.

F. **General Photography Procedures**

1. Prior to beginning photography of a scene, the photographer should prepare an identifier that lists certain relevant information about the case.

   a. The relevant information includes the case number, agency number, crime scene responder information and date.

   b. The identifier can be a pre-printed form, a portion of the Field Services Information Form, or just a piece of paper with the requisite information on it.

   c. The media in which the information is written is not as important as the information itself.

   d. When working an investigation with multiple locations or secondary scenes, a new identifier should be completed reflecting the change in location prior to beginning photography.

   e. When shooting with a digital camera, most of the camera settings can be acquired post capture from the cameras metadata. An exception to this is when any filters or alternative light sources are integrated. When using a technique or device during capture that will not be recorded in the camera's metadata, that information should be reflected in the case record.

2. **Perspectives and Compositions**

   a. In order to capture a complete and accurate documentation of the crime, photographs of the scene and all evidence must be linked to one another in a succinct and logical manner.

   b. Photographs taken from crime scenes must make sense to the individuals who will eventually use them in determining the significance of the evidence.

   c. Nothing in the crime scene should be moved, altered, or collected until it has been photographed, absent exigent circumstances.

   d. There are three standard perspectives that must be included during crime scene photography: overall, intermediate and close-up. Each perspective is interdependent upon the other to do its job in telling the entire crime related story. In order for this process to work seamlessly, the photographer must integrate the proper techniques during each perspective. The photographer must not skip a step between overall and close-up photography, nor should the photographer skip the overall or close-up perspectives because they feel that they have accomplished those objectives in documenting an item of evidence during another perspective.

3. **Overall photography** - In order for the significance of any item of evidence to make sense to the viewer it must be logically related to the scene. In order for the location and conditions of the scene to make sense to the viewer it too must be related logically. Overall photography is the perspective that relates the entire scene to its physical surroundings.

   a. **Perspective**- The correct perspective is full standing height, or a natural perspective. Elevated, kneeling, or prone perspectives should be supplementary to the normal standing views.

b. **Exterior overalls**- The photographer should properly and completely document the entire exterior of the location.

   i. Overall exterior views should start with landmarks that put the scene in geographical perspective to the viewer. Example: street signs, intersections, and house numbers.

c. **Lens and angle selection**- Photographs of the exterior of residences and buildings should be taken with a normal perspective lens, and should be taken at right angles to one specific side of the structure at a time.

   i. Shooting from a corner of a structure, or a diagonal view, can cause a distorted perspective and should supplement the standard right angle, parallel views.

d. **Interior overalls**- Complete interior overall views should be captured.

e. **Four corner photography**- In rooms that are square, somewhat square, or rectangular the photographer can shoot at opposing corners from an opposing corner. When using a wide angle lens the overall interior photography may be able to be completed in as little as four shots. When the room contains closed doors and closets, the photographer should document the room in its condition of discovery, and then follow up with a sequence of shots with the closets and closed doors in the open position to show the items contained within the closets.

f. **Parallel overall interior photography**- When the physical size of the room is of importance to the type of crime being investigated, the type of photography to accurately illustrate the scene is also of importance. When contrasted with other photographic techniques, photographing interior walls with the camera's film plane parallel to the wall being photographed, while using a normal perspective lens, is the best approach. This technique eliminates spatial distortions caused by wider angle lenses, and any distortion caused by off angle or diagonal photography. This method also ensures proper and even illumination when using a flash to photograph the interior of a scene, and ensures a consistent depth of field. Although more images may be necessary to completely document the scene, one must always remember that film is cheap and digital images are even cheaper. As with the four corner photography technique, when the room contains closed doors and closets, the photographer should document the room in its condition of discovery, and then follow up with a sequence of shots with the closets and closed doors in the open position to show the items contained within the closets. When photographing closets, the photographer should position the film plane of the camera parallel to the wall containing the closet or closed door. An off camera or remote flash technique may be necessary to properly illuminate larger closets.

g. **Victim/Officer/Suspect's perspective**- In many cases it may be helpful to obtain photographs of an individual's perspective as they stood at a particular place.

4. **Intermediate/midrange photography**- The perspective between overall and close-up that is used to relate items of evidence to a fixed feature within a scene. Example: a handgun and its relationship to the front door.

5. **Close-up Photography**- The close-up perspective is the final perspective necessary in completing the crime related photographic story. These views are very specific and their compositions distinctively isolated to one item of evidence at a time.

   a. Each item of evidence must be photographed with a close-up perpendicular perspective.

   b. The item of evidence must fill the frame as much as possible.

   c. Lens selection is an important element for consideration during close-up photography.

   d. All items of evidence should be photographed without and with a scale.

      i. The scale should be situated along side of the evidence at the same focal plane as the actual object or impression.

      ii. Disposable adhesive scales are convenient for vertical surfaces.

   e. After an item of evidence is photographed "in place", both without and with a scale, it may be moved from its original location for additional photography.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 10/22/2019	**NUMBER:** CS.05 - Autopsy
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Autopsy	

I. The Forensic Pathologist determines which examinations are to be conducted at the autopsy and the crime scene responder's function is to document with photographs and collect evidence. The following procedures should be followed for most autopsies, though may not be applicable to all cases.

A. **A series of photographs will be taken to document the deceased.**

1. Include a photograph of the Coroner’s tag with identifying case information.

B. **Clothed and unwashed:**

1. Complete coverage of body surface from above, both sides, and back.
2. Follow overall photography with medium range photographs that cover all sides of the body.
3. Take close-up photography on any areas that appear significant (using a scale).
4. Photograph both sides of the hands.
5. Photographs of any visible injuries, pertinent marks, scars, and tattoos - with and without a scale as appropriate.
6. Collect any trace evidence.
7. Photograph any ligatures/bindings and preserve knots when removing.
    a. NOTE: the Pathologist will want to see the ligatures in place.
8. Examine the area around any gunshot wounds for gunpowder particles.
    a. Take multiple perpendicular photographs.
    b. Consider using an acetate sheet to trace any pattern present.
    c. Collect a sample of any gunpowder particles.
9. Collect fingernail clippings. If nails are too short to clip, collect swabs from around nail ends on fingertips. Individual nail end swabs may be appropriate.
10. If a sexual assault is a possibility, consider using an alternative light source (ALS) to examine the body.
11. Collect tape lifts if appropriate.
12. Collect clothing, placing each item in its own container. Cut clothing off if appropriate.
13. Collect hair standards if appropriate.

C. **Unclothed and unwashed:**

1. Photograph the same series of views taken prior to removing the clothing.
2. Photographs of any injuries, marks, and tattoos that were not previously visible, with a scale.
3. If a sexual assault is a possibility, consider taking swabs of the nipples and other areas that may have been licked or touched by the suspect.
4. Collect pubic hair, arm hair, leg hair, and other standards as appropriate.

D. **Unclothed and washed:**

1. Photograph the same series of views taken prior to removing the clothing.
2. Photographs of both sides of the hands.
3. Photographs of injuries, marks, and tattoos, with a scale

4. Photographs at the request of the Pathologist or Detective.

E. **Under the Pathologist's direction:**

1. Any photographs that the Pathologist requests during examination of the body or during the Pathologist's examination of the internal organs.
2. Photographs to document any trajectories as determined by the Pathologist.
    a. Photograph each probe from at least two mutually perpendicular angles as well as down the axis of the probe.
    b. Consider photographing each probe from a head-to-feet view and from side-of-body view.
    c. Consider photographing probe with body in purported position at time of shooting.
3. Collect any bullets as the Pathologist removes them from the body. If trace evidence is not a concern on the bullet, rinse the bullet before packaging.

F. **Additional considerations**:

1. If X-Rays were taken of the deceased, take photographs of the radiographs showing the location and condition of the bullets inside the body. Turn off the flash when taking these photographs.
2. If the deceased was dismembered, consider obtaining cut ends of bones or casts of the cut ends of bones.
3. If the victim was stabbed, ask for the Pathologist's opinion if the blade was single or double edged, minimum blade width, and minimum blade length. This information is only to be recorded in the notes, not the report as it may be a preliminary opinion by the Pathologist.
4. Consider collecting a rib bone as a DNA reference standard.
5. If any teeth were broken, consider casting fragmented ends if the teeth can not be collected.
6. Contact the Identification Unit (957-7101) to obtain major case prints of the deceased.

G. **Casts of ridge detail**

1. Crime scene responders may need to obtain casts and photographs of fingerprint ridge detail if the Identification Unit is unable to. Generally, casting fingerprints is for mummified remains.
2. Accutrans will be used to cast fingerprints. Accutrans is similar to Forensic-Sil in its use. White Accutrans is preferred.
    a. Identify and document the fingers that will be cast.
    b. Apply a light coating of fingerprint powder.
    c. Cast one finger at a time.
        i. Load the Accutrans cartridge into the dispenser and place the mixing tip onto the cartridge opening.
        ii. Exude and discard the Accutrans until the Accutrans is evenly mixed at the tip.
        iii. Steadily apply the casting material to the finger.
        iv. The Accutrans will need approximately 3-6 minutes to set.
        v. Remove the Accutrans from the finger. Package and label each cast.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 08/17/2016	**NUMBER:** CS.06 - Vehicle Processing
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Debbie McKillop & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Vehicle Processing	

I. During a criminal investigation, the analyst may be called upon to process a vehicle for physical evidence relating to a crime. This vehicle may or may not be the primary location of the crime, but should be treated as a crime scene and given the same attention as given to a primary scene. The evidence inside a vehicle may yield valuable information to solving the investigation or identifying suspects involved. The type of evidence that should be searched for in a vehicle will be dependent on the type of crime being investigated. It is important for the analyst to establish a specific and organized approach to processing a vehicle. Detailed notes and photographs should be gathered to identify specific elements and information of both the scene and the vehicle.

A. **Procedure**

1. Confirm that consent has been given to search from the registered owner or a search warrant has been obtained for the vehicle. If legal access cannot be immediately granted, the vehicle may be towed and held until it can be processed.
    a. Note, the laboratory is not responsible for towing vehicles.
    b. The laboratory will not respond for the sole purpose of processing a vehicle after business hours unless authorized by the crime scene supervisor, Manager, or Chief.
2. The vehicle should be secured when possible (windows up and doors locked) prior to towing. When possible, the vehicle should be placed inside a garage.
3. The analyst should develop a systematic approach to processing a vehicle. The types of evidence found in a vehicle will be dependent on the types of crimes being investigated.
4. Document the vehicle as it is found. Note the make, model, color, license plate number, state of issue, vehicle identification number (VIN), and year of registration.
5. In some cases, the specific location of the vehicle may be of important evidentiary value. In these cases, specific measurements to place the vehicle at the scene should be collected. To properly place a vehicle at a specific location, two sets of measurements, a north/south and an east/west measurement, should be collected from at least two (2) points on the vehicle. These measurements should be taken from two (2) fixed and permanent areas of reference at the scene, a north/south and an east/west reference. A ground height to the vehicle at these points should also be taken.
6. Any transient details regarding the condition of the vehicle should be noted. For example: hood - warm/cool, windows - down/up, exterior - wet/dry/condensation, odors - present in the vehicle, steering column - intact/damaged, ignition switch - intact/damaged, lights - on/off, door - locked/unlocked, mileage and gas gauge, seat position, position of the gear shift, tire conditions etc.

B. **DAMAGE:** Document any interior and exterior damage to the vehicle.

1. If applicable, any exterior damage to the vehicle should be examined for potential evidence of paint transfer. If evidence of paint transfer is noted, a paint transfer sample should be collected. If a paint sample is collected a paint standard will also need to be collected from the vehicle. This paint standard should be collected from an undamaged area in the same proximity as the area where the paint sample was collected. These items should each be collected with a steel dissecting scalpel and packaged separately.
2. If applicable, glass standards should be collected from all broken glass on the vehicle.
3. Glass or plastic from broken headlights or taillights should be collected and preserved for possible physical matches to broken glass collected at any associated scenes and for examination of the filament to determine whether the light was on or off before the impact.
4. Other physical evidence specific to the criminal act being investigated should also be searched for and recovered.

5. In cases of burned vehicles, collection of samples may be necessary to determine if any accelerants were use during the commission of the crime. These samples should be collected in an appropriately sized arson can and sealed immediately at the scene. Depending on the condition of the vehicle and the localization of the fire damage, collection of more than one sample may be necessary.

C. **PHOTOGRAPHY:** Photographs should be taken of the vehicle to not only place the vehicle at the scene, but also to note the condition and direction of the vehicle.

1. The vehicle should be photographed from all four directions and all four corners.
2. Photographs should be taken of the license plate and, when appropriate, any decals or custom accessories on the vehicle. Close-up photographs should be taken of any damage to the vehicle.
3. When photographing multiple bullet holes in a vehicle, it may be necessary to document each bullet hole, either with removable stickers or other identifiers, so that close-up photographs of individual bullet holes can be distinguished from one another and so that they can be placed by location on the vehicle.
4. When using trajectory rods or wooden dowels, photographs should be taken prior to insertion of the rods and again with the rods in place.
5. Bullet holes in the vehicle should be measured (See CS.09 for details on trajectory interpretation).
6. The interior of the vehicle should be photographed. Photograph each interior door. Photographs should be taken of the driver's side and the passenger side, the ignition area, the dashboard display, the glove box, the rear seat, the trunk area, and underneath the hood if it is related to the crime.

D. **EVIDENCE COLLECTION:** An organized and systematic approach should be used to search the vehicle. The vehicle may be divided into sections, similar to an organized zone search pattern, to ensure that all areas of the vehicle are searched. The analyst needs to practice on the side of caution when searching underneath seats or in difficult to see areas. A small mirror and a flashlight will allow the analyst to search these areas without the risk of exposure to potential hazards.

1. The analyst should collect the most fragile evidence prior to searching the entire vehicle. Evidence becomes fragile by the passing of time, exposure to the elements or other environmental factors, movement, and improper handling.
2. Examination of the interior of the vehicle, when exterior bullet holes are present, will yield potential areas to be examined for spent bullets or fragments.
3. Any blood located inside of the vehicle should be collected when applicable. Removal of the entire sample would be ideal for blood collection. If this is not feasible, a swab of blood sample should be collected.
4. In sexual assault investigations, if the crime occurred inside of the vehicle, the interior of the vehicle may need to be examined with an alternate light source or chemical screening for the presence acid phosphatase (cross reference to 7.3 Biological Evidence) to help detect any biological evidence deposited. Any drinking containers, such as bottles or straws, may also be collected for potential DNA analysis and latent prints.
5. Burglary tools, weapons, drugs, paperwork, or stolen property specific to the crime should be collected.
6. Depending on the type of crime being investigated and the circumstances in which the vehicle was involved, the collection of carpet and upholstery standards may be necessary.

E. **LATENT PRINT PROCESSING**: After the entire vehicle has been thoroughly searched and documented, one of the final phases in vehicle processing is the processing for latent fingerprints, if applicable.

1. Exterior of the vehicle
    a. Use a high intensity light to search for any obvious ridge details on the doors, the trunk, and the hood area.
    b. Processing an approximate 6" wide area around the sides, hood, trunk, and fuel door, concentrating on areas that would be touched in general usage. In addition, roof support posts and the exterior of windows should also be printed.
2. Interior of the vehicle
    a. Generally, the rear view mirror, door handles, seat belt buckles, windows, gearshift, vanity mirrors, and the stereo face should be printed.
    b. Any item located inside the vehicle that may have been handled and possess print evidence should also be processed for latent prints.
    c. Note: The crime scene supervisor must approve the use of cyanoacrylate ester fuming and dye staining prior to use.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 5/14/2015	**NUMBER:** CS.07 - Latent Prints
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Latent Prints	

I. Impressions of fingerprints, known as latent prints, may be left behind on a surface by the natural secretions of sweat from the eccrine glands that are present in friction ridge skin, or by other contaminants present on the skin. Latent fingerprints, which are left when an object is touched or handled, are not always visible but can be developed using a variety of methods. A fingerprint in its narrow sense is an impression left by the friction ridges of a human finger. In a wider use of the term, fingerprints are the traces of an impression from the friction ridges of any part of the palmar side of the hand or the sole of the foot. The ridge formations associated with the friction skin develop during the fourth month of gestation and are permanent until decomposition at death.

A. **Introduction:** The most common form of latent print processing in the field is powder processing or dusting for latent prints. Other processing methods, including amido black, may be used depending upon the circumstances of a particular case and the expertise of the analyst.

1. Collect trace evidence prior to any fingerprint processing.
2. Depending on the circumstances of the case, it may be important to collect biological evidence prior to fingerprinting. A determination should be made which type of evidence is more useful to the case. Discuss this decision with the assigned detectives as appropriate Example: if a knife was used to kill the victim and the knife handle is void of blood, processing the knife for latent fingerprints may be more important than determining whose blood is on the knife's blade.

B. **Visual Examination**

1. Examine the surface of an item for visible prints, trace evidence, and biological evidence before processing it for fingerprints.
2. Any visible fingerprints should be photographed with and without a scale prior to any further processing, as that may destroy a visible fingerprint.
    a. If close-up pictures are taken for comparison purposes, use the RAW format. See FSD.42.01.
    b. When burning the RAW image to CD, include a sufficient number of overall photographs to give a latent print examiner the orientation of the latent print at the crime scene or prepare a written photograph log that clearly describes the location and orientation of the latent print.
    c. If there are multiple latent prints documented via photograph, include both overall photographs on the CD and a written photograph log describing the locations of the latent prints.

C. **Methods to use on non-porous surfaces (glass, metal, plastic, finished wood, etc.)**

1. As a general rule, a powder should be used which will contrast with the color of the surface. Many times additional lifts can be made from prints and quite often the later lifts are superior in quality to the first lift. Rubber lifts can be utilized for making lifts on curved surfaces. Faint bloody prints on non-porous surfaces like glass can often be enhanced by powdering or with amido black. These prints should be photographed prior to dusting and chemical processing. Don't attempt any processing of bloody prints until they are completely dry and have been photographed.
2. Never dip the brush directly into the original jar. Use a separate reservoir of powder, discarding any leftover powder and its container. If DNA evidence is or might be a consideration in the case, use a new brush(es) so as to avoid possible contamination, unless swabbing for DNA material is completed first.
3. **Non-magnetic powders**
    a. Equipment
        i. Latent Print Powders
        ii. Light source
        iii. Camera equipment

iv. Nylon/fiberglass brush

v. Fingerprint tape

vi. Glossy fingerprint card

b. A high intensity light is invaluable in assisting in the location and photography of latent prints on certain surfaces. Side lighting the area to be printed could reveal prints that otherwise might have been over looked. Examination of evidence for inherent luminescence can be conducted with the use of an alternate light source.

c. Place a small amount of powder on a fiberglass brush and remove any excessive powder. An excessive amount of powder could destroy the print so tap the brush on the side of the powder jar if needed.

d. Lightly twirl the brush over the object until the fingerprint develops. Once the print has been developed, it is recommended that the print be photographed prior to being lifted. More powder can be applied as needed, depending on the development of the latent print.

e. The developed print is ready to be lifted. Create an anchor on your tape roll. This will give you something to hold on to that is not sticking to your gloves. Beginning off to the side of the print, anchor the tape down and then smooth the remainder of the tape over the print, working the tape toward the opposite end of the print. During this process, use your finger to prevent any creases or air bubbles from developing. Once the tape is adhered to the print, never lift the tape in an attempt to remove any creases or air bubbles.

f. Once the tape covers the entire print, lift the tape in the same manner it was placed on the print. Begin at one end of the tape and slowly lift toward the opposite end.

g. The color of the card should provide the greatest amount of contrast to the color of powder chosen. Example: black powder - white card.

h. Make a small diagram on the fingerprint card to indicate the location and direction of the fingerprint recovered. Place an arrow next to the lift tape and do the same on the diagram to indicate the orientation of the lift tape on the object. Initial and date the tape. Mark the case number, location, description of the object/surface, your initials, and the date on the card.

4. **Magnetic powders**

a. Magnetic powders are useful for items in which you want to control the amount of powder placed on the object, such as cardboard or glossy paper.

b. Apply the magnetic powder in the same manner as the black powder, except using a magnetic wand to lightly brush the powder over the object until a fingerprint has developed.

c. Pick up the left over material by using the magnetic wand.

d. Lift the developed print using latent tape and place it on a contrasting latent card.

e. Place an arrow next to the lift tape and do the same on the diagram to indicate the orientation of the lift tape on the object. Initial and date the tape. Mark the case number, location, description of the object/surface, your initials, and the date on the card.

D. **Other Types of Surfaces**

1. Generally, other categories of materials encountered at a crime scene (e.g. porous surfaces, tape, etc.) will not be processed at the scene. Collect these items for further processing at the laboratory.

E. **Bloody Fingerprints**

1. Photograph the bloody fingerprint before collecting the item in RAW format. If the object cannot be collected, consider consulting with the Crime Scene Supervisor or Latent Print Supervisor to discuss which, if any, blood enhancement techniques to apply.

F. **Wet Surfaces**

1. Small particle reagent (SPR) can be used on wet surfaces. SPR is a liquid suspension of molybdenum disulfide particles which adhere to the fatty deposits left in the fingerprint. Wet Print is the brand name of the SPR product.

a. Shake the bottle containing the SPR.

b. Adjust the spray for a fine spray.

c. Spray the wet surface above the area suspected to contain fingerprints.

d. Repeat several times with a 30 second window between applications.

e. Once prints develop, photograph and allow to air dry.

f. Collect the fingerprint.

G. **Packaging of Objects for Transportation**

1. Secure items to be fingerprinted to minimize movement within the container. Do not allow adhesive materials to contact other materials.

H. **Use of an Alternative Light Source**

1. An alternative light source may assist in locating fingerprints in substances that fluoresce. Vary the filter and the wavelength as appropriate.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 09/04/2019	**NUMBER:** CS.08 - Biological Evidence
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Biological Evidence	

I. Biological evidence is often in the form of liquid or dried blood, semen, or saliva. Other biological evidence that may be encountered is hair, urine, feces, bones, teeth, and other tissues. Since biological evidence may lead to the identification of a victim or suspect, it is imperative that this evidence be collected and preserved for DNA analysis.

A. **Introduction:** Biological evidence includes blood, other body fluids such as semen, and contact DNA that can be found at crime scenes. The use of DNA typing with its increased sensitivity and durability has heightened the need to properly collect and package biological evidence to prevent any source of cross-contamination. Proper steps must be used to ensure that there is no direct contact between the sample and the person collecting the sample and between samples of different origins.

B. **Preliminary Considerations**

1. The crime scene should be photographed prior to any evidence collection and an individual photograph of the area sampled should be taken where appropriate. The area collected should be designated such that the area can be related back to the item collected.

2. When searching for a crime scene for blood, the analyst should first use a high intensity light. Diluted blood will often leave a brownish stain. Blood may flow into floorboard cracks, carpet padding, and behind baseboards. In such cases, blood can be located with a high intensity light source and presumptive blood testing can be performed. Photographs and documentation should be made prior to any testing, collection, or altering of the crime scene. There are a variety of techniques available to the analyst to assist with locating biological evidence, including the following: visible searching, using an alternate light source, and general swabbing using appropriate presumptive tests.

C. **General Collection Requirements**

1. Gloves used for evidence collection must be taken from a clean container (e.g. directly from the box or a clean secondary container).

2. To prevent contamination, gloves must be changed between handling evidence and handling non-sterile scene supplies and tools (e.g. pen, posse box, etc.).

3. Items sharing a likely common origin do not require a glove change (e.g. four fired cartridge cases on the ground next to each other).

4. A mask will be worn while collecting evidence. Detectives will be given a mask if they are near evidence.

5. Additional PPE is recommended based on scene conditions (Tyvek suit, shoe covers, hair nets).

6. If disposable tools are not available, any tools used for collection must be sterilized with a bleach solution before use.

D. **General Swabbing Procedures**

1. Wear proper PPE (e.g. lab coat, gloves, and mask) to prevent possible contamination of the evidence. Change gloves between handling different items of evidence.

2. Moisten the swab(s) using sterile water.

3. Rub the swab(s) rigorously over the target area. Optimally, use the entire surface area of the swab to collect as much material for potential biological testing.

   a. If necessary, for non-porous surfaces, use a dry swab to collect the residual moisture from the target area.

   b. At times using two (simultaneous) swabs will be necessary depending on how textured the substrate is or how torn the swab becomes during collection.

4. If collecting contact DNA swabs from unfired cartridges or fired cartridge cases, collect one wet and one dry swab from each group of cartridges or cartridge cases. If necessary, comparative evidence unit staff may be consulted to determine groups based on class characteristics. For large groups of cartridges or cartridge cases

(over 10), multiple pairs of wet and dry swabs may be needed. Package the swabs from a single group together in one envelope.

5. For stained areas, a substrate control may be collected. Repeat the above procedure on a visually unstained area.
    a. A substrate control is not necessary when evidence collection is for contact DNA.
6. Package the swab in a properly labeled evidence envelope and allow it to dry completely.
7. Swabs from different items or locations must be packaged separately.
8. While collecting a sample, do not mix adjacent drops of blood or other biological material, as they may not be from the same source. If the stains to be collected are extremely small and might not generate a DNA profile, adjacent drops may be combined.
9. Record in the case notes the lot number of the sterile water that was used.

E. **Collection of Movable Objects**

1. If the item containing the biological sample can be collected in its entirety, collect the entire item. Place the item in an appropriately-sized porous package such as a brown paper bag or envelope. Use a separate bag or envelope for each item.
    a. Label the exterior of the package with the case number, date, item number, description, and initials.
2. Do not use plastic bags for long-term storage; however, saturated items may need to be transported to the laboratory in plastic for drying (see below).

F. **Heavily Bloodstained Clothing**

1. A piece of clean butcher paper can be placed around the clothing item to minimize contact between different bloodstains when the clothing is packaged into a brown paper bag.
2. Layer with butcher paper to preserve bloodstain patterns and prevent cross contamination as appropriate. Example: a piece of butcher paper on the exterior back of a shirt, a piece on the interior of the shirt, and a piece on the exterior front of the shirt).
3. Very wet items may soak through a paper bag and contaminate adjacent items. These items may be placed into a plastic bag for transport **only.** Remove the item from the plastic bag as soon as possible at the laboratory and place it in a drying cabinet. The transport packaging (paper and plastic) may have dried blood and additional evidence. Retain the transport packaging and place it within another container after drying.

G. **Collection from Large Objects or Non-Movable Objects**

1. Whenever possible, collect the biological stain by cutting it from the object using a disposable scalpel or razor blade. Once removed, place the item into an appropriately-sized envelope or brown paper bag. Collect sample of an unstained area near the stain to be used as a substrate control. Note, if a larger area than just the stain is cut, the stain and a substrate control can be collected simultaneously.
    a. Package into a suitably sized package.
2. If the biological stain is on an object such as a wall or concrete flooring and cannot be removed, then collect a swab of the biological material.

H. **Collection of Used Condoms**

1. If fluid is present, collect a swab from the inside of the condom and a second swab from the outside of the condom and package separately. Note, if there is a large amount of fluid, use multiple swabs to obtain as much fluid as possible. Place the condom into a conical tube.

I. **Use of an Alternative Light Source**

1. An alternative light source may assist in locating biological evidence that fluoresces or absorbs light.Vary the filter and the wavelength as appropriate.

J. **Packaging**: Biological evidence should be packaged in paper (porous) products. Proper collection includes preventing contamination from extraneous sources, such as crime scene personnel and other samples from the crime scene. Proper preservation ensures that degradation due to bacteria, humidity, high heat, and other environmental factors is limited. The following order of preference for collection of biological evidence should be considered:

1. Collect the entire item on which the evidence is located.
2. Cut the evidence from its location. This is a reasonable course of action when dealing with large furniture, area rugs and carpet, drywall, wood floor, door, and window frames, etc.

3. Swab the evidence. Moisten a sterile cotton swab using only enough sterile water to collect the sample. Rotate the tip of the swab through the sample until it appears saturated with sample and the stain appears collected. Concentrate the sample on the tip of the swab. Always consider collecting multiple swabs if sample quantity permits. Swabs from the same sample should be packaged together.

4. Wet biological evidence should be dried prior to being placed into a storage location. It may be necessary to place wet biological evidence into plastic packaging for transportation purposes; however it should be removed from the plastic as soon as possible, allowed to dry, and then packaged in appropriate paper (porous) packaging.

5. Visible trace evidence should be collected from these items before they are bagged and transported. In the case of liquid biological evidence, saturate several cotton swabs and allow to dry. Note: A substrate/control swab of a stain-free area should be collected whenever possible.

K. **Presumptive Testing:** The use of presumptive tests may be useful to the crime scene responder to help identify blood at crime scenes. A positive reaction does not confirm the presence of blood, merely the presumptive presence, because a variety of biological and chemical substances may react with the presumptive test. Prior to each scene use, the test must be checked with a positive and negative control.

1. **Hemastix**

   a. **Blank**: Add one drop of sterile water onto a clean swab. Press the swab against the Hemastix strip. No immediate color formation should occur. If one does, use a new source of sterile water and repeat the test. If an immediate color formation still occurs, discard the Hemastix bottle and use a new one.

   b. **Known Blood Standard**: Add a small drop of distilled water to the end of a clean swab or to the tip of a folded piece of filter paper. Swab a small portion of the known blood. Press the swab against the Hemastix strip. The immediate formation of a green color should result. This should be done prior to each testing session to ensure the strips are working properly.

   c. **Test**: Add a small drop of distilled water to the end of a clean swab or to the tip of a folded piece of filter paper. Swab a small portion of the suspected bloodstain. Press the swab or filter paper against the Hemastix Reagent Strip. Repeat the procedure on an unstained area of the substrate when possible.

   d. **Interpretation**: The rapid appearance of a green color, typically under 5 seconds, indicates the possible presence of blood. A known bloodstain and reagent blank must be tested each session Hemastix is used to demonstrate the reagents are working properly. The Hemastix Reagent Strips are sensitive, but not very specific. The positive color test alone should not be interpreted as indisputable proof of the presence of blood.

2. **Ortho-Tolidine (O-Tol) Presumptive Test for Blood**

   a. **General Information:** A suspected bloodstain can be examined with a quick, sensitive, but non-specific presumptive test to determine if it could be blood. These tests depend upon the catalytic peroxidase-like activity of the heme group of hemoglobin. Therefore, this reagent will react with blood from animals as well as humans. Do not place reagents directly on the evidence. Sample the evidence with a cutting or swabbing. In the absence of blood, the two reagents will begin to react with each other and give a pink color with time. A description of the biological evidence should be documented (e.g., color, pattern, size, wet, clotted, damp, or dry).

      i. Hemoglobin and a number of its derivatives catalyze the oxidation by peroxide of a number of organic compounds to yield colored products. Since color catalytic tests are not specific, a positive color test alone should not be interpreted as positive identification of blood. However, a negative result is indicative of the absence of detectable quantities of blood.

      ii. Color development before the addition of hydrogen peroxide may be due to the presence of a chemical oxidant. Several substances will give a positive color reaction for these presumptive tests.

      iii. Vegetable peroxidases will frequently show positive color reactions. Plant peroxidases react similarly to blood in catalyzing this reaction. However, they are generally associated with plant tissue and can be visually distinguished from blood. In addition, they tend to be unstable over time, losing their ability to oxidize the ortho-tolidine reagent.

      iv. Many substances of animal origin may contain blood (even in trace amounts) and will therefore give positive presumptive tests. These substances include pus, saliva, and mucous.

      v. A bloodstain control and unstained control must be tested prior to testing unknown or suspected blood samples.

   b. **Reagents**: prepared by the Forensic Biology Unit

   c. **Blank**: Add one drop of sterile water onto a piece of filter paper or a clean swab. Add one drop of o-tolidine working solution and then a drop of 3% hydrogen peroxide onto the filter paper or swab. No

immediate color formation should occur. If one does, use a new source of sterile water and repeat the test. If an immediate color formation still occurs, obtain another source of the chemicals.

d. **Known Blood Standard**: Transfer a small portion of the known blood onto a piece of filter paper or swab (may be slightly moistened with distilled water, if needed). Add one drop of o-tolidine working solution and a drop of 3% hydrogen peroxide onto the filter paper or swab. The immediate formation of a blue-green color should result. This should be done for each testing session to ensure the reagents are working properly.

e. **Test**: Transfer a small portion of the suspected bloodstain onto a piece of filter paper or onto a swab that has been slightly moistened with distilled water. Place one drop of the o-tolidine working solution onto the piece of filter paper or the swab followed by one drop of 3% hydrogen peroxide. The immediate formation of a blue-green color indicates the presence of blood. Repeat the procedure from a visually unstained area of the substrate, if possible.

f. **Interpretation**: The rapid appearance of a blue-green color, typically under 5 seconds, indicates the presence of blood. A known bloodstain and reagent blank must be tested each session the o-tolidine reagents are used to demonstrate the reagents are working properly. Catalytic blood tests are very sensitive, but not specific. The positive color test alone should not be interpreted as indisputable proof of the presence of blood. The major sources of false positives are chemical oxidants and vegetable peroxidases. A color reaction which occurs after the addition of the o-tolidine solution, but before the addition of 3% hydrogen peroxide, indicates a non-specific reaction caused by a chemical oxidant.

g. **Notes:** Record the lot number of the reagents used, their reaction with a known positive and a known negative blood, in the case notes.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 05/17/2019	**NUMBER:** CS.09 - Firearms
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Firearms	

I. Firearms evidence can help to identify which gun fired a particular bullet or cartridge case and the distance from which a weapon may have been fired (muzzle to target distance). It can also potentially be used to test for fingerprints or DNA and determine who may have handled the firearm or cartridge case. All firearms must be rendered safe before transportation. If the firearm is jammed or the crime scene responder is unable to render it safe, then a firearms examiner should be consulted.

A. **Introduction**: Firearms evidence can include firearms, ammunition, discharged cartridge cases, projectiles, fragments, bullet impact marks, and gunpowder residue.

B. **Safety**: The primary concern during the collection and packaging of a firearm is safety. Always handle a firearm as if it is loaded and keep it pointed in a safe direction. Preservation of evidence that may be present on the firearm (e.g., blood, trace evidence, latent prints) should be assessed prior to packaging the evidence. Trace evidence like hairs or fibers should be documented at the scene and collected prior to packaging the firearm.

1. In the rare circumstance that a firearm cannot be unloaded safely at the scene, engage any actives safeties (if present and possible), secure the hammer (if present and possible), and place in a cardboard box for careful transport to the laboratory. Mark the box as "loaded" and clearly indicate the muzzle direction on the box. Always position the muzzle end of the box in a safe direction while transporting.
2. Never move a firearm by inserting an object inside the barrel or trigger guard. This is unsafe and can damage potential evidence. Minimize handling because it is possible to recover latent prints from firearms and ammunition.

C. **Revolvers:** The following guidelines should be used when handling a revolver:

1. Photograph the firearm prior to handling or collecting it.
2. When collecting a revolver, pick the firearm up by the textured surface on the grips or by the edges of the trigger guard (with clean gloves).
3. Note the position of the hammer.
4. If the revolver is cocked (hammer back), consider placing an object between the hammer and the frame for added safety before carefully letting the hammer down by manipulating the trigger while holding the hammer spur.
5. Mark the position of the cylinder on each side of the topstrap prior to opening the cylinder. Index the number of chambers and document the brand and condition of the ammunition in each chamber (the part of the frame directly above the cylinder).
6. Mark the cartridge or cartridge case under the firing pin as #1 and mark the remaining cartridge cases in the direction of rotation for the cylinder. The chambered cartridges should be photographed prior to removal.
7. Document in case notes the location of the chambered live cartridges or discharged cartridge cases.
8. Individually remove the cartridges/cartridge cases from the revolver and package each one separately in an appropriately numbered envelope or paper bag to prevent alteration or obliteration of microscopic markings, latent prints, and to reestablish how the revolver was loaded.
9. Place the firearm in a cardboard box or other appropriate container.

D. **Semiautomatic Pistols**

1. Photograph the firearm prior to handling or collecting it.
2. When collecting a semiautomatic pistol, pick the firearm up by the textured surface on the grips or by the edges of the trigger guard (with clean gloves).
3. Carefully disengage the magazine and remove it from the firearm.
4. Manipulate the slide to clear the chamber.

5. Package any cartridge that was found in the chamber.
6. Any cartridge(s) found in the magazine can either be inventoried on scene or at the laboratory.
7. Cartridges may be numbered as they are removed from the magazine if relevant to the case.
8. Place the firearm in a cardboard box or other appropriate container.

E. **Rifles and Shotguns**

1. Photograph the firearm prior to handling or collecting it.
2. When collecting a rifle or a shotgun, pick the firearm up by the textured surface on the stock or by the edges of the trigger guard (with gloved hands).
3. Note the position of the bolt and any safeties.
4. Remove the magazine from the firearm if possible.
5. Open the action and visually check the chamber for a fired or unfired cartridge/shotshell, remove any cartridge/shotshell, document the brand and condition (fired or unfired) and package it in an envelope or paper bag.
6. Package any cartridge that was found in the chamber.
7. Place the firearm in a cardboard box if possible or other appropriate container.

F. **Cartridges, cartridge cases, bullets, and fragments**

1. Collect fired cartridge cases, unfired cartridges, bullets, and fragments found at a scene and package them into coin or soil envelopes or other appropriate containers.
    a. Mark the exterior of the package with the item number, date, case number, description, and initials of who collected it.
    b. Groups of cartridge cases may be packaged together in unusual circumstances (e.g. more than 20 cartridges cases fired from a single area).

G. **Shot and Shot Wadding**

1. Recover as much of the shot (pellets) material as possible.
2. Pellets found in the same location may be packaged together.
3. Package pellets and wads found at different locations separately.
4. Mark the container with the appropriate information including item number, case number, date, description, and initials of who collected it.
5. Collect all the wadding material discovered at the scene.
6. Place each into separate containers and mark with the appropriate information.
7. Package the wadding material collected from different locations into separate containers.
8. If present, collect any shot buffer (also known as “Grex”) in the same manner as the wadding. Shot buffer is typically a white granular material and will most likely be found somewhere between the shooting position and the target.

H. **Powder Patterns on Clothing:** When a firearm is discharged, unburned and partially burned particles of gunpowder, gas, soot, metallic particles stripped from the bullet, and vaporized metal from the bullet are propelled out of the barrel along with the bullet toward the target. If the muzzle of the weapon is sufficiently close, these products will be deposited onto the target. It is the distribution of gunpowder particles and other discharge residues around the bullet hole that permits an assessment of the distance from which a firearm was discharged. The clothing from a shooting victim should be carefully preserved so as to prevent damage or disruption to powder residues deposited around bullet or shotshell component holes. The cutting or tearing of clothing in the area of these holes must be avoided as the clothing is being removed. Each item of clothing should be packaged separately in paper. If it is necessary to fold an article of clothing, place a piece of paper over the article to prevent contact and reduce the possibility of transferring residues to other areas.

1. Any article of clothing with a powder pattern should be packaged to protect the area that might have a powder pattern:
    a. Place a piece of butcher paper inside the garment and button the garment, if applicable.
    b. Cover the article of clothing with another piece of butcher paper.

c. Place a piece of butcher paper on the back of the garment.

d. Fold the butcher-paper wrapped article of clothing into a paper bag.

I. **Trace Evidence, Including DNA, on Firearms**

1. Trace evidence that is readily visible at the scene and may be easily lost in transport should be photographed in place, removed prior to packaging, and placed in a separate envelope or appropriately-sized package.

2. Clearly label the packaging with the source of the evidence as well as the date, case number, item number, description, and the initials of who collected it.

3. Collect contact DNA swabs from appropriate surfaces as needed.

a. Use one or two swab(s) for the grips, one swab for the trigger, and one swab for the slide including the front sight tip. Other areas should be swabbed if commonly handled by the operator (e.g. magazine, charging handle, forestock, etc.).

b. Reference CS.08 for swabbing procedures.

J. **Trajectory Reconstruction** A trajectory reconstruction of a crime scene may assist with the determination of the sequence of events: the orientation and location of the individuals involved in the shooting incident, the position of intervening objects, and the sequence of the shots fired into the windshield of a vehicle.

1. **Equipment**

a. Cameras

b. Tripod

c. Trajectory rods

d. String

e. Protractor/Angle finder and plumb bob

f. Laser

g. Small mirrors

2. **Procedure**: The following guidelines should be used when documenting trajectories:

a. Photograph the bullet hole or defect prior to any attempt to determine the trajectory (overall, intermediate, and close-up, with and without scales).

b. Document the location of the bullet hole in your notes (sketch and measurements).

c. If applicable, collect trace evidence.

d. Determine the direction of fire, if possible (entrance vs. exit)

e. Carefully place a trajectory rod through the entrance hole (and associated exit hole or terminal defect, if applicable). Place the angle finder along the top of the trajectory rod and record the measurement of the vertical impact angle relative to the horizontal plane. Alternatively, a protractor can used to determine the impact angle. With the protractor in the vertical position, place the center of the flat edge flush with the one side of the bullet hole and read the angle measurement on the protractor from the same side of the bullet hole. From a side view, determine the vertical impact angle with the inclinometer. It is important to document whether the measured angle is in relationship to the target surface or the horizontal/vertical plane. This can be documented by a description or a sketch, and is left to the crime scene responder's discretion.

i. If an exit hole or terminal defect is not present and the medium is not sufficiently thick to ensure the trajectory rod is creating a true representative of the trajectory, then the trajectory should not be determined.

f. A laser can be attached to the end of the trajectory rod to project/extend the trajectory in either direction.

g. Top down and side photographs are recommended for each trajectory rod.

i. Top-down photographs should be taken orthogonal to the horizontal plane.

ii. Side photographs should be taken orthogonal to the trajectory rod.

K. **Ejection Pattern Analysis**

1. The laboratory does not routinely offer ejection pattern analysis. However, the crime scene responder may be asked questions by counsel in court. Because the crime scene responder has training in this area and experience

from responding to crime scenes, he or she may opine about ejection patterns after explaining certain critical limitations.

2. Limitations on ejection pattern analysis
    a. Firearm
    b. Ammunition
    c. Shooter's grip position
    d. Movement of the shooter
    e. Shooter's position (e.g. in a car)
    f. Material and slope of the surface the cartridge cases land on
    g. Climatic conditions
    h. Subsequent actions by the victim or suspect
    i. Subsequent actions by emergency personnel
3. If these limitations are acknowledged, it may be appropriate for the crime scene responder to answer questions about where the shooter could, or sometimes more importantly, could not have been. The crime scene responder will be conservative for any opinions.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 09/10/2019	**NUMBER:** CS.10 - Impression Evidence (Footwear, Tires and Toolmarks)
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Impression Evidence (Footwear, Tires and Toolmarks)	

I. The value of any toolmark evidence is to link a particular tool to a particular crime scene and potentially the suspect. A toolmark is created by a harder object (the tool) coming into contact with a softer object (the substrates), leaving a striated or impressed mark from the tool's working surface. A toolmark can be created by a scraping motion (crowbars, screwdrivers), shearing/pinching action (scissors, wire cutters, and tin snips), or perpendicular force acting against the receiving object (hammers, punches, and some gripping tools) with an object or surface, leaving a mark.

A. **General Documentation for Toolmarks**

1. Take overall, medium range, and close-up photographs of the toolmark with direct and oblique lighting (as appropriate), both with and without a scale and perpendicular to the toolmark.
2. The close-up photographs may be used for comparison and should be taken in RAW format.
3. Use exposure settings that will ensure sufficient depth of field in the photograph of the toolmark.
4. Measurements should be taken to document the toolmark in relationship to the ground or other fixed objects. When possible, collect the actual toolmark. This may require collecting part of a door frame or other large object. If this is not possible, a Mikrosil or Forensic-Sil cast may be made

B. **Collection of the Toolmark**

1. Collect the item containing the toolmark if possible. Package to protect the toolmark from harm, loss, or cross contamination of any trace evidence that may have been left in the toolmark. If trace evidence is fragile and could be lost, considering collecting it prior to packaging the marked surface
2. In some cases, the toolmark can be removed from the object by cutting it out. If the toolmark has to be cut from an object, do not cut across the toolmark itself, but cut in such a manner to preserve the entire toolmark. Document the original orientation of the cut piece containing the toolmark relative to the whole item it is being cut from and mark the cut piece accordingly so this information is clear to whoever may examine it at a later date. Package to protect the toolmark from harm or the loss of any trace evidence that may have been left in the toolmark.
3. Mark the packaging with the appropriate information regarding item number, case number, and the initials of individual collecting the toolmark.

C. **Casting the Toolmark**

1. If the item containing the toolmark cannot be removed and the toolmark itself cannot be cut away from the item, a cast of the toolmark is created. Cast the toolmark using Forensic Sil, Mikrosil, or other suitable casting material by following the casting material directions. Treat the final cast according to the manufacturer's instructions and place in a suitable container once it is dried and removed from the toolmark
2. Do not package silicone-based casts (i.e. Forensic Sil, Mikrosil) in plastic bags or containers that may come in contact with the surfaces of the cast during storage.
3. If possible, mark on the casting material itself (or the paper backing) and include the item number and orientation of the toolmark.

D. **Collection of Tools**

1. Collect any tool, especially those which appear recently used and which, based on their size, shape, and/or tool action, could have made the toolmarks in question. Each tool collected should be packaged separately and care should be taken not to disturb any trace evidence that might be present on the tool. If trace evidence is visible on the tool and may be lost during transport, the trace evidence should first be photographed in place, carefully collected, and placed in an appropriately-sized container.

a. Mark the container with where the trace was removed from, a description of the trace material, item number, date, and person collecting it.

2. When removing any trace evidence from a tool's surface, do not contact the tool's working surface with a metal tool (such as forceps being used to remove the trace evidence) as this may leave marks on the tool surface.

3. DNA evidence located on the tool's handle can also be collected either at the scene or at the laboratory. If DNA evidence collection is warranted, then the tool edge as well as the handle must be packaged in such a manner as to prevent contamination or loss.

II. Impression evidence can provide the basis for determining whether a particular person, shoe, tool, or other object produced a mark on a substrate. The impression can record both class and individual characteristics. Impressions should be documented by photographs with oblique light and collected with an appropriate method. The term "impression" in this policy is intended to include two dimensional imprints, such as imprints in dust.

A. **General Documentation for Impressions**

1. All impressions should be photographed with direct and oblique lighting, with and without a scale, and perpendicular to the impression.

2. The close-up photographs may be used for comparison and should be taken in RAW format.

3. Adjust camera settings to ensure sufficient depth of field in the photograph for the impression.

B. **Electrostatic dust lifts (ESDL)** use a device that creates a static charge on a lifting film (mylar), causing a dust impression to transfer from the substrate it is deposited on to the film. The result is a same-sized transfer of the impression that may be collected. The device will work on both porous and non-porous substrates, but works best on dry dust impressions on relatively clean surfaces. The technique is not successful with wet transfers or dry transfers that became wet or damp prior to lifting. The electrostatic lifting process is non-destructive and is normally the first method used when attempting to lift an imprint. Note: bright oblique lighting is helpful to locate dusty imprints (e.g. shoeprints) on a dark or patterned surface.

1. **Equipment**

a. Electrostatic dust print lifter

b. Lifting film

c. Fingerprint roller

2. **Procedure**

a. Take examination-quality photograph(s) of the impression prior to any lifting attempts.

b. Place a piece of clean plastic electrostatic lift film over the area to be examined. The black surface of the film is in contact with the surface to be examined.

c. Place the ground electrostatic plate near the surface being examined. The most effective position of the ground plate is when it is in maximum contact to a surface adjacent the impression surface.

i. For impressions on moveable objects, such as newspapers, rugs, etc., the best position for the ground plate would be under the impression with the metal side up.

ii. For impressions on immovable objects, such as vinyl flooring or a wall, place the ground plate next to, but not touching, the object.

iii. For impressions on metallic objects, such as a vehicle door, the device may be grounded directly to the metallic object.

d. Place the device on the edge of the metal surface of the lifting film so the electrical contacts make contact with both the grounding plate and lifting film. Never slide the lifting film on the impression surface.

i. The film has two sides: a metallic silver side and a black side. The black side should be facing the impression (face down) and the silver side away from the impression (face up). The lifting film must be larger than the impression to ensure a full transfer. Mark the orientation of the film.

e. Turn on the voltage. Start at a lower voltage setting, and increase voltage slowly as needed.

f. Use the rubber roller to remove any trapped air pockets under the film. When using a fingerprint roller to eliminate air bubbles in the lifting film, avoid shifting or excessive pressure that may damage the impression.

g. Reduce the voltage, turn off the power, and wait 5 seconds to allow the static charge to dissipate.

h. Mark the lifting film before removing it from the impression surface to allow for the orientation of the impression to be recreated. This may be impossible to do if the film was removed from the surface without orientation marks, clear photographs, or a supporting diagram.

i. Pick up the lift film, and check it for possible imprints. **Note:** bright oblique lighting is helpful and multiple lifts can be made of the same area. If the first lift removes extraneous dust present on the substrate, subsequent lifts may improve imprint resolution.

i. Not all dry impressions can be successfully lifted using ESDL. Attempts to lift dust prints on dirty backgrounds will cause both the dust print and dirty background to lift together. Subsequent lifts should be attempted to see if they would be successful.

ii. Subsequent lifts from the same impression must be numbered or otherwise labeled to distinguish which was first, second, etc. The case record must have some statement addressing the quantity and description of impressions located, along with which ones were lifted. This may be aided with, but not replaced by photographs.

j. If imprints are present, secure the lift film to the inside of a dust-free container such as a clean, unused file folder or pizza-sized box. Alternatively, the lift film may be rolled (dust-side inward) and secured with a small piece of tape. However, if this method is used, the film should not be unrolled and re-rolled again before it is examined and photographed.

k. As soon as possible, photograph the imprint present on the film under controlled conditions at the laboratory (the imprints are fragile).

i. **Note:** The imprints on the film are reversed from their orientation on the original surface they were lifted from.

l. Record the orientation, case number, date, and initials on the film, its packaging, and in the notes. It can also be helpful to take a photograph of the overall area before lifting the film to show its relationship to the scene.

m. If no imprint is lifted, other enhancement techniques can be applied.

3. **Safety**

a. As a precaution the electrostatic dust print lifter should not be operated by persons with pacemakers.

b. Fail to discharge the lifting film will resulting in a static electricity shock to the analyst touches the film. To discharge the surface, allow devise to sit in contact with the lifting film, with no voltage, for at least 5 seconds after the ESDL voltage is turned off. It is possible to receive electrical shocks from the lifting film, the ground plate, the metal probe, and a metallic impression surface. Such shocks will be avoided by not touching any of these parts when the current is on and by allowing the probe to discharge after use. Do not allow the lifting film to come into contact with the grounding plate while the ESDL is on – this will cause arching and the device will not work properly.

c. If arcing occurs between the film and the ground, the power is too high or part of the film is touching or too close to the ground plate.

C. **Gel Lifting:** uses a low-adhesive gelatin layer to lift of traces of fingerprints, footprints, and marks in dust from many surfaces, including porous materials such as paper or cardboard. Gel lifts are available with three different colored backings (clear, white, and black) and have a transparent, colorless polyester film that protects the gelatin layer. The backing color is chosen to best contrast with the color of the target impression or fingerprint. The gelatin layer will melt between 400 - 450 Celsius or 1040-1130 Fahrenheit. Lifts may be stored at room temperature.

1. **Equipment**

a. Gelatin Lifters (various sizes and colors are available)

b. Fingerprint Roller

2. **Procedure**

a. Take examination-quality photographs (with and without a scale) of the impression prior to any lifting attempts.

b. Choose the color of the gelatin lifter based on what will result in the best contrast between the target impression and the backing color. Black often works well for dusty shoe impressions, while a fingerprint developed with black fingerprint powder may best appear on a white background. Attempts to lift dust prints on dirty backgrounds will cause both the dust print and dirty background to lift together. Subsequent lifts should be attempted in this case; the quality of the print may be improved with subsequent lifts.

c. Cut the gelatin lifter to a size just larger than the target impression. Label the back of the lifter or cut a notch in a corner and document the orientation, position, and location of the lifter.

d. Remove the protective plastic film and let the gel rest momentarily to reduce stretch from lifting the plastic film.

e. Place the surface of the gel in contact with the surface to be examined. Never slide the gelatin lifter across the surface with the impression.

f. With the rubber roller, roll the back surface of the gel support film to ensure complete contact of the gel with the surface to be examined. When using the fingerprint roller to eliminate air bubbles in the lifter, avoid shifting or excessive pressure that may damage the impression.

g. After the lifter has been smoothed over the entire surface of the impression carefully pick it up starting at the corners and examine it for possible imprints (oblique light is helpful).

h. Place it on a horizontal surface with the gelatin layer up and secure the lifter by the edges or corners in the bottom of a flat cardboard box to protect the exposed gelatin layer. **Note:** multiple lifts (using a new gel lifter each time) can be made of the same area. If the first lift removes extraneous dust that might be on the substrate, subsequent lifts may be necessary to pick up the imprint.

i. Photograph the imprint present on the gel as soon as possible. These imprints are fragile and may be absorbed into the gel over time. The rate of fading depends on the storage temperature (cooler is better) and the material of the impression.

i. **Note:** the imprints are reversed from their orientation on the original surface they were lifted from.

j. Record the orientation, case number, date, and initials on the gel, on its packaging, and in the notes.

3. **Interpretation**

a. Lifted prints can easily be viewed and photographed with oblique lighting. Powdered prints can be lifted with rubber-gelatin lifters. With the transparent lifters, a positive image can be obtained by photography through the transparent backing.

D. **Dental Stone:** is a casting technique that is used to collect three-dimensional impressions. Three-dimensional impressions are those that have a significant depth to them, in addition to the length and width of the impression. Commonly, they may be found in soil, sand, mud, or snow. The detail within the impression may vary according to the substrate.

1. **Equipment**

a. Dental stone

b. Water Bucket or plastic bag

c. Stir stick or spoon

d. Tongue depressor

e. Adjustable metal or wood forms

f. Plastic or metal tray

2. **Procedure**

a. Take examination-quality photographs of the impression prior to casting.

b. Set a casting frame around the impression to contain the casting mixture, if appropriate. Casting frames are usually only needed on sloped surfaces.

c. Mix the dental stone powder with water to prepare a mixture according to the manufacturer's instructions. For smaller impressions, this is best done in a plastic press-lock bag using hand kneading; for larger impressions, a five gallon plastic bucket may be used with a paint stirrer or hand drill with mixing attachment. The mixture should have a consistency similar to pancake batter, usually 10-12 oz water per 2 lbs of pre-measured dental stone.

i. The reaction of dental stone with water is exothermic. Once a dental stone mixture has hardened, it is not reversible. Use the mixture quickly after it is mixed or it may harden in the mixing container. Thicker mixtures and warmer temperatures will cause hardening more quickly compared to thinner mixtures and colder temperatures.

d. Gently direct the flow of the mixture into the cavity of the impression. Do not pour the mixture into the impression—start pouring at the edge of the impression and then pour into the mixture as the mixture flows across the impression A piece of cardboard or plastic held between the pouring container and the impression can dissipate the force of the flowing mixture and help distribute the mixture in the cavity of the impression.

e. If the impression sits on a slope, pour the mixture from the bottom of the impression towards the top. This will help ensure that any gravity-induced flow of the mixture does not disturb the detail in the impression.

f. Allow the dental stone to set. Note: dental stone casts can be made through shallow standing water as the dental stone mixture, being more dense than water, will displace any water in the impression.

g. Record the case number, date, initials, and compass orientation by scratching them into the back (non-impression) side of the cast before it has completely dried.

h. Take orientation (overall) photographs at the scene before the casts are removed for possible reference as needed.

i. After the cast has completely dried, remove it and place it in a cardboard box or other suitably sturdy packaging for collection. Leave any soil that may adhere to the cast intact until it can be safely and thoroughly removed at the laboratory. All cast cleaning will be done in the laboratory as part of the laboratory examination by a trained analyst.

E. **Mikrosil:** is a casting technique that is used to collect three-dimensional impressions. Three-dimensional impressions are those that have a significant depth to them, in addition to the length and width of the impression. Commonly, they may be found in soil, sand, mud, or snow. The detail within the impression may vary according to the substrate.

1. **Equipment**

a. Mikrosil

b. Tongue depressor

c. Mixing board

2. Procedure

a. Take comparison-quality photographs of the impression prior to casting.

b. Mikrosil is mixed per the manufactures instructions and applied/worked into the impression with the aid of a tongue depressor. Once the Mikrosil mixture has hardened, it is not reversible. Use the mixture quickly after it is mixed or it may harden and not flow evenly.

c. The required amount of Mikrosil will vary depending on the size of the impression to be cast, therefore, variations are expected.

d. Once cured (rubbery texture) it can be gently pulled from the impression. Note: A light misting of glass cleaner (e.g. Windex) can be first applied to the surface to act as a release agent.

e. Label the back (top surface) of the cast with identifying markings. Orientation of direction is often also useful and should be recorded. Case record must have some statement addressing the quantity and description of impressions located, along with which ones were cast.

f. Do not clean out debris that is part of the impression or was present when the impression was made.

F. **Forensic-Sil:** is a casting technique that is used to collect three-dimensional impressions. Three-dimensional impressions are those that have a significant depth to them, in addition to the length and width of the impression. Commonly, they may be found in soil, sand, mud, or snow. The detail within the impression may vary according to the substrate.

1. Equipment

a. Forensic-Sil gun

b. Cartridges (brown or gray typically)

c. Mixing tip

2. Procedure

a. Place the cartridge in the gun, mixing tip on the cartridge, and pull the trigger to force the two components to mix and extrude through the tip. Deposit Forensic-Sil onto surface to be cast.

III. Chemical and physical enhancement techniques are used to increase the detail and contrast between an impression and the substrate.

A. General Information

1. The first consideration when deciding to use chemical enhancement techniques is whether the substrate containing the imprints can be safely removed from the scene for laboratory processing. Laboratory processing is much preferred since it will eliminate safety concerns regarding use of hazardous chemicals at the scene, as

well as make the processing much more efficient. Preservation of the imprint without damage is the main concern. If the imprint cannot be collected intact, then processing at the scene should be considered.

2. Sequential processing should be considered before using any chemical dye stain. DNA evidence, trace evidence, and any other type of physical evidence that could be lost or altered should be collected before processing. As with all imprints, the surface of the substrate affects the potential success of producing a useable imprint for comparison. Smooth and non-porous surfaces, such as tile, Linoleum, glass, painted finishes, and most counter tops are ideal surfaces.

3. Chemical enhancement techniques may interfere with subsequent DNA analysis; therefore, treat these techniques as being potentially destructive to the evidence. These techniques may permanently stain the substrate material and it may be impossible to restore the item back to its original condition.

4. When using fingerprint powder, never dip the brush directly into the original jar. Use a separate reservoir of powder, discarding any leftover powder and its container. If DNA evidence is or might be a consideration in the case, use a new brush(es) when dusting separate items so as to avoid possible contamination, unless swabbing for DNA material is completed first.

B. **Leuco crystal violet (LCV)** is a catalytic test for blood. When LCV and hydrogen peroxide come into contact with hemoglobin or its derivatives, a violet colored dye (crystal violet) is formed. The formulation is a clear solution containing the fixative 5-sulphosalicylic acid.

1. Formula

   a. Dissolve 10 g of 5-sulphosalicylic acid in 500 ml of 3% hydrogen peroxide

   b. Add 4.4 g sodium acetate

   c. Add 1.1 g leuco crystal violet

   d. If LCV crystals are yellow instead of white, do not use (yellow crystals indicate they are old and the solution will not be effective). LCV will stay active for several months at room temperature. It is best stored in amber glassware since the solution is light sensitive. The reactivity of the solution may be further extended by refrigeration.

2. Procedure

   a. Take examination-quality photographs of the impression before (if impression is visible) and after enhancement.

   b. Being a colorless solution, LCV is particularly useful for spraying on large floor surfaces, where faint or latent bloody impressions need to be enhanced or developed.

   c. The solution may be applied by spraying with an aerosol sprayer or cascading the liquid over the impression with a squirt bottle.

   d. Surfaces like tile or wood floors, where LCV has pooled or beaded, may be rinsed with water approximately two minutes after the reagent has been applied.

   e. Carpeted areas or areas which have absorbed the LCV need not be rinsed. However, it should be rinsed from non-porous surfaces to avoid spotting when the residual droplets of LCV dry.

   f. Should the enhancement occur outdoors or areas exposed to intense light, the impression should be photographed as soon as possible since photo-ionization of the dye may occur, creating a violet background.

   g. LCV luminesces and can be photographed and viewed under various wavelengths of ultraviolet (UV) and infrared (IR) light.

   h. LCV treatment can be followed with Amido Black should additional contrast be needed.

C. **Amido Black** (also known as Amido 10B or Naphthalene Black) is an enhancement technique for use on protein impressions, including blood. It reacts with proteins present causing a blue-black color result, typically increasing the contrast of the impression on the substrate. It is especially useful enhancement technique for nonporous surfaces such as glass, plastic, vinyl, and finished wood. It may also be applied to porous surfaces, but extensive background staining may occur.

1. Formula (aqueous formula with fixer added)

   a. Mix by stirring and combining the below ingredients in the following order:

      i. 500 ml distilled water

      ii. 20 g 5-sulfosalicylic acide

      iii. 3 g Amido 10B

iv. 3 g sodium carbonate

v. 50 ml formic acid

vi. 50 ml glacial acetic acide

vii. 12.5 ml Kodak Photo Flo 600 solution

b. Dilute this mixture to one liter with distilled water. The mixture can be used immediately, but best results are achieved after allowing it to stand for several days prior to use. The shelf life is unlimited.

2. Procedure

a. Take examination-quality photographs of the impression before (if impression is visible) and after enhancement.

b. Stain and apply rinses to a small area of substrate that is not part of the impression to check for background staining. Should extensive background staining occur, do not use this enhancement method.

c. Saturate the impression with the amido black reagent by immersing or soaking for approximately one minute. Development is typically quick, but allow for a minute or two to pass to ensure complete development.

d. Rinse the impression with tap water to remove excess dye from the background by immersing or soaking for approximately one minute.

e. The impression may be re-stained to make darker, if necessary.

f. Allow the impression to air dry.

D. **Powdering and Lifting** Although this may be the oldest and least sophisticated of development techniques, it is still the best method of use on many dry smooth non-porous surfaces. Latent prints are developed when fingerprint powder adheres to residues left by contact from the friction ridge skin.

1. Equipment

a. Fingerprint powder (conventional and magnetic)

b. Latent print brush

c. Latent lifting tape or other lifting devices

d. Latent lift cards

e. Scissors

f. Marking device

g. Magnetic applicator

2. Procedure

a. Apply a small amount of fingerprint powder to the brush by dipping the brush into the powder. Additional powder can be applied later if necessary.

b. Lightly dust the area to be processed for latent prints.

i. This procedure is relatively safe and the only safety concern is the inhalation of the fingerprint powder.

c. When a print is fully developed stop the dusting.

d. Anchor the lifting tape beside the print(s) then lay the tape over the prints and smooth the tape as much as possible to remove air pockets.

e. Gently lift the tape from the surface.

f. Place the tape on a latent lift card and smooth the tape with your finger.

g. Cut the lifting tape and mark the lift card as to item number, area, position, initial, and date.

E. **Magnetic powder**, applied with magnetic applicator, good for textured surfaces, such as leather or wood, and glossy paper. As a general rule, a powder should be used which will contrast with the color of the surface. Many times additional lifts can be made from prints and quite often the later lifts are superior in quality to the first lift. Rubber lifts can be utilized for making lifts on curved surfaces. Faint bloody prints on non-porous surfaces like glass can often be enhanced by powdering or with amido black. These prints should be photographed prior to dusting and chemical processing. Do not attempt any processing of bloody prints until they are completely dry and have been photographed.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.11 - Trace Evidence
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Trace Evidence	

I. Trace evidence is a generic term for small materials which can be transferred when contact is made with an individual or an environment. Trace evidence can be found on any surface including people, floors, clothing, furniture, bedding, and on both the interior and exterior surfaces of vehicles. Small items such as fibers, hairs, broken glass, plastic fragments, paint fragments, and assorted microscopic debris may be left by a person or picked up from contact with the environment or another person. The method used to collect trace evidence depends on the location of the evidence, the nature and condition of the article to which the trace evidence is adhering, the presence or absence of other evidence and its nature and condition, the type of crime being investigated, the relationship of the evidence to the reconstruction of the crime scene, and any other circumstances that might arise.

A. **Preliminary Considerations**

1. Prior to the collection of any trace evidence, take overall and close-up photographs of the items.
2. The method of collection of the trace evidence is dependent on a number of different variables, including the type of surface, the area of the surface, the portability of the object, the type of trace evidence being sought, and the examiner's discretion. In many instances, more than one method of collection can be used.

B. **Methods of Collection**

1. **Hand picking/Particle Picking**: This method involves the visual examination of an object for trace evidence such as hairs, fibers, glass, soil, and paint. It is the recommended technique when visible trace evidence is to be collected. This method allows the analyst to determine the exact location a specific piece of trace evidence was recovered from.
    a. **Equipment**: Particle picking may be performed without equipment, using only the analyst's gloved fingers, or with the aid of a Post-it note, tweezers, forceps, or other tools. Serrated tools are not recommended as they are difficult to clean and keep contamination-free.
    b. Normal room light, oblique lighting, and/or an alternate light source can be used in the search. A magnifying glass may be used to enhance the search.
    c. When trace evidence is located, it is collected by hand or with a pair of forceps and placed into the appropriate sized packaging, such as a paper bindle.
    d. Use of tools, such as forceps and tweezers, may cause damage to the trace evidence. Clean any collection tools thoroughly between samples to prevent cross-contamination.
    e. Label collected trace evidence containers with the appropriate markings. Case record must state where the trace evidence was located.
2. **Adhesive/Tape Lifts**: This method uses clear one-sided adhesive tape, tape rollers, or fingerprint tape lifts to remove trace evidence from an object. **Note**, this is done for both visible trace evidence and as part of normal processing (even if no hairs, fibers, etc. are observed). The method is used to collect trace evidence from a variety of surfaces, such as vehicle seats and clothing items. This method of collection is not recommended for substrates that will strongly adhere to the tape lift adhesive (e.g. paper products, cardboard, etc.). This method is useful when collecting trace evidence that is not visible or apparent to the unaided eye.
    a. **Equipment**: Clear and colorless adhesive/tape lifters or sheets or Scotch tape, fingerprint lifting tape, mailing tape and clear and colorless plastic sheets.
    b. After the analyst defines the target area, expose the adhesive layer of the adhesive or tape lift. Do this just prior to use to avoid contamination.
    c. Repeatedly pat the adhesive or tape lift in the target area. The size of the area will be dependent upon how much the substrate sheds fibers/particles, how much dirt/debris/trace evidence is present on the substrate, the overall size of the lift used and the need to precisely define the location of the trace evidence.

d. This determination is at the discretion of the analyst based upon the evidence as evaluated on a case to case basis.

e. Place the lift onto a clear plastic sheet to protect the collected trace evidence from contamination, damage, or loss.

f. Repeat the process until the defined area is finished.

g. Package in an envelope or other container to prevent contamination, damage, or loss.

h. Label collected trace evidence containers with the appropriate markings. The case record must state where the trace evidence was located.

3. **Combing**: This method uses a comb or brush to collect trace evidence from the body of a victim or suspect.

a. A piece of butcher paper should be placed under the area to be brushed to collect any evidence that may fall.

b. The brush or comb should only be used on one particular area of the body at a time, such as the pubic region. If additional areas are to be brushed or combed, use a new brush or comb.

c. Package each combing (comb and paper) individually and the package marked with the appropriate information

4. **Vacuuming** trace samples may be collected using a vacuum with an in-line filter.

a. The filter containing the debris is removed and packaged in large petri dishes, paper packages, Kapak bags, or other suitable containers.

5. **Removal of an object**: If the trace evidence is securely attached to an object and cannot be easily removed (e.g., a paint smear on an article of clothing), then collect the entire object or the portion containing the trace evidence.

C. **Packaging of Trace Evidence at Crime Scenes**

1. The type of packaging used to store the collected trace evidence will depend on what type of evidence is collected and will minimize the chance of cross contamination and loss. In most instances a paper bindle or glassine bindle will be used. Depending on the amount of sample/control collected, the trace evidence should be placed in the smallest container that it will comfortably fit into such as a pillbox, coin envelope, or paper bindle

2. At no time should the item (trace evidence) be packaged with cotton or other protective material directly touching the object. If the trace evidence is subject to breakage, as is the case with glass or even large paint samples, then it can be packaged in a bindle and placed into a box to prevent further breakage.

3. The original covering supplied with the tape lift should be used to protect the sticky surface after it has been used. Alternatively, the tape lift can be placed against the the inside of a plastic bag.The tape lift can then be placed into a manila envelope and marked with the appropriate information.

4. If the bindle is small, it should be placed into an envelope and the outside of the envelope should be marked as described above.

5. Trace evidence, which consists of fine particles such as a dry soil sample, should be first collected in a plastic or glass container with a lid to prevent loss of the sample. If this is not available, then use a paper bindle placed in a manila envelope making sure the corners are sealed to ensure the material stays in its packaging. If the sample is wet, it will need to be dried at the laboratory before booking or storage. Again, the proper information should be on both the inner and outer packaging.

6. Once all the trace evidence has been individually packaged, they can all be consolidated and placed into in a larger envelope or brown paper bag. The individual bindles and envelopes must be folded in such a manner to prevent leakage, and should be taped closed to prevent leakage. Tape lifts stuck to plastic bags and put inside a larger envelope do not need to be individually tape sealed.

D. **Marking of Trace Evidence/Controls Collected at Crime Scenes**

1. Each package should be individually marked with the laboratory number, item number, a brief description of the item, the location from which the sample was collected, date of collection, initials of the collector.

2. When the trace evidence is consolidated into a larger envelope, the exterior of the packaging material should be labeled with the laboratory number, date, contents of bag/envelope (items included) and collectors initials

E. **Preservation of Trace Evidence Collected at Crime Scenes**

1. Trace evidence of a biological nature, such as hair evidence, should be frozen so that any root sheaths or other residue such as blood, if present, can be analyzed for DNA. However, even if there is no root material or foreign matter on the hair, the hair may still be suitable for mitochondrial DNA analysis and still should remain frozen.

2. Most other trace evidence can be stored at room temperature in a controlled environment unless there is the possibility that biological evidence is physically present on the trace evidence collected. If this is the case, then this trace evidence should be preserved in the freezer.

3. If the trace evidence is transferred to the law enforcement agency at the scene, the CSI or other collector from the Laboratory should indicate on the exterior packaging whether or not the contents should be stored frozen or at room temperature. This information should also be conveyed verbally to the evidence handlers at the scene.

F. **Collection of Controls at Crime Scenes**

1. When collecting various controls, they should be representative of the sample material being collected. For example, if a multi-color carpet is present, the control collected should contain all the various colored fibers present in the carpet. More than one fiber of each color should be collected. A representative swatch of the material can also be collected. Example: removing tufts of carpet or a cut out a section of the carpet (preferred)

2. If the material from which the control is being collected is damaged in some areas either through wear, chemical or environmental causes like sun damage, control from the damaged area as well as the undamaged area should be collected.

3. When collecting controls from the interior of the vehicle, collect upholstery fibers as well as carpet and, if present, floor mat and seat covers. If the upholstery is damaged and the underlying seat foam is visible, collect a control from the foam material as well.

4. In most cases, the greater the number of control materials collected, the better the chance of associating the perpetrator to the crime scene or to the victim. However, the control material must be representative of the evidence samples. Do not collect just a single fiber, paint chip or hair as a control material.

II. The following are the procedures for the collection of fibers.

A. **Introduction**: Fiber comparisons are performed on both natural and synthetic fibers. A potential fiber source may have one or more different kinds and colors of fibers that are present, and the differences may only be apparent using microscopic or instrumental techniques; therefore, it is important to obtain fiber standards that adequately represents all of the fiber types present in the potential source. Differences in the color or texture of a fabric, carpet, or other source should alert the analyst that different fiber types might be present so a standard must be collected from each discernible area.

1. **Movable Objects** If the potential source of a fiber transfer can be packaged and transported to the laboratory with ease, then it should be submitted in its entirety (e.g., clothing items, throw rugs, etc.) Package movable items in clean, unused packages such as envelopes or paper bags. Securely seal and label the package with a description of where the standard came from and other appropriate markings.

2. **Immovable Objects** If the potential fiber source is from a large object or one not easily transported, such as car upholstery or carpeting from a dwelling or vehicle, cut representative samples from various areas of the object. Be sure the cut is deep enough that the backing material or substrate is also collected. If the object appears uniform, only one sample needs to be collected. Except with vehicles collections must be performed at all carpeted areas. collect samples that are visually different (e.g., faded/worn areas, and different colored areas). A sample size of approximately 1” x 1” is fine unless variations are visible, thus warranting a larger sample size. If the source appears uniform, a smaller size cutting may be acceptable. Package in an envelope, paper bag, or other container. Securely seal and label the package with a description of where the samples came from and other appropriate markings.

B. **Considerations**

1. Do not pull or tape lift fiber standards. Securely seal all possible openings in packaging, including seams and air holes. Do not allow potential fiber sources to come into contact with fiber evidence samples as cross-contamination could occur.

2. A description of the fiber standard must be recorded in the case record. The description will include what the standard is and from where it was collected (to include sketches, measurements, and photographs).

III. The following are the procedures for the collection of glass.

A. **Introduction:** As with many other areas of criminalistics, the examination process is often more concerned with establishing an association between an individual, item, or crime scene than the actual identification of the substance itself. Broken glass, which can commonly be found at crime scenes or on persons who have been involved in crimes is one of those substances. Although during the examination process the unknown material will be identified as glass, the fact that glass is present usually provides no association with a particular crime or victim unless it can be linked to broken glass found at the scene. Therefore the proper collection of control glass samples from the crime scene is the first step in the glass examination and comparison process. Glass comparisons are performed on window glass, vehicle glass, bottle glass, and other glass types. A critical factor in comparing glass evidence to a potential glass source is whether the characteristics of the evidence sample fall within the range of variation present in the source; therefore, it is important to obtain a sufficient number of glass samples to adequately represent the range of all characteristics present.

The analyst should consider the probative value of a physical match of glass to the source and the determination of the direction of force. Collect as much of the original glass as possible if a physical match may have probative value. A physical match comparison is usually not attempted in the field due to the lack of a controlled environment. The following outline provides the basic steps involved in the proper collection of control samples from known sources of glass, which will be used as a source of comparison.

B. **Preliminary Considerations**

1. When collecting control glass samples, especially from large pieces of remaining broken glass, the possibility of a fracture or "jig-saw" puzzle match (physical match) should be considered. Caution must be taken in preserving additional types of trace evidence that might be present on the control glass sample including blood, fibers, hairs, shoeprint impressions, fingerprints, and paint transfers. When taking a sample from a known source of glass, the glass should be sampled from various locations throughout the sample in order to best represent the source material. The known sample should consist of the largest amount of material that can be reasonably collected. If the sample is still present in a structure, for example a window frame or light assembly, then the inside and outside of the remaining glass pieces should be marked. This information can be useful in determining the direction of force and to facilitate a possible physical match.

2. Large glass pieces should be packaged with care to prevent further breakage that might result from the transportation of the item. Each of the packages containing the control glass sample should be marked with at least the case or laboratory number, date, location obtained, and the initials of the person collecting the sample.

3. At all times, care should be taken to avoid contamination of known and control glass samples, as well as the mixing of control samples which have been collected from various locations.

   a. Package each standard collected separately in a cardboard box or other rigid container and secure to reduce the likelihood of further breakage or damage to the fractured edges. Small glass particles may be packaged in folded Post-it notes, paper folds, envelopes, paper bags, etc. and then placed in a padded envelope if necessary to prevent damage or injury. Securely seal and label the package with a description of where the standard came from, along with appropriate labeling or marking.

4. Broken glass edges are extremely sharp. Handle with caution. Use personal protective gear or tools to reduce the risk of being cut.

5. The following are a set of general guidelines for the collection of commonly occurring control material of glass samples and does not attempt to cover all sources of glass that may be found at a crime scene or might be used for comparison purposes.

C. **Sample Collection and Handling**

1. **Vehicle Door Window Glass**

   a. Vehicle door glass usually consists of tempered glass, which when broken, will be found in small cube "dice" shaped pieces. The broken pieces of tempered glass will not have sharp or pointed edges. In most circumstances the window will be completely broken with little if any glass left in the frame. If only a single vehicle window is broken then a sample of glass from that window should be collected. The control may be collected from various areas of the vehicle including the floor, inside the door frame and/or from pieces that remain in the frame. The control should consist of as many pieces as reasonably possible.

   b. The control glass samples from the window should be collected with forceps; however, depending on the size of the control glass pieces, they can be collected by gloved hands. Care must be taken not to cut oneself.

2. **Vehicle Windshield Glass**

   a. Modern front windshield glass is laminated, consisting of a piece of plastic laminate sandwiched between two pieces of glass. This type of glass resists penetration and is very hard to break into pieces. Since the possibility exists that the two flat glass pieces used in the glass may be from different pellets (sources) or may actually be different in color, control samples of the glass if broken on both sides should be taken. Since vehicle window glass usually remains intact in the windshield when damaged, care should be taken in documenting any damage to the window that might indicate the direction of an impact prior to the collection of any control glass material.

   b. Control materials can be collected with forceps from areas around any damage to the windshield. Since most of the glass will likely be slivers and/or very small pieces, it is unlikely that a physical match can be made; however, prior to collecting the sample consider the possibility of a physical match.

3. **Window and Door Glass**

   a. Window type glass, sometimes referred to as flat or glass, may consist of a double pane (two pieces of glass with air or a gas trapped between the pieces). If this is the case, and both panes are broken, then samples from each of the panes should be collected. If the broken window or door were a point where entry was made these can provide large surface areas for prime evidence like latent fingerprints. If these

pieces of glass are on the ground they may have footwear impressions. Care should be taken to preserve this type of evidence, as well as pieces of fabric, individual fibers, and/or hairs that may be adhering to any remaining glass pieces still present in the window or door frame.

b. Glass can be collected for the purpose of determining direction of impact of a bullet or other fracture analysis. If this is requested, record which side of the glass was on the outside of the window, and which side was on the inside before collecting the remaining pieces of glass from the window or door. Prior to collecting the glass in this situation, the damage should be documented as well as any supporting evidence that might support the direction of the breakage. If size limitations preclude collecting all the glass, always attempt to obtain a sample from an area near the point of impact and then collect and mark separate specimens from distant corners of the pane as well.

c. Collect standards that are still adhering to the frame and as close as possible to the point of impact. Do not collect glass standards from the ground unless it is unavoidable as this increases the likelihood of introducing foreign glass to the standard. Collect several samples of glass from different parts of the same pane of glass. This is because of the potential variation that exists in the pane of glass. One suggestion is to collect standards from the 12, 3, 6, and 9 o'clock positions around the edge of the break. Collect several samples from dual-pane windows such as thermal windows or vehicle windshields that consist of two panes of glass laminated together. Label clearly which standard is from the inside pane and which is from the outside pane. A sample size of approximately 2.5 centimeter square is usually adequate.

d. Collection of the glass samples can be done using forceps or by hand. Gloves and the proper hand protection should be worn while collecting the glass pieces by hand to avoid injury..

4. **Bottle and Ornamental Glass (vases, candle holders, etc.)**

a. In many instances, large pieces of broken bottle glass or ornamental glass may remain at the scene and there exists the possibility of a physical match between these pieces and those deposited on a suspect. Therefore, an attempt should be made to collect all pieces of the broken bottle or ornamental glass, which appear to be from a single source. If there appears to be more than one source of glass, either due to location of the item, color, shape or other distinguishing features then collect each type separately. The pieces should be packaged to prevent further breakage, using such items as butcher paper or paper bags for cushion if placing the items in a box and to minimize the loss of additional evidence such as fingerprints and trace evidence.

b. If the item is primarily intact, prior to its collection consideration should be given to fingerprinting the glass object at the scene to minimize loss of potential fingerprint evidence.

5. **Headlamps and Automotive Mirrors**

a. When a headlamp or automotive mirror is broken, attempt to collect the entire assembly leaving the glass in place so as to facilitate a possible physical match. Pieces of these items may be left at a scene of a hit and run, or found on the victim's clothing. All glass found at a hit and run scene should be collected due to the fact that more than one type of glass may be present and there may be a possibility of a "physical match" with glass remaining on a vehicle, such as with a broken headlamp.

b. Like other glass evidence, it should be packaged in a manner that will not contaminate the specimen and will prevent its loss.

c. If only pieces remain in the headlamp or mirror assembly, then collect as many pieces as possible or remove the assembly and package appropriately.

6. **Other Sources of Glass**

a. Mineral wool (glass wool, slag wool and rock wool) is often found as insulating material in ceiling tiles and home insulation. Glass fibers are also a primary component of fiberglass boats and automotive parts. Evidence samples and their representative control materials should be collected.

b. As with other sources of glass, controls should be collected that are representative materials of the item of evidence collected. It is best to collect the sample of the damaged area as well as control of areas near the damage to get a representative material. Unless it is the only option, it is best not to collect the control from like or undamaged ceiling tiles or insulation due to the fact that variations may occur due to lot number or the use of different manufacturer's products.

IV. The following are the procedures for the collection of paint.

A. **Introduction**: Paint, as a type of trace evidence, can be present in a variety of cases including hit and runs, assaults, burglaries and homicides. Paint can be found as a chip, consisting of single or multiple layers, a smear, or may be painted on an object in an act of vandalism. Like other forms of trace evidence, paint evidence can be used to link a suspect or victim to a scene, or to link an object to the scene or an individual. One of the most important aspects of any comparison of paint involves the proper collection of the paint sample from an unknown source as well as the control paint sample to which it is to be compared. The information derived from the control sample through its analysis will be the basis of its comparison to an unknown sample. Paint comparisons are performed on a variety of paint types

including vehicle paints, architectural paints, spray paints, cosmetic lacquers, etc. A potential paint source may have one or more different kinds and colors of paint that are present in vehicle paints. The differences may only be apparent using microscopic or instrumental analysis; therefore, it is important to obtain paint standards that adequately represent all of the paint types present on a potential source. The analyst should consider the possibility of a physical match of paint chips to the source when determining how to collect paint standards.

1. **Movable Objects** If the potential source of a paint transfer can be packaged and transported to the laboratory with ease, then it should be submitted in its entirety (e.g., bumper of vehicle, bicycle, etc.) Package movable items in clean, unused, packages such as envelopes or paper bags. Securely seal and label the package with a description of where the standard came from, along with any other labeling requirements.

2. **Immovable Objects** If the potential paint source is from a large object or one not easily transported, such as a vehicle, use the following procedure to collect a paint standard. Collect paint from an area as close to the area of damage, but not within the point of damage. If a physical match examination is deemed appropriate, collected all the damaged body panels rather than attempting to remove paint standards. Use a clean steel dissecting scalpel, or knife to gently pry, carve, or chip the paint from the surface down to the metal. If possible, do not remove the paint by scraping as all paint layers may not be represented or the layer structure may be destroyed. Collect approximately 0.5” x 0.5” combined amount of paint from a particular damaged area, when possible. Place the paint standard into a paper fold or small paper envelope, carefully sealing to prevent loss. Continue to collect paint from each damaged area in the same manner, even if the object appears uniformly painted. Also collect samples that are visually different. Package and label each area separately. Securely seal and label the package with a description of where the sample came from, along with any other labeling requirements.

B. **Collection and Packaging of Control Paint Samples from Vehicles**

1. Collect control paint samples from around all freshly-damaged areas of a vehicle. This will provide a range of samples due to the fact that the paint may differ in type or composition on different areas of a vehicle, even if the color is the same. If more than one vehicle is involved, then collect control samples from each vehicle as well as any cross transfers that may have occurred. If large flakes are present along broken edges or chips of paint are missing, then a physical match may be possible. Carefully collect these areas and protect the edges from further damage.

2. Paint should be collected as close to the damaged area as possible. Remove a sample of paint either by bending the metal back slightly so that the paint will flake off or scrape or chip the paint off using a clean scalpel or knife blade. The blade must be clean prior to collecting each sample of paint, even if it is from the same vehicle. In many cases, the paint sample will consist of a clear coat, colored topcoat, and primer layer, make sure that all layers of the paint down to the metal or plastic are collected as a control sample.

3. Place each sample collected in a separate paper or glassine bindle and label. The label should include the laboratory number, the date the sample was collected, who collected the sample, and the location on the vehicle. The make, model and year of vehicle should be recorded in the notes.

4. Do not collect a control paint material using a tape lift or other sticky object. The adhesive may interfere with future analysis of the material.

5. Do not place control material directly into an envelope unless large pieces are present. Placing small chips of paint directly into an envelope may result in a loss of material.

C. **Collection and Packaging of Paint Samples from Burglary Scenes**

1. Collect a sample of paint from all areas in which a tool may have contacted the scene. Make sure to collect all layers of paint present. Do not destroy an actual toolmark, if present, when collecting a control paint material. Carefully remove a paint sample from around the mark. Use a clean blade for every sample collected, including those collected from the same item but in different areas. Be aware that the tool itself may be painted and a cross-transfer of paint from the tool may be left at the scene. Collect any cross-transfers by removing the area or by carefully scraping the paint from the surface. Be sure to include the original surface area as well as a control from that surface area.

2. The tool itself may contain trace evidence other than paint, such as plastic or insulation; therefore, care must be taken in transporting the tool. Wrap the area containing the trace in clean paper and seal with tape to prevent loss. Collect other possible sources of trace evidence as controls as well as the paint samples. If the tool is located at the scene and a comparison of any trace evidence on the tool is desired, no attempt should be made to actually match the toolmark at the scene to the tool. This action could cause paint or other trace evidence transfers to occur which would lessen their significance if found at a later date. In addition, this may introduce additional and erroneous toolmarks onto the evidence item.

D. **Other Considerations**

1. When collecting foreign paint from non-painted surfaces such as a rubber bumper or wood frame, attempt to collect the paint and the substrate material together. Make sure to collect control material from the underlying material as background material. Collect each sample separately and label accordingly.

2. In some cases, especially when the amount of paint transfer on an object is small, it is best to collect the entire object containing the paint transfer. If this is not feasible, collect all the paint transfer as well as a sample of the underlying material attached to the paint transfer and a control paint material from the underlying material. Label all items with the location obtained and whether or not it is a control or the unknown sample of interest (transfer paint sample).

3. Paint may be transferred to the clothing of a hit and run victim and should not be removed at the scene, unless the paint is large enough and it will be lost in transport. The area thought to contain a paint transfer can be marked at the scene. Clothing items should be carefully removed from the victim and wrapped individually in paper before placing in a labeled brown paper bag.

4. Substantial variations in thickness and layer sequences over short distances can exist across a painted surface. This is particularly true in architectural paint and for vehicle paint where curves, corners, and edges are often impact points and may have been subjected to previous damages, sanding, or over-painting. Known paint samples should be collected from these areas, when recognized. When contact between two painted surfaces is indicated, the possibility of cross-transfers must be considered. Collect both objects or paint standards from both surfaces. Do not allow potential paint sources to come into contact with paint evidence samples. Cross contamination may occur. Securely seal all possible openings in packaging, including seams, corners and air holes.

5. A description of the paint standards must be recorded in the case record. The description will include what the standard is and from where it was collected (documented by notes, sketches, measurements, and photographs).

V. The following are the procedures for the collection of soil samples.

A. **Introduction**: The collection of proper reference samples (those from a known location) is essential to the evaluation and comparison to soil samples collected from various items of evidence. Since soil can vary in its vegetative, animal, and mineral composition as well as its man-made components (e.g. building materials and asphalts) across a relatively small geographical area, the collection process must ensure that a sufficient number of reference samples from various nearby areas are collected.

B. **General Collection**

1. Collect reference samples from various areas near and around the crime scene. A simple change in color can be significant. These reference samples should be representative of the soil variation within the crime scene area. If the area is an open area, collect reference samples from the initial crime scene then collect additional reference samples from distances of approximately 10 ft., 50 ft. and 100 ft. in all four compass directions where soil is present.

2. Collect a reference surface soil sample, especially in those cases thought to be involved with casual contact. Do not dig down to obtain the reference soil sample. If the area in question involved excavation, then collect numerous samples from different depths and note the depth.

3. All soil samples should be dry before packaging. If the soil is wet or damp when collected, it might develop mold, which can cause the organic matter in the soil to decompose. Collect 1 to 8 ounce reference samples from the various areas in leak proof containers. In most cases, this should be adequate for further examination.

4. Mark each container with the appropriate identifiers including case number, date, item number, initials of individual who collected the reference sample and the location obtained. A note can be made regarding whether or not the sample had to be dried before packaging.

C. **Special Issues**

1. To best enable the best selection of reference soil samples and controls from the appropriate geographical areas, basic facts of the case must be obtained from the investigators at the scene before collection begins. This will help focus the collection of reference soil samples from specific locations. Collect a reference soil sample from the suspected source area. If the crime scene contains shoeprint or tire track impressions, then the reference soil samples need to be collected from the area within the impression. However, this must be done after the impressions have been documented.

a. If a cast is made of the entire shoe or tire impression, then the soil remaining on the cast can be used as a control. In addition to this soil sample, supplemental reference samples close to the impression should be collected as well.

b. If the sample of dirt is firmly attached to an object, like a clump of mud on a shoe, do not remove it at this time, but package the entire item in an appropriate container.

c. Reference soil samples must be collected as soon as possible after the crime scene is discovered. If the reference samples are not collected in a timely manner, the soil may be altered by cultivation, contamination, or natural events.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.12 - Bloodstain Pattern Analysis
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Bloodstain Pattern Analysis	

I. Bloodstain Pattern Analysis is the study of blood as it comes into contact with a surface. Crime scenes often contain multiple bloodstains that can be examined and interpreted in order to help establish the nature of the crime and help assist in determining the series of events that may have occurred to produce those stains. The mere presence or absence of blood in and of itself may be of value, independent of any pattern that may be present.

A. **Introduction**: Many bloodstains only require proper documentation at the crime scene and no further reconstruction. This procedure will guide the analyst in both the proper documentation and interpretation of bloodstain patterns. If all the information is not available at the time of the scene the responder should attempt to find out as much information regarding the scene from the investigator and the pathologist and relay it to the analyst as soon as possible. The factors that influence bloodstain pattern analysis include:

1. Information about the type of weapon.
2. The location of any wounds on the involved individuals.
3. The clothing worn by the bleeding person or people.
4. The history of the location (clean house vs. bar with daily fights).
5. The environmental conditions since the incident.
6. The actions of first responders and emergency personnel.

B. **Documentation**: The proper documentation is vital for interpretation of bloodstain patterns which can provide meaningful information and aid in crime scene reconstruction. This must be accomplished through a combination of notes, diagrams, photographs, and the collection of the actual bloodstains. Besides photography, a rough diagram is useful to show the general appearance of the stains, the orientation, location, direction, size, and their relative position to other areas of the crime scene. The diagram is also useful for documenting small bloodstains that are difficult to photograph.

C. **Bloodstain Pattern Photography:** In general, bloodstain pattern photography is no different than any other type of crime scene photography. However, due to the nature of the stains and the information that can be derived from them, it is imperative that the bloodstain/spatter photographs depict enough information to lend themselves to further analysis in order to reconstruct or answer additional questions that may arise during the investigation. The photographic documentation of bloodstain patterns should include overall, medium-range, and close-up views. A scale should be included in close-up photographs. The close-up photographs should be taken such that the captured image is parallel to the surface of the pattern. For large bloodstain patterns it may be necessary to grid the area and photograph each grid with either a number or letter distinction.

1. **Overall Scene Photographs**: Take the initial overall photographs as with any other scene.These will document the scene before any actual processing of the scene has taken place.
2. **Bloodstain Pattern Photographs (Road Mapping Technique)**: Take sufficient photographs to orient the location of the bloodstains within the scene. Next place placards next to the various bloodstain patterns of interest, especially when dealing with more than one pattern in a single location. First recognize the different bloodstain pattern types that are present in the scene. Label each pattern with a sequential number or letter, each representing a different bloodstain pattern. Determine which individual stains or groups of stains within a given pattern are of interest. Label each of the stains within the pattern with a sub-label.
    a. Use a bold marker to mark on the label.
    b. Make sure that these markers or at least the bold marking depicting the sub-labels are readable from several feet away.
    c. Place the sub-label adjacent to the pattern or stain in question.
    d. The adhesive paper scales can be positioned in an “L” shape near the stain or around the entire stain, if necessary.

e. Take another orientation photograph with all the labels in place showing the relationship between those different placards and the bloodstains they represent. These will represent landmarks in the overall photographs.

f. Take additional photographs of each pattern type. These photographs should be taken close enough to see the sub-labels and the patterns.

g. Next, close-up photographs of the individual sub-labeled stains within the specific pattern should be taken. These stains should always have adhesive or other scales in them clearly showing the pattern sub-label.

3. **Bloodstain pattern Analysis (Grid Method):** This method uses a grid in order to help organize the sequence of photographs taken. Grid off the area in squares with tape or string (2'x2' is a recommended size).

a. Take overall photographs of the bloodstain patterns before any analysis.

b. Take an overall picture of the grid before marking each square within the grid with a number or letter.

c. Take an overall photograph of the grid with the numbering/lettering system in place.

d. Take close-up photographs of the stains of interest within each individual grid square, marking each stain of interest with an identifier and ruler (an adhesive tape ruler can be used). The grid square should fill-up the entire frame of the photograph.

e. Make sure that at least one of the photographs shows which grid square you are photographing and its relationship to the individual or groups of stains of interest within the grid.

f. A laser grid may also be used.

4. **Hybrid Method**: The bloodstain patterns may not be extensive enough to require either the Road Mapping Technique or the Grid Method. Good overall, medium range, and close-up photographs can sufficiently document bloodstain patterns as long as the locations of the patterns are documented.

D. **Observations and Interpretations**

1. **Determination of Direction of Travel**

a. Where possible, the direction of travel will be determined based on the stain's shape.

b. The tail of the parent drop will point in its direction of travel.

c. The tail of the wave cast-off points back to the parent drop.

d. Blood in motion falling on a horizontal surface may show scalloped edges (produced at an angle of less the 90 degrees) on the side indicating the direction of travel of the source.

2. **Determination of Impact Angle**

a. Obtain the width and length of the stain in millimeters (mm). The impact angle can be determined by using the following formula: impact angle = arcsin (width of stain)/(length of stain)

b. The width and length of the stain should be measured by calipers or a measuring device with fine divisions less than 1 mm.

3. **Point or Area of Convergence**

a. The area of convergence is determined by tracing the long axis of well-defined bloodstains (preferably drops traveling in an upward direction) within the pattern back to a common area or source. The area of convergence is a two-dimensional representation.

b. Using strings or graphic tape, extend the strings through the long axis of the individual bloodstains.

c. Determine the point or area where the strings from each of the bloodstains converge.

d. Take measurements to locate the area of convergence in three dimensional space relative to a known location.

4. **Point or Area of Origin**

a. An area of origin is used in tracing the origin of a bloodstain or series of bloodstains back to location that produced the bloodstain.

b. Project the impact angles of well-defined bloodstains back to an axis constructed through the area of convergence.

c. Using strings projected from each measured bloodstain at its angle of impact, trace them back to an axis perpendicular to the plane on which the bloodstains are located. These should pass through their area of convergence.

d. The determined area of origin could represent the height above a floor or the distance from a wall, ceiling or other object, to the source of the blood or impact site.

e. Conclusions regarding area of origin:

i. Include a range of possible impact sites.

ii. Consider a range of possible flight paths that might produce a similar angle of impact.

5. **Actions Producing Stains**

a. Depending on the size, shape, and distribution of blood spatter and bloodstains found at the crime scene, the analyst may be able to characterize the bloodstains as low energy, medium energy, or high energy or some combination.

b. An alternative approach is to focus on describing or classifying stains in terms of their physical characteristics. This taxonomic method appears to be the best way moving forward to describe stains as these classifications describe the basic nature of the underlying event, such as cast-off, transfers/contact pattern stains, swipes, wipes, drips, trails, expirated blood, arterial spurting and impression type patterns. The scene context may give information that, when coupled with the classification, leads to a conclusion about the source event.

6. **Absence of Blood**

a. The lack of blood or voids present at the scene should also be noted.

b. The lack of blood may indicate that this is not the original scene and the victim was not injured here.

c. The absence of blood due to a void area in a pattern may indicate the presence of an object during the event or an intervening object that has since been removed.

d. The presence of clothing may also prevent or restrict blood from being deposited within the scene.

7. **Direction of Flow**

a. Blood flows in the direction of gravity. If the flow is in a different direction or changes direction this denotes movement or another force acting upon the stain.

E. **Collection**

1. After thorough documentation of bloodstains, representative samples of the bloodstains should be collected along with appropriate control swabs.

2. Refer to Scene.04 for the procedure on collecting swabs of biological evidence. Ensure all unassociated bloodstains are collected and packaged separately. If there are multiple small associated bloodstains, the bloodstains may be swabbed and concentrated on the tip of individual swabs.

F. **Experimentation**

1. In some cases, it may be necessary to reproduce the mechanism by which a bloodstain pattern was created before the analyst makes an interpretation. In these cases, the important elements of the scene and suspected actions that occurred should be replicated as close as possible in controlled laboratory settings. This experimentation and research will ensure that a particular pattern has been created within the action of a particular even or mechanism.

2. Consult with the Crime Scene Supervisor before beginning any experimentation.

G. **SWGSTAIN 2009 Recommended Terminology**

1. **Altered Stain** - A bloodstain with characteristics that indicate a physical change has occurred.

2. **Angle of Impact** - The acute angle (alpha), relative to the plane of a target, at which a blood drop strikes the target.

3. **Area of Convergence** - The area containing the intersections generated by lines drawn through the long axes of individual stains that indicates in two dimensions the location of the blood source.

4. **Area of Origin** - The three-dimensional location from which spatter originated.

5. **Backspatter Pattern** - A bloodstain pattern resulting from blood drops that traveled in the opposite direction of the external force applied; associated with an entrance wound created by a projectile.

6. **Blood Clot** - A gelatinous mass formed by a complex mechanism involving red blood cells, fibrinogen, platelets, and other clotting factors.
7. **Bloodstain** - A deposit of blood on a surface.
8. **Bloodstain Pattern** - A grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited.
9. **Bubble Ring** - An outline within a bloodstain resulting from air in the blood.
10. **Cast-off Pattern** - A bloodstain pattern resulting from blood drops released from an object due to its motion.
11. **Cessation Cast-off Pattern** - A bloodstain pattern resulting from blood drops released from an object due to its rapid deceleration.
12. **Directionality** - The characteristic of a bloodstain that indicates the direction blood was moving at the time of deposition.
13. **Directional Angle** - The angle (gamma) between the long axis of a spatter stain and a defined reference line on the target.
14. **Drip Pattern** - A bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood.
15. **Drip Stain** - A bloodstain resulting from a falling drop that formed due to gravity.
16. **Drip Trail** - A bloodstain pattern resulting from the movement of a source of drip stains between two points.
17. **Edge Characteristic** - A physical feature of the periphery of a bloodstain.
18. **Expiration Pattern** - A bloodstain pattern resulting from blood forced by airflow out of the nose, mouth, or a wound.
19. **Flow Pattern** - A bloodstain pattern resulting from the movement of a volume of blood on a surface due to gravity or movement of the target.
20. **Forward Spatter Pattern** - A bloodstain pattern resulting from blood drops that traveled in the same direction as the impact force.
21. **Impact Pattern** - A bloodstain pattern resulting from an object striking liquid blood.
22. **Mist Pattern** - A bloodstain pattern resulting from a spray of micro-drops as a result of the force applied.
23. **Parent Stain** - A bloodstain from which a satellite stain originated.
24. **Perimeter Stain** - An altered stain that consists of the peripheral characteristics of the original stain.
25. **Pool** - A bloodstain resulting from an accumulation of liquid blood on a surface.
26. **Projected Pattern** - A bloodstain pattern resulting from the ejection of a volume of blood under pressure.
27. **Satellite Stain** - A smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface.
28. **Saturation Stain** - A bloodstain resulting from the accumulation of liquid blood in an absorbent material.
29. **Spatter Stain** - A bloodstain resulting from a blood drop dispersed through the air due to an external force applied to a source of liquid blood.
30. **Splash Pattern** - A bloodstain pattern resulting from a volume of liquid blood that falls/spills onto a surface.
31. **Swipe Pattern** - A bloodstain pattern resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.
32. **Target** - A surface onto which blood has been deposited.
33. **Transfer Stain** - A bloodstain resulting from contact between a blood-bearing surface and another surface.
34. **Void** - An absence of blood in an otherwise continuous bloodstain or bloodstain pattern.
35. **Wipe Pattern** - An altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.13 - Drugs
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Drugs	

I. Illicit drugs and drugs of abuse can include a variety of substances whether they are common over the counter substances, prescribed pharmaceuticals, or illegally manufactured and cultivated substances. Drugs are commonly encountered at crime scenes, during property searches, and on persons of interest. Suspected narcotics may be directly related to the crime scene incident or may be of secondary nature to the crime scene. Regardless, in special instances, the immediate analysis of drugs may be crucial to an investigation. Due to potential safety hazards of drugs, care and caution must be taken during collection and packaging. A drug is defined as any substance that can alter a person's physiological response. A person's demeanor, judgment, or well being may change. Any suspected drug that is encountered at a scene or on a person may be collected if it is deemed pertinent to the investigation..

A. **Safety**: Caution must be taken when working with solid dose narcotics. Drugs in powder form can be inhaled (e.g. cocaine) and drugs suspended in liquid can be absorbed transdermally (e.g. Lysergic Acid Diethylamide (LSD), Phencyclidine (PCP)), all causing ill effects on a person.

1. Gloves must be worn at all times when handling suspected drugs.
2. Disposable respirators maybe used with liquid forms of drugs due to fumes.
3. Clothes should be laundered to prevent any further transfer of solid dose drugs from a scene.

B. **Procedure for Drugs Encountered on Scene or at Autopsy**

1. If a suspected narcotic is encountered on scene, the best practice is to place the narcotics in a secondary container that is appropriate for the drugs encountered (i.e. plastic bag or paper bindle for powders and pills, paper bag or paper bindle for plant material, glass container for liquids).
   a. A secondary container is not always necessary depending on how the drug is encountered.
   b. The narcotics may be placed in a controlled substance envelope if one is available.
2. Drugs found on scene should be relinquished to the lead investigator for safe transportation.
   a. Document through notes and photographs the item that is relinquished.
   b. The lead investigator should be instructed, if he/she has not already done so, to place the suspected drug in a controlled substance envelope, fill out the request on the envelope, and return it to the laboratory for analysis if desired. All scene responders should avoid transporting suspected drugs when possible.
3. In cases of bulk amounts of narcotics, the AGENCY should be notified to assist, collect, and transport the narcotics and submit a representative portion to the lab for analysis.
   a. Document through notes and photographs the narcotics encountered at the scene.

C. **Drugs Encountered at the Laboratory**

1. Drugs may be found in a person's clothing or concealed in an object when taking inventory of evidence at the laboratory. A crime scene responder must place the suspected drugs in a controlled substance envelope and must contact the lead investigator to obtain authorization for analysis of the substance. The responder must complete the controlled substance envelope and attach a phone log or fax from the lead investigator indicating authorization of analysis.
2. The suspected drug evidence will be entered as an item in LIMS along with the other evidence collected. The evidence description can be labeled as 'Controlled Substance Envelope'.
3. The item will be transported to the Muir Laboratory Facility and placed in the Muir Log-in storage to be further processed by the clerical staff.

D. **Special Instructions**

1. The laboratory does not routinely accept or analyze drug paraphernalia. Special circumstances must exist for the laboratory to analyze paraphernalia. The lead investigator must seek Supervisor/Manager approval to determine

if paraphernalia can be submitted to the laboratory for analysis. Relinquish paraphernalia to the lead investigator. Suggest removing any solid dose narcotics (if possible) and submit any removed solid dose drugs to the laboratory for analysis.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 1/5/2016	**NUMBER:** CS.14 - Forensic Entomology
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Forensic Entomology	

I. Forensic entomology is the use of insects, and their arthropod relatives, that inhabit decomposing remains to aid legal investigations. Their collection and preservation may be important to estimate time of death.

A. **Introduction**: A proper collection of entomology evidence can provide data for a forensic entomologist to calculate the time of death. It is crucial that the crime scene analyst to follow the proper steps of collection and record the appropriate information. Some insects have evolved a gradual or "paurometabolous" development in which there is an egg that hatches into an immature or "nymph" form, which resembles the adult form, but is smaller and lacks wings. However, most forensically-important insects undergo a complete or "holometabolous" development. There is an egg stage which hatches into a larval form and undergoes an incremental growth. This pattern is caused by the successive molts that the larva must undergo before it finally enters the inactive pupal stage. The pupa is simply the hardened outer skin of the last larval stage and the adult will develop inside of this protective skin.

1. **Blow Flies**: In the insects that undergo complete development, the larval stages appear quite different from the adult form. The larvae of flies that are commonly recovered from decomposing human remains lack functional legs, and the body of many species appears cream colored, soft-bodied, and quite "maggot-like". Once the larva is through feeding, it will migrate away from the corpse in order to find a suitable site to form the pupal stage. If the adult insect has emerged, one end will appear as if it has been cut off, and the hollow interior will be revealed. Most adult blow flies appear a metallic green or blue and are easily recognizable.

2. **Beetles**: Beetle larvae recovered from corpses can be easily differentiated from maggots as they have 3 pairs of legs and the maggots found on decomposing remains will not have any legs. The bodies of beetle larvae may range from almost white, robust, and hairless to dark brown, slender, and quite hairy. Others may appear almost black and have armored plates on their back.

B. **Equipment**:

1. Collecting vials.
2. Sweep insect nets.
3. Plastic specimen vials with screw cap.
4. Thermometers (mercury/electronic).
5. Solution (ethyl alcohol ~95%) to preserve specimens.
6. Hand trowel for soil sampling.
7. Forceps (tweezers).
8. Paper labels – use pencil to mark the labels.
9. Shipping containers.
10. Log sheets.

C. **Procedure:** There are four major steps need to follow for collection and preservation of entomology evidence.

1. **Visual and initial data collection**

a. Document the condition of the decedent with photographs and notes at the scene– (e.g. fresh, bloated, active decaying, any wounds).

b. Detailed site description: rural, urban, aquatic habitat, condition of windows, etc.

c. The position of the body, including where there would be sunlight and shade in the crime scene area during a normal daylight cycle.

d. Initiation of temperature data collection at the scene which includes body surface, ground surface, under-body interface, soil, maggot mass, ambient, and enclosed structure. The current weather conditions at the

site must be noted. Thermostat settings should be noted in dwellings.

e. Document observations and estimates of the number of flying, resting and crawling insects, and larvae or pupae within close proximity to the body. Note locations of major insect infestations associated with the body or surrounding areas. Insect activity may begin around an area of trauma.

f. Search surrounding areas for maggot tracks and document any accumulation of maggots or pupae (e.g. on baseboards and window sills).

2. **Collecting Climatological data at the scene**

a. When estimating the time death, climatological data about the crime scene is absolutely critical. The length of the insect life cycle is determined mostly by temperature and relative humidity in the environment development takes place. There are several temperature readings that should be taken in association with the death scene.

i. Ambient temperature can be evaluated by taking readings at 0.3 to 1.3 m heights in close proximity to the body.

ii. Ground temperature can be obtained by placing the thermometer on the ground, immediately above any surface ground cover.

iii. Body surface temperature is obtained by placing the thermometer on the skin surface.

iv. Under-body interface temperature is obtained by sliding the thermometer between the body and the ground surface.

v. Maggot mass temperatures can be obtained by inserting the thermometer into the center of the maggot mass.

vi. Soil temperatures should be taken immediately after body removal at a ground point which was under the body before removal. Also take soil temperatures at a second point 1-2 m away from the body. These temperatures should be taken at 3 levels:

1. Directly under any ground cover (grass, leaves, etc.),

2. at 4 cm soil depth and

3. at 20 cm soil depth.

b. Weather data for the scene should be collected from the nearest meteorological station. Minimum requirements should be maximum and minimum temperature and amount of precipitation. The climatological data should extend back to the time the victim was last seen.

3. **Collection of Specimens Before Body Removal**

a. An insect net can be used to collect flying insects. For the fast flying adult flies, use an aerial net.

i. Fill a vial half way with 95% ethyl alcohol.

ii. Sweep back and forth over the remains in swift sweeping movements, and then quickly trap the adults in the tail of the net by grabbing it with one hand.

iii. Hold the tail of the net up with one hand while moving the vial inside the opening of the net to trap the flies.

iv. If needed, pour more alcohol to fully submerge the insects.

b. Collect as many ground crawling insects as possible from around the body and put them in a vial. Pour 95% ethyl alcohol into the vial to fully submerge the insect mass after collection.

c. Once the surrounding area has been processed, collection of specimens from the body can begin. Scoop a representative sampling of larvae as well as egg masses from various areas of the body in glass vials. Pour 95% ethyl alcohol into the vial to fully submerge the insect mass after collection.

d. If desired by the Forensic Entomologist, and only if prompt transfer is assured, scoop another sampling of the maggot mass into a ventilated container and stored refrigerated.

4. **Collection of Specimens After Body Removal**

a. When a body is heavily infested at an outdoor scene, many insect adults, larvae, and pupae will remain on the ground after the body is removed. These specimens should be collected and preserved.

b. Any material (leaves, grass, bark, etc) on the ground surface close to or under the body should be collected and labeled.

c. Soil samples should be collected from under and around the body. Dig from the edge of the body and work outward, approximately 3-4 m to look for pupae. The larvae will migrate away from the corpse upon completion of their feeding.

D. **Shipment of Live Larvae**

1. First contact the Forensic Entomologist to see which way they prefer the insects to be shipped or delivered. Put all collection containers in a box with ice and ship them to the Forensic Entomologist via overnight delivery or deliver it directly.

E. **Entomology Evidence Collection Using the Lynn Peavey Collection Kit**

1. **Lynn Peavey provided the following instructions for use with their kit**: Entomology evidence recovery or collection techniques used should be the most direct and practically the least intrusive techniques. The collection kit contains two types of solutions. Solution A is used for preservation of the adult flies, adult beetles, beetle larvae, and fly puparia. Solution B is used for preservation of fly eggs and maggots (larvae). The collection vial should be labeled with the Lab Number, date of collection, location, and collector's initials. The adhesive labels marked Solution A and Solution B should be filled out and placed on the appropriate vials and the matching copy label should be filled out and placed in the vial with the specimen. Use only pencil in filling out the labels (ink will run or dissolve in the solutions).

2. **Adult Insects**

a. The first insects that should be collected are the adult flies and beetles.

b. Using Solution A, fill a screw cap vial 1/3 full.

c. For the fast flying adult flies, use an aerial net.

i. Sweep back and forth over the remains in swift sweeping movements, and then quickly trap the adults in the tail of the net by grabbing it with one hand.

ii. Hold the tail of the net up with one hand while moving the vial inside the opening of the net to trap the flies.

d. For ground crawling beetle larvae, adults, and fly puparia, place them into vials 1/3 full of Solution A.

e. Submerge all insect masses with Solution A if necessary.

3. **Fly Eggs and Larvae**

a. Scoop as many eggs or larvae into a vial to provide an adequate specimen representation.

b. Make separate collections from each major area where colonies are seen.

c. Submerge all insect masses with Solution B.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.15 - Body Recovery
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB**	
CHAPTER: Procedures	**SUBJECT:** Body Recovery	

I. The successful recognition and recovery of human skeletal remains is important in determining the identity of the individual, as well as providing investigators with forensic evidence in which to further their investigation. Proper techniques must be employed in order to retrieve as many bones of the human body as possible. Those aspects of this procedure that are applicable will be dictated by the requesting investigator, the Coroner's Investigator, and the District Attorney's Office Personnel. The Coroner's Investigator is responsible for the removal of the body from the scene.

A. **Preliminary Considerations**: Before traveling to the site of possible human skeletal remains, certain queries must be made in order to assess the scope of the recovery.

1. Does the investigating agency have legal permission to be present on the land?
2. Is the area safe and secure?
3. Is the body completely buried? Partially exposed?
4. Can vehicles access the area? If not, what accommodations have been made to transport investigators and workers to the site?
5. Has the Coroner's Office been notified? Is a representative from the Coroner's Office available to be on-site?

B. **Equipment**

1. Rakes
2. Flat-headed shovels
3. Trowels
4. Paint brushes
5. Tongue depressors
6. Survey flags
7. Measuring tape
8. Stakes
9. Colored string
10. Canvas or heavy plastic sheets
11. Sifting screens
12. Camera and memory card
13. Grid paper
14. Notebook
15. Paper bags
16. Cardboard boxes
17. Packing tape
18. Duct tape
19. Ink markers
20. Evidence tape

C. **Safety**: Appropriate personal protective equipment should be worn to reduce exposure to bloodborne and airborne pathogens.

D. **Search Techniques for Human Remains:** Visual cues may lead investigators to the site of a clandestine grave. Initially scanning the landscape to discern baseline topography may allow the analyst to recognize irregularities in both the ground surface structure and the vegetation.

1. **Differences in vegetation and soil.**

   a. **Disturbed vegetation**. Whenever a hole is dug in the ground, the vegetation in and around the hole is disturbed. Look for: unnatural succession of plants, disruption of root balls, unusual plant locations, "staged" appearance to natural vegetation. This will be seen with recently buried remains.

   b. **Soil compaction**. The natural decomposition of the buried remains will leave a void in the soil. Through time and rain, the soil above the remains will sink to fill the void, thus forming a depression in the surface above the body. Look for: primary or secondary burial depressions, sunken soil. This will be seen with remains that have been buried for a significant amount of time.

   c. **Soil disturbance**. When a grave is dug, the layers of the soil are disturbed. The soil under the ground is layered. At different depths, the soil will vary in color and represent the different layers of soil. Digging not only disturbs the soil layers in the grave, but also disturbs the surface soil around the grave. Look for: broken ground, fresh surface soil, disruption of strata.

   d. **Other inconsistencies**: Look for: tire tracks, garbage, animal burrows, clumps of hair or fibers, clothing.

2. **Aerial Photographs**: Aerial photos could show a vegetation disturbance occurring where a body is buried.

3. **Ground Penetrating Radar (GPR)**: GPR uses high-frequency radio waves and transmits into the ground. When a wave hits a buried object the receiving antenna records the variations in the reflected return signal.

4. **Metal detector**: Metal detectors can be helpful if metal or bullets are in and around the grave.

5. **Cadaver Dogs**: Some dogs are trained to detect the scent of decomposing bodies.

6. **Test Pits**: When an investigator has a reasonable belief that human remains are buried in an area but there are no obvious signs pointing to the location, test pits may be dug in an attempt to locate the remains.

E. **Recovery Site:** An evidence-free access route to and from the site must be established prior to processing. Extreme scattering of the bones/body parts or physical evidence by animals frequently occurs. Therefore, an outer perimeter search must be completed to locate other body parts or physical evidence.

F. **Excavation:** There are three primary methods of excavating the ground around the body and the body itself.

1. **Hole**: As the name indicates, a hole is dug, uncovering the remains as the soil is removed from over and around the body.

2. **Trench**: A trench is dug next to the remains to a depth of 18 inches below the upper body level. The trench must be at least the length of the body and approximately 18 inches wide. Using this method, three of the four walls of the grave can be defined.

3. **Table**: A table is dug by trenching all around the body, usually leaving a table approximately three and a half feet wide by six feet long and extending a foot and a half beyond the depth of the body. This method will leave all four walls of the grave intact.

4. A variety of shovels can be used during excavation; however, as you get closer to the remains, change to smaller digging instruments.

G. **Surface scatter**: Remains are left to decompose above ground or are only buried in a shallow grave. These types of scenes may be large in scope and may encompass a large amount of corresponding physical evidence. In addition, carnivorous scavengers may have relocated a large number of skeletal elements over a large area. General procedures to conduct a surface scatter site recovery are as follows:

1. If scavengers appear to have disturbed the remains, be cognizant of where animals take food to feed (underneath trees, in burrows, where they can see danger approaching, etc.)

2. Flag with survey flags any unusual items and evidence found in the field, including clothing, bones, garbage, debris, etc.

3. Locate a fixed point in the landscape to perform the appropriate measurement technique(s). Be sure to record all three dimensions, as appropriate.

4. Determine which items previously flagged are of evidentiary value to the case.

5. Place number or letter placards next to each item of forensic value, photograph and diagram

6. Collect all human remains in paper containers, being careful to correctly label and seal all packaging. Note, this may be done by laboratory staff or by the investigator from the Coroner's Office.

7. Release all other items of evidence to the investigating agency.

H. **Interred Remains**: Remains left below ground. The depth is of no importance in this classification. These types of scenes, although more compact in nature, pose an additional challenge of documenting a three-dimensional environment. General procedures to conduct a burial site excavation are as follows:

1. Remove excess leaf litter and vegetation from the grave surface.

2. Examine the leaf litter and vegetation for trace evidence (hair, clothing, jewelry) in a location away from the burial site.

3. Stake out a work area around the burial area for diagramming and measuring purposes.

II. Documentation

A. Once the remains have been located and the recovery site defined, proceed as with any other crime scene: secure the area, examine and evaluate the site, photograph, sketch and process. Document the position and location of the body within the scene through notes, photographs, sketches, and measurements to reference points.

B. A grid may be set up with rope or string for the purpose of locating the items by measurements and for ease in placing the items on a sketch.

C. Stations may be setup to sift through dirt and debris. Generally several inches of dirt from one quadrant can be sifted at once.

D. Plot all evidence and remains on the sketch.

E. Close-up photographs should be taken of all items before their removal. If items are located when sifting through the dirt, photograph the item when it is located.

F. The analyst must obtain approval from the Coroner’s Office before removing any transient evidence located on the body (i.e., trace evidence, biological fluid or stain, impression evidence).

G. The analyst must obtain approval from the Coroner’s Office before removing any clothing. If removing clothing, remove by cutting along an area free of defects or by removing intact, as circumstances dictate. Package articles of clothing in separate paper bags.

H. If there is potential evidence on the hands, the coroner’s investigators should place a paper bag over each hand and secure with tape prior to removal of the body.

I. If a sexual assault is suspected to have occurred, consider examining the body with an alternate light source.

J. Bindings and ligatures should not be disturbed, unless they attach the body to the scene. Minimize the number of cuts to bindings necessary to release the body from the scene. Never cut through a knot. Tape and label ends of ligatures or bindings that were cut by investigators

K. Always dig at least one foot below the depth of the body to ensure all evidence is located.

III. Collection of Evidence

A. The specific location of any evidence recovered will be documented in context (x, y, and z coordinates).

B. All evidence collected should be packaged separately.

C. The remains of the deceased should be packaged separately; if that is the way they were found.

D. If the body is intact, use a wooden backer board, white sheet and new body bag.

E. The easiest method of removing the body is to wrap it in a white sheet and place it into wooden backer board before removing it from the grave. This will keep the body intact and make transportation easier. Several centimeters of the soil beneath the body must also be removed and sifted again to locate evidence, bones, projectiles and teeth which may be present.

F. While it is the Coroner's Office responsibility to recover all human remains, the crime scene responder should share the best practices when it comes to recovering buried bodies.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 10/28/2019	**NUMBER:** CS.16 - Case Record
	RELATED ORDERS: FSD.17 Technical Review, FSD.18 Administrative Review, FSD.43 Test Reports,	
APPROVED BY: Donnie Finley, Tony Nguyen & Pamela Hofsass	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Test Reports and Test Records	

I. Crime scene processing activities must be documented by means of a Laboratory Report. Reports must be accurate, precise, and complete for the given type of crime scene processing performed. Any opinion or interpretation in the report must have documentation in the test record to support it. Both negative and positive results of tests and searches must be reported.

A. **Report Header**

1. The report will contain the same required header information as specified in FSD.43.
2. Verify the agency name and case number, case type, requester and request date, and the names of victim(s) and suspect(s) are correct. Wrong information in the header must be corrected.

B. **Report Outline (Body of Report):**
From the "Edit findings" menu, select result type "Field Services." This will populate the "Report of Field Services" header in the body of the report.
The following are the recommended sections in the body of the report and what each section should contain:

1. General Information:
   a. Laboratory personnel: a list of staff who responded to the scene.
   b. Date and Approximate Time of Arrival & Departure:
   c. Location of Scene: address of scene or addresses if more than one location
   d. Investigator(s) Present: to include DAs, Detectives, and Deputies and Officers of significance
2. Activities Performed:
   a. Typically: Documentation with notes, photographs, and laser scans. Evidence collection; see evidence section below.
3. Observations and Findings:
   a. Significant observations, opinions, and interpretations from the scene. This includes the results of tests performed on scene (e.g. presumptive blood tests) for both positive and negative results. Positive and negative control information is not required to be included in the report but must appear in the notes. Any opinion or interpretation in the report must have documentation in the test record to support it.
4. Recommendations:.
   a. This optional section may be used to notify the agency of recommended follow-up. For example, what evidence could be submitted for further analysis.

C. **Evidence inventory in report**

1. All collected evidence items with their descriptions and tracking numbers shall be in LIMS (see CS.21).
2. Location from where the item was collected.

D. **Atypical situations that require inclusion in the report**

1. Methods used to collect evidence will be noted if unusual.
   a. For example, a door with apparent bloodstains may not be feasible to completely cover and tape seal. The evidentiary areas must be protected from contamination and these unusual methods must be reported.
2. The evidence items that are documented but were not collected:
   a. For example, photographing and taking notes on an officer involved in a shooting who had no physical contact with the suspect.

E. **Disposition of Evidence**

1. Evidence submitted to technical units.
2. Any copies of photographs created.
3. Storage and copies of any electronic diagrams or data generated by the lab or outside agency relied upon during the preparation of the report.

F. **Style of report**

1. Both first person (e.g. "I noted apparent bloodstains on the pillowcase") and third person (e.g. "Apparent bloodstains were noted on the pillowcase") are acceptable viewpoints. Using active voice sentences is preferred when possible.
2. The report should be consistent in style. Avoid switching back and forth between first and third person viewpoints within the same report.

G. **Formatting**

1. Use the Times New Roman font, size 12.
2. Bold, italic, or underlined text should not be used, unless quoting or creating subsections.
3. The text should be Left-aligned with single paragraph spacing.
4. There will be a single empty space between paragraphs.

H. **Review and Dissemination**

1. The second crime scene responder should do a second read of the report prior to the report being submitted for technical/administrative review. If there was no second responder, the reports may be submitted directly for Technical and Administrative review.
2. All written reports will be technically and administratively reviewed prior to being released.
3. The administrative review milestone in LIMS reflects both the technical and administrative review of the request.
4. The primary crime scene responder will include the crime scene review checklist as the last page in their note packet. See CSF.02.

I. **Case Notes**

1. The note packet should be organized as follows:
    a. Assignment Notification Sheet
    b. Communication Logs (if appropriate)
    c. Field Services Information Sheet
    d. Notes
        i. Field Notes
        ii. Sketch
        iii. Measurements
        iv. Annotated photographs
            1. Photographs should be annotated with the filename, date taken, and a short description of the content of the photograph.
    e. Autopsy Checklist (if appropriate)
    f. Copy of Property/Clothing Evidence Inventory Sheet (if appropriate)
    g. LIMS Evidence Inventory Sheet
    h. Photo Thumbnail Sheets
    i. Crime Scene Review or Autopsy Review Checklist
2. While this is the preferred order, case circumstances may require a different organization of the note packet.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 05/23/2019	**NUMBER:** CS.17 - Equipment
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedure	**SUBJECT:** Equipment	

I. The Crime Scene Unit uses a variety of equipment to preserve, document and collect evidence. This policy describes the equipment and its maintenance schedule (if applicable). No critical measurements are recorded by the Crime Scene Unit.

A. Common crime scene supplies and equipment (swabs, envelopes, bags, etc.).

1. Used for evidence collection and/or measurement.
2. Replace as needed.

B. Common tools (hammers, punches, screwdrivers, Dremel, reciprocating saw, etc.).

1. Used to access or collect evidence, for example remove wall section to access bullet.
2. Repair/replace as needed.

C. Canon Digital SLR Camera (20D, 40D, 50D, 60D, or similar).

1. Document scenes, associated people, and evidence.
2. Repair or replace as needed.
3. See manuals: INSCS.01, INSCS.02, INSCS.03, and INSCS.04.

D. Tape measures and rulers (scales)

1. Prior to issue, all rulers and tape measures will be verified against a NIST calibrated ruler.
2. Packs of scales with adhesive backing do not need to be verified prior to issue.

E. Handheld laser measuring device (Hilti or Leica brand).

1. Measure evidence and/or dimensions of scene.
2. Accuracy verified annually.
3. Replace batteries as needed.

F. Leica laser scanner or equivalent

1. Measures evidence and dimensions of a crime scene.
2. Replace batteries as needed, update software and calibrate as needed.
3. A log will be maintained on all repairs and software upgrades.
4. See manual and user guides: INSCS.05, INSCS.06, and INSCS.08.

G. Electrostatic dust print lifter, adhesive lifter, gel lifter

1. Used to visualize and collect shoe prints off of surfaces
2. Ensure that electrostatic dust lifter is charged

H. Entomology Collection Kit

1. Used to collect samples of insects and larvae.
2. No expiration date as provided by vendor.

I. Alternative Light Source

1. Aids in visualization of biological stains and in locating trace evidence.
2. Replace batteries as needed

J. Casting material (ForensicSil, Mikrosil, Dental Stone)

1. Used to cast impression evidence that can not be collected.
2. As provided by vendor.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.18 - Reagents
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Reagents	

I. The Crime Scene Unit uses a variety of reagents for presumptive tests and documentation purposes. The method of preparation, procedure for use, and expiration are contained in this policy.

A. **Ortho-Tolidine (O-Tol):** Presumptive blood test

1. Source: The reagent is prepared by the Forensic Biology Unit (refer to BIO.5.QAQCF.14 for recipe for o-Toldine working solution and Hydrogen Peroxide).
2. Prior to use, the solution must be tested with a positive (known blood) and a negative (reagents alone) controls.
3. The expiration of the solution is 18 months from date of preparation and will be marked on the bottle.

B. **Hemastix:** blood test

1. Source: These are purchased ready to use from a vendor.
2. Prior to use, Hemastix must be tested with a positive (known blood) and a negative (reagents alone) controls.
3. The expiration of Hemastix is as specified by the vendor.

C. **Acid Phosphatase:** semen test

1. Source: The Acid Phosphatase buffer solution is prepared by the Forensic Biology Unit (refer to BIO.5.QAQCF.13 for recipe for AP Substrate and BIO.5.QAQCF.12 for recipe for Acetate buffer).
2. Prior to use, Acid Phosphatase must be tested with positive (known semen) and negative (reagents alone).
3. The expiration of the solution is 1 month and will be written on bottle.

D. **Luminol-based reagent (Bluestar):** blood enhancement reagent for detection of old or dilute bloodstains

1. Source: purchase Blue Star from vendor (Evident)
2. Prior to use, Bluestar must be tested with positive (known blood) and negative (reagents alone) controls
3. The expiration is as specified by the manufacturer.

E. **Leucocrystal Violet (LCV):** blood enhancement for visualization/enhancement of fingerprint or shoeprint impressions in blood

1. Source: vendor (Evident)
2. The expiration is as specified by manufacturer

F. **Sodium Rhodizonate:** presumptive lead test

1. Source: purchase lead check swabs from vendor.
2. Use positive (known lead) and negative (reagents alone) controls prior to use.
3. The expiration is as specified by manufacturer.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** CS.19 - Abbreviations
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedures	**SUBJECT:** Abbreviations	

I. The following are the approved abbreviations for the Crime Scene Unit.

⊥- perpendicular to (orthogonal)
// - parallel
∠ - angle
-, (-) - negative
+, ⊕, (+) - positive
@ - at
ADD'L - additional
ADW - assault with a deadly weapon
AF - Asian female
AFA - Asian female adult
AFJ - Asian female juvenile
ALPR - automated license plate reader
ALS - alternative light source
AM - Asian male
AMA - Asian male adult
AMJ - Asian male juvenile
AMT - amount
ANG - angle
APB - all point bulletin
APP - apparent, appears
ASSUM - assuming
AVE - avenue, average
AVG - average
BSEK - buccal swab evidence kit
BET, B/W - between
BF - black female
BFA - black female adult
BFJ - black female juvenile
BK, BLK - black
BLVD - boulevard
BM - black male
BMA - black male adult
BMJ - black male juvenile
BOLO - be on the lookout
BPB - brown paper bag
BR, BRN - brown
B/W - between
CAPT - captain
CB or CDBD - cardboard box or cardboard
CCME - clasp-closed manila envelope
CCRMC - Contra Costa Regional Medical Center

CCSE - clasp-closed soil envelope
CD - compact disk
CE - coin envelope
CHAR - characteristics
CIR - circle
CMDR - commander
COLL - collected
COMP - comparison
CONS - conservative
CONT, CONTG, C¯ - containing
CONT, CONT'D - continued
CORR - corresponding
CPL - corporal
CPR - cardiopulmonary resuscitation
CRIT - criteria
CSO - community services officer
(D) - deceased
DEF - defined
DEMO - demonstrate
DEP - deputy
DES - designated
DESC - decription
DET - determine(d) or detective
DI H_20 - deionized water
DIAM. - diameter
DIFF - different
DK - dark
DL, D/L - drivers license
DOB - date of birth
DTO - dithiooximide
DUI - driving under the influence
DV - domestic violence
DVD - digital video disc
EB oe E/B - eastbound
ENV - envelope
EtOH - ethanol
EVID, EVI - evidence
EXT - exterior
FECK - Fingernail Evidence Collection Kit
FOB - Field Operation Bureau
FP - fingerprint
FPE - fingerprint envelope
FRAG - fragment
FTO - field training officer
GOA - gone on arrival
GRN - green
GSR - gunshot residue
GSW - gunshot wound
HBD - has been drinking
HF - Hispanic female
HFA - Hispanic female adult
HFJ - Hispanic female juvenile
HM - Hispanic male
HMA - Hispanic male adult
HMJ - Hispanic male juvenile

HSPB - heat-sealed plastic bag
ID or IDE - identification
IFO - in front of
IMG - image
INCL -includes, included
INFO - information
INT - interior
INV - Investigator
JMMC - John Muir Medical Center
L or LFT - left
LAT - lateral(ly)
LF - left front
LIC - license
LG, LRG - large
LN - lane
LP - latent print(s)
LR - left rear
LT - left, light, lieutenant
MAG - magazine
MAN - manila
MAN ENV - manila envelope
MAT - material
MCDF - Marsh Creek Detention Facility
MDF - Martinez Detention Facility
ME - manila envelope
MEAS - measures, measured
MeOH - methanol
MISC - miscellaneous
MKS - marks
M/N - model number
MOD - model
MS - microscope
N/A - not applicable
N/C - not collected
NB or N/B - northbound
NEG - negative
NFE - not further examined
O-Tol - Orthotolidine
OBS - observed, observation
OD - overdose
OFC - Officer
ORTHO - orthogonal
OTO - on top of
P, PG - page
P/U - pick-up
PASS - passenger
PD - police department
PHOTO, PHOTO'D - photograph(s), photographed
PKG'D, PKGED - packaged
PB - paper bag
PLB - plastic bag
PLPB - press-lock plastic bag
POS - positive or position
POSS - possible
POT - potential or potentially

PROB - probably
PROM - promiscuous
Q - questioned
QUANT - quantity
R, RT - right
RAJ - runaway juvenile
RBEK - Reference Blood Evidence Kit
RD - road
REC, RECD, REC'D, RECV'D - received
REF - reference
REG - registration
REL - relative or relatively
REP - reportedly
RP - reporting party
RPT, REPT - report
RESEM - resembles or resembling
RF - right front
RGT - reagent
RR - right rear
RXN - reaction
(S) - suspect
SAEK - sexual assault evidence kit
SAMP - sample
SART - sexual assault response team
SB or S/B - southbound
SE - soil envelope
SER - serial
SGT - sergeant
SIG - significant
SM - small
SN, S/N - serial number
SO - sheriff's office
ST - street
STEREO - stereomicroscope
SUFF - sufficient
SUS, SUSP - suspect
T - test
TC - traffic collision
TC - tape-closed
TCBPB - tape-closed brown paper bag
TCME - tape-closed manila envelope
THRU - through
TRAJ - trajectory
TS - tape-sealed
TSBPB - tape-sealed brown paper bag
TSCB - tape-sealed cardboard box
TSCE - tape-sealed coin envelope
TSME - tape-sealed manila envelope
TSSB - tape-sealed slide box
TSSE - tape-sealed soil envelope
UNK - unknown
UTL - unable to locate
(V) - victim
VEH - vehicle
VIC - victim

VIN - vehicle identification number
VIS - visual
VS - versus
W/ - with
W/I - within
W/O - without
WB or W/B - westbound
WCDF - West County Detention Facility
WF - white female
WFA - white female adult
WFJ - white female juvenile
WHT - white
WM - white male
WMA - white male adult
WMJ - white male juvenile
WKSHT - worksheet
XFER - transfer
XR - cross-reference
XS or X/S- excess or cross street
XTALINE - crystalline
YEL - yellow
ZLPB - ziplock plastic bag

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** CS.20 - Evidence Handling & Chain of Custody
	RELATED ORDERS: FSD.35 - Evidence Handling, FSD.38 - Evidence Itemization, QA.09 - Adding, Itemizing and Transferring Evidence in LIMS	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Procedure	**SUBJECT:** Evidence Handling & Chain of Custody	

I. The Crime Scene Unit adheres to the Division Policy in regards to evidence handling and chain of custody requirements. Unit specific procedures are described here.

A. All evidence collected at crime scenes will be tracked in LIMS, with the exception of evidence items collected and released to an agency's representative at the scene.

1. Evidence may be collected and released to an agency's representative at the scene. Prior to release of evidence the following steps must be taken.

a. Document the chain of custody on the exterior packaging of the evidence.

b. Document the description of the evidence, collection location, person collecting it, and the date of collection on the exterior packaging.

c. Tape seal the evidence prior to its release.

2. After the chain of custody has been signed by the agency representative, take a photograph of the label and signed chain of custody in lieu of an evidence receipt.

B. For evidence transported to the lab:

1. Document the chain of custody on the exterior packaging of the evidence.

2. Document the description of the evidence, collection location, person collecting it, lab number, and the date of collection on the exterior packaging.

3. The evidence will be logged into LIMS within a reasonable time frame. See CS.02 for time frame requirements.

a. The first line on LIMS chain needs to be entered to **match** the chain listed on the hard copy chain on the exterior of the package.

i. LIMS will take the default date when the evidence is being logged in. It is the responsibility of the person logging in the evidence to ensure **the dates on the electronic chain match that on the package.**

b. The description of the evidence and location of collection must also appear in the LIMS evidence description.

i. The chain of custody in LIMS for crime scene evidence collected by crime scene responders will begin with the Agency Representative as "Crime Scene" and then be transferred to the crime scene responder.

ii. For evidence collected from Coroner's, the Agency Representative should be listed as "Autopsy", "Crime Scene", or the Pathologist's name as appropriate.

4. Tape seal the evidence prior to its transfer to a storage location.

C. Evidence storage requirements.

1. Evidence must be stored appropriately to prevent deleterious change.

2. Blood/urine must be refrigerated. After logging the evidence into LIMS, the incoming refrigerator is the most appropriate storage location.

3. Swabs must be air dried prior to packaging.

a. If submitting for analysis, swabs may be placed in Log-In at room temperature along with the request for analysis.

b. If no analysis is needed, swabs should be placed in the Return Freezer.

4. Wet clothing must be air dried prior to packaging.

5. Refer to the individual crime scene policies for further information (Biological Evidence, Firearms, Latents, Autopsy, Vehicle, Impressions, Trace, Drugs)

D. Crime scene responders may bring crime scene evidence back to the laboratory and continue processing or presumptive screening tests at the laboratory if the following conditions are met:

1. The evidence must have been collected by laboratory staff at the crime scene.

2. The processing or presumptive screening may only be performed by the crime scene responder(s) that responded to the scene (e.g. a second could perform the test even if the primary collected it).

3. The crime scene responder is appropriately competency and proficiency tested.

4. The time period between collection and processing in the laboratory is reasonable.

5. The limitations to any presumptive testing are appropriately qualified in the report.

E. Images as evidence.

1. Images taken for comparison examinations must be taken in a lossless format and treated as evidence. Refer to FSD.42.01 for division requirements.

2. All other documentation images taken at crime scenes are not considered evidence.

a. When a subsequent analysis requires documentation images to be treated as evidence (such as a reconstruction), the analyst will export the original documentation images from Veripic, burn them to disc, and treat them as evidence. The initial transfer will be from "Veripic" (under the Forensic Services Division agency in LIMS) to the analyst on the date that the images were exported.

b. If a request for subsequent analysis exists at the time of the original crime scene, then the crime scene responder will treat the images as evidence as described in a, above, but beginning the chain with "Crime Scene" instead of "Veripic."

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 02/16/2018	**NUMBER:** CS.21 - LIMS
	RELATED ORDERS: FSD.42 - Case Record	
APPROVED BY: Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** LIMS	

I. The following procedures will be used by staff to generate laboratory case numbers for crime scene call-outs generated after hours and on weekends and for evidence inventory lists for inclusion in note packets.

A. A Laboratory Information Management System (LIMS) Administrator will reserve lab numbers from LIMS as needed.

1. The lab numbers may be reserved using a defined convention and/or based on operational needs. Unused lab numbers may be recycled by year's end.
2. The nomenclature will include the year and all leading zeros to enable searching using the LIMS case mask e.g. -18-00500 or 18-01150.
3. The lab numbers will be reserved under the agency name of "Crime Scene".

B. Reserved lab numbers will be accessible from the Google Drive Crime Scenes folder.

1. The list of reserved lab numbers will be uploaded on the secure Google Drive folder, which will be easily accessible from bookmarks saved on the crime scene iPhones and clerical kiosk tablet.
   a. Open the Google Drive app and the Crime Scenes folder to locate the list of reserved lab numbers in a spreadsheet.
2. Staff will use the reserved crime scene lab numbers sequentially and place their initials on the spreadsheet in Google Drive, to indicate that the lab number has been used. When multiple scenes occur, the crime scene responder will take the next available reserved lab number.
3. Crime Scene responders will communicate the agency case number to clerical staff in a timely manner to prevent multiple lab numbers from being erroneously drawn for the same case.

C. All note packets will include a list of evidence collected and logged into LIMS by the crime scene responder.

1. This list can be generated by going to Administration, Crystal Reports, and Generate Reports. Change the category to crime scene and select the "Crime Scene Evidence Inventory" crystal report.
2. Select print, choose your option (default printer, other printer, or screen), click in the "Enter a Value" box, and then scan the barcode of the request.
3. Note, some findings must be entered under the request in order for the report to print.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.01 - Module I-Crime Scene Overview
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module I-Crime Scene Overview	

I. Purpose: The primary purpose of this unit of training is to introduce the trainee to the aspects of crime scenes including requests, vehicles, radio use, and crime scene team expectations.

A. **Objectives**

1. Understand the scientific methodology used in Crime Scene analysis.
2. Understand the differences between class and individual characteristics as they relate to physical evidence.
3. Understand the scientific foundation behind the collection and preservation of physical evidence.
4. Be familiar with legal aspects that govern crime scene processing.
5. Understand the procedures for operation and maintenance of the crime scene vehicle and equipment.
6. Prioritize the response to multiple requests.
7. Recognize that a crime scene responder may function as a technical advisor.
8. Explain the operation of the various forensic science disciplines and be able to identify the types of evidence they examine.
9. Know the proper use of personal protective equipment.
10. Know the proper use of facility protective equipment.
11. Know the proper use of storage and handling of chemicals.
12. Be able to communicate the safety procedures whether in the laboratory or outside at a crime scene.

B. **Study Questions**

1. Define physical evidence
2. What are the various types of crime scenes that a responder may be requested to document in the performance of their duties?
3. Define the role of the crime scene responder.
4. What is Locard's Exchange Principle?
5. Explain the linkage triangle.

C. **Practical Exercises**

1. Identify the exams used to analyze those various types of evidence. This may be accomplished by temporary assignment to each of the following sections of the Laboratory for a block of time to be introduced to the types of evidence and examinations that take place within each discipline: Forensic Biology, Comparative Evidence, Latent Prints, Drugs, Alcohol, and Toxicology.

D. **Suggested Reading**

1. Forensic Services Division Policy
2. Criminalistics: An Introduction to Forensic Science Richard Saferstein (GC-103d)
3. Practical Homicide Investigation Vernon Geberth (GC-155)
4. Techniques of Crime Scene Investigation Barry Fisher (GC-125)
5. Saferstein Forensic Science Handbook Vol 1 (GC-132)
6. Saferstein Forensic Science Handbook Vol II (GC-140)

7. FSD Safety Manual

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 10/2/2018	**NUMBER:** CS.22.02 - Module II-Crime Scene Management
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen, & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module II-Crime Scene Management	

I. The primary purpose of this unit of instruction is to address the initial actions taken by the Crime Scene Responder prior to and upon arrival at the scene. This unit will also discuss the skills necessary to coordinate a crime scene.

A. **Objectives**

1. To understand what type of information is needed before responding.
2. To understand what type of information is required on arrival at the scene.
3. To understand the importance of properly searching for evidence.
4. To become knowledgeable of and experienced with different search techniques and their applications at various types of scenes.

B. **Study Questions**

1. What should be documented during the initial response request?
2. What information should be documented or discussed upon arrival at the crime scene?
3. How should the extent and scope of the crime scene be evaluated?
4. What immediate precautions should be taken to ensure the successful collection of physical evidence?
5. What types of systematic search techniques are commonly used when processing crime scenes?
6. What types of specialized equipment can be used for crime scene searches? What is each piece of equipment used for?

C. **Practical Exercises**

1. With your instructor acting as the lead investigator, review photographs from a real crime scene. Determine what special equipment would be useful. Discuss what you might collect, how you would collect it, and what follow-up examinations you would recommend to the detective.

D. **Suggested Reading**

1. Crime Scene Investigation & Reconstruction, Robert Ogle, Jr.
2. Crime Scene Investigation Goddard (GC-74)
3. Handbook of Forensic Archaeology and Anthropology Morse, Duncan, Stoutamire (FM-38)
4. Forensic Taphonomy Haglund (FM-52)
5. Evidence and Crime Scene Reconstruction Rynearson and Chisum (GC-164)
6. Techniques of Crime Scene Investigation Barry Fisher (GC-125)
7. Fundamentals of Criminal Investigations O'Hara (GC-65)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 05/23/2019	**NUMBER:** CS.22.03 - Module III-Crime Scene Documentation and Evidence Collection
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Module III-Crime Scene Documentation and Evidence Collection	

I. This unit of instruction is designed to provide the trainee with information on the proper documentation of a crime scene. The note-taking portion of this unit will emphasize to the trainee the importance of taking proper notes, not only at the crime scene, but also upon notification for assistance and during all follow-up work. The sketching portion of this unit is designed to develop basic skills in preparing crime scene sketches. Various techniques will be explained and demonstrated. The trainee will learn the proper procedures for obtaining accurate measurements necessary to complete a crime scene sketch. The initial photography portion of this unit is intended to develop the basic skills in the use of photographic equipment. It is designed to instruct the student in the type of photographic equipment that is available and the proper use of the equipment, as well as the lighting needed for good photography.

A. **Objectives**

1. To understand the importance of documenting crime scenes and the evidence therein by a combination of note taking, sketches, and photography.
2. To demonstrate the ability to document observations at a crime scene through note taking.
3. To demonstrate the ability to produce various sketches of crime scenes.
4. To develop the skills necessary for recording the location of evidence and its spatial relationship to other items in the scene through photography and sketches.
5. To correctly complete the Crime Scene Forms and electronic documentation (LIMS) required for crime scenes.
6. To understand the basic principles of photography, the types of photographs taken at a crime scene, and the methods for acquiring them.
7. To demonstrate the ability to operate photographic equipment successfully at a crime scene.
8. To understand the various methods of making and recording measurements at the crime scene.
9. To understand chain of custody and the need for chain of custody documentation.

B. **Study Questions**

1. **Note Taking**:
   a. Why is it important to document your observations and actions in writing?
   b. What type of information should you document when you arrive at the scene?
   c. List information that should be included in the description of the general scene conditions:
   d. In addition to describing the type and location of evidence, what information should be included in the description of the body, if present:
2. **Photography**:
   a. What is the purpose of crime scene photography?
   b. What is exposure?
   c. Describe how the exposure can be adjusted using shutter speed and aperture. What effects can shutter speed and aperture adjustment have on the resulting photograph?
   d. What are the three types of photographs that should be taken at a crime scene?
   e. What is the purpose of each type of photograph?
   f. What two close-up photographs of evidence items are necessary?
   g. Name three techniques for controlling flash output and shadow management.

h. What is the procedure for photographing the reaction of Luminol or Luminol-based reagents with blood?

i. What are the requirements for footwear impression photography?

3. **Sketches**:

a. What are the purposes of diagrams/sketches?

b. What are the main types of sketches?

c. What measurements are necessary for the creation of a scaled diagram?

d. What information should be included on the sketch?

e. List the measuring devices and equipment useful for creating a sketch.

f. List the three main reference methods used to diagram a scene and explain each method. What are the strengths/weaknesses of these methods?

C. **Practical Exercises**

1. **Note Taking**:

a. Review examples of crime scene reports and notes.

b. Explain why seemingly trivial observations observed in the example note packets were important.

2. **Photography**:

a. Photograph a house or building as if it were the location of an outdoor crime scene. Be sure to establish location and identity, as well as walk around the house to get all exteriors. Also, remember to get pictures of other structures on the property and show their location with respect to the house.

b. Photograph the interior of a house where a scene is located. Get all rooms, not just the rooms pertinent to the scene. Manipulate the camera and the light to properly expose the images regardless of the conditions of the room (dark walls, light walls, small room, etc.).

c. Photograph a single room with multiple exhibits of interest (the “crime scene”). Be sure to use overall, medium range, and close-up photographs.

d. Photograph a blood spatter pattern on a white wall, watching out for hot spots, focus, and establishing visual relationships between photographs.

e. Photograph the following items related to processing a vehicle:

i. VIN

ii. License plate, front and back

iii. External damage

iv. Tire tread pattern

v. Object in the anterior of the vehicle, through the windshield

vi. A stain, defect, or object on the windshield

vii. A stain, defect or object on the head liner

viii. An object under the seat

ix. Latent prints on a window, exterior of a door, and rearview mirror

f. Photograph the following items: handgun, knife, footwear impression, tire impression, fingerprint, toolmark and blood trail.

3. **Sketches**: Create the following sketches and include all relevant measurements necessary for a scaled diagram to be produced (you do not need to produce the scaled diagram).

a. An overview sketch of a furnished room with evidence placed at various locations/elevations throughout the room.

b. An exploded view sketch of a hallway with evidence placed on the walls and floor.

c. A 3-dimensional sketch of a piece of furniture with a knife protruding from it.

d. An elevation sketch of a door or window where evidence of forced entry and fingerprints are located.

e. A sketch of an outdoor scene showing the relative positions of tire tracks and footwear impressions to the surrounding environment.

4. **Specialized Equipment:**

a. Use the ALS to view various biological materials and other non-biological materials on different types of surfaces.

b. Use the Leica laser scanner or equivalent to document a mock crime scene.

D. **Suggested Reading**

1. Practical Homicide Investigation, Third Edition, author Vernon J. Geberth, Chapter 6 Crime Scene Photography (GC-155)

2. Crime Scene and Evidence Photographer's Guide (PH-41)

3. Techniques of Crime Scene Investigation, Sixth Edition, author Barry A.J. Fisher, Page 82-97.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 04/24/2019	**NUMBER:** CS.22.04 - Module IV-General Photography
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Module IV-General Photography	

I. The following is the training procedure for crime scene photography.

A. **Objectives**

1. To become familiar with Principles of Photography including:
   a. Aperture and its influence on exposure
   b. Shutter speed and its influence on exposure
   c. ISO and its influence on exposure
   d. Starting points for ISO, aperture, and shutter speed for common lighting situations
   e. Various types of light and their color temperatures
2. To become familiar with the Digital SLR Camera System including
   a. The nomenclature of the Canon SLR camera system
   b. The nomenclature of the Canon electronic flash unit
   c. Digital imaging file formats
   d. The function and operation of a fixed focal length standard camera lens, telephoto lens, and macro lens
   e. The various photographic shooting platforms available to the photographer
3. To become familiar with Flash Photography including:
   a. the methods of controlling the flash unit
   b. the three primary angles of lighting commonly used in conjunction with the flash
   c. various techniques for controlling the effects of illumination from the flash
   d. situations when a flash is required when there appears to be enough ambient light
4. To become familiar with Specialized Photography Techniques including:
   a. evidence on highly reflective surfaces
   b. evidence on curved surfaces
   c. evidence on clear surfaces
   d. three dimensional impression evidence
5. To become familiar with low-light Photography including:
   a. a large outdoor crime scene by painting with light
   b. a large outdoor crime scene using a timed exposure technique
   c. a crime scene containing trace amounts of blood using luminol-based reagent
   d. the flight path of bullet trajectory in a crime scene using lasers

B. **Study Questions**

1. Identify the primary objective of crime scene photography and the documentation needed to ensure the admissibility of photographic evidence.

2. List the proper perspectives and compositions necessary during crime scene photography.
3. What is exposure?
4. What is shutter speed? What happens to exposure if you increase the shutter speed? Decrease? What is the trade off (possible negative effect) with shutter speed?
5. What is aperture? What happens to exposure if you increase the aperture? Decrease? What is the trade off (possible negative effect) with aperture?
6. What is ISO? What happens to exposure if you increase the ISO? Decrease? What is the trade off (possible negative effect) with ISO?
7. What are the three types of photographs that should be taken at a crime scene?
8. What is the purpose of each type of photograph?
9. What two close-up photographs of evidence items are necessary?
10. Name three techniques for controlling flash output and shadow management.
11. What is the procedure for photographing the reaction of Luminol or Luminol-based reagents with blood?
12. What are the requirements for footwear impression photography?
13. What are the four variables that affect exposure?
14. Why does changing one of them require an adjustment to one of the other exposure variables?
15. What are the two main reasons for changing exposure variables while maintaining the same exposure?
16. Explain white balance. How do different types of lighting affect the colors in your images?
17. Can a properly exposed crime scene photograph still be unsuccessful? Why?
18. Automatic focus has difficulties locking in on some types of scenes. Explain two situations in which it may be better to use manual focusing.
19. Explain the camera variables that affect depth of field, including those that maximize depth of field and minimize depth of field.
20. Explain which focal length of lens is considered a “normal” lens and why this is so. At what focal length (in mm) do you need to set a 16-35mm lens attached to a crop-frame sensor camera, such as a Canon 40D-80D?
21. Is there just one sync speed a camera can use with a particular flash unit? Although most cameras designate one shutter speed as that camera’s sync speed, can “faster” or “slower” shutter speeds ever be used with a flash?
22. Indicate one circumstance when it would be better to choose the automatic flash mode over the manual flash mode. Why?
23. Indicate one circumstance when it would be better to choose the manual flash mode over the automatic flash mode. Why?
24. In what circumstances does fill-in flash result in distinct benefits to exposure?
25. Explain all the concerns related to the photography of footwear impressions.
26. Briefly explain the types of exterior overall photographs.
27. Briefly explain interior overall photographs. What are some starting points for ISO, aperture, and shutter speed?
28. Midrange photographs have a specific purpose. Explain.
29. Explain the types of close-up photographs that should be taken of evidence.
30. Explain the “full body panorama” series of photographs.
31. What does the flash diffuser do to the flash? When should you use it?
32. What is a good lighting scenario to use Av (aperture priority) mode? Why?
33. What is a circular polarizer (filter) used for?

C. **Practical Exercises**

1. Properly photograph one item that is completely in the sun.
2. Properly photograph one item that is completely in the shade.

3. Photograph a building facade that is in the shade.
4. Place an interesting object on a vehicle dashboard and photograph it through the windshield with a polarizer filter used to eliminate the reflections on the windshield. From this same position, photograph the same object without the polarizer filter.
5. Place a coin on the sidewalk with the mint designation or date plainly visible. With the camera on a tripod, determine the best exposure using an aperture of f/22, f/16, f/11, f/8, f/5.6, f/4.0, and f/2.8.
6. On a day with bright sunlight, place an object by a car's tire in the shadow.
7. Find or create a shoe print in dirt, place the camera on a tripod, and photograph it with the flash as directly as possible. Then, take a set of photographs with oblique lighting, changing the angle and position of the flash several times. Compare and contrast the images of the oblique flash with the direct flash.
8. In a bathroom, place several items around the sink and take a direct flash photograph. Next, use a bounce flash for the same scene, from the same position. Compare and contrast the images.
9. Take a picture of a smear on a mirror.
10. Take a series of photographs completely documenting two sides of a building.
11. Take a photograph or series of photographs relating the building in which a crime occurred to the surrounding area or neighborhood.
12. Take a series of photographs completely documenting two walls of a room.
13. With an item of evidence outside, take a midrange and close-up photographs of it.
14. With an item of evidence inside, take a midrange and close-up photographs of it.
15. Repeat with a reflective object, such as a license plate or knife blade.
16. With a body outside, take a midrange photograph and a complete body panorama of it.
17. On this body, draw a 1″ "wound" and take a midrange photograph and a series of close-ups of it.
18. With a body inside, take a midrange photograph and a complete body panorama of it.
19. On this body, draw a 1″ "wound" and take a midrange photograph and a series of close-ups of it.
20. **Fluorescence**
    a. As directed, photograph a fluorescing non-blood body fluid. Use the camera on a tripod, aperture priority, f/11, the alternate light source emitting blue light, and an orange filter on the lens. Alternatively, a long-wave UV light and yellow filter can be used. Include a partial fluorescent scale with your initials on it.
    b. As directed, photograph a bloody shoe print or handprint with Bluestar or luminol. This can be animal blood. Bleach may be used as a blood substitute. Photograph in complete darkness, with a flashlight briefly bounced off the ceiling during the exposure. A phosphorescent scale with phosphorescent initials can be included, as well as a penny and positive blood control. Exposure: Use the camera on a tripod, ISO 400, f/5.6, 90-second SS (45 seconds for bleach as a blood substitute); or a reciprocal exposure.

D. **Required Reading**

1. The Practical Methodology of Forensic Photography (PH 41). Chapters 1, 2, and 7.

E. **Suggested Reading**

1. Photography Monograph
2. Photographic Evidence: Preparation & Presentation (PH 36)
3. Forensic Uses of Digital Imaging (PH 40)

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.05 - Module V-Autopsy
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module V-Autopsy	

I. The primary purpose of this unit of instruction is to introduce the trainee to the proper preservation, collection, and documentation of evidence that relates to the postmortem examination of human remains.

A. **Objectives**

1. To understand the types and nature of evidence collected at post mortem examinations.
2. To demonstrate the ability to photograph a postmortem examination.
3. To demonstrate the ability to conduct a post mortem evidence search, and to recognize, collect and successfully preserve physical evidence from the body.
4. Be able to utilize specific photographic techniques necessary for the documentation of identifying characteristics (i.e. bite marks, tattoos, wounds, stippling, enhancements, etc.).
5. Explain the analytical possibilities concerning evidence obtainable from the autopsy.

B. **Study Questions**

1. Where does the recovery of evidence from a body begin?
2. What are livor, blanching and rigor? How are these post mortem body changes to be documented? Why is it important to note these changes?
3. How should a body at a crime scene be prepared to protect against loss of evidence during transport to the Coroner's office?
4. List the types of evidence that may be found on a body.
5. List and discuss the things that must be done pre-autopsy, during autopsy and post autopsy.
6. What is the most important aspect and the most used evidence of an autopsy?
7. Why are hands typically covered with paper bags prior to transport to the Coroner's office?
8. Why are paper bags used and not plastic bags? How should the bags be labeled?
9. When should a discipline expert be called in to assist with a post mortem evaluation?

C. **Practical Exercises**

1. Attend 3-5 autopsies.

D. **Suggested Reading**

1. Forensic Pathology Dominick J. DiMaio, Vincent J.M. DiMaio (FM-48)
2. Gunshot Wounds Dominick J. DiMaio, Vincent J.M. DiMaio (FI-41)
3. Interpretation of Bloodstain Evidence at Crime Scenes William G. Eckert, Stuart H. James (GC-141)
4. Bloodstain Pattern Analysis Bevel (GC-177)
5. Autospy checklist

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** CS.22.06 - Module VI-Vehicle Processing
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Module VI-Vehicle Processing	

I. The primary purpose of this unit of instruction is to introduce the trainee to the collection and documentation evidence when processing vehicles.

A. **Objectives**

1. To understand the techniques for processing the interior and exterior of a vehicle.
2. To understand the special conditions unique to processing a vehicle when compared with an interior crime scene.

B. **Study Questions**

1. What transient conditions should be documented during vehicle processing?
2. What kinds of activities can processing a vehicle entail?
3. Name common areas that should be considered for latent print processing.
4. Name common areas that should be considered for the collection of contact DNA swabs.
5. Discuss trace evidence standard collection techniques with your trainer.
6. How can damage to vehicle be documented? What evidence can be collected from damaged areas?
7. What equipment would be used if a sexual assault was suspected to have occurred in the vehicle? If evidence is located, how could it be collected?
8. How can items be documented within a vehicle?
9. How should items in a vehicle be prioritized in terms of collection?
10. What could be done if no keys are available for a vehicle and it is locked?
11. If multiple items of clothing exist inside a vehicle, what should be collected?
12. How can indicia be documented? What determines whether to collect indica or not? What about receipts?
13. What items could be documented to demonstrate a hit-and-run scenario?

C. **Practical Exercises**

1. Document a vehicle under the direction of your trainer.

D. **Required Reading**

1. Crime Scene Investigation Reconstruction, Robert Ogle, Jr. pages 196-206

E. **Suggested Reading**

1. Vehicular Accident Investigation and Reconstruction, Donald J. Van Kirk

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 3/25/2019	**NUMBER:** CS.22.07 - Module VII-Latents
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module VII-Latents	

I. The primary purpose of this unit of instruction is to introduce the trainee to the recognition, proper handling, collection, and documentation of latent print evidence at crime scenes.

A. **Objectives**

1. To develop friction ridge detail at various crime scenes using physical and chemical techniques including, as necessary, optical and forensic alternate light sources.
2. To understand the basic characteristics of friction ridge skin and their transferred impressions.
3. To select and apply accurate recording and documentation techniques to optimize the usefulness of latent friction ridge detail at crime scenes.
4. To apply the appropriate method(s) for collecting and preserving latent friction ridge detail at a crime scene.

B. **Study Questions**

1. Name the three basic fingerprint patterns.
2. Can the friction ridge detail from our finger joints, palms or the soles of our feet be used for identification purposes?
3. Name two friction ridge characteristics used for identification/individualization.
4. Define Latent, Patent, and Plastic friction ridge impressions.
5. Define the difference between physical and chemical processing techniques and how each category might be used at a crime scene.
6. Explain the appropriate application of black and magnetic powder.
7. Discuss and demonstrate the documentation requirements of observed, developed and preserved friction ridge impressions.
8. Discuss and demonstrate the appropriate collection, packaging and transport of latent friction ridge physical evidence associated with various crime scenes.
9. Share your general understanding of the preservation and storage requirements of latent friction ridge physical evidence for subsequent laboratory processing.
10. Share your general understanding of the importance of obtaining known inked print standards, including deceased prints.

C. **Practical Exercises**

1. Discussion of Level 1 (class characteristics: overall ridge flow and fingerprint patterns) and Level 2 characteristics (individual ridge path – bifurcations, ridge endings, dots)
2. Using the appropriate physical development techniques, process the following items as directed:
    a. Aluminum can
    b. Glass bottle
    c. Plastic beverage bottle
    d. Mirror
    e. Vehicle exterior
3. Discuss the areas on the interior of a vehicle you would process for latent fingerprints with your trainer.

4. Obtain a set of exemplars from a coworker and have a latent print examiner provide feedback on the quality.

D. **Required Reading**

1. Saferstein, Richard, *Criminalistics: An Introduction to Forensic Science*. Pearson Education, 2018, pages 406-431.

E. **Suggested Reading**

1. NIJ: The Fingerprint Sourcebook. Chapters 4, 7, 8, 9, and 11.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 3/25/2019	**NUMBER:** CS.22.08 - Module VIII-Biological Evidence
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen, & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module VIII-Biological Evidence	

I. Purpose: The primary purpose of this unit of instruction is to introduce the trainee to the recognition, preservation, collection and documentation of biological evidence at crime scenes.

A. **Objectives**

1. To demonstrate the ability to search for blood and other biological material at a crime scene, including the use of an ALS.
2. To demonstrate the ability to use presumptive blood tests.
3. To demonstrate the ability to document blood and other biological materials at a scene.
4. To use proper collection and preservation techniques for blood and other biological evidence, including contact DNA.

B. **Study Questions**

1. What structure in blood reacts with the O-tol test, resulting in a positive reaction? What are common false positive materials that react with O-tol?
2. Why is O-tol a presumptive test? What controls are necessary to document for presumptive tests?
3. When might you use Hemastix instead of O-tol?
4. What is the purpose of a substrate control? Is a control necessary in all cases?
5. You have a pool of blood at a crime scene. How would you collect a sample of that blood? How would you store it?
6. You have a trail of blood drops leading away from the body of a deceased individual (beaten to death), down a hallway in a residence, and out the back door. You don't count the individual droplets, but there appears to be several dozen individual drops that make up the trail. How many would you collect and why?
7. You are examining a car seat where you believe an individual bled profusely. You observe that the upholstery fabric is stained an even, diffuse yellowish-light red color over the entire seat portion. You cut out a piece of fabric for your sample, and notice that the seat cushion is thoroughly saturated with blood – so much that it's soaked through and is dripping onto the floorboard underneath. Why do you think the upholstery stain looked as it did?
8. Why is it recommended that you air dry wet biological evidence? How could wet biological evidence be transported to the laboratory?
9. It has been 1½ days since the assault took place where the victim was beaten and bleeding severely. You find a suspected assault weapon (a wooden bat) in the gutter of a street near the suspect's residence. It has also started raining several hours earlier and you assume the bat has been immersed in water for that time. Do you think any blood will be left on the bat for DNA testing?
10. Describe where on a vehicle you might start swabbing for latent blood when none is visible. Let's assume that investigative information leads you to believe that the possible driver may have been bleeding.
11. What body fluids may fluoresce with the ALS? Which ones will not?
    a. What filter works best with the ALS set to 450nm? 415nm?
12. You have a suspected semen stain located on a car seat. Describe at least two ways you can collect the stain. Explain the pros and cons of each method.
13. Discuss some possible sources of DNA contamination. What PPE would you use to protect evidence from contamination?
14. Where are the best places to collect contact DNA from a car? From a firearm?

15. What biological evidence may be packaged together? When can biological evidence not be packaged together?

C. **Practical Exercises**

1. Collect contact DNA from a firearm.
2. Test a positive and negative control with O-tol and document in your notes.
3. Test and document the following stains with O-tol as directed:
    a. Human blood in diminishing stain size
    b. Human blood in serial dilution
    c. Animal blood
    d. Horseradish
    e. Rust
    f. Semen
    g. Perspiration
    h. Ink stain
    i. Chocolate stain
    j. Ketchup stain
4. Collect the bloodstains from the following substrates using an appropriate technique as directed:
    a. Wallboard
    b. Carpet
    c. Glass
    d. Wood
    e. Denim
    f. Metal
    g. Leather
5. Practice the following different methods of collecting bloodstains:
    a. Cutting out the stain
    b. Swabbing the stain
    c. Scraping the stain from a vertical object
6. Use an alternate light source to examine the following items as directed:
    a. Semen in diminishing stain size
    b. Perspiration stain
    c. Coffee stain
    d. Bleach
    e. Soap
    f. Blood serum
    g. Semen-free vaginal stain
    h. Neat semen stain
    i. Urine stain
    j. Beer stain
7. Discuss with your trainer the different sources of DNA.

D. **Required Reading**

1. Saferstein, Richard, *Criminalistics: An Introduction to Forensic Science*. Pearson Education, 2018, pages 348-405.

E. **Suggested Reading**:

1. Gaensslen, R.E. Sourcebook in Forensic Serology, Immunology and Biochemistry. United States Department of Justice, Washington, D.C., 1983. Pages 112-115.

2. Baechtel, F. S. (1988) "The Identification and Individualization of Semen Stains," In Forensic Science Handbook Volume II, R. Saferstein editor, Prentice Hall, Englewood Cliffs, New Jersey, pp. 347-39

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.09 - Module IX-Firearms
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module IX-Firearms	

I. The primary purpose of this unit of instruction is to introduce the trainee to the recognition, safe and proper handling, collection and documentation of firearms evidence at crime scenes.

A. **Objectives**

1. To demonstrate the ability to use safe handling techniques for recovering firearms at crime scenes.
2. To develop the ability to recognize firearms evidence.
3. To demonstrate the ability to properly document and collect firearms evidence.

B. **Study Questions**

1. What are the safe handling and unloading techniques for various firearms types (revolvers, pistols, rifles and shotguns, tube magazine)?
2. Describe the components of a cartridge and shotshell.
3. What factors effect the size of the hole that a bullet makes in a substrate?

C. **Practical Exercises**

1. Observe a revolver containing six (6) cartridges within its cylinder. Document the make, model and serial number of the firearm, the general description, the number of cartridges, and the cartridge placement.
2. Correctly render safe, secure and properly package the above firearm. Mark the exterior packaging appropriately.
3. Repeat practical exercises 1 and 2 with a variety of firerams, as supplied by a firearms examiner.
4. Disassemble several cartridges and shotshells to become familiar with the components that may be encountered at a crime scene (bullets, cartridge cases, shot pellets, slugs, various powders, shot shells, wads, shot cups, etc.). Also examine samples of fired components as supplied by a firearms examiner.

D. The following practical exercises/demonstrations need to be conducted at a firearms range or other appropriate location with a qualified firearms examiner. Range safety will be discussed by the firearms examiner prior to beginning the exercises. The firearms examiner(s) will be the designated shooter(s) for these exercises.

1. **Ejection Patterns:**
   a. Use several semiautomatic weapons to demonstrate the variability in the ejection patterns from each of the weapons and variability created by the surface struck by the cartridge cases (fire on asphalt surface and grassy area if available).
   b. Demonstrate how the position of the weapon affects the ejection pattern.
2. **Trajectory Analysis:**
   a. If possible, shoot firearms straight-on into the post to demonstrate penetration and the size of the hole created from each weapon. After each shot observe the damage, check each of the secondary targets and discuss bullet flight. String the holes through the series of targets to determine changes in bullet flight. Label the holes in each target so that subsequent shots can easily be distinguished.
   b. Using the same targets, shoot an angled shot along one side. Observe the furrowing and review the bullet flight.
   c. Using a drywall target, fire two 12 gauge shot shells into the drywall from a distance of about 10 yards. Observe the penetration and pellet pattern of each and any damage produced by the shot cup. Discuss the value of recovering the shot cup and the distance it traveled. Change the distance to demonstrate the spread of the pellet pattern.
3. **Powder Patterns**

a. If possible, fire a shot from both a pistol and a revolver adjacent to the post to simulate a door frame situation. Demonstrate how the muzzle blast and gases from around the cylinder produce sooting on the post or adjacent material.

b. Shoot the post or a 2”x4” board with a muzzle distance of 6” and note the powder pattern. Fire a pistol, revolver and rifle in this manner.

c. Shoot a pistol, revolver, rifle and shotgun over a sheet of white paper. Observe the distribution of powder particles for each firearm.

d. Wrap a towel, blanket or pillow around a handgun and fire. Observe the sooting and powder burn on the object.

4. **Glass**

a. If possible, shoot the handguns and rifles into a sheet of laminated glass (label each hole with the corresponding caliber or document the location of each hole on paper).

b. Observe the size of the holes, extent of the fracture, and cupping around the hole.

c. Discuss how to determine directionality (entry and exit) from glass fractures (review radial, concentric and concodial) and how the laminate layer can assist (point out coning effect).

d. Discuss how sequencing of shots may be determined and the limitations of this technique.

e. Fire a shot through the glass from an acute angle to demonstrate what effect that has on the shape of the hole and the associated damage.

5. **Vehicle**

a. If possible, fire across the hood roof or trunk of the vehicle and then examine the area for gunpowder. Take tape lifts or vacuum sweepings and examine the results of the collection technique.

b. Fire the handguns and rifles straight into the door panel. Observe the damage and determine which bullets exit into the vehicle.

c. Fire handguns and rifles through the rear quarter panel and into the trunk. Observe the damage (entry and exit holes).

d. Fire bullets along the curved areas of the vehicle and at various angles to demonstrate how the shape of the defect (bullet hole) can vary.

e. Fire various shot shells into the vehicle. Observe the penetration and shot patterns produced.

f. Shoot the tire(s) with a 357 caliber, 40 caliber or 45 caliber firearm. Observe the size of the hole in the tire with respect to the caliber of the bullet.

g. Fire a shot shell into the windshield. Observe the penetration and overall damage.

E. **Suggested Reading**

1. “A Guide to Firearms Safety”, A Safety and Educational Publication of the National Rifle Association, May 1994.

2. “Technical Protocols for the Handling of Firearms and Ammunition”, FBI, June 1992 Saferstein, Richard, Criminalistics: An Introduction to Forensic Science, 8th ed., Pearson Prentice Hall, 2004.

3. Haag, L. and M. Haag. "Shooting Incident Reconstruction", Academic Press, 2nd Edition, July 2011.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 09/10/2019	**NUMBER:** CS.22.10 - Module X-Impressions
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Module X-Impressions	

I. Purpose: The primary purpose of this unit of instruction is to introduce the trainee to the recognition, proper preservation, collection and documentation of impression evidence at crime scenes.

A. **Objectives**

1. To understand the importance and methods of properly searching for impression evidence and then applying specialized techniques for their recovery.
2. To understand various methods for preserving and recovering impression evidence at crime scenes and in the laboratory.
3. To understand the importance and correct procedures for photographic documentation of impression evidence at crime scenes, including the use of various lighting techniques.

B. **Study Questions**

1. Discuss the value of footwear impression evidence. Is footwear evidence class or individual evidence? How big does a footwear impression need to be before it is a print of value?
2. Discuss the proper use of tripod, light, scale, and camera when photographing a three-dimensional impression at a crime scene.
3. Discuss various methods of enhancing impressions through photography.
4. Define wheel base and track width.
5. Discuss what information should be documented from the sidewall of a tire and how that information is useful in subsequent analysis.
6. Discuss the proper way to clean a dental stone cast.
7. Discuss the differences between gelatin and adhesive lifting materials and the qualities of various lifting materials. Discuss the surface and substrates from which lifts should not be attempted.
8. Discuss the proper ways to take standards for tire and footwear impressions.

C. **Practical Exercises**

1. Photography
   a. Produce a series of examination-quality photographs of two-dimensional footwear prints and a series of examination-quality photographs of tire track marks to include a series of sequential photos documenting a track of at least three feet in length.
   b. Prepare several depressed prints of various depths and photograph these prints from various lighting angles and positions and compare results of different shadowing effects. Discuss the problems associated with photographing deep impressions.
   c. Prepare a mark on a transparent surface and photograph it for maximum clarity of detail.
2. Enhancement
   a. Prepare a blood track and enhance it by using Amido black or LCV.
   b. Prepare tracks and process/enhance them with fingerprint powder
3. Recovery
   a. Using dental stone, cast footwear impression at least two types of the following materials:
      i. Fine topsoil

ii. Sandy soil

iii. Submerged or partially submerged mud

iv. Make notes concerning your efforts and observations.

b. Using an electrostatic lifting device, attempt to lift prints of dry and wet origin from some of the following surfaces:

i. Wood

ii. Simulated winter clothing

iii. Metal

iv. Sheetrock

v. Newspaper

vi. Carpet

vii. Tile

viii. Make notes of your observations and results.

c. Using gelatin and adhesive lifting materials, make some lifts of both dry residue and wet residue marks on both porous surfaces and on non-porous surfaces.

d. Make a wet origin mark on a smooth waxed or a polished surface and allow them time to dry. Enhance these marks using fingerprint powder. Attempt to lift the prints using the following:

i. Overlapping strips of transparent adhesive tape transferred to white card stock.

ii. Commercial clear adhesive footprint lifters.

iii. Clear, white and black gelatin lifting material.

iv. Make notes on your results and observations.

e. Determine the wheel base and track width of at least three vehicles available in the parking lot.

f. Make appropriate observations and measurements of a vehicle track provided by the instructor.

g. Collect several toolmarks using Forensic-Sil (or equivalent).

D. **Required Reading**

1. Forsythe-Erman, J. A comparison of Blood Enhancement Techniques, Journal of the Canadian Society of Forensic Science, vol. 34, no. 4, 2001. Pages 159-165.

2. User Instructions for the Electrostatic Dust Print Lifter, Kinderprint Co., Inc., Martinez, CA. Geller, J., (1990). "Casting on Road Surfaces," Journal of Forensic Identification, 40:5, pp279-282.

3. The Science of Fingerprints, United States Department of Juice, Federal Bureau of Investigation, Revision 12-84.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.11 - Module XI-Trace
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module XI-Trace	

I. The primary purpose of this unit of instruction is to introduce the trainee to the recognition, proper handling, collection and documentation of trace evidence at crime scenes.

A. **Objectives**

1. To understand the capabilities and limitations of trace evidence analysis.
2. To demonstrate the ability to utilize the proper methods of trace evidence collection, protection and packaging.
3. To understand the necessity of collecting appropriate standards from the crime scene.
4. To understand the potential for cross-contamination of trace evidence and methods for preventing cross-contamination.

B. **Study Questions**

1. Describe the various types of trace evidence.
2. Discuss the advantages and disadvantages of particle picking, tape lifting and vacuuming.
3. What steps can be taken to reduce the risk of cross contamination between samples when using a particle picking technique at a crime scene? Adhesive lifting? Vacuuming?
4. What method of collection works best for glass, paint, hairs and fibers from an item of evidence?
5. Discuss why it is usually better to collect the entire item of evidence for trace analysis rather than screen that item at a crime scene. When would it be appropriate to collect trace evidence from an object at a scene?
6. Discuss the use of various lighting sources (oblique, high intensity and ALS) for visualizing trace evidence.
7. Discuss the various documentation techniques (photography, sketches and notes) that can be used at a crime scene for trace evidence.
8. Discuss glass breakage and how to determine which fractures are concentric and which are radial. Demonstrate the proper method for marking glass fragments when directionality of break needs to be determined.
9. Discuss the use of controls/standards in the laboratory. How and where would you collect a glass standard, carpet standard and paint standard? How can you package the standards to ensure that they do not contaminate other items of evidence?
10. Discuss packaging of fragile evidence for transport to the lab (headlamps, broken glass).

C. **Practical Exercises**

1. Screen a car seat (particle pick, tape lifts and vacuum) searching for hairs, fibers and paint fragments. Examine the results under a stereomicroscope.
2. Demonstrate the techniques of particle picking, tape lifting and vacuuming on a piece of clothing.
3. Photograph an individual's hair stuck to an object.
4. Examine a sweater with natural light, high intensity light and an alternate light source. Describe the amount of foreign material that is visible by each source.
5. Adhesive-lift your work area prior to handling a sweater. Handle (lightly shake) a sweater at this work site for approximately 30 seconds. After handling the sweater adhesive-lift the work area again. Repeat after one hour. Also, adhesive-lift your lab coat. Use separate lifts for each arm and other areas of the lab coat. Examine the lifts under a stereomicroscope. Look for fibers of the same color as the sweater. How many fibers did you find on each lift? What precautions must be taken to reduce the chance of cross contamination between items of evidence?

6. If possible, go to an automotive junkyard and document and collect the following samples: a broken head or tail light, pieces of broken glass, paint standards collected from damaged and undamaged areas and carpet standards. Package these samples for transport to the lab. At the lab reexamine the evidence. Did the packaging protect the items that were collected?

D. **Suggested Reading**

1. Saferstein, Richard, Criminalistics: An Introduction to Forensic Science, 8th ed., Prentice Hall, New Jersey, 2004, Chapter 8, “Hairs, Fibers, and Paint.”

2. Saferstein, Richard (ed.), Forensic Science Handbook Vol. II, Prentice Hall, New Jersey, 1988, Chapter 5, “The Forensic Aspects of Textile Fiber Examination.”

3. Saferstein, Richard (ed.), Forensic Science Handbook Volume 1,2nd ed., Prentice Hall, New Jersey, 2002, Chapter 4, “ Forensic Glass Comparisons.”

4. Saferstein, Richard, Criminalistics: An Introduction to Forensic Science, 8th ed., Prentice Hall, New Jersey, 2004, Chapter 4, “Physical Properties: Glass and Soil.”

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.12 - Module XII-Bloodstain Pattern Analysis
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module XII-Bloodstain Pattern Analysis	

I. The primary purpose of this unit of instruction is to introduce the trainee to the recognition, proper handling, collection, and documentation of bloodstain pattern evidence at crime scenes.

A. Objectives

1. To understand the history, development, and advancement of bloodstain pattern analysis.
2. To understand the purpose and function of bloodstain pattern analysis in crime scene investigations.
3. To recognize the inherent limitations of bloodstain pattern analysis.
4. To recognize the appropriate protective measures to follow in processing bloodstained crime scenes.
5. To understand the characteristics of liquid blood and blood droplets under force and upon impact

B. **Study Questions**

1. What is bloodstain pattern analysis?
2. Name three pieces of information that may be obtained through bloodstain pattern analysis.
3. What is the purpose of bloodstain pattern analysis?
4. Define the following terms and explain their importance to bloodstain pattern analysis:
    a. Gravity:
    b. Surface tension:
    c. Air resistance:
    d. Viscosity:
    e. Oscillations:
5. How does the shape of an individual bloodstain change as the angle of impact becomes more acute?
6. Name the two most dangerous bloodborne diseases to which the crime scene analyst may be exposed.
7. Name four steps that can be taken to reduce or eliminate possible exposure to bloodborne pathogens.
8. What are the two main components of blood?
9. Common presumptive tests for blood (O-Tol, Hemastix) react with what portion of the red blood cells?
10. What component of the blood is useful for DNA analysis?

C. **Practical Exercises**

1. These practical exercises are typically performed as part of a week-long class on bloodstain pattern analysis.
2. **Objective**: To study the circular and elliptical shapes of the stains produced by drops of blood falling onto a surface at varying angles. As the angle of impact becomes more acute, the resulting stains become increasingly elongated. The reproducibility of this characteristic elongation can be demonstrated by varying the texture of the target surface.
    a. Equipment:
        i. Precut angle block
        ii. Clipboards (8)
        iii. White poster board (9 pieces)

iv. Sandpaper or wallpaper (9 pieces)

v. Tape measure

vi. Plumb line

vii. Pipette

viii. Blood

b. Procedure:

i. Mark the nine white poster board targets with impact angles from 10-90o in 10o increments

ii. Begin with the 90o impact angle by placing the white poster board target on the floor.

iii. Allow several drops of blood to fall straight down from the pipette onto the target surface from a height of 48 inches.

iv. Use the tape measure and plumb line to ensure accuracy.

v. Place a piece of white poster board onto a clipboard and insert into the precut 80o impact angle on the wooden block.

vi. Repeat the blood drop process above. Leave the target in the wooden block until dry. Repeat this process for the remaining impact angles.

vii. Repeat the entire procedure using wallpaper or sandpaper (to vary surface texture)

c. Once the stains have dried:

i. Measure the width and length for three stains from each target. Measurements will vary between individuals so it is important to have only one person measuring the stains.

ii. Calculate the W/L ratio

iii. Calculate the impact angle

d. Record Observations:

i. How does the texture of the target surface effect the degree of elongation of the stain?

ii. How does the surface texture of the target effect the appearance of the stain and your ability to calculate the angle of impact?

iii. What characteristics allow you to determine direction of travel?

3. **Objective**: To evaluate the correlation between the distance that a blood drop falls and the diameter of the resulting stain. Limitations present in evaluating the distance a blood drop has fallen will be illustrated.

a. Equipment:

i. White poster board

ii. Glass

iii. Newspaper, fabric or carpet

iv. Ladder

v. Tape measure

vi. Plumb line

vii. Pipette

viii. Blood

b. Procedure:

i. Allow three drops of blood to fall straight down from the pipette onto a horizontal white poster board target from heights of 3, 6, 12, 24, 36, 48, 60, 72 and 96 inches. Be sure to mark each set of drops with the corresponding height. Use the tape measure and plumb line to ensure accuracy.

ii. Repeat the procedure using a glass target surface and an absorbent target surface (newspaper, fabric, carpet)

c. Once the stains have dried:

i. Measure the diameter of each stain and calculate average stain diameter. Measurements will vary between individuals so it is important to have only one person measuring the stains.

d. Record Observations:

i. How does the surface texture of the target effect the diameter of the stain?

ii. How does the distance fallen effect the diameter of the stain?

4. **Objective**: To evaluate the correlation between the surface area that blood drips from and the diameter of the resulting stain. The volume of a blood drop is dependent upon the surface from which it falls.

a. Equipment:

i. White poster board

ii. Various objects (knife, hammer, screwdriver, bat, etc.)

iii. Tape measure

iv. Plumb line

v. Blood

b. Procedure:

i. Allow several drops of blood to fall from various objects onto a horizontal white poster board target from heights of 3, 12, 36 and 72 inches. Be sure to mark each set of drops with the corresponding object and height. Use the tape measure and plumb line to ensure accuracy.

c. Once the stains have dried:

i. Measure the diameter of each stain and calculate average stain diameter. Measurements will vary between individuals so it is important to have only one person measuring the stains.

d. Record Observations:

i. How does the surface area of an object on which a blood drop is formed effect the size of the resulting stain?

ii. Is there a similarity between the stain diameters of blood dripped from a large surface area close to the target and blood dripped from a small surface area higher above the target?

D. **Suggested Reading**:

1. Barry A.J. Fisher “Techniques of Crime Scene Investigation” Fifth edition, chapter 8

2. Bevel, Tom & Gardner, Ross M., Bloodstain Pattern Analysis: With an Introduction to Crime Scene Reconstruction, 2nd ed., 2002.

3. Eckert, William G. and Stuart h. James, Interpretation of Bloodstain Evidence At Crime Scenes, Elsevier Science Publishing, New York, 1989.

4. James Stuart H. (editor), Scientific and Legal Applications of Bloodstain Pattern Interpretation, CRC Press, 1999, plate 1.

5. Gardner, Ross M., Practical Crime Scene Processing and Investigation, CRC Press, 2005 pp. 135 to 152.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.13 - Module XIII-Drugs
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module XIII-Drugs	

I. The primary purpose of this unit of instruction is to introduce the trainee to the recognition, safe and proper handling, collection and documentation of drug evidence at crime scenes.

A. **Objectives**

1. To understand the potential safety hazards of drug evidence.
2. To understand the proper packaging of drug evidence.
3. To recognize potential drug evidence.

B. **Study Questions**

1. What is transdermal absorption? What drugs can be absorbed transdermally?
2. What personal protective gear should be worn when handling suspected controlled substances?
3. How should suspected controlled substances be packaged?
4. What is paraphernalia? Give three examples of drug paraphernalia.

C. **Practical Exercises**

1. Spend time in the Drug Unit shadowing a drug analyst to become familiar with the appearance of commonly encountered controlled substances and their packaging.

D. **Suggested Reading**

1. De Forest, P.R., Gaensslen R.E. and Lee C. Henry. 1983 Forensic Science -An Introduction to Criminalistics. McGraw-Hill Inc. Series in Criminology and Criminal Justice.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.14 - Module XIV-Forensic Entomology
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module XIV-Forensic Entomology	

I. The primary purpose of this unit of instruction is to introduce the trainee to the recognition, proper handling, collection and documentation of entomology evidence at crime scenes.

A. **Objectives**

1. To understand the capabilities and limitations of forensic entomology.
2. To understand the necessity of collecting detailed climate and environmental conditions from the crime scene.

B. **Study Questions**

1. Why should insect activity be considered an important aspect of a homicide investigation?
2. What is the direct relationship of Arthropods to human remains?
3. What are the four basic arthropods having some direct relationship to the corpse?
4. What are some factors that may delay an invasion of arthropods on human remains?
5. What general sequence of events takes place when determining the postmortem interval?
6. What are the general developmental stages of arthropods?
7. What are the collection and preservation procedures for the following groups of arthropods:
   a. Flying insects (Diptera, true flies)
   b. Crawling insects (Coleoptera, beetles)
   c. Burrowing insects
   d. Immature and Soft-bodied insects?
8. How are living specimens reared to the adult stage?
9. What is the proper procedure to label specimens and packaging material related to entomological evidence?

C. **Practical Exercises**

1. None

D. **Suggestion Reading**

1. Forensic Entomology-The Utility of Arthropods in Legal Investigations, Edited by Jason H. Byrd and James L. Castner
2. Byrd, Jason H. and Castner, James L., Forensic Entomology: The Utility of Arthropods in Legal Investigations, 2001. Introduction pg. 1-16, Chapter 14, The Forensic Entomologist as Expert Witness, pg. 379-400.
3. Goff, M. L., "Estimation of Postmortem Interval Using Arthropod Development and Successional Patterns", Forensic Science Review, Vol. 5, No. 2, December 1993, pp. 81-94.
4. Haskell, Neal and Catts, P. "Collecting Insects for Homicide Investigations", diagram from Entomology and Death, 1990.
5. Lord, Wayne D. and Burger, John F., "Collection and Preservation of Forensically Important Entomological Materials", Journal of Forensic Sciences, Vol. 28 No. 4, October 1983, pp. 936-944
6. Catts, E. P. and Goff, M. L., "Forensic Entomology in Criminal Investigations", Annual Review of Entomology, Vol. 37, 1992, pp. 253-272.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/15/2014	**NUMBER:** CS.22.15 - Module XV-Body Recovery
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Module XV-Body Recovery	

I. A scene that involves the recovery of buried and/or decomposed or skeletonized human remains is no different from any other crime scene investigation. There is still a scene, a victim, a suspect, and physical evidence. The same processing techniques are used: examine, photograph, sketch, and process. The primary purpose of this unit of instruction is to introduce the trainee to the collection and documentation of human remains at crime scenes.

A. **Objectives**

1. To understand the macrostructure of bone and its function as a human body component.
2. To differentiate between bone and non-bone material.
3. To demonstrate the ability to apply archaeological techniques in human remains recovery.
4. To implement detailed note taking, measurement, and photographic techniques that will aid in the recovery and subsequent examination of remains.
5. To become knowledgeable of and experienced with specific search techniques when attempting to locate scattered or subsurface burials.

B. **Study Questions**

1. What type of tissue is bone? What is its purpose in the human body, and what is the anatomy of bony structures?
2. What is the difference between a scattered remains scene and a clandestine burial?
3. What are the similarities between archaeological methods and forensic investigations? What are the differences?
4. Name and describe search methodologies and techniques in field investigations involving human skeletal remains (buried or surface scattered).
5. How many bones are in the human body? How many bones are important in the identification of an individual?
6. How are items of evidence marked at a scattered remains scene? How are items of evidence marked at a clandestine burial?
7. How should a buried body or scattered skeletal remains case be documented?
8. How should remains be packaged for transport?

C. **Practical Exercises**

1. Obtain human and non-human bone reference samples.
2. Observe the physical structure of a long bone. Identify compact bone, cancellous bone, and the marrow cavity.
3. Diagram a cross-section of bone, labeling all structures and their function.
4. Note the width of the compact bone within the shaft of a long bone provided. Compare this with the relative width of several animal bones (bird, small and large mammals, ungulates) and note the distinct difference in width.
5. Observe several samples given to you by your coach or trainer. Determine which materials are bone, and which materials are not bone.

D. **Suggested Reading**

1. Practical Homicide Investigation, Third Edition, author Vernon J. Geberth, Chapter 10

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 03/05/2019	**NUMBER:** CS.22.16 - Module XVI-Testimony
	RELATED ORDERS: FSD.26 - Court Testimony Monitoring	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Module XVI-Testimony	

I. Expert witnesses must assure the judge or jury that their testimony is sound and truthful. The expert is testifying to their field activities. The expert must testify to the forensic significance of the evidence, regardless of whether this helps the prosecution or defense. The expert must be highly knowledgeable, organized, unflappable, and ethical.

A. **Objectives**

1. To develop the skill to present expert testimony that is accurate, knowledgeable, clear, concise, believable, and unbiased.
    a. **Knowledgeable** — Show that you are up to date, have command of the subject matter in your field, and are knowledgeable about the California laws relevant to the case (Kelly/Frye). Know how to use such things as demonstrative evidence (an item not from the crime scene that is used to illustrate a point).
    b. **Organized** — Be able to easily reference and locate key pieces of evidence. Reports should clearly document the test results.
    c. **Unflappable** — Do not appear combative or annoyed during questioning, especially during cross-examination.
    d. **Ethical** — Know the ethical standards of conduct. Display objectivity, not advocacy for either side.
2. To demonstrate proper courtroom demeanor and attire by clothing choices, body language and mannerisms, and both verbal and non-verbal expression.
3. To effectively prepare for courtroom testimony by pretrial communications and case review.
4. To understand the court system, courtroom procedures, and courtroom etiquette.

B. **Study Questions**

1. Describe the order of events that occurs in a courtroom when you are offering expert testimony. Start your description from the time you are called into the courtroom and end when you exit the courtroom.
2. Describe the order of legal events that occur to a defendant from the arrest through sentencing.
3. Discuss the importance of the content of your testimony vs. the manner is which the testimony is delivered. Which is more important and why?
4. Describe how you would dress for court to present a professional image. Include descriptions of clothing you would wear, as well as your grooming.
5. Discuss some behaviors or mannerisms you feel would be distracting from your testimony. What habits do you specifically have that you want to work on minimizing or eliminating?
6. What items in the case file are discoverable? Which items are not?
7. The defense attorney on a case calls you on the phone and asks you for a copy of all reports and notes pertaining to that case. What do you do?
8. You answer a question with, “I don’t know” but later during your testimony you remember the answer to that question. What would you do?
9. What is the difference between an “ordinary witness” and an “expert witness”?
10. What are the criteria for the admissibility of scientific evidence in the state of California? What is the name of the case that resulted in these criteria?
11. Describe what pretrial preparation you would do for upcoming testimony regarding a crime scene processing.

C. **Practical Exercises**

1. If possible, observe the testimony of a crime scene responder. Discuss what you learned from observing the process (both about the courtroom process and the delivery of the testimony).

D. **Required Reading**

1. NIJ training: Law 101: Legal Guide for the Forensic Expert http://nij.gov/training/pages/training-detail.aspx?itemid=64 (also downloaded on the Crime Scene network drive)

E. **Suggested Reading**

1. Courtroom Testimony CCI Class Binder

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 08/31/2017	**NUMBER:** CS.22 - Overview of Training, Competency, & Authorization
	RELATED ORDERS: FSD.21 - Competency, Training, Authorizations & Ethics	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Overview of Training, Competency, & Authorization	

I. **The goal of the training program is to provide uniform coordination and quality training in all aspects of Crime Scene Processing to laboratory personnel. The work performed by the trainee is intended to be part of a formal training program that will establish a certain minimum standard of professional competency.**

A. **Introduction**

1. Crime Scene processing is typically a secondary job function for staff of the Forensic Service Division. This training program is designed to train the analyst on the principles of Crime Scene Processing. The trainee must demonstrate knowledge of the required objectives by successfully completing written tests and practical exercises throughout the training program. The trainee must also communicate an understanding of the objectives and underlying principles.
2. Training is multi-faceted and ever changing. The sections of this manual are outlined to allow for changes during the training period (eg., new processing techniques that become available). The sequence in which the modules are presented should not necessarily be considered as a mandatory order of instruction.
    a. The minimum qualification for an analyst to perform crime scene casework is a high school diploma (or equivalent) and successful completion of the appropriate training modules.
3. The trainee will respond to crime scenes while also performing their routine duties in their primary assignment.

B. **Coordination and Overview of the Program**

1. The Training Program will be coordinated by the Crime Scene Supervisor.
    a. The Supervisor will be responsible for the overall training, but may choose to delegate certain duties or blocks of instruction to other qualified analysts.
2. The length of the training period may vary and will be left to the determination of the unit Supervisor. Certain individuals may require less time than others, depending on experience, education, or learning ability. The expected time to complete the full program is approximately one year for a trainee assigned to the Unit full-time. The trainee will be provided a timeline for completion of assigned modules.
3. The training will consist of thorough instruction (e.g., mentor sessions, presentations, practical exercises, reading assignments), hands on training, and application of lessons at crime scenes.
4. Trainees will begin as tertiary crime scene responders. Their primary duties are to learn from crime scene responders as well as perform duties that do not require testing (eg. Measurements, sketches, and labeling packaging). They may be authorized to perform crime scene duties based on training received in their primary assignment (e.g. swabbing, latent print processing, etc.).
5. Transition from tertiary to secondary crime scene responders and secondary to primary crime scene responders require successful completion of a competency test.
    a. The Supervisor may assign a non-primary secondary to process crime scenes and write reports under the direction of an experienced primary prior to completion of all modules.
6. The Supervisor is responsible for ensuring that the analyst's Training Records are completed in a timely fashion as training progresses. The appropriate spaces on the training checklists and forms will be initialed, dated, and completed for each area assigned by the Supervisor and/or any other personnel who assisted in the training.
7. The various quizzes and activities throughout each module will be assessed on a Satisfactory/Unsatisfactory basis.
8. The trainer is expected to communicate with the trainee offering feedback and guidance throughout the training program.
9. A mock court exercise will be conducted as part of the final competency test for primary crime scene responders.

C. **Orientation**

1. Before beginning the training program, the new employee will be oriented to expectations, timelines, and schedule of training for the trainee.

2. The trainee will be introduced to PowerDMS and assigned to read the Crime Scene Technical and Training Manuals.
3. The trainee will be provided general knowledge of forensic science and training on ethics as related to Crime Scenes.

D. **Expectations of Trainee**

1. The trainee is expected to keep a notebook/binder of information compiled during the training program. Copies of written examinations, practical exercises, presentations, or other items prepared during training should be maintained in the notebook/binder. These items may be maintained electronically.
2. Documentation of the completion of the suggested reading for each module should be maintained (e.g., on a reading list).
3. As designated by the unit Supervisor, the trainee may assist with casework (to the extent of which they are qualified) during the training, only under the direct supervision of a qualified responder.
4. Study time for the trainee is not restricted to on-duty hours.
5. Trainees are expected to communicate any concerns about their training to the Supervisor.

E. **Progression and Guidelines for Competency**

1. The crime scene unit has three categories of responders (tertiary, secondary, and primary). Competency testing is required to become a secondary and primary crime scene responder..
    a. Successful completion of both the test of knowledge and the test of sufficient unknowns (mock crime scene) requires a score of 80% along with a written report.
        i. The test of knowledge and quizzes may have multiple choice, true/false, fill-in-the-blank, and/or essay type questions.
        ii. Failure of any portion of a module will result in remedial training prior to retesting. Failure of a retest could result in the trainee's elimination from the training program.
    b. The samples used for the practical portion of the crime scene competencies may be created internally, at the direction of the unit Supervisor.
    c. The competencies will encompass only the duties expected from a secondary or primary responder.

F. **Modules**

1. It is expected that the trainee will successfully complete the core training modules in order to successfully complete the training program.
    a. Completion of some of the specialized training modules (Bloodstain Pattern Analysis, Body Recovery) will be dependent upon the operational needs of the Division; therefore, not all trainees will be trained in all areas prior to a competency test.
2. The **Objectives** outline the purpose of each study segment.
3. The **Study/Discussion Questions** have a number of purposes:
    a. To assist reading comprehension by providing a focus on certain concepts prior to completing Required Readings,
    b. To evaluate understanding of relevant concepts after completing Required Readings
    c. To promote active discussions between the trainer and trainee using the questions as a starting point.
        i. The answers to the questions may be written, verbally discussed, or a combination of both.
    d. The **Practical Exercises** are designed to provide the trainee first-hand experience with the main concepts of each study segment.
        i. Many of these practical exercises will be encompassed by training classes such as Shooting Incident Reconstruction or Bloodstain Pattern Analysis.
        ii. Other practical exercises may not actually be performed due to a variety of administrative concerns, but the trainee will describe how he or she would perform the exercise.
4. The **Suggested Readings** list the reference material that should be read to successfully complete the study segment. The reading assignments are cumulative; comprehension of prior readings and are required to successfully complete Study/Discussion Exercises of subsequent study segments. Study/Discussion Exercises should be reviewed prior to completing Required Readings.

G. **Training Documentation**

1. After successful completion of modules, the crime scene supervisor will complete the appropriate forms.

2. Completed and in progress authorization forms (CSF.13) will be maintained by the crime scene supervisor or designee.
3. The effectiveness of initial training will be monitored by the Supervisor in one or more of the following ways:
    a. Providing feedback to the trainee after completion of initial training modules and competencies.
    b. Soliciting feedback from the trainee regarding the initial training modules, including discussion about the practical exercises, required readings, and study questions.
    c. Performing technical or administrative review of initial casework produced by trainee.
    d. Providing annual performance evaluations.

H. **Transition from secondary to primary**

1. Upon completion of the competency, and having been granted authorization, the responder will have attained the necessary knowledge, skills and abilities to independently perform crime scene processing. Regardless of how well a new examiner handles their assignments during the transition, there follows a period of adjustment. The unit Supervisor should monitor the new primary's casework for a period of time following authorization. In addition, the Supervisor should accompany the newly qualified primary to crime scenes to offer guidance and mentor the new primary.

I. **Assessment/Training of Experienced Personnel**

1. The responsibility of assessing the degree of qualifications of newly hired experienced personnel who have successfully completed a qualified training program in crime scene processing shall lie with the unit Supervisor with approval from the Manager and/or Chief.
2. Some content or sections of this training program may be skipped for a previously trained analyst who has demonstrated to the Supervisor a comprehensive knowledge of the subject matter with the approval of the Manager and/or Chief.
    a. In order to substitute for the entirety of the training specified in this manual, the analyst must provide documentation of their formal and informal training records which cover all facets of crime scene processing along with a crime scene log.
3. Methods of verifying the completion of prior training could include, but is not limited to, reviewing the individual's job application, statement of qualifications, transcripts or prior training records. A series of practical, written, and/or oral technical exams could also be administered.
4. Newly hired personnel shall not be authorized to perform casework by the Chief, Manager and/or Supervisor until the successful completion of a competency test. The Competency will consist of a practical and written exam, and will include the issuing of a report in LIMS.
5. The unit Supervisor will monitor the new employee's casework for a period of time following authorization. In addition, the Supervisor should accompany the newly qualified primary to crime scenes to offer guidance and mentor the new primary.

J. **Continuing Education**

1. All analysts should participate in continuing education to broaden and/or maintain their skills and expertise in the crime scene processing discipline. Training received will be documented as outlined in QA.12. Internal training will be offered by the Crime Scene Supervisor. External training courses or programs including, but not limited to, Webinars and/or classes offered by*DOJ California Criminalistics Institute, AAFS, CAC,* and *IAI* conferences should be attended to supplement training assignments and exercises contained in this manual. The effectiveness of on-going training will be monitored and evaluated by the Supervisor in one or more of the following ways:
    a. Requiring a teach back from the analyst attending the training (or feedback regarding the training) during a unit meeting.
    b. Evaluating yearly proficiency test results.
    c. 100% Tech and Admin review of casework.
    d. Court testimony monitoring.
    e. Rotational presentations of various topics to the unit by staff.
    f. Providing annual performance evaluations.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 06/04/2019	**NUMBER:** CS.24 Leica Scanner
	RELATED ORDERS:	
APPROVED BY: Donnie Finley, Tony Nguyen & Debbie McKillop	**ANAB:**	
CHAPTER:	**SUBJECT:** CS.24 Leica Scanner	

I. The Leica RTC360 and BLK360 are laser-scanning systems designed to record three-dimensional layouts of crime scenes.

A. **Theory:** Leica laser scanners use a time-of-flight laser range finder to record highly accurate point measurements to object surfaces within the scanning field. The scanners can also take digital images of the scene. Following the scanning process, the measurement data and digital images (if taken) are processed using specialized software to create a digital model of the crime scene in three dimensions.

Purpose: The scanner is a tool intended to supplement more traditional methods of crime scene documentation, including note-taking, sketching, and photography. Scanned areas do not need to be manually measured or fully sketched; however, the scanner is not intended to replace other means of documentation, including photography. High-quality photographs are still required of the scene. Additional manual measurements and photography may be required for special types of evidence (e.g., blood spatter) where access by the scanner is limited.

B. **When to use**:

1. At the request of a client agency.
2. To help expedite the measurement documentation process, especially that of a large scene or a scene with numerous items of evidence.
3. If needed, to provide supplemental measurement documentation for areas of the scene already documented by other means (e.g, another agency using a Total Station).

C. **When not to use:**

1. When the scanner cannot be placed in a stable area or on a stable platform.
2. In adverse weather conditions. Note: The RTC360 can be used in light rain conditions; however, the BLK 360 cannot.
3. To create Total Station data for another agency. Scanner data is incompatible with Total Station software, and the agency must have software compatible with point clouds to be able to work with scanner data.
4. As the only documentation for blood stain patterns. The scanners do not record measurements or images with enough detail for blood stain pattern interpretation. The scanners may be used for supplemental measurements of blood stain patterns.

D. **BLK360 vs. RTC360 Advantages and Disadvantages:**

1. In general, the RTC360 should be used for all scanning. The BLK360 may be used as a backup.
2. The RTC360 has higher resolution and a longer effective range than the BLK360.
3. The RTC360 has a smaller minimal scanning distance than the BLK360.
4. The BLK360 cannot record measurement data from most black surfaces; the RTC360 does not have this limitation.
5. Both scanners cannot record measurement data from highly reflective surfaces.

E. **RTC360 Recommended Settings and Operating Instructions**

1. To prepare for scanning:
    a. Plan the location of the scan perspectives. The scanner must have line-of-sight to the objects intended to be scanned.
    b. Setup the tripod. Ensure the legs are locked prior to attaching the RTC360. Mount the unit on the tripod or floor bracket.

c. Insert two batteries and turn the RTC360 on.

i. One battery at a time may be hot-swapped while the system is on.

ii. Two batteries must be inserted to scan.

2. When the RTC360 is turned on it performs an internal system calibration check.

a. If the calibration check fails, the status light will be red. Hold down the power button to shut it down. Restart the scanner.

b. If the calibration check fails a second time, the unit is not to be used and must be serviced.

3. The following settings are recommended for most crime scenes:

a. Resolution: **High**

b. HDR images: **On**

c. Double Scan: **Off** (may be turned on if many people are walking through the scene. Increases scan time by 2 minutes.)

d. Visual Inertial System (VIS): **On**

4. To scan:

a. Press the red play button.

i. The remaining time will be displayed on the screen. Approximately 2:30 minutes for a high-resolution scan with images.

ii. The status LED will be yellow while scanning.

iii. The status LED will be green when the scanning is complete and the RTC360 is ready for the next scan.

b. To collect additional scans from a scene

i. **Do not turn the scanner off.** The VIS system will track the locations of the scans and link the scan locations together. The scanner must be on between scan locations for the VIS system to work.

ii. Pick up the tripod and place it at the new scan location. The RTC360 may be left attached to the scanner or removed while the tripod is relocated.

iii. The status light will flash green while the RTC360 is being moved and while the auto-leveling is taking place.

iv. The status light will be solid green when the RTC360 is ready to scan.

c. Multiple scans are required for trajectory rods and to remove voids. Multiple scans are always recommended for any scene.

d. The Twin-Target pole (length standard) should be set-up and included in at least one scan per scene

F. **BLK 360 Recommended Settings and Operating Instruction**

1. To prepare for scanning:

a. Plan the location of the scan perspectives to facilitate scan stitching (each scan should be line-of-sight to another scan).

b. Mount the unit on a camera tripod with the tripod adapter or use the floor base.

c. Insert a battery and turn the unit on.

d. When the LED ring (surrounding base) is solid green, the scanner is ready to use.

2. To scan:

a. Press the button.

b. The LED ring will flash yellow while it is scanning and taking photos.

c. When the LED ring is green, the scan is complete and the BLK360 is ready to scan again (approximately 4 minutes).

d. Multiple scans are required for trajectory rods and to remove voids. Multiple scans are always recommended for any scene.

e. The Twin-Target pole (length standard) should be set-up and included in at least one scan per scene.

G. **Post-scene scanner activities - to be conducted by qualified personnel:**

1. The scan data will be downloaded and stored at the laboratory.
2. The scan data may be processed to yield TruViews, which are views of the scene from the scanner viewed through a web browser.
3. The TruViews can be burned to an optical disc and given to investigators.
4. Additional processing (including distance measurements) of the scan data may be completed as necessary.

II. Training

A. Staff will be provided hands-on training in the theory, operation, and use of the laser scanners prior to authorization. Crime Scene competency testing will cover scanner use.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 5/27/2016	**NUMBER:** CS.25 - Non-Conforming Work
	RELATED ORDERS:	
APPROVED BY: Donnie Finley & Debbie McKillop & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Quality	**SUBJECT:** Non-Conforming Work	

I. Policy: Non-conforming work is an undesirable incident or problem encountered in casework, proficiency testing, testimony or the quality assurance program. When non-conforming work is encountered in the Crime Scene Unit, action is taken to address the non-conformity.

The level of corrective action taken for any non-conformity is dependent on the type of incident or problem and its severity. In general, the greater the severity and/or its substantive nature, the higher the level of corrective action taken. The appropriate corrective action taken is based on the type of non-conformity, the magnitude/scope of the problem, and/or whether its a single event or repetitive. Types of non-conforming work and their corresponding level of corrective action are described below.

A. **Corrective Actions (Most Significant)**: Quality system non-conformities are discrepancies or incidents that raise immediate concern regarding the overall quality of the Unit's work product or the competency of an analyst. These non-conformities rise to the level of significant concern for the quality system or a systemic problem within the Unit.

1. Quality system non-conformities include but are not limited to:
    a. Erroneous or falsified tests, results, conclusions, records or testimony
    b. Improper or deliberate misuse of reagents, methods, equipment or evidence
    c. Audit findings
    d. Unsuccessful proficiency test
    e. Repeated Level 2 errors
2. A significant quality system non-conformity requires documentation of the corrective action per Division policy and procedure. See FSD.15, QA.18, FSDF.06, FSD.44 for more information about the evaluation of significance, required elements of a corrective action, documentation and retention of corrective action records.

B. **Level 2 Non-Conformity (Somewhat Significant)**: These discrepancies or incidents are not serious enough to cause immediate concern for the quality system or the Unit's overall work product, but do have an isolated affect on the work product, tend to be individual events, and are addressed on a case-by-case basis. These non-conformities are typically detected prior to the release of results and conclusions, and have the potential to be re-mediated.

1. Level 2 incidents include but are not limited to:
    a. Improper use of controls, reagents, methods, or equipment when it is demonstrated their use did not impact the quality of work or validity of the result.
        i. use of expired reagents
        ii. not using a control
        iii. using equipment that has not been properly checked or calibrated
    b. Procedure not being followed when it is demonstrated that its use did not impact the quality of work or validity of the result
    c. Improper conclusions or lack of documentation of conclusions
    d. Repeated Level 1 errors
2. Documentation of a Level 2 non-conformity will be maintained within the unit and will be evaluated by the Supervisor. The documentation should include, as applicable:
    a. An explanation of the error or non-conformity. What is the problem?
    b. An evaluation of the impact (if any) on casework, equipment, etc. How significant is the problem?

c. An explanation of how the error on non-conformity occurred. Why did it happen?

d. An explanation of the action taken to correct the error or non-conformity. What was done to correct the problem?

e. A summary of any monitoring or follow-up. Was the correction effective?

C. **Level 1 (Least Significant):** Discrepancies or incidents that do not effect the significance of a conclusion, a reported test result, or impact on the quality system, are unlikely to recur, are not systemic, and do not affect the fundamental reliability of the work product.

1. Examples of a Level 1 Non-Conformity include, but are not limited to:

a. transcription errors: switching the month/day when documenting the lot # of a reagent, wrong direction of the north arrow noted during review

b. grammatical or typographical errors: spelling or grammar mistakes in reports or notes, wrong agency case number or requester in LIMS, etc.

c. omission errors: omitting relevant information (e.g. "not to scale" on sketches)

d. When brought to the analyst's attention, this type of non-conformity is typically corrected immediately by the analyst. A record of the correction is captured when the analyst initials and/or dates the correction as outlined in Case Record Division Policy FSD.42 and Test Reports Policy, FSD.43 .

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Crime Scene Technical Unit Manual	**REVISION DATE:** 12/31/2018	**NUMBER:** CS.26 - Shooting Incident Reconstructions
	RELATED ORDERS:	
APPROVED BY: Tony Nguyen, Donnie Finley & Debbie McKillop	**ANAB:**	
CHAPTER: Crime Scenes	**SUBJECT:** Shooting Incident Reconstructions	

I. POLICY Shooting incident reconstructions are dynamic investigations that incorporate several different examinations into one comprehensive opinion. The following examinations are only some of the tests performed.

A. Examination of bullet holes

1. Examination of holes in garments. All holes in garments or in objects should be documented with photographs, notes, or sketches.
    a. Holes in clothing can be microscopically examined for evidence of firearm discharge such as:
        i. The presence of smoke and soot
        ii. Bullet wipe
        iii. Burning and tearing of fibers due to muzzle blast
        iv. Deformation of synthetic fibers due to the passage of a bullet
        v. The presence of blood and tissue from a bullet wound
        vi. Fragments from a bullet
        vii. Smokeless powder particles
2. Examination of holes in objects
    a. Perforating holes
        i. Round holes can be made by a bullet passing through an object in a flight path orthogonal to the surface.
        ii. Irregular holes can be made by a bullet fragment, a destabilized bullet passing through the object, or from a bullet striking an object at an angle.
        iii. Examine the hole for material possibly transferred from the bullet surface, such as lubricants, ricochet-acquired transfers, body fluid residue, and lead or copper transfers.
        iv. Examine the hole to determine if there was fresh removal of paint, wood, masonry, or plaster fragments.
        v. On metal or wood surfaces, look for corrosion or signs of weathering (e.g. discoloration) around the suspected bullet impact that might indicate the damage did not occur recently.
        vi. Hackle marks and cratering of glass can indicate the direction of bullet travel.
        vii. If in doubt that a suspected impact site was struck by a bullet, sample the margins of ricochet or hole with a GSR collection disk.
        viii. Chemically test surfaces for lead, copper, and nitrites, if needed (see below).
    b. Non-perforating impact sites
        i. Examine the ricochet sites as you would a penetrating hole.
        ii. On metal or wood surfaces, look for corrosion or signs of weathering (e.g. discoloration) around the suspected bullet impact that might indicate the damage did not occur recently.
        iii. Examine the impact site for visible lead or copper transfers left by the passage of a bullet.
        iv. Examine painted surfaces for pinch points and fracture lines that can indicate the direction of travel of the bullet.

v. If in doubt that a suspected impact site was struck by a bullet, sample the margins of ricochet or hole with a GSR collection disk.

vi. Chemically test surfaces for lead, copper, and nitrites, if needed (see below).

3. Further chemical testing, including the Sodium Rhodizonate test for lead, Modified Griess test for nitrites, or Dithiooximide (DTO) test for copper, can be done to identify items suspected of being related to the discharge of a gun.

a. The absence of residues commonly associated with firearms discharge around a hole should not necessarily lead one to exclude the hole as being caused by the passage of a bullet. An intervening object may bear the evidence of the passage of the bullet leaving only the hole or impact site.

b. Lead check swabs

i. Squeeze and crush points marked "A" and "B" located on the barrel of the swab.

ii. Swab the surface and then squeeze the liquid out from the swab. If the tip turns pink or red, lead is presumptively present.

iii. A known positive control is included in the kit. Document the results of the positive/negative controls and all areas swabbed in the case notes.

c. Sodium Rhodizonate

i. Transfer a small amount of the surface to a swab or piece of filter paper.

ii. Apply the Sodium Rhodizonate to the sample. A pink to red color indicates lead is present.

iii. Apply 5% HCl to the sample. The pink to red color changing to a purple/blue color confirms lead is present.

iv. Document the results of the positive/negative controls and all areas swabbed in the case notes.

d. DTO

i. Moisten a suitably sized piece of filter paper with 2:5 ammonium hydroxide solution from a small spray bottle (allow adequate ventilation).

ii. Press the filter paper against the suspected bullet hole and adjacent areas, maintaining firm contact for at least 30 seconds. Do not let the paper move or slide across the areas being tested. If possible, mark the back of the paper to indicate the margins of the hole being tested for orientation purposes later.

iii. Invert the filter paper and visually inspect for any deposits that may be confused for a positive DTO reaction (greenish-gray color), such as dirt or grime. Photography is highly recommended to record these deposits before applying the DTO reagent.

1. If testing at the scene is not necessary, the filter paper may be preserved at this point for transport and later testing at the laboratory. If copper residues have been transferred to the paper, they will remain viable for testing with DTO indefinitely.

iv. Verify the 0.2%-alcohol DTO reagent as working with a known copper transfer or deposit on one of the corners of the filter paper (or on a separate piece of filter paper)

v. Lightly spray the filter paper with the DTO reagent. A dark greenish-gray ring corresponding to the margin of the hole constitutes a positive test for copper-containing bullet wipe. This chemical complex is typically stable over long periods of time, but color photography at or near the time of testing is highly recommended

B. Determination of smokeless powder.

1. Smokeless powder comes in several forms and compositions.

a. The primary compositions of smokeless powder available for small arms are single base and double base.

i. Single base powder is composed primarily of nitrocellulose.

ii. Double base powder is composed of nitrocellulose and nitroglycerine.

b. Smokeless powder particles have several shapes.

i. Ball or flattened ball, which is sometimes referred to as spherical.

ii. Flake.

iii. Cylindrical, which may have a perforation in the center.

iv. Disk, which may or may not be perforated.

v. Other types, like lamel, in the shape of flattened diamonds.

c. Smokeless powder particles usually appear black or charcoal gray in color. This is due to the graphite coating applied to the grains. The uncoated smokeless powder color is usually green to grey.

2. Examination of garments or objects for the presence of smokeless powder

a. Examine the garment or object for the unburned or partially burned smokeless powder.

b. A stereo microscope can be used to locate and identify smaller particles.

c. Care should be taken to not dislodge or move particles while examining the garments or objects.

C. Bullet path determinations.

1. Bullet path determinations can range from simple to complex, depending on the objects hit. The following procedure may be used for simple bullet path determinations using probes on objects where either two objects were struck along the same path or a single thick object was struck.

a. Examine the hole as described above.

b. Document the hole, its dimensions, and its location.

c. Examine the interior of the hole as deep as possible to determine if the bullet is still inside the object.

d. Select a probe approximately the size of the hole or slightly smaller. Insert the probe into the hole so that the hole is not damaged.

i. If the hole is significantly larger than the probe or one part of the hole is blown out, use a probe cone to help guide the probe.

e. If the probe is placed correctly, it should stay in place by itself with no assistance

f. Document the position of the probe with 3D scans, sketches, notes, and photographs.

i. Typical photographs include those from the front, the side, the top, or the bottom. Ensure the lens is in the same orthogonal plane as the trajectory rod to reduce perspective distortion. This may be accomplished by hanging a plumb bob so that the string contacts the probe. Position the camera at the same level as the probe and plumb line intersection and make sure that the camera lens is orthogonal to the probe.

ii. If 3D scans are taken with trajectory rods in place, manual trajectory rod measurements do not need to be taken.

g. Measure the vertical angle of the probe with an inclinometer.

h. Measure the azimuth angle of the probe using a protractor and plumb line.

i. Place the protractor horizontally against the surface bearing the hole at the intersection of the hole and probe. Ensure the protractor is parallel to the ground. The center of the protractor should be at the probe.

ii. Hang a plumb bob so that the string touches the probe and the protractor. The azimuth angle is where the plumb line touches the protractor. Azimuth angles are typically measured from an imaginary line that is orthogonal to the impact (≤ 90 degrees)

iii. When measuring, make sure the center point of the protractor and the plumb line are on the same side of the probe.

i. Record the measurements in your notes. Two sketches, a side view and a top view, should be used to aid in documenting the measurements.

j. Remember to use the same reference points when recording the measurements. Either use the object hit as the reference or use the perspective of the shooter.

D. Ejection pattern determinations.

1. Cartridge case ejection patterns can be used to determine the approximate location of a shooter at the time a firearm was fired.

2. Ejection of cartridge cases from a firearm involves a large number of variables that cannot all be accounted for or determined. Ejections patterns are estimates of a shooter's location at best. Some of the variables to consider are:

a. The type of gun used and its condition

b. The type of ammunition used and its condition

c. How the firearm was held when fired

d. The hardness of surfaces the cartridge cases impacted

e. Intervening objects

f. Changes in elevation

g. Environmental concerns (wind, rain, etc…)

3. Performing a firearms ejection pattern test requires the use of the Sheriff's Office Range. When conducting an ejection pattern test, the following steps should be followed:

a. Choose a location that is similar to the surface in question. This may not always be possible.

b. Pick a landmark to use as a reference point and mark it as necessary.

c. This reference point will be used to take measurements from depending on which way the firearm ejects cartridge cases. Firearms may eject in any direction.

d. Ten cartridges similar to the evidence ammunition should be used for this test.

i. Consider firing ammunition submitted with the firearm, particularly if it is identical to the questioned components in the case.

e. The shooter will load the firearm and position the weapon in a horizontal position directly over the reference point in alignment with the target. The ejection port of the weapon should be perpendicular to the target.

f. Hold the weapon at the desired height and fire the test rounds. After each round is fired, the observer should mark the location where the expended cartridge case comes to rest. Label each marker with the number of the test fire.

i. It may also be necessary to change the orientation of the firearm to determine ejection patterns when these facts are known or suspected.

ii. Multiple tests can be performed with the gun held at different orientations to create a range of possibilities for the firearm.

iii. A tripod or other device may be used to maintain a consistent shooting position between shots.

iv. Plastic shower curtain rings or cones are convenient markers for the cartridge cases.

g. Measure the location of each point where the expended case came to resting point. See the diagram below for an example.

h. The points may be plotted in a diagram. Indicate in your diagram:

i. The location of the ejection port above the reference point.

ii. The direction of fire in alignment with the target and reference point.

iii. The height and orientation of the weapon being fired.

i. The horizontal cartridge case ejection angle can be calculated from the measurements or measured directly from a scale diagram.

j. The information may also be entered into a spreadsheet to make a diagram and to calculate the ejection angles.

4. Report the following information in the conclusions:

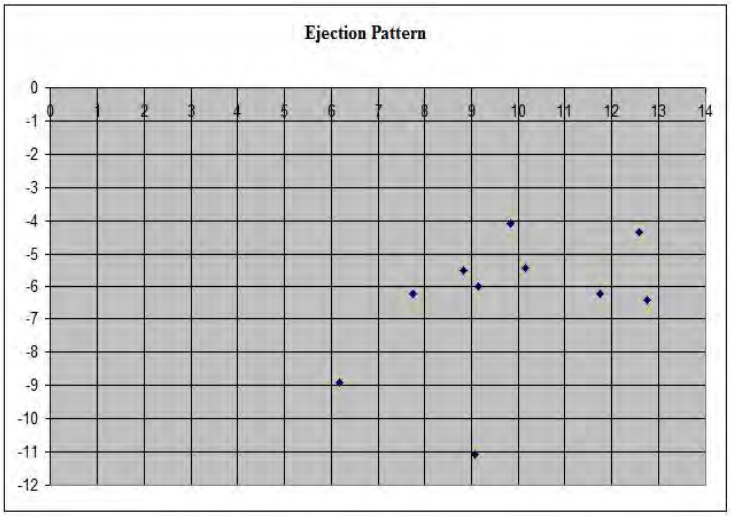
a. The minimum and maximum distance the casings were ejected from the weapon.

b. The direction the casings were ejected.

c. The range of cartridge case ejection angles.

5. The height of the firearm and orientation how it was held when it fired.

Example:



Ejection pattern from a Smith & Wesson model 5906 pistol S/N: TDU0104 firing issued duty ammunition (Winchester 9x19mm 127gr +P+ SXT) at a height of 58" with the firearm held in an upright two handed hold. Surface was grass.
Maximum height that an ejected cartridge reached was 96". Gun is at 0, 0 position on chart. Numbers are in feet.

Raw data for shots (feet):

X (right)	Y (back)	Angle
6.166	-8.916	55.33
7.75	-6.25	38.88
8.833	-5.5	31.91
9.166	-6	33.21
10.166	-5.416	28.05
9.833	-4.083	22.55
11.75	-6.25	28.01
12.583	-4.333	19.00
12.75	-6.416	26.71
9.083	-11.083	50.66

Negative numbers refer to distance cartridge casing ejected behind gun. Angles refer to angle to the right and back from the gun in degrees.

E. Reagent Preparation

1. Dithiooximide (DTO)
   a. Add 0.2 g DTO to 100 mL of ethanol.
   b. Mix well and store in a tightly sealed container.
2. 2:5 Ammonium Hydroxide
   a. Dilute 40 mL of NH_4OH to a total volume of 100 mL with deionized H_2O.
   b. Mix well and store in a tightly sealed container.

F. References

1. Because of the complexity of shooting reconstructions, comprehensive procedures for all scenarios are not possible. Refer to the following references for more detailed information on shooting incident reconstructions:
   a. Books

Haag, Lucien and Michael Haag. *Shooting Incident Reconstruction*, 2nd Edition, Academic Press, San Diego,

Hueske, Edward E. *Practical Analysis and Reconstruction of Shooting Incidents*, 2nd Edition,

Moran, Bruce. "Shooting Incident Reconstruction", in *Crime Reconstruction*, Elsevier Academic Press, San Diego, pp. 215-312, 2007.

b. Journal Articles

Haag, L.C. and Patel, M. "Chemical and Instrumental Tests of Suspected Bullet Impact Sites," AFTE Journal, Vol. 42, No. 2, Spring 2010, pp. 132-144.

Haag, M.G. "2-Nitroso-1-Naphthol vs. Dithiooxamide in Trace Copper Detection at Bullet Impact Sites," AFTE Journal, Vol. 29, No. 2, Spring 1997, pp. 204-209.

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CONTRA COSTA COUNTY OFFICE OF THE SHERIFF FORENSIC SERVICES DIVISION

Crime Scene Photography

Training Monograph

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CHAPTER ONE:
Crime Scene Photography

DESCRIPTION:

This chapter is intended to introduce the principal concepts of crime scene photography to the law enforcement student. Areas of concentration covered will include the primary objectives of crime scene photography, the desired photographic perspectives necessary to effectively document the scene of a crime or items of physical evidence, and the proper photographic compositions necessary in scene and evidence documentation.

GOAL:

Given a simulated crime scene containing various items of evidence, the student will make properly composed, sharply focused, and properly exposed photographs that could be used as exhibits in a court of law.

PERFORMANCE OBJECTIVES:

1. Identify the primary objective of crime scene photography and the documentation needed to ensure the admissibility of photographic evidence
2. List the proper perspectives and compositions necessary during crime scene photography

Chapter Introduction

One of the single best methods of crime scene and evidence documentation is through photography. Photography taken from crime scenes is commonly used in court proceedings, for analysis, and for later reconstruction. This type of evidence memorializes the scene as it was when the incident occurred, and provides a graphical illustration to the Judges and Jurors who will ultimately decide the fate of an accused.

Main Objectives of Crime Scene Photography

The ultimate objectives of crime scene photography is its intended eventual use as evidence in a criminal proceeding, for analysis, or to aid in the re-construction of a

particular crime or law enforcement related event. The value of proper and professional crime scene and evidence photography cannot be overemphasized. Without the necessary documentation and authentication, the best crime scene and evidence photographs can be rendered inadmissible by the shrewd and articulate ability of a veteran defense attorney.

Photographs as Evidence

For a photograph to become evidence it must meet certain criteria. The following will specify the necessary criteria needed to allow for a photograph to be used as evidence:

Relevant- the intended photograph must be relevant to the issue being contested. Irrelevant and demonstrative photographs of a crime scene, evidence, or injuries may be found to be inadmissible due to their potential ability to prejudice the jury with respect to the state, the government, the defendant or the victim.

Accurate- the intended photograph must be a "Fair and Accurate" representation of the scene. Accuracy may relate directly to the exposure as well as perspective and distance relationships. It is easy to distort the accuracy of a scene through the use of an improper lens or composition. Wide angle and telephoto lenses can be integrated but should not be exclusively used during crime scene photography. A normal perspective lens, 50mm or 50mm equivalent (based on digital sensor size, commonly 1.5x or 1.6x crop factor), should be used for the majority of the crime scene photography.

Authentic- the photographs of the scene must be authentic. In order for the photographs and images to be admissible the photographer or an individual at the scene when the photographs were taken must be able to testify that they do accurately represent the scene as it was on the date in question, and that nothing was added to, taken away from, moved or removed from the scene before the photographs were taken.

PHOTOGRAPHS INTENDED FOR ANALYSIS-

There are countless examples of types of evidence that are best collected through use of photography. Photography may in fact at times be the only method of collection of certain types of evidence because many items commonly encountered are too fragile or difficult to physically collect without the risk of damage or destruction. Examples of these items may include a fragile fingerprint on a difficult surface, a shoe or tire track in soft sand, an injury on human skin, tool impression evidence left at the scene of a crime, or perhaps skid marks and road damage left on the pavement at the scene of a vehicular homicide.

Many types of evidence become very valuable following an analysis that results in compelling testimony from an expert witness which suggests the guilt of the accused.

Photographs of evidence intended for analysis are close-up/evidence grade images. These types of images will be discussed further in performance objective 2.

PHOTOGRAPHS TO AID IN RECONSTRUCTION-

Photographs from complex and violent crime scenes are often used to help theorize and reconstruct the events of an incident. When done correctly, crime scene photography can afford valuable insight to analysts and crime scene reconstructions as to the events leading up to and following an incident.

PHOTO IDENTIFIER (THE FIRST SHOT)-

Prior to beginning photography of a scene, or any evidence, the photographer should prepare an identifier that lists certain relevant information about the case. The identifier can be a pre-printed departmental document, a portion of the Field Services Information Form containing the pertinent case information, or just a plain white piece of paper with a fat edged black magic marker writing on it. The media in which the information is written is not as important as the information itself. When working an investigation with multiple locations or secondary scenes, a new identifier should be completed reflecting the change in location prior to beginning photography. The requisite information that should be included:

1. Case number & Agency Information
2. Photographer/Investigator name
3. Date that photographs were taken

When shooting with a digital camera, most of the camera settings can be acquired post capture from the cameras metadata. An exception to this is when any filters or alternative light sources are integrated. When using a technique or device during capture that will not be recorded in the camera's metadata, that information should be reflected in your field notes for later reference.

HANDLING OF CRIME SCENE PHOTOGRAPHS-

Although most of the photographs taken at a crime scene are not considered to be "evidence" by the Forensic Services Division, their handling by the crime scene responder after the scene is still very important. Whether or not the images are ever used in court, photographs become part of the investigation, and could be potentially valuable for the prosecution or defense during a criminal proceeding. Like any other evidence collected during a criminal investigation, photographs must be handled properly in order for them to maintain their value and integrity.

Refer to policy FSD.42.01, "Diagrams, Photographs & Digital Images" for specific information on handling, storage and retention of crime scene photographs

The Proper Perspectives and Compositions Necessary during Crime Scene Photography

In order for the complete and accurate story of a crime to be told, photographs of the scene and all evidence must be linked to one another in a succinct and logical manner. Photographs taken from crime scenes must make sense to the individuals who will eventually use them in determining the significance of the evidence, as well as those who will use them when deciding the fate the accused. As a general rule, nothing in the scene should be moved, altered, or collected until it has been photographed. There are three standard perspectives that must be included during crime scene photography: overall, intermediate and close-up. Each perspective is interdependent upon the other to do its job in telling the entire crime-related story. In order for this process to work seamlessly, the photographer must integrate the proper techniques during each perspective. The photographer must not skip a step between overall and close-up photography, nor should the photographer skip the overall or close-up perspectives because they feel that they have accomplished those objectives in documenting an item of evidence during another perspective. But first, there are three rules that the crime scene photographer should always keep in mind:

The Three Rules of Crime Scene Photography

1. Fill the frame.
2. Maximize depth of field
3. Keep the film plane parallel with the subject.

OVERALL

Overall photography - In order for the significance of any item of evidence to make sense to the viewer it must be logically related to the scene. In order for the location and conditions of the scene to make sense to the viewer it too must be related logically. Overall photography is the perspective that relates the entire scene to its physical surroundings.

Perspective- If at all possible during overall crime scene photography the photographer should make every attempt to document the scene accurately by selecting the correct perspective. The correct perspective for this type of photography is full standing height, or a natural perspective. Elevated, kneeling, or prone perspectives can skew and distort the accuracy of the scene, which could make the photograph arguably inadmissible due to its inaccuracy. Elevated and lower than normal angle views may be very helpful in the investigation, but should be supplementary to the normal standing views.

Exterior overalls- When documenting the location of a crime, search warrant, or law enforcement event, the photographer should properly and completely document the entire exterior of the location. Whether it is a property crime, death investigation, search warrant, or violent crime against a person, the significance of items located within the scene at the time of the investigation may not be immediately known, and could go undocumented if not photographed properly. The photographer should be mindful of equipment introduced into the scene by them or their colleagues. Items like crime scene kits, camera bags, purses, or other personal effects that are set down upon arrival should be noted or removed from the scene prior to beginning the photography.

Begin with landmarks- Overall exterior views should start with landmarks that put the scene in geographical perspective to the viewer. Street signs, intersections, and house numbers are landmarks that should be included in this type of photography if possible. When shooting street signs of an intersecting roadway, emphasis should be given to the street that the incident occurred on. A method of doing this is to photograph the street sign of interest with the film plane parallel to that particular sign.

- **Lens and angle selection**- Photographs of the exterior of residences and buildings should be taken with a normal perspective lens (50mm or 50mm equivalent*), and should be taken at right angles to one specific side of the structure at a time (film plane parallel to one side of the building). Shooting from a corner of a structure, or diagonal view, can cause a distorted perspective. Although these views can be included, and may be helpful in establishing relationships between points of ingress and egress, they should be supplemental to the standard right angle parallel views. When documenting an extremely large structure, overlapping photographs may be necessary, and should be taken from the same distance each time.
- **When evidence is located outside of the primary scene**- In many cases, the crime scene and associated evidence is not isolated to the interior or exterior of a residence or structure. Many crimes leave a trail of relevant evidence from the exterior of the residence to a particular room within the residence, or from a room within the residence to the exterior, and perhaps through the yard and even down the block. When evidence is encountered at the exterior of the residence, it should be properly documented with relationship and close-up photography prior to proceeding into the residence. This becomes particularly necessary when evidence must be quickly collected due to the hostility of a particular environment, including the risk of theft or destruction of evidence.

Interior overalls- Upon the completion of the exterior overall photography the interior overall views should be captured. Using a standard lens when possible (50mm or *50mm equivalent) the photographer should begin the photography at the threshold of each door, shooting into the room. In extremely small rooms, it may be necessary to use a wider angle lens in conjunction with the standard lens to properly document the room. In cases where a wide angle lens is necessary, the photographer could choose to select from a 28mm to a 35mm lens. These focal lengths will begin to introduce some wide-angle distortion; however, are typically acceptable in most situations. The photographer should be prepared to defend his or her decision for lens selection based on the small or confined area, as the wider angle lenses tend to make the scene

look larger or deeper than it actually is. When the actual physical size of the room is of importance to the case at hand (e.g. violent crime against a person), the use of a wide angle lens is discouraged due to its potentially distorting effects.

Four corner photography- In many cases where the actual physical size of a particular room is irrelevant (search warrant for drugs or stolen property etc.) a four corner photography technique with a wider angle lens may be appropriate. In rooms that are square, somewhat square, or rectangular the photographer can shoot at opposing corners from an opposing corner. When using a wide angle lens the overall interior photography may be able to be completed in as little as four shots. When the room contains closed doors and closets, the photographer should document the room in its condition of discovery, and then follow up with a sequence of shots with the closets and closed doors in the open position to show the items contained within the closets. When photographing closets the photographer should position the film plane of the camera parallel to the wall containing the closet or closed door.

Parallel overall interior photography- When the physical size of the room is of importance to the type of crime being investigated, the type of photography to accurately illustrate the scene is also of importance. When contrasted with other photographic techniques, photographing interior walls with the camera's film plane parallel to the wall being photographed, while using a normal perspective lens, is the best approach. This technique eliminates spatial distortions caused by wider angle lenses, and any distortion caused by off angle or diagonal photography. This method also ensures proper and even illumination when using a flash to photograph the interior of a scene, and ensures a consistent depth of field. Although more images may be necessary to completely document the scene, one must always remember that film is cheap and digital images are even cheaper. As with the four corner photography technique, when the room contains closed doors and closets, the photographer should document the room in its condition of discovery, and then follow up with a sequence of shots with the closets and closed doors in the open position to show the items contained within the closets. When photographing closets, the photographer should position the film plane of the camera parallel to the wall containing the closet or closed door. An off camera or remote flash technique may be necessary to properly illuminate larger closets.

Victim's perspective- In many cases it may be helpful to obtain photographs of the victim's perspective as he/she stood at a particular door looking out. Home invasion robberies, forcible burglaries, or assaults that occur upon opening the door of a residence are examples of when this added perspective may be helpful.

INTERMEDIATE/MIDRANGE

Intermediate photography is the perspective between overall and close-up that is used to relate items of evidence to a fixed feature within a scene. An example of this may include the location of a handgun, and its relationship to the front door. A "fixed feature" is just that, it is fixed. Large furniture objects, appliances, dead bodies, household pets and vehicles are not fixed features within a scene due to their potential

for mobility. A fixed feature is structurally fixed within a scene, a feature that would require structural demolition to change, remove, or alter. Inside corners, outside corners, door jams, and base boards are all examples of interior fixed features. Exterior fixed features may include a sidewalk, fire hydrants, telephone poles, the corner or side of a structure, a fence post, or perhaps a utility enclosure.

Avoid distorting perspectives- In order to ensure accuracy during relationship photography the photographer should select the correct focal length lens as well as the correct perspective. The location that the photographer is standing when the shutter release is depressed should be a location that he or she intentionally selected in order to achieve the best results, not a haphazard location that just seemed convenient at the time. One school of thought on this particular subject integrates an imaginary isosceles triangle approach into midrange photography. In doing this, the photographer draws an imaginary line between the subject of the photograph (the evidence) and a fixed feature within the scene, for the sake of argument a line between a handgun and a door jam. The photographer then distances him/herself equidistant from the evidence and fixed point in a location that would complete the imaginary isosceles triangle. The photograph is then properly composed and taken at full standing height. Lower angle photography may be necessary in certain situations when items of evidence are concealed in locations that offer additional challenges, such as under a bed or under a vehicle. Lower or elevated angle photography during the relationship perspective should be avoided when possible due to its potential to distort distance relationships between fixed features and evidence. Higher angles tend to suggest more distance from near to far in an image while lower angles tend to suggest a decrease in distance between objects in a photograph. Distorted views during this type of photography are entirely counterproductive to the intended goal. Although various angles of view may be helpful to the investigation, they should be supplementary to the natural standing perspective.

Proper composition- Composition in photography is often what “makes” the photograph in portrait, landscape, architectural, and creative photography. Composition in law enforcement photography is also very important, and is technical in nature. The dominant themes surrounding law enforcement photography are accuracy and specificity. Specific items should be photographed in such a fashion that they are an accurate representation of what was at the scene when it was documented. Items not intended for graphical illustration should be excluded from the compositions. Objects and surroundings that tend to distract from the intended subject, the evidence, should not be included in the composition. The photographer during all phases of crime scene photography should concentrate on illustrating the specific intended subject while also concentrating on intentionally excluding non-relevant subjects and objects. Distracting and non-relevant subjects, objects or items may confuse the viewer, the Judge or Jury, of a law enforcement photograph as to the intended subject. These sloppy compositions may also provide defense council with non-relevant hypothetical scenarios that can be used against the photographer or merits of the case during court proceedings.

CLOSE-UP

Close-up Photography- Now that the scene has been put in context with its

surroundings (overall photography), and the evidence has been related to a fixed feature within the scene (intermediate photography), the actual evidence that is so important to the investigation can be properly photographed. The close-up perspective is the final perspective necessary in completing the crime related photographic story. These views are very specific and their compositions distinctively isolated to one item of evidence at a time. This is not the time to get lazy by documenting multiple items of evidence with one photograph. It is that final interdependent process that is as important as the previous two.

Each item of evidence must be photographed with a close-up perspective. If there are fifty items intended for collection, then there should be at least fifty full-frame, close-up images of each of those items. Close-up images should be carefully composed. Any other item, object, or background other than the intended item should be intentionally excluded from the composition. Close-up photographs should be taken prior to the evidence being moved or handled, "as is". The photographer should be able to testify that these images of evidence are as they were discovered, are unaltered, and depict the evidence prior to it being moved or handled by law enforcement.

Fill the frame. When conducting close-up photography the item of evidence must fill the frame as much as possible. A tight crop is preferred during close-up photography in order to force the viewer's attention to only the object of consideration.

Lens selection is an important element for consideration during close-up photography. Not all lenses are created equally. During close-up/evidence photography a close-up lens should be used. Most lenses have different minimum distances at which they can focus. Many lenses will offer a 1:1 or 1:2 reproduction ratio. Close-up lenses come in a variety of focal lengths, but can focus at much closer distances than most standard lenses. The closer the lens is to the evidence when photographed the better. Reducing the distance between the lens and the subject during photography increases the resolution and the latitude for enlargement and enhancement. Every crime scene photographer's kit should include a close-up lens.

The strict and specific composition adhered to during close-up photography should also be complimented by a proper framing technique. When an object or item being photographed has a specific geometric shape, it should be framed in the viewfinder squarely prior to being photographed. Using the horizontal and vertical boundaries inherent in any SLR camera viewfinder to achieve the proper framing will aid in acquiring a professional composition that can be used as a courtroom exhibit with absolutely no editing. Many of today's camera systems offer an optional grid display that can be activated through a menu option. This is useful tool in the critical framing during close-up evidence photography.

SCALES- Close-up photographs should be taken without and with a properly labeled scientific scale. Every crime scene photographer's kit should include a variety of photo scales to be used during evidence photography. There are a host of shapes, sizes, and colors of scales available through multiple police and forensic supply vendors. Initially the close-up photographs should be taken without a scale, an "as is" photograph. For a gauge of size, actual 1:1 size duplication, calibration or enlargement a scale must be

included in the image. The scale should be placed in a location in the image that will not compromise or contaminate any evidence. In the presence of biological hazards a disposable scale should be considered.

- **Placement of the scale**- The scale should be situated along side of the evidence at the same focal plane as the actual object or impression. The scale should be placed in the scene squarely with the object, with the proper framing composition in mind. A disposable adhesive label should be placed on the scale when possible to reference the item of evidence being photographed, the date, case number and photographer's name. Following this procedure will help eliminate the potential for unnecessary evidentiary hearings or testimony concerning the authenticity of the item of evidence being photographed.
- **Angular distortion should be avoided during close-up photography**. When possible, close-up photographs should be taken at a 90° angle to the camera's sensor or film plane. The use of a tripod, quadpod, or copy stand is helpful in this endeavor. An angle level may also be used in transposing unknown angles from awkward terrains back to the tripod mounted camera. Close-up photographs intended for later analysis or introduction into an AFIS or other similar forensic database for query may be rendered useless if captured at angles other than 90°.
- **"As is" versus secondary close-up photography**. After an item of evidence is photographically documented "in place", both without and with a scale, it may be moved from its original location for additional photography. It may be impossible to completely and properly photograph all items of evidence "in place" due to their often times difficult locations of discovery. After making a good faith effort to properly document an item of evidence in place, it can be moved to a suitable location for additional photography. A reference should be noted on the photo log concerning the secondary location. If an item is moved from its original location for additional photography, the photographer should select a suitable and neutral colored background. The use of a gray card can often provide a professional looking background, while at the same time aiding in achieving the correct pre or post capture exposure.

Chapter Review

The technical and structured approach to photographically documenting a crime scene is designed in such a fashion that it provides a comprehensive, succinct, and permanent record of the scene and all associated evidence in its condition upon discovery. These images, if properly taken, have the potential of becoming valuable evidence to use in determining guilt during criminal proceedings. Properly taken crime scene photography is also a valuable tool used by investigators during the reconstruction of events leading up to and following the commission of a violent act or incident.

Crime scene and evidence photography is a technical and structured process that requires a very specific set of well thought of compositions, overall, intermediate, and close-up. The proper compositions in crime scene photography are designed to put the

scene in context with the evidence and the evidence in context with the scene. This systematic approach in documenting crime scenes ensures that an accurate story regarding the incident, the scene, and the evidence can one day be told through photography.

Glossary of Photographic Terms

A

Aberrations

Chromatic

Longitudinal and lateral chromatic aberrations. Unless corrected, the different colors of white light will separate and focus at different points. The result is color fringing, where the edges of objects appear to have strange bands of color.

Spherical

The outer part of a lens will bend/refract light differently than the middle or central part, so that all the light does not focus at the same point. The result is soft focus rather than clear, crisp detail.

Coma

Off-axis detail will not focus sharply on the film or digital sensor.

Astigmatism

Off-axis points in the scene will appear as lines or ovals on the image instead of distinct points.

Curvature of field

A subject that is completely flat will be focused sharply in the center of the image, but toward the periphery of the image, the image is softer or slightly out of focus.

Aliasing

The digital effect of a jagged appearance of diagonal lines, edges of circles, etc. caused by the square nature of most pixels, also known as ‘jaggies’.

Ambient Light

The available light completely surrounding a subject. Light already existing in an indoor or outdoor setting that is not caused by any illumination supplied by the photographer.

Angle Of View

The area of a scene that a lens covers or sees. Angle of view is determined by the focal length of the lens. A wide-angle lens (short-focal-length) includes more of the scene-a wider angle of view-than a normal (normal-focal-length) or telephoto (long-focal-length) lens.

Aperture

The opening in a camera lens through which light passes to expose the image on the film or digital sensor. The diameter of a camera lens opening, expressed by the *f* stop number. The term *f* stop relates to a fractional relationship between the focal length of the lens and the diaphragm opening. E.g. in the case of a 50mm lens, if the aperture is set to *f*/8, the size of the opening that allows light to pass is 50/8=6.25mm, the measured opening in the lens. Aperture controls the volume of light by physically allowing more or less through the lens at any one given time. Aperture also influences the area of acceptable sharpness in an image, also known as depth of field (DOF).

Aperture Priority

An exposure mode on a programmable camera that lets you set the aperture while the camera sets the shutter speed for the proper exposure. If you change the aperture, or the light level changes, the shutter speed changes to provide a correct or reciprocal exposure. This mode is used when the photographer's primary goal is to control the depth of field in an image. Identified as an "A" on the mode dial of many cameras, often mistaken for a fully "Automatic" mode.

Aspect Ratio

The ratio of width to height in photographic prints - 2:3 in 35 mm pictures to produce photographs most commonly measuring 3.5 x 5 inches or 4 x 6 inches;

Autofocus (AF)

A system by which the camera lens automatically focuses on a selected area of an image. Many camera systems will allow the photographer to select from one of dozens of areas within the frame as a 'point of focus' when using auto focus. The lens and camera use contrast sensitive algorithms and 3D information to detect and select the proper focus.

Automatic Camera

A camera with a built-in exposure meter that automatically adjusts the lens opening, shutter speed, or both for proper exposure.

B

Blinking Highlights

The highlights feature in digital cameras will blink on and off during preview. This

feature allows the user to identify areas within the image where an overexposure has occurred, or where no detail remains due to a ‘clipping’ of the highlights.

B (Bulb) Setting

A shutter-speed setting on an adjustable camera that allows for time exposures. When set on B, the shutter will stay open as long as the shutter release button remains depressed. To help eliminate camera shake, it is essential to utilize a remote control device to activate and deactivate the shutter curtain when using this mode.

Background

The part of the scene that appears behind the principal subject of the picture.

Backlighting

Light coming from behind the subject, toward the camera lens, so that the subject stands out vividly against the background. Sometimes produces a silhouette effect. Backlighting techniques can also be used in forensic photography to bring out detail on transparent surfaces, e.g. visible latent fingerprints on clear tape or glass.

Balance

Placement of colors, light and dark masses, or large and small objects in a picture to create harmony and equilibrium.

Barrel Distortion

Wide and super wide angle lenses cause vertical elements in an image, e.g. sides of buildings, poles, etc., to bow out like the sides of a barrel.

Bellows

The folding (accordion) portion in some cameras that connects the lens to the camera body. Also a camera accessory that, when inserted between lens and camera body, extends the lens-to-film distance for close focusing. Can be used during forensic close-up photography to bring out extremely small detail in a subject.

Bit

The smallest unit of digital memory; a contraction of “binary” and “digit”.

Bit Depth

Bit depth quantifies how many unique colors are available in an image's color palette in terms of the number of 0's and 1's, or "bits," which are used to specify each color. This does not mean that the image necessarily uses all of these colors, but that it can instead specify colors with that level of precision. For a grayscale image, the bit depth quantifies how many unique shades are available. Images with higher bit depths can encode more shades or colors since there are more combinations of 0's and 1's available

Bounce Flash/Lighting

Flash or tungsten light bounced off a reflector (such as the ceiling or walls) to give the effect of natural or available light. Using a bounce flash technique reduces or eliminates hard edge shadow detail from subjects.

Bracketing

Taking additional pictures of the subject through a range of exposures-both lighter and darker, commonly used to ensure the correct exposure.

Burning

A digital imaging tool used to provide localized adjustment by darkening areas that require additional contrast. Considered a traditional enhancement by SWGIT due to its roots in conventional silver based photography.

C

CCD (Charge Coupled Device)

A common digital camera sensor type, probably the most common type.

CD-R

Write once Compact Disc Recordable. The preferred type in law enforcement due to the write once only format.

CD-RW

A re-writable CD format that can be appended to, or re-used. Not the preferred type of media to archive LE digital images.

Center Weighted

A camera metering mode by which the exposure is determined primarily from the light coming from a large oval in the center of the composition, or field of view. A common metering mode used during portrait photography, more critical than a Matrix metering mode, and less critical than a Spot metering mode.

Circle of Confusion

As focused light comes from the lens towards the film plane, it travels in a narrowing cone until it meets at a precise point on the film plane, where the image is judged to be in focus. The selected lens aperture will control how light that enters the lens will be distributed on the film or sensor. If the light waves focus before reaching the film plane, they begin diverging and form a circle on the film plane. If the light waves have not yet focused to a point by the time they

reach the film plane, they will also form a circle on the film plane. The human eye perceives some of these smaller circles to still be in focus. Circles larger than a certain size are perceived by the eye to be out of focus, or "confused." Smaller apertures will produce smaller circles of confusion and larger apertures will produce larger circles of confusion. It is the circles of confusion that are directly related to the depth of field in a given image. Smaller apertures generally produce greater apparent focus in a photograph. The concept of circles of confusion helps explain why there is only one "true" point of focus in any image, however the perception of focus can be achieved both in front of and behind the actual focused subject.

Close-Up

A picture taken with the subject close to the camera-usually less than two or three feet away, but it can be as close as a few inches.

Close-Up Filters

A series of lens attachments that can be threaded into the front element of a lens that allows the photographer to acquire images at a closer distance than the camera lens alone will allow. These can be used individually, or stacked to achieve further enlargement.

CMOS (Complementary Metal Oxide Semiconductor)

A type of digital camera sensor. This type of chip is gaining a lot of popularity in the pro-sumer and professional digital SLR camera lines.

CMYK (Cyan-Magenta-Yellow-Black)

Primary subtractive colors. When projected together over the same area they block all light, resulting in black (the K designates black).

Color Balance

How a color film reproduces the colors of a scene. Color films are made to be exposed by light of a certain color quality such as daylight or tungsten. Color balance also refers to the reproduction of colors in color prints, which can be altered during the printing process.

Color Noise

Better known as chrominance signal-to-noise ratio. A measure of how accurately the color signals are reproduced. Poor chroma signal-to-noise ratios are evidenced in color fringing on edges of objects and what appears to be thousands of moving dots in large areas of highly saturated colors (especially red).

Color Output

The playback output level of the color (chrominance) signal after it is separated from the luminance signal.

Composition

The pleasing arrangement of the elements within a scene-the main subject, the

foreground and background, and supporting subjects.

Compression

To reduce file sizes so that more files can be stored in the space or easily transmitted over the Internet. Compression algorithms search for redundant information, e.g. similar colors or contrasts, and discard that information. JPEG is referred to as a lossy compression, as it permanently discards the redundant information. RAW and TIFF are considered lossless compression, that preserve all information. Higher levels of compression will result in lower quality images**.**

Contrast

The range of difference between the light to dark areas in an image.

Cropping

Trimming off unwanted parts of an image.

Crop Factor

This generally indicates that the sensor size is physically smaller when compared to a 35mm negative, and that a crop factor will be present. For Nikon crop factor is 1.5x whereas with Cannon it is roughly 1.6x. Also see DX.

Crop tool

A digital imaging software tool that is used to trim a photo and is usually represented by a scissors icon.

D

Darkroom

A light-proof area used for processing films and for printing and processing papers.

Dedicated Flash

A fully automatic flash that is integrated into a camera's body. Dedicated flash units automatically set the proper flash sync speed and electronic sensors within the camera automatically control exposure by regulating the amount of light from the flash. The onboard flash system on most consumer camera systems are considered a dedicated flash.

Definition

The clarity of detail in a photograph.

Density

The blackness of an area in a negative or print that determines the amount of light that will pass through it or reflect from it. Sometimes referred to as contrast.

Depth of Field

The amount of distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph. Depth of field depends on the lens opening, the focal length of the lens, and the distance from the lens to the subject.

Diaphragm

Lens opening. A perforated plate or adjustable opening mounted behind or between the elements of a lens used to control the amount of light that reaches the film. Openings are usually calibrated in f-numbers.

Diffraction

Light striking an edge will bend and no longer proceed in a straight line. Light coming through a lens with the smallest apertures is more affected by diffraction, because most of the light forming the image is diffracted light. Diffracted light results in soft focusing and the loss of edge detail. When maximum depth of field is required, many photographers will select the smallest camera aperture. This may produce counterproductive results in terms of focus. A slightly wider aperture, two or so stops from the smallest opening, may in fact produce a sharper focused image because more light comes through the center of the aperture, where it is not affected by diffraction.

Diffuse Lighting

Lighting that is low or moderate in contrast, such as on an overcast day. Can also be used in conjunction with an electronic flash or dedicated light source by placing a translucent material over the light source to soften and distribute its effects.

Digital Noise

Randomly spaced brightly colored pixels that speckle and reduce image clarity. Can often be visualized as red, green, or blue globules of color speckled about the dark areas in an image. Mainly caused by long exposures or by high ISO settings in a digital camera.

Diopter Adjustment

Many of today's digital SLR camera systems come equipped with an eyepiece adjustment. This adjustment is known as a Diopter adjustment, and can be adjusted to the vision of the photographer.

Dodging

An image software tool used for localized contrast adjustments that will lighten the areas.

Double Exposure

Two pictures taken on one frame of film, or two images printed on one piece of

photographic paper. Many consumer and pro-sumer cameras come equipped with a 'multiple exposure' option in the menu that can be used to produce this effect. This effect can also be done by merging layers in an imaging software application.

Download

Transferring files or other information from a camera, media card, CD, DVD, hard drive, or the Internet to a computer.

DPI (Dots Per Inch)

A measure of resolution of a photo printer based on dot density.

Dynamic Range

A measure that reflects a camera's ability to capture a range of light levels from the highlights to shadows. The better the range, the more information that is available during post capture forensic image processing.

E

Emulsion

Micro-thin layers of gelatin on film in which light-sensitive ingredients are suspended; triggered by light to create a chemical reaction resulting in a photographic image.

Enlargement

A print that is larger than the negative or slide; a blowup.

Existing Light

Available light. Strictly speaking, existing light covers all natural lighting from moonlight to sunshine. For photographic purposes, existing light is the light that is already on the scene or project and includes room lamps, fluorescent lamps, spotlights, neon signs, candles, daylight through windows, outdoor scenes at twilight or in moonlight, and scenes artificially illuminated after dark.

Exposure

The quantity of light allowed to act on a photographic material; a product of the intensity (controlled by the lens opening) and the duration (controlled by the shutter speed or enlarging time) of light striking the digital sensor (controlled by the sensitivity of the sensor, or ISO).

Exposure Latitude

The range of camera exposures from underexposure to overexposure that will produce acceptable pictures from a specific film.

Exposure Meter

An instrument with a light-sensitive cell that measures the light reflected from or falling on a subject, used as an aid for selecting the exposure setting. The two types of light meters are the **incident** and the **reflective.** Incident light meters are generally handheld devices that can measure the precise amount of light at or striking a particular subject. A reflective light meter, the kind that is internal in most digital SLR camera systems, differs from an incident light meter in that it measures light reflecting from a subject, not striking it.

Exposure Mode

Most digital cameras have a host of 'exposure modes' to select from. The common exposure modes available in most digital SLR camera systems include the following:

Programmed Automatic – camera selects shutter speed and aperture based on ambient lighting conditions in an attempt to achieve a correct exposure.

Shutter Priority – camera user selects a shutter speed based on a motion controlling objective and the camera provides the necessary aperture to achieve the correct exposure.

Aperture Priority – camera user selects the aperture based on a depth of field related objective and the camera provides the necessary shutter speed to achieve a correct exposure.

Manual – camera user selects the desired aperture and shutter speed that provide the desired effect. To achieve a correct exposure in this mode, the photographer must balance the camera's reflective light meter by use of any of the three available exposure controls e.g. aperture, shutter speed, or ISO.

Automatic – camera controls exposure automatically and will use flash when needed to illuminate the scene or to photograph at an acceptable shutter speed, e.g. $1/60^{th}$ of a second.

Exposure Value Compensation

Also known as EV Compensation, referenced on many digital SLR camera systems as **+/-,** allows the photographer to intentionally over or under expose an image from what the camera believes to be the 'correct' exposure. Many cameras allow for a five stop either direction exposure control range.

Extension Tube

A hollow lens like device that integrates between a camera lens and a camera body. This device decreases the minimum focusing distance of a lens by moving the prime lens elements further from the subject. Extension tubes can be used individually, or stacked together to increase the magnification of a subject.

F

Field of View

The angle of view or area of coverage of a particular lens. Wider angle lenses

will result in an increased angle of view, e.g. fisheye lenses, or a lens with a super wide designation. Telephoto lenses result in a decreased field of view when compared to wide or normal focal length lenses.

File

A collection of information, such as data, images, or text that can be saved on a disc, hard drive, or external media. Also, a term used to describe an individual digital image.

File Format

A selected program type of data file. In digital photography, common file formats include JPEG, NEF(RAW), TIFF.

Fill-In Light/Fill Flash

Additional light from a lamp, flash, or reflector; that is used to soften or fill in the shadows or dark areas in an image. Called fill-flash when an electronic flash is used. Useful in law enforcement photography to illuminate evidence concealed by shadows.

Film Speed

Also known as **ISO**. The sensitivity of a given film or digital sensor to light, indicated by a number such as ISO 200. The higher the number, the more sensitive or faster the film speed. Note: ISO stands for International Organization for Standardization.

Filter

A piece of glass or other transparent material used over the lens to emphasize, eliminate, or change the color or density of the entire or certain areas within a scene. Polarizing filters, neutral density filters, tinted gradient filters, and solid primary colored filters are examples of a filter. When considering a filter for purchase you should ensure that the selected filter matches the front element size of the lens that the filter is purchased for.

Fixed Focal Length Lens

A lens that has only one focal length, and cannot zoom to a wider or more telephoto focal length. These types of lenses for SLR camera systems are generally more efficient in terms of their light gathering abilities due to the increased size of their widest aperture. Close-up lenses are commonly fixed focal length lenses.

Fixed Lens Camera

A non detachable lens, generally compact point and shoot camera systems come equipped with a wide angle to telephoto fixed zoom lens that is not detachable.

Flare (Lens Flare)

Visible multi-colored octagonal shaped artifacts rendered in images that were

taken when unwanted stray sunlight, or other strong light, streamed directly into the camera lens. Lens flare can also cause a reduction in contrast in the image. Wider angle lenses are more susceptible to lens flare. A lens hood is the device intended to reduce or eliminate lens flare. When a lens hood is not available, holding a hand, note pad or other object above the front element of the camera lens can reduce or eliminate the flare.

Flash

A brief, intense burst of light from an electronic flash unit, usually used where the lighting on the scene is inadequate for hand held photography.

Flash Diffusion

Direct flash is very harsh and often times uncontrollable when used at close and medium distances to the subject. Placing a diffusion material between the flash and the subject can provide more evenly distributed lighting. This even pleasing light is the result of increasing the surface area that the light is emitted from, while at the same time dampening its effects. Flash diffusion works very well when conducting close-up evidence grade photography of highly reflective subjects, e.g. guns, jewelry, edged weapons. A simple and highly effective field expedient diffusion device is a white Styrofoam cooler. A hole is cut in the top of the cooler for the lens and the flash is fired remotely while outside of the cooler, providing a even wrapping consistent shadow-less light on virtually any surface.

Flat Lighting

Lighting that produces very little contrast or modeling on the subject plus a minimum of shadows.

***F* Number**

Also referred to as *f* stop. The designation for the optical opening in the camera lens that corresponds to the lens focal length divided by the setting, which will give the measured opening in the aperture of the lens. The common f-numbers are f/1.4, f/2, f/2.8, f/4, f/5.6, f/8, f/11, f/16, and f/22. The larger the f-number, the smaller the lens opening. In this series, f/1.4 is the largest lens opening and f/22 is the smallest. A doubling or halving of light occurs with each full stop incremental change.

Focal Length

Technically defined as the distance between the film and the optical center of the lens when the lens is focused on infinity. The focal length of the lens on most adjustable cameras is marked in millimeters on the lens mount. As a general rule, the wider the angle the lens the further the subject appears in the viewfinder and the wider the field of view. The more telephoto the lens, the closer the subject appears in the viewfinder and the smaller the field of view. A 50mm lens in 35mm film format is considered a ‘normal’ focal length lens. The equivalent to a ‘normal’ perspective lens in a DX format digital camera is approximately 33 mm.

Focal Length Multiplier

Relates to the physical size of the sensors in digital cameras. Many digital sensors are physically smaller than the small format film negative, causing a crop factor. See crop factor for additional information.

Focal-Plane Shutter

An opaque curtain located immediately in front of the sensor in a digital SLR camera that moves directly across, usually vertically, to allow image-forming light to strike the sensor.

Focus

The setting on the camera lens that focuses light so that it converges at a precise point on the film or sensor plane. Most lenses are equipped with automatic and manual focus options.

Focus Range

The range within which a camera is able to focus on the subject, e.g. 4 feet to infinity. Shorter focal length lenses generally have a closer minimum focusing distance than do telephoto lenses. Specialty lenses intended for close-up photography commonly have focusing distances under twelve inches.

Foreground

The area between the camera and the principal subject.

Forensic Photography

The application of specialized photography techniques to questions of criminal and civil law.

Frame

One individual picture on a roll of film or digital media. Also, foreground foliage or objects that frame a subject.

Front Lighting

Light shining on the subject that originates from behind the photographer.

G-J

GN (Guide Number)

An indication of the relative power and effective distance range of an electronic flash unit.

Gaussian Blur

A technique/tool used in imaging software that will allow the user to intentionally blur detail in an image, a post capture editing technique.

Gigabyte

One thousand twenty four (1,024) megabytes.

Graininess

The sand-like or granular appearance of a negative, print, or slide. Graininess becomes more pronounced with faster film and the degree of enlargement. Analogous to noise in digital images taken with high ISO settings.

Gray Card

A gray in color card calibrated at 18% reflectance. Gray cards are used to achieve the correct exposure when photographing other than average reflective subjects, e.g. predominantly black or white subjects.

High Contrast

A wide range of density in an image.

Highlights

The brightest areas of a subject and the corresponding areas in an image.

Highlights Preview Mode

A preview mode in many digital camera systems that displays the highlights of an image by blinking on and off in areas that are totally white. Previewing in this mode allows the user to determine if any 'clipping' of highlights, or gross overexposure, has occurred.

Histogram

A bar graph that is used to identify the contrast and dynamic range of an image. This graph is available during in camera review and during post capture software editing/review.

History

As digital images are 'processed' to improve the overall image, or an isolated portion thereof, a record of the processing steps, levels, and techniques should be maintained for later court purposes. Adobe Photoshop® CS, and certain other image editing software, allows the user to activate a history option that will record the detail of all changes to an image in a separate file.

Hot Shoe

The fitting on a camera that holds a small portable flash. It has an electrical contact that aligns with the contact on the flash unit's "foot" and fires the flash when you press the shutter release. This direct flash-to-camera contact eliminates the need for a PC cord.

Hue

A gradation of color, applicable to the entire range of colors in the spectrum. When digital images are captured with an inaccurate white balance setting they will often have an obvious hue, or color cast, that is inconsistent with the actual colors at the scene.

Hyperfocal Distance

Distance of the nearest object in a scene that is acceptably sharp when the lens is focused on infinity.

Image Stabilization

A feature built into a camera lens or camera body that reduces the effects of 'camera shake'. Most SLR camera systems integrate image stabilization into the lenses rather than the camera bodies. This technology works very well, and can allow a trained photographer to record sharp detail at up to four full shutter speed stops slower than was otherwise possible while hand holding a camera. An essential tool for low light hand held photography, e.g. surveillance photography etc. Also commonly referred to as **Vibration Reduction (VR).**

Incident Light Meter

A portable light meter that reads light levels falling on a subject, rather than reflecting from a subject. This is the other type of meter that can be used to achieve a correct exposure and are potentially more accurate than a reflective light meter, which are the meters standard in SLR camera systems. Commonly used by professional and portrait photographers.

Interpolation

The process whereby an image-editing program adds supplemental pixels that are created from the image's existing, neighboring pixels – in effect creating a file with more image data and thus potentially producing better image output.

Inverse Square Law

The law related to light that states that light diminishes by the inverse square of the distance traveled. As the distance light travels doubles, its intensity is quartered. This is a law that is frequently considered when conducting manual flash photography.

ISO Speed

The speed (sensitivity) of the imaging sensor, or film, as determined by the standards of the International Standards Organization.

JPEG (Joint Photographic Experts Group)

A standard for image compression. An image format that is considered 'lossy', as it permanently discards redundant information, colors and contrast details, from the file. This compression algorithm takes 8 x 8 areas of pixels and compresses the information to its lowest common value. As a general rule, more compression = lower quality images with limited enlargement and analysis potential. JPEG Fine Large setting is considered an acceptable minimum setting for law enforcement digital imaging.

K-N

LCD (Liquid Crystal Display)

The screen on cameras that displays the captured image for review, as well as the menu and any other internal camera information.

Lens

One or more pieces of optical glass or similar material designed to collect and focus rays of light to form a sharp image on the imaging sensor, film, paper, or projection screen.

- **Close-up Lens:** Designed to produce magnifications allowing small items such as fingerprints, shell casings, and blood spatter to 'fill the frame'.
- **Normal Lens:** A 50mm lens for a 35mm negative/sensor based SLR camera system. Normally, a focal length equivalent to the diagonal of the film or sensor. With many digital SLR cameras, a 'normal' lens is approximately 33 mm (due to crop factor). Provides a close approximate to 'what we see' in terms of field of view.
- **Telephoto Lens:** A lens longer than 50mm (33mm in DX digital).
- **Wide-Angle Lens:** A lens shorter than 50mm (33mm in DX digital).
- **Zoom Lens:** A lens that can be set to a range of focal lengths, or 'zoomed'.
    - **Fixed Focal Length Lens:** A lens that has only one focal length, generally faster in terms of their light gathering ability.
    - **Catadioptric Lens:** A lens design that uses a mirror to capture and project light. Generally shorter in construction, and slower in terms of light gathering ability than a refractive glass lens.
    - **Refractive Glass Lens:** Typical glass lens construction, the most common type.

Lens Shade

A collar or hood at the front of a lens that keeps unwanted light from striking the lens and causing image flare. May be attached or detachable, and should be sized to the particular lens to avoid vignetting.

Lens Speed

The largest lens opening (smallest f-number) at which a lens can be set. A fast lens transmits more light and has a larger opening than a slow lens.

Light meter

(See Exposure meter/Incident Light Meter)

Lossless Compression

A method for reducing the size of a photographic file so that when it is uncompressed, the resulting image matches the quality of the original source. TIFF is a lossless compression format.

Lossy Compression

A reduction in image file size by disposing of redundant data (colors/contrasts), resulting in a degradation of image quality. See JPEG for additional information.

Macro Lens

A lens that provides continuous focusing from infinity to extreme close-ups, often to a reproduction ratio of 1:2 (half life-size) or 1:1 (life-size). See **lens** for additional information.

Matrix-Metering

An advanced camera light metering system using a multi-segment sensor and computer to establish a proper 'average' exposure for an entire scene. Produces good results in most applications.

Megapixel

One million pixels (picture elements).

Metadata

Embedded information in a digital image (file) that contains file number, date, time, camera make, model, focal length, exposure settings, and other important data.

Mini-lab

Photofinishing operation that operates on a retail level, serving consumers directly and processing film on-site.

Mirror Lock-up

A feature in many digital SLR camera systems that allows the user to physically lock the camera's internal mirror in the up position, as if taking an image. This allows access to the camera's imaging sensor for inspection and cleaning. This feature can also be used when making a timed exposure, to reduce the internal camera movement (vibration) that may cause a slight blur during a long exposure when the mirror slaps to the open and closed position.

Monopod

A portable single leg camera support used to control camera shake and vibration during longer exposures. Commonly used with long focal length lenses typical in sports photography and surveillance photography.

NEF (Nikon Electronic Format)

Nikon's proprietary RAW format.

Noise

Visible artifacts in a digital image, common with long exposures and high ISO photography. See digital noise for additional information.

Normal Lens

A lens that makes the image in a photograph appear in perspective similar to that of the original scene. A normal lens has a shorter focal length and a wider field of view than a telephoto lens, and a longer focal length and narrower field of view than a wide-angle lens. See **lens** for additional information.

O-P

Oblique Light

Ambient, dedicated, or flash illumination that comes in from the side. Low angle oblique lighting techniques are helpful in bringing out three dimensional details in textured surfaces, e.g. shoe impressions, indented writings, etc.

Overexposure

When an exposure receives too much light, causing loss of details in the highlights, or 'clipping'. Occurs when the exposure time is greater than suggested by the camera's reflective light meter, or an incident light meter.

Painting With Light

A photography technique used to illuminate a large low light scene. This technique is common in motor vehicle accident investigation photography and in large outdoor crime scenes, where a single flash would not provide adequate illumination. The shutter is set to the BULB setting, and the illumination comes from multiple manual bursts of light from an electronic flash unit, or painted in with a dedicated light source like a rechargeable flash light or spot light.

Panning

Moving the camera so that the image of a moving object remains in focus and in the same relative position in the viewfinder. A technique used during surveillance photography, or during creative photography to render the appearance of motion in an image.

Panorama

A broad view, usually scenic. Can be achieved by stitching multiple exposures together in an image editing software application, e.g. Adobe Photoshop®. Can also be a technique used to document a very wide crime scene, like multiple robberies or burglaries in multiple businesses of a strip mall.

Parallax

With a lens-shutter camera, parallax is the difference between what the

viewfinder sees and what the camera records, especially at close distances. This is caused by the separation between the viewfinder and the picture-taking lens. There is no parallax with single-lens-reflex cameras because when you look through the viewfinder, you are viewing the subject through the picture-taking lens.

Photogrammetry

The method by which accurate measurements may be extrapolated from photographs. This generally involves the inclusion of a known size perspective grid into an image.

Pincushion Distortion

The lens distortion that shows linear elements at the periphery of an image that appear to be bending in to the center of the image. This distortion is most common with certain larger focal length telephoto lenses.

Pixel

An abbreviation, or conjunction, of the words Picture Element. It represents the smallest visible element in a digital image.

PPI (Pixels Per Inch)

A commonly used unit of measurement that indicates the number of pixels contained in a square inch of space. The more pixels per square inch, the grater the sharpness and resolution.

Pixelization

When a digital image is enlarged beyond its resolution settings, the individual square pixels that make up the image become visible. The image looks ‘boxy’ and lacks smooth gradation or transition between subjects, colors and contrasts.

Point & Shoot

A slang term commonly used to identify compact consumer based portable automatic camera systems. These are basic camera systems that generally lack the level of programmability and control of a DSLR camera system. This is the term that is generally used to differentiate between an SLR camera system and a fixed lens automatic camera system.

Polarizing Filter

A filter that transmits light traveling in one plane while absorbing light traveling in other planes. When placed on a camera lens or on light sources, it can eliminate undesirable reflections from a subject such as water, glass, or other objects with shiny surfaces. This filter also darkens blue sky. Polarizing filters are helpful during surveillance and crime scene photography, when the subject or evidence is inside the cab of a vehicle and a glare on the windshield prevents proper photography.

Positive

The opposite of a negative, an image with the same tonal relationships as those in the original scenes-for example, a finished print or a slide.

Prime Lens

Another name for a lens having a fixed focal length.

Print

A positive picture, usually on photo paper.

Processing

A term commonly used to identify post-capture digital image enhancement. “The image has been processed.”

Program Exposure

An exposure mode on an automatic or autofocus camera that automatically sets both the aperture and the shutter speed for proper exposure.

Q-S

Rangefinder

A device included on many cameras as an aid in auto or manual focusing.

Reflector

Any device used to reflect light onto a subject.

Reciprocity Failure

Most films are designed to be exposed within a certain range of exposure times-usually between 1/15 second to 1/1000 second. When exposure times fall outside of this range-becoming either significantly longer or shorter-a film's (or sensors) characteristics may change. Loss of effective film speed, contrast changes, and (with color films) color shifts are the three common results. These changes are called reciprocity failure.

Reciprocity Law

Many different combinations of shutter speed, aperture, and ISO can be used to acquire the same exposure. Increasing one exposure variable while incrementally decreasing another will generally result in an equivalent (same) exposure.

Red Eye

When an electronic flash photograph is taken and the flash unit is close to the axis of the camera lens, light enters the eyes of humans and animals and bounces off of the blood vessels in the eye, resulting in a subject with red eyes.

Methods to correct this include a series of pre-flashes that fire before the actual exposure that cause the pupils of the eye to constrict, reducing the effect. Another method is to position the flash unit so that it is away from the axis of the lens. A final method is to use a bounce flash technique.

Reflective Light Meter

The light meter that is built into most point and shoot and SLR camera systems.

Refraction

As light moves from one medium to another, it bends.

Re-sampling

Changing the resolution of an image either by removing pixels (lowering resolution or compressing the image), or adding them by interpolation (potentially increasing the printable size of an image.

Resolution

The capability of a photographic reproduction to distinctly record two separate but adjacent elements of an image. The degree of sharpness of a computer-generated image as measured by the number of dots per linear inch in a hard-copy printout or the number of pixels across and down, or per inch, in a digital image.

Retouching

Altering an image after capture by use of photo editing software. Can also be accomplished with conventional silver based photography.

RGB (Red, Green, Blue)

The primary colors.

Ring Flash

A flash unit that attaches to and encircles a lens to emit light onto all sides of a small object. A soft even light used during close-up photography that produces virtually no shadows.

S

Saturation

An attribute of perceived color, or the percentage of hue in a color. Saturated colors are called vivid, strong, or deep. Desaturated colors are called dull, weak, or washed out.

Selective Focus

Choosing a lens opening that produces a shallow depth of field. Usually this is

used to isolate a subject by causing most other elements in the scene to be blurred.

Shutter

Blades, a curtain, plate, or some other movable cover in a camera that controls the time during which light reaches the film.

Shutter Priority

An exposure mode on an automatic or autofocus camera that lets you select the desired shutter speed; the camera sets the aperture for proper exposure. If you change the shutter speed, or the light level changes, the camera adjusts the aperture automatically.

Shutter Speed

The time the shutter is allowed to remain open to expose the image. This duration is generally expressed in fractions of a second, e.g. 1/60. Shutter speed can also be expressed as whole seconds, e.g. 30” (30 second exposure), or in exposures that extend beyond 30”, a BULB setting.

Sidelighting

Light striking the subject from the side relative to the position of the camera; produces shadows and highlights to create modeling on the subject. Also known as oblique lighting, and commonly used during three dimensional subjects, or textured surfaces, to bring out detail.

Single-Lens-Reflex (SLR) Camera

A camera that allows you view the scene through the same lens that takes the picture, and captures accurately what is viewed through the viewfinder. This system incorporates a system of mirrors and prisms to allow the photographer to view the scene through the optical viewfinder. Generally, a camera system that allows the user to interchange lenses based on photographic application.

Slide

A photographic transparency (positive) mounted for projection.

Slow ISOs (Film)

ISOs of 100 or below. Although less sensitive to light, requiring longer exposure times or wider apertures, these low ISOs are capable of producing better quality digital images.

Soft Lighting

Lighting that is low or moderate in contrast, such as on an overcast day.

Spot Metering

A metering mode that only registers the light coming from a very small circle in the center of the focus point. The size of this circle is programmable in many

new digital SLR camera systems. This is the preferred metering mode for very critical exposures, surveillances, and during close-up forensic photography.

Stopping Down

Changing the lens aperture to a smaller opening; for example, from f/8 to f/11.

Synchronization Speed

When conducting flash photography the photographer should first set the appropriate shutter speed to synchronize with the flash unit. The shutter speed, or range of shutter speeds, that will operate in conjunction with the use of an electronic flash unit. These speeds used to be limited to maximum shutter speeds of about 1/250. New technology allows extremely fast flash synchronization speeds in some advanced digital SLR camera systems.

Front Curtain Sync: Dedicated flash units allow the flash to fire immediately after the front curtain has completely opened. This is the default for most flash units.

Rear Curtain Sync: Some camera systems, and flash units, can allow the flash to fire just before the rear curtain begins to close. A creative photography option that allows for streaking of moving objects and lights.

T

Telephoto Lens

A lens that makes a subject appear larger on film than does a normal lens at the same camera-to-subject distance. A telephoto lens has a longer focal length and narrower field of view than a normal lens.

Teleconverter

A supplemental lens that integrates between the selected lens and the camera body to increase to focal length of the selected lens. Teleconverters come in a variety of sizes, that will either magnify the focal length by 1.4x or 2.0x. A 2.0x teleconverter is commonly called a ‘doubler’.

Through-The-Lens Metering

Meter built into the camera determines exposure for the scene by reading light that passes through the lens during photography.

TIFF (Tagged Image File Format)

A lossless or uncompressed image file format. Produces very large file sizes, however preserves image resolution.

Time Exposure

A comparatively long exposure made in seconds or minutes. In most cases with

timed exposures the camera is set to the BULB setting, and the shutter speed is controlled manually by the photographer with a remote control.

Tone

The degree of lightness or darkness in any given area of a print; also referred to as value. Cold tones (bluish) and warm tones (reddish) refer to the color of the image in both black-and-white and color photographs.

Transparency

A positive photographic image on film viewed or projected by transmitted light (light shining through film).

Tripod

A three-legged supporting stand used to hold the camera steady. Necessary when using slow shutter speeds and/or large telephoto lenses.

Tungsten Light

Light from regular room lamps and ceiling fixtures, not fluorescent.

U-Z

Underexposure

A condition in which too little light reaches the film, producing a darker than acceptable image.

Unsharp Mask

A tool available in most digital image editing programs, and internally in some camera systems, that will sharpen detail in an image.

USB (Unversal Serial Bus)

A data transfer standard.

Viewfinder

The optical opening in a camera system that allows the user to compose, preview, and focus the subject.

Vignetting

A fall-off in brightness at the edges of an image, slide, or print. Can be caused by poor lens design, using a lens hood not matched to the lens, or attaching too many filters to the front of the lens.

White Balance

Digital cameras come equipped with a control that allows the user to calibrate the camera to virtually any lighting environment. Setting the correct white balance

ensures accurate color reproduction, and eliminates inaccurate color casts.

Wide-Angle Lens

A lens that has a shorter focal length and a wider field of view (includes more subject area) than a normal lens.

Zoom Lens

A lens in which you adjust the focal length over a wide range. In effect, this gives you lenses of many focal lengths.

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CHAPTER TWO:
Principles of Photography

CHAPTER DESCRIPTION:

This chapter is designed to identify the fundamental principles of controlling the photographic exposure.

GOAL

Given a photographic assignment, the student will identify the four components of a photographic exposure and apply these in a manner that produces properly exposed images of simulated evidence, subjects and scenes.

PERFORMANCE OBJECTIVES:

1. List the primary photographic formats
2. Identify camera aperture and its influence on the photographic exposure
3. Identify the camera shutter and its influence on the photographic exposure
4. Identify ISO/film speed and its influence on the photographic exposure
5. Identify various types of light, color temperatures, and their influence on the photographic exposure

Introduction

There is probably no better method to illustrate a crime scene or individual pieces of evidence than a well composed, properly exposed, clear, and accurate photograph. The age-old adage of “a picture is worth a thousand words” rings true for thousands of people documenting evidence.

Photography as we knew it has undergone a dramatic evolution during the last decade. With the rapid technological advances, digital photography is not only an emerging and acceptable method of documentation for crime scene professionals; it is fast becoming the preferred method for the vast majority of departments.

Photographic formats

Throughout the evolution of photography various photographic formats have been developed. These formats were typically developed to meet the emerging needs of the professional, amateur, and consumer photographers. Each format has its own niche in

the industry, as well as its own specific applications and level of requisite photographic knowledge necessary operate and or master.

Crime scene photographers should have a basic understanding of the various photographic formats available in the industry, their applications, attributes, advantages and disadvantages.

SMALL FILM FORMAT – Until recent years, the most widely utilized and dominant photographic format since its inception in the early 1900's. Small format, also known as 35mm, is referred to as "small format" due to its relatively small film negative size of 7/8" tall by 1 7/16" wide. Albeit a small negative, the 35mm format is still considered the reference standard when comparing the latest and greatest digital camera systems available today. Resolution is commonly measured by the quality of fine detail contained, or retained, within a particular image when it is enlarged.

The maximum print size of the format being used is a genuine concern because of the need for enlargements of evidence for laboratory analysis and photographic court exhibits. As a rule of thumb, a 35mm film negative is capable of producing enlarged prints, of acceptable discerning quality, of sizes up to 11x14. Larger prints can be, and commonly are, produced from small format negatives, but as the size of the print goes up the quality of fine detail goes down.

Advantages - Small format films and film processing are readily available, produce high quality prints, and offer considerable latitude for enlargement.

Disadvantages - with the wide spread proliferation of digital cameras, certain types of small format films are becoming increasingly difficult to acquire, and many have been discontinued altogether.

MEDIUM FILM FORMAT cameras incorporate a film negative significantly larger than that of a 35mm small format camera, however significantly smaller than that of a large format camera, hence the name "medium format". Much akin to the 35mm camera system, the medium format is typically a handheld, portable camera system that operates functionally similar to the small format system.

The primary functional differences are the size of the film negative, 120 or 220mm, and the way into which film is loaded into the camera, roll film vs. canister film. It is the quality that distinguishes the medium format from the small format camera systems. Printed photographs begin with a film negative. Larger negatives have the potential for larger prints and greater retention of fine detail during printing or enlargement.

Advantages - Medium format cameras offer greater latitude for enlargement. The larger film negative results in a higher quality printed photograph at larger sizes, while maintaining a high degree of resolution.

Disadvantages - Medium format film is not as "readily" available, and is becoming

increasingly more difficult to find.

Medium format camera equipment (camera bodies and lenses) are more expensive and generally require more technical skill to operate than small format cameras.

LARGE FORMAT cameras are in a category all their own, and for good reason. As mentioned earlier, large format cameras have a significantly larger film negative than do small and medium format camera systems. This larger film negative, 4" x 8" or 8" x 10" sheet film, translates to the highest quality images with the greatest latitude for enlargement of any of the photographic formats. Large format print enlargements are possible at sizes greater than 30" x 40". This enlargement potential is often times necessary during forensic laboratory analysis of microscopic detail present in various types of evidence collected in the field.

Advantages - Large format cameras offer the highest quality (resolution) prints of any photographic format available. This is especially useful during photography of evidence intended for forensic analysis and comparison.

Large format film offers the highest degree of latitude for enlargements, which may be especially useful for large courtroom exhibits.

Disadvantages - Large format camera systems are very expensive to outfit, and are very slow in terms of film advance due to the manual loading of sheet film for each frame.

Large format camera systems require a great deal more requisite photographic knowledge than do the other formats and are typically impractical for field use due to their size and method in which they function.

Their impracticality, technical learning curve, and cost are probably why the majority of these types of cameras are found in a laboratory or fixed studio applications.

INSTANT PRINT cameras are "almost" just that, instant. With virtually a mini film processing lab built into every sheet of film, the "Polaroid" company in conjunction with Edward Land introduced the Polaroid Land Camera Model 95 to the public in 1948. Many models have been released since then, and many formats. From 3 ¼" x 4 ¼" to 20" x 24", the Polaroid company developed various size instant films for various applications. The magic of instant cameras is in the film pack.

The instant film pack contains all of the necessary chemicals for developing the exposed film, which automatically begins seconds after a photograph has been taken.

Advantages - The primary advantage to instant cameras is the immediacy in which the user can confirm that a successful image has been obtained. This feature is one of the primary reasons that instant cameras became so popular with the law enforcement community, and believe it or not are still being used by

some agencies during general crime scene and evidence photography.

Disadvantages - The quality of images produced with an automatic exposure instant print camera are often times not acceptable. Although high resolution instant print images are possible with special application large format instant cameras, this is not the type available to the officers and investigators in the field. Another drawback to these types of cameras is that they are limited in respect to manual control over exposure. Additionally, it has become increasingly difficult to find film since 2009, when the Polaroid Company ceased manufacture and went out of business.

DIGITAL - Since its debut in the early 1990's, digital photography has globally evolved to become the dominant photographic format in the consumer market. From kindergarten children to professional portrait photographers and photo journalists, digital photography is currently emerging as the most widely accepted and preferred of the photographic formats.

As the quality of digital photography increases the price decreases, at astonishingly exponential rates. Conventional film cameras focus reflected light on gelatin film with silver halide crystals imbedded in an emulsion. A digital camera has a sensor, or digital semiconductor, that converts focused reflected light into electrical charges, or electrons. This semiconductor, commonly either a CCD (charged coupled device), or CMOS (complementary metal oxide semiconductor), then records this reflected light electronically.

Advantages - Digital photography has a multitude of advantages for the civilian and law enforcement photographer:

The ability to instantaneously acquire and confirm an evidentiary photograph is probably the most valuable attribute associated with digital imaging.

Being able to record several hundred images on a stable and removable media card is also an advantage.

The cost factor associated with digital photography is another advantage that cannot be overlooked, especially in the law enforcement arena.

Digital images can be stored on a stable media indefinitely. Not until a case comes up for a court proceeding does one need to print. And, only selected images need be printed, reducing waste associated with printing entire rolls of film.

Disadvantages - Many digital camera systems are completely electronic devices that cannot function without battery power. Some have a combination of electronic and mechanical functions, but all require battery power to operate. This is a disadvantage when compared to many manually operated 35mm film cameras, which can function without the aid of a battery.

Resolution is another debatable disadvantage for many digital camera systems. Until recently, small format film quality exceeded that of any digital camera on the

market (some research in this area suggests that it would take a digital camera with a sensor resolution of approximately 22 megapixels to match the quality of a small format film negative). However, there are currently several affordable camera models on the market that meet or exceed this resolution.

Image integrity and the ability to quickly and easily edit, manipulate, enhance, or otherwise modify a digital image is another issue that tends to raise the brow of many legal professionals. Although image integrity is a potential issue, a specific set of recommendations are in place that help to ensure image integrity and limit the potential for debate or evidentiary exclusion (SWGIT Guidelines).

Camera aperture and its influence on photographic exposure

APERTURE is defined as the physical opening, or hole, in an optical instrument that allows a specific volume of light to pass through. In SLR, this means photography that relates directly to the camera's lens. Aperture is also referred to as a diaphragm, which is formed by a series of six or more overlapping metal blades within the lens that can be adjusted to create a smaller or larger opening.

The actual size of the lens opening is identified with an *f* stop value, i.e. *f* 1.4, *f* 2.8, *f* 4, *f* 5.6, *f* 8, *f* 16, *f* 22:

- ✓ The larger the lens opening, a smaller *f* stop number, the more light allowed to pass through.
- ✓ The smaller the opening, a larger *f* stop number, the less light allowed to pass through.

Each "full stop" incremental change in aperture either allows twice the amount of light in, a doubling effect, or half the amount of light in, a halving effect from the previous setting.

Aperture, *f* stop, and diaphragm are all terms used interchangeably in photography, however relate to the photographer's ability to control light and exposure by manipulating or adjusting the volume of light allowed to pass through a lens. While aperture controls the volume of light reaching the camera's digital sensor, or film in the case of a film camera, it also controls depth of field.

DEPTH OF FIELD is defined as the area of acceptable sharpness in front of and behind the subject of focus in an image. Although there is only one "true" point of focus in any image, varying levels of focus can be controlled by the photographer through the manipulation of three variables:

1. Depth of field is primarily influenced by the opening in the diaphragm of the lens, or aperture. Smaller *f* stop numbers (*f* 1.4, *f* 2.8, *f* 4), larger apertures, result in

shallow, or limited, depths of field. Larger *f* stop numbers (*f* 11, *f* 16, *f* 22), smaller apertures, result in increased depths of field. In practical terms, larger lens openings result in less apparent focus extending outward in both directions from the focused subject, whereas smaller lens openings result in greater apparent focus extending outward (from foreground to background) from the focused subject.

2. Another variable that influences depth of field in an image is the focal length of the lens. Shorter focal length (wide angle) lenses i.e. 24mm, 50mm, tend to produce images with greater depths of field. Fixed and telephoto lenses with large focal lengths i.e. 300mm, 500mm, 800mm, exhibit shallower depths of field.
3. Lens to subject distance is another variable that influences depth of field. The closer the lens is to the focused subject, the shallower the depth of field. This is why that during close-up (macro or micro) evidentiary photography depths of field are so critical when photographing evidence on concave or convex surfaces. Smaller apertures are preferred (i.e. *f* 16-*f* 22) during close-up photography of evidence in order to maintain acceptable focus in the desired areas of the image.

Aperture is also a method to control an exposure. The term exposure can have a variety of meanings, but in this context it is the amount of light striking the film or digital sensor. Larger apertures allow more reflected light to come through the lens; smaller apertures allow less light through.

Aperture allows for users to regulate the volume of light streaming through the lens in a given lighting environment. In low light environments, larger apertures are much more effective at gathering what little light there is so that an image can be obtained. Conversely, photography in a bright sunny white beach environment forces the photographer to "stop down" the lens so that their images are not over exposed.

Lens aperture is also a method of determining how "fast" a given lens is. When the term "fast" is used in conjunction with lens aperture, it implies a lens with a very wide open available aperture, a low *f* stop number, i.e. *f* 1.4, *f* 1.8, or *f* 2.8. Lenses with larger apertures, known as efficient lenses, allow for photography at faster shutter speeds in lower light environments.

UNDERSTANDING THE 'F' IN "F-STOP" - The term *f/stop* is a fraction that identifies the actual measured size of the opening, or diameter, of the lens diaphragm of a particular focal length lens. The following example illustrates the fraction: 50mm lens @ *f 1.*4=50/1.4=35.7mm opening, compared to 50mm lens @ *f* 22=50/22=2.27mm (very small when compared to the diameter @ *f* 1.4). This begins to make sense of the often times confusing inverse relationship between *f* stop numbers and volume of light.

Camera shutter speed and its influence on photographic exposure

If the aperture of a lens controls the volume of reflected light reaching the film or digital sensor, then the camera shutter controls the duration of the volume of light that is set by the aperture.

Single Lens Reflex camera systems are equipped with what is referred to as a focal plane shutter. The focal plane shutter is located in the back of the camera body, just in front of the film. It is called a "focal plane" shutter because it is situated at the location in the camera body where the light allowed to travel through the lens is brought into focus. When the shutter release is depressed, whether it is a mechanical or electronic camera, the focal plane shutter opens and allows light through to strike the film or digital sensor for a pre-determined amount of time. This pre-determined amount of time, *shutter speed*, is the length of time the shutter remains open to create the image.

- ✓ Shutter speeds are measured in fractions of a second, whole seconds, or in some instances minutes.
- ✓ Shutter speeds influence the photographic exposure by either controlling exposure or controlling motion.

Aperture controls the volume of light reaching the film or sensor.

Camera shutter controls the duration of that volume of light that is set by the aperture.

The function of the shutter mechanism is to admit the light that passed through the aperture into the camera and onto film or digital sensor for a specific amount of time. Longer (slower) shutter speeds in any lighted environment will allow more light to influence, or expose, the film. Longer shutter speeds are especially helpful in low light situations when an auxiliary flash unit is not being used. Conversely, faster shutter speeds allow less light through, and are helpful in bright sunny daylight conditions.

The camera shutter is also the mechanism used for synchronization with an auxiliary flash unit. A certain range of shutter speeds must be used during flash photography; these are referred to as flash synchronization speeds. The shutter speeds conducive for flash photography typically range from 1/60-1/500th of a second. These identify the exact moment when the shutter curtain is completely opened and the flash fires to properly illuminate the subject or scene.

Another aspect of the photographic exposure that is influenced by the camera shutter is its ability to control motion. How fast the shutter has to open and close to control motion depends entirely upon the speed in which the subject is moving.

- ✓ Faster moving subjects, i.e. a racecar or fast moving motorcycle, require faster shutter speeds.
- ✓ Slower moving subjects, i.e. running, walking, or stationary human beings, require slower shutter speeds.

One other factor that must be considered when selecting the "correct" motion stopping shutter speed is the direction in which the moving subject is traveling:

- ✓ Perpendicular and angular motion requires faster shutter speeds.
- ✓ Travel in the direction towards or from the photographer may be controlled

with slower speeds.

NOTE: The latitude to photograph at faster shutter speeds is dependent upon the amount of available or auxiliary light, size of lens aperture, and film speed (ISO). Dimly lit environments will require longer exposure times (shutter speeds) to make a photograph. Longer exposure times will not control (stop) motion, i.e. 1/30th, 1/15th, 1/8th…, and will require a tripod.

Generally speaking, the only time moving subjects will be a concern for FSD crime scene photography is when aerial photography of a scene is requested.

When photographing from a moving platform, i.e. vehicle, boat or aircraft, shutter speeds of 1/500th sec. or faster should be used in order to control your motion, as well as the motion of your subject.

Camera shake, or the uncomplimentary blur that is often times recorded in an image during handheld photography, can also be controlled through use of faster shutter speeds. As a general rule, shutter speeds greater (faster) than 1/60th are recommended for handheld photography. For those shots that the ambient lighting conditions force the shutter slower than 1/60th, a tripod should probably be used to retain crisp non-moving subject detail.

Creative photographers often times incorporate various photographic techniques along with **slower shutter speeds** to intentionally "suggest" motion within a photograph. Slower shutter speeds are useful for law enforcement personnel during lower light photography of stationary scenes and subjects, or when photographing objects using depth of field enhancing apertures that restrict the volume of light. This type of photography **requires the use of a tripod to ensure crisp detail** where it counts.

ISO/film speed and its influence on photographic exposure

Another aspect that controls photographic exposure is the sensitivity to light of the media in which the captured image is recorded. This sensitivity to light is referred to as film speed, or **ISO** (International Organization for Standardization), and is also identified as the **exposure index**.

In film photography, various sized silver halide crystals are embedded in the emulsion of the gelatin film. These crystals are responsible for the chemical reaction in the film that creates the image when the film is exposed to reflected light.

- ✓ Larger, loosely compacted silver halide crystals respond faster to light, and can create a properly exposed image with less time.
- ✓ Smaller, tightly packed silver crystals respond slower to light, and take more time

to create a properly exposed image.

The concept and standardization of film speed has been universally applied to digital photography as well. The advantage with film speed and digital photography is that it can be changed from shot to shot, depending on the photographer's objective and available lighting conditions.

Film speeds range from about 6 on the slowest end of the exposure index, up to 12,800 on the fastest end of the index. Slower speed films exhibit less granular structure, or "film grain", when printed in comparison to fast films which tend to exhibit an obvious granular structure when printed.

- ✓ Film speeds up to about ISO 100 are considered "slow" films.
- ✓ Film speeds beginning at around ISO 400 are considered "fast" films.

There are certain advantages and disadvantages associated with using very slow or very fast films. Very slow films will produce exceptional prints with very little or no visible "film grain", however must be used in well lighted environments, with slower shutter speeds, or with an auxiliary flash unit. Very fast films produce obvious film grain that can degrade the quality of the print, however can be used in lower lighting environments with faster shutter speeds. "Average" speed films that will produce good quality prints with an acceptable level of grain in a variety of lighting environments are around ISO 400.

Various types of light and color temperatures and their influence on photographic exposure

LIGHT is one of three essential ingredients that must be present in order to make a photograph. Without light, photography would be impossible to make. Light comes in various forms, from a variety of sources, and varies significantly in its quality and characteristics. A better understanding of the influence of light on your photographs, and how to better control or manage it is a very important component of the photographic process that the photographer needs to understand.

1. The most common light source the photographer encounters is **natural sunlight**. Our sun emits a host of energies which form the Electromagnetic Spectrum. Within this spectrum is a small range of specific energies that humans are able to see, this small range of energy is referred to as visible light. The range of "visible" energy that we can see is measured in nanometers (nu), and includes the primary colors of

red, green, and blue (400-700 nu).

2. On the lower end of the electromagnetic spectrum is **ultraviolet (UV) energy**, the energy that cooks your skin when exposed too long without "UV protection". Although we cannot see UV energy with the unaided eye, we certainly know it is there after a long day in the sun.
3. On the higher end of the spectrum is **infrared (IR) energy**. IR isn't visible without the aid of special equipment, but we know it is there because we use it as part of our everyday activities and it is often helpful in certain special photographic assignments.

All other forms of light that illuminate our world, or that are used in photography, are generated from **manmade** sources. These sources include house lamps, street lamps, car lamps, flash lights, flood lamps, candles, and electronic or bulb originated photographic flash units. Many of these are used specifically in photography, and are developed in such a fashion that they mimic the characteristics of natural sunlight.

The qualities of the various forms of light exhibit certain **color temperatures**. Color temperature is a characteristic of visible light that has important applications in photography and video. Color temperatures significantly influence the photograph and are measured on a scale known as the **Kelvin Temperature Scale**. Common photographic lighting sources include, but are not limited to, daylight (at various stages), incandescent, fluorescent, flash, and studio lamps or photo floods. All of the aforementioned lighting sources exhibit differing color temperatures, and must be properly addressed in order to reproduce accurate color in a photograph.

In film photography color temperature issues are corrected with specific film types that are "color balanced" to a particular light source, i.e., daylight balanced films, vs. tungsten balanced films etc. When the type of film and color temperature doesn't match, the images will contain a color cast that ranges from yellow/orange to blue/gray, depending on the environment.

In digital photography color balance can be adjusted from shot to shot by adjusting the camera's white balance setting. Today's digital cameras are very versatile and contain a wide assortment of color balances to choose from. The following chart illustrates some examples of common lighting sources and their associated color temperatures in degrees Kelvin.

Color Temperature	Light Source – Environment
1700 K	Match Flame
1850 K	Candle
2800- 3300 K	Incandescent Light Bulbs
2900-3500 K	Fluorescent Light Bulbs
3350 K	Studio "CP" Light
3400 K	Studio Lamps, Photofloods, etc.

3500-8000 K	Auto White Balance (Digital Cameras)
4100 K	Moonlight, Xenon Lamp
5000 K	Horizon Daylight (morning)
5500-6000 K	Average Daylight - Electronic Flash, Clear Mercury-Vapor
6500 K	Cloudy Sky or Noon Daylight
8000 K	Shade
10,000+	Skylight-without direct sun

Methods used to correct color balance include colored lens filters, gel flash filters, and filters that can be placed over lights.

Electronic flash units are typically calibrated at about 5000 K, which is about the same as average daylight. This allows for accurate color reproduction during flash photography using daylight calibrated films.

Most of today's digital cameras are equipped with an "Auto" white balance (AWB) setting. This setting will not work properly in incandescent environments because it is outside of the range of color temperatures.

Chapter Review

The primary photographic formats: Small (35mm film), Medium (120-220 medium format roll film), Large (4x5 or 8x10 sheet film), Instant, and Digital. Large format film cameras are capable of producing the highest quality prints of any of the current formats, although digital sensors have made rapid advancements in recent years.

Camera aperture is the physical opening in the camera lens that allows a certain amount of light to pass through the lens and onto the film or digital sensor. Aperture is also known as diaphragm, and consists of six overlapping metal blades that can be adjusted to various sizes, known as ***f stops***. Each "full stop" adjustment in aperture allows either twice as much or half as much light to pass through the lens. Aperture also controls depth of field, or the area of acceptable sharpness in a photograph.

Camera shutter is the mechanism that opens and closes to allow a specified amount of light to reach the film or digital sensor. The shutter in SLR camera systems is known as a focal plane shutter. Shutter speeds are also referred to as "stops", and each full "stop" incremental change will either allow twice as much or half as much light expose the film or digital sensor. Shutter speed also controls motion. Fast shutter speeds stop action and slow shutter speeds suggest motion in an image.

ISO (International Organization for Standardization) is a global standard established for the sensitivity of film, or image sensors in the case of digital photography, to light. *Film sensitivity is also known as "film speed*". Slower films, or ISO's, offer exceptional quality images however take longer periods of time to properly expose. Faster films will expose faster in a given lighting environment however will exhibit grain, or "noise" which

can compromise image quality or resolution.

Light is a necessary ingredient of the photographic exposure. Without light photography would be impossible to make. Visible light is that small range of light that includes the primary colors of red, green and blue. Visible light ranges from about 400-700nu. ***Below visible spectrum is infrared energy*** and ***above the visible spectrum is ultraviolet energy***. In law enforcement photography accuracy is very important. Accurate colors are reproduced by photographing with films and white balances that match the same color temperatures in the environment that the photography is being conducted. These color temperatures are measured in degrees Kelvin and common environments range from about 2,000 K to over 10,000 K. Photographing with incorrect films or white balances produces prints and images that reflect color casts which range from yellow/orange to blue/gray, depending on the environment.

CHAPTER THREE:
Controlling Depth of Field & Motion Blur

CHAPTER DESCRIPTION:

This chapter is designed to introduce the student to the photographic concepts and methods associated with controlling depth of field and motion blur (camera shake).

GOAL:

Given a photographic objective associated with controlling depth of field or motion blur (camera shake), the student will make a properly exposed photograph of a simulated item of evidence that would be acceptable for analysis or identification.

PERFORMANCE OBJECTIVES:

1. Identify depth of field, and the primary factors that influence acceptable sharpness in a photograph
2. Identify the function of the camera's shutter and the influence that shutter speeds have on controlling motion blur in a photograph

INTRODUCTION

In crime scene or close-up evidence photography, a primary objective is to control depth of field to the extent that all relevant information and detail are rendered in clear crisp focus to aid in later analysis or courtroom exhibits.

Primary Factors That Influence Acceptable Sharpness in a Photograph

Depth of Field (DOF): Refers to the amount of distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph. There are three primary factors that influence the level of depth of field within an image:





Aperature (f-stop): Size of an opening in a camera lens through which light passes to expose the film, or create the image on a digital chip or semi-conductor in the case with a digital camera.

The size of aperture is usually calibrated in *f*-numbers ("f-stop"), or fractions. Larger *f*- numbers relate to smaller apertures and smaller *f*-numbers are associated with larger apertures. The size of the aperture of a lens is controlled by the lens diaphragm, commonly six overlapping metal leaves that can be adjusted to regulate the amount of light allowed through.



STANDARD APERTURES - standard apertures include *f*1.4, *f*2.8, *f*4, *f*5.6, *f*8, *f*11, *f*16, *f*22. Many cameras will allow the user to select ½ or 1/3 stop settings, in addition to standard full stop incremental changes in aperture. Each full stop incremental change in aperture either doubles or halves the amount of light allowed to pass through the lens from the previous setting.



SMALL APERTURES - Smaller apertures which restrict the light streaming through a camera lens produce images with greater depths of field.



LARGE APERTURES - Larger apertures, which allow greater amounts of light to stream through the lens, produce images with shallow or reduced depths of field.

CIRCLE OF CONFUSION - When light reflects off of an object, it is reflecting in all different directions. When a camera lens is pointed toward an object it gathers the reflected light. This reflected and gathered light is brought into focus by adjusting the distance between the lens and the film or sensor plane, usually with the focus ring on a lens. It is at this plane that all of the gathered reflected light converges into a point of focus. **There is only one true point of focus in any image**. The areas within an image in which reflected light is not brought into exact convergence will be rendered visually out of focus, these out of focus areas are known as circles of confusion. The larger the lens opening (aperture), the larger the circles of confusion and the less apparent focus from near to far within an image.

When reflected light from varying distances (lens to subject distances) is restricted to streaming through a smaller lens aperture prior to striking the film or sensor plane, the circles of confusion are smaller and less noticeable under normal viewing conditions. Although the areas may still be slightly out of focus, they are rendered in what appears to be focus to the unaided eye. This is the reason that smaller apertures produce images with greater depths of field.

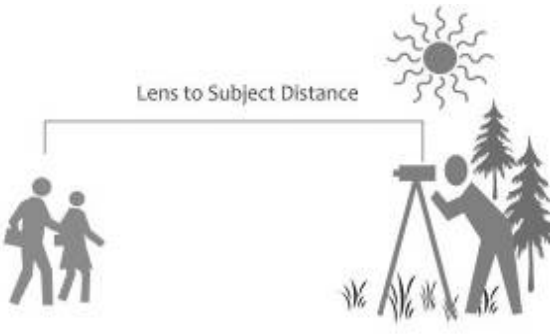
Focal Length of Lens



Another factor influencing the depth of field in an image is the focal length of a lens. Shorter lenses produce greater depths of field than do longer lenses at similar *f*-stops. This may be related to the difference in distances from lens to

subject when using longer lenses, but as a rule of thumb the longer the focal length of the lens, the less apparent depth of field.

Distance from Lens to the Subject



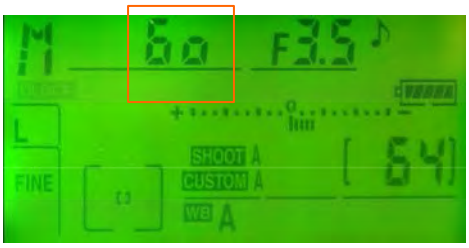
The final factor influencing depth of field in an image is the distance between focal plane (film or sensor plane), and the subject being photographed. As a general rule, the closer the lens is to a subject the less available depth of field. In normal photography, depth of field is typically distributed about one third before (foreground) a subject, and two thirds beyond (background) a subject. In close-up or macro photography, depth of field is extremely critical, being distributed about one fourth in front of and one half beyond the focused subject. This is why smaller apertures are necessary when doing close-up photography of evidence, especially on concave or convex surfaces.

The Function of the Camera's Shutter and the Influence Shutter Speeds Have on Controlling Motion in a Photograph

The aperture designates by size (*f*-stop) the volume of light allowed to stream through the lens and strike the film, or sensor. The shutter, however, is the mechanism that allows the volume of light set by the aperture to pass through the camera body and actually reach the film or sensor for a specific length of time. The shutter is the barrier between the lens and the film that prohibits light to pass until opened by the photographer. The duration that the shutter remains open before closing is known as a shutter speed. Shutter speeds are measured in fractions of a second, whole seconds, or even minutes. Whereas a dominant feature of aperture is controlling the depth of field within an image, shutter speed

controls another important aspect of photography, motion.

SHUTTER SPEEDS- shutter speeds are expressed in fractions of a second, full seconds, and even minutes. Shutter speeds are reflected on a camera dial and in LCD's as full numbers. Full second settings in shutter speed are expressed with a " next to the number, indicating full second exposures. Shutter speeds, like apertures, are also referred to as stops. Many of today's cameras will allow the user to select from 1/2 or 1/3rd stop changes in shutter speeds. The standard full stop changes in shutter speed are: 30", 15", 8", 4", 2", 1", ½, ¼, 1/8th, 1/15th, 1/30th, 1/60th, 1/125th, 1/250th, 1/500th, 1/1000th, 1/2000th, 1/4000th, 1/8000th, 1/16000th.



Each full stop incremental change in shutter speed either doubles or halves the duration and amount of light reaching the film or sensor. The camera shutter can also be controlled manually for an indefinite amount of time in the "Bulb" setting, which is useful for exposures that are longer than 30 seconds.

> **BULB** - the B, or Bulb, setting for the camera's shutter relates back to early photography when the shutter could be controlled by a rubber bulb that when squeezed would force air through a tube to open the shutter until the pressure was released. Today the Bulb setting still exists, however it is typically controlled by an electronic shutter release cable (MC-30), an IR remote control, or maybe a plunger type configuration that threads into the actual shutter release button. This setting will be used during the painting with light segment of this training program.

CONTROLLING MOTION BLUR (CAMERA SHAKE) - Another factor that must be controlled in order to ensure crisp focus within an image is not only the motion of the subject in front of the camera but the movement of the subject behind the camera, the photographer. Camera shake at slower shutter speeds is commonly the predominant culprit responsible for a blurry, out of focus photograph. This is the reason why stability is essential during handheld photography. As a general rule, photography without the aid of a tripod or stabilization device (handheld photography) should not be done at shutter speeds lower than 1/60th of a second. Many camera companies tout their vibration reduction technology that can be integrated into the lens or camera body. This type of technology is not just a sales gimmick; it does work and can allow the photographer to obtain good results when photographing in diminished lighting conditions. Another important aspect that influences camera shake is the focal length of the lens being used. As a

general rule, in an attempt to control camera shake, a photographer should select a shutter speed that is at least equivalent to, or one stop faster than, the focal length of the selected lens during handheld photography, i.e. 400mm lens = 1/400th - 1/800th of a second shutter speed, lighting permitting.

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Chapter Review

Depth of field (DOF) refers to the amount of distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph.

There are three primary factors that influence the level of depth of field within an image: aperture, focal length, and lens-to-subject distance.

Smaller apertures allow less light to pass through a camera lens, however increase the depth of field in a photograph by constricting the circles of confusion. Longer focal length lenses typically produce images with shallower depths of field. The closer a lens is to an object the shallower the depth of field. Depth of field in normal photography is typically characterized by being distributed 1/3rd in front of the subject (the foreground) and 2/3rd beyond (the background). Close-up or macro photography distributes depth of field ¼ in front and ½ beyond the subject, creating a very shallow depth of field situation. *This is why small apertures and a tripod are usually necessary in order to achieve acceptable depths of field for items of evidence photographed on concave or convex surfaces.*

The shutter is the mechanism that allows the volume of light set by the aperture to pass through the camera body and actually reach the film or sensor for a specific length of time. The shutter is the barrier between the lens and the film that prohibits light to pass until opened by the photographer. The duration that the shutter remains open before closing is known as a shutter speed. Shutter speeds are measured in fractions of a second, whole seconds, or even minutes. Shutter speed is the mechanism used to control motion within an image. Handheld photography should generally not be done using shutter speeds lower than 1/60th of a second.

CHAPTER FOUR: Introduction to the Digital SLR Camera System

CHAPTER DESCRIPTION:

This chapter is designed to introduce the law enforcement student to the single lens reflex (SLR) digital camera system and auxiliary flash unit. During this block of instruction the camera and flash nomenclature will be identified, along with the various manual and pre-programmed modes and recommendations for operation. Also discussed during this block of instruction are methods for remote control operation of both camera and flash and proper installation of the camera system onto a portable tripod.

GOAL:

Given a digital SLR camera system, tripod, auxiliary flash unit and various lenses, the student will select the proper equipment and camera settings necessary in making properly exposed digital images that could be used as evidence in a court of law.

PERFORMANCE OBJECTIVES:

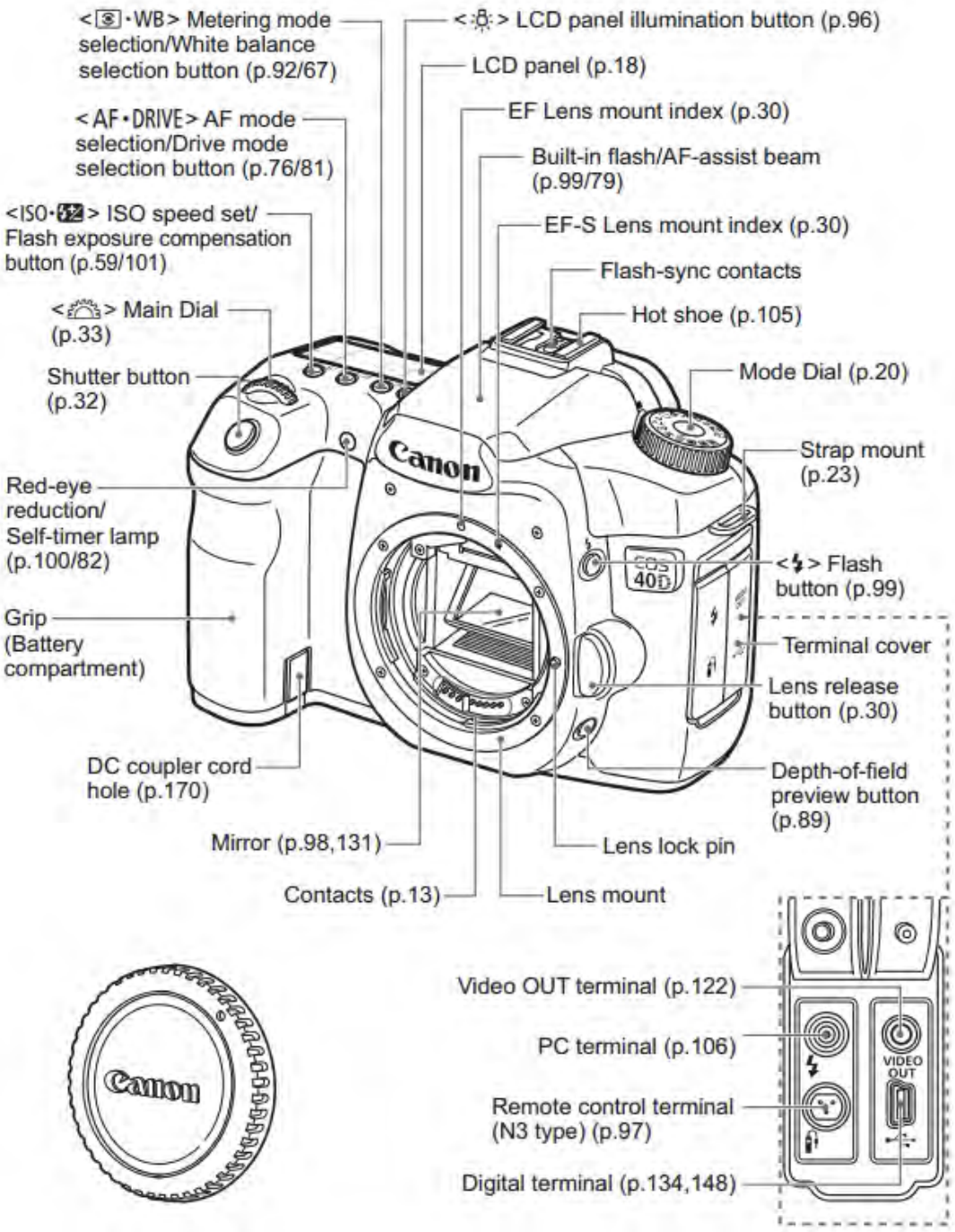
1. Identify the nomenclature of the Canon EOS SLR camera system
2. Identify the nomenclature of the Canon Speedlite electronic flash unit
3. List the various digital imaging file formats
4. Identify the function and operation of a fixed focal length standard camera lens, telephoto lens, and macro lens
5. List the various photographic shooting platforms available to the photographer

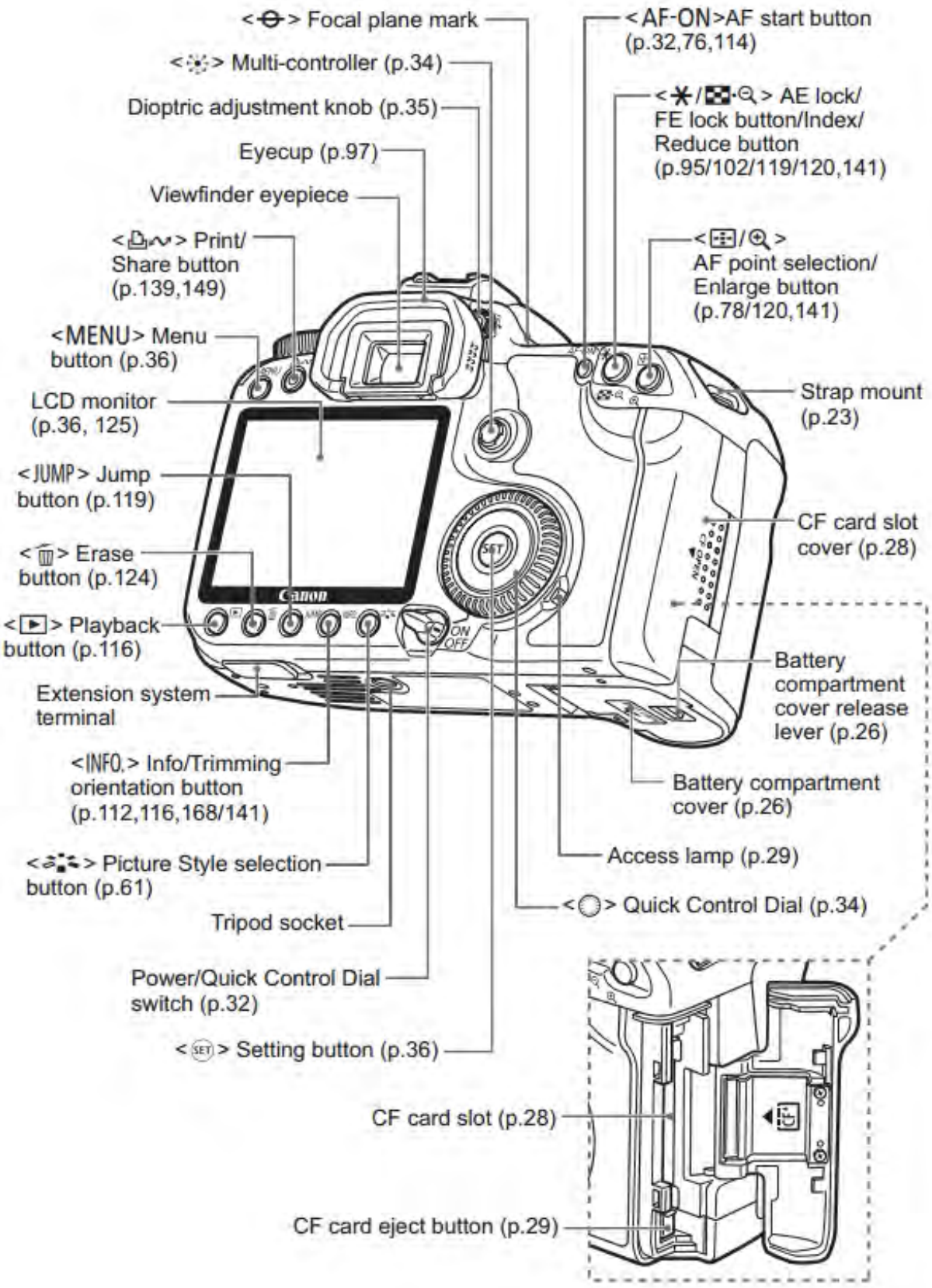
Chapter Introduction

In order to effectively conduct photography, the crime scene photographer must have a solid understanding of the controls and functions of a manual SLR camera system, various interchangeable lenses, the auxiliary flash unit, and a tripod. The dozens of buttons and hundreds of menu options in today's digital SLR camera and flash systems are often overwhelming and intimidating to the beginning photographer. A comprehensive overview of the camera and flash nomenclature will provide a solid foundation in which the crime scene photographer can build on.

Nomenclature of the Canon EOS Digital SLR Camera System

CURRENT CAMERA SPECIFICATIONS - The current camera in use by the CCCSO FSD is the Canon EOS digital SLR camera system. Although there are several different generations of this camera system currently in use by the FSD, they all share the same basic controls:




<⊖> Focal plane mark
<AF-ON>AF start button (p.32,76,114)
<✳/▦·🔍> AE lock/ FE lock button/Index/ Reduce button (p.95/102/119/120,141)
<⊞/🔍> AF point selection/ Enlarge button (p.78/120,141)
<MENU> Menu button (p.36)
LCD monitor (p.36, 125)
<JUMP> Jump button (p.119)
<🗑> Erase button (p.124)
<▶> Playback button (p.116)
Extension system terminal
<INFO.> Info/Trimming orientation button (p.112,116,168/141)
<Picture Style> Picture Style selection button (p.61)
Tripod socket
Power/Quick Control Dial switch (p.32)
<SET> Setting button (p.36)
<multi-controller> Multi-controller (p.34)
Dioptric adjustment knob (p.35)
Eyecup (p.97)
Viewfinder eyepiece
<Print/Share> Print/ Share button (p.139,149)
Strap mount (p.23)
CF card slot cover (p.28)
Battery compartment cover release lever (p.26)
Battery compartment cover (p.26)
Access lamp (p.29)
<Quick Control Dial> Quick Control Dial (p.34)
CF card slot (p.28)
CF card eject button (p.29)
Canon
SET
ON
OFF

Some key specifications:

a. 8.2 million to 15.1 million effective pixels (8.2 to 15.1 megapixel)

b. ISO sensitivity from 100 to 3200

c. CompactFlash (CF) Card media for image storage

d. RAW and JPEG file formats (Small, Medium & Large selection in JPEG)

e. White balance settings (WB) of Auto, Sunlight, Shade, Cloudy, Incandescent, Fluorescent, Pre, and Degrees Kelvin

f. Picture angle approx. 1.6 times lens focal length, due to APS-C sensor format (multiply lens focal length by 1.6 for effective focal length using this sensor)

g. Built-in auto focus servo in the camera body

h. 4 Auto Focus Area Mode Selections: Single Area, Dynamic Area, Group Dynamic Area, Dynamic Area with Closest Subject Priority

i. 3 Metering Modes:

- 3D Color Matrix Metering II (1,005 segmented metering),
- Center-Weighted Metering (weight of 75% given to 6, 8, 10, or 13mm diameter circle in center of frame, or
- Spot Metering (metering a 3mm diameter circle, approximately 2.0% of frame) centered on active focus area

j. +/- 5 stops of Exposure Value Compensation (EV) in 1/3, ½, or full stop increments

k. Manual, Aperture Priority, Shutter Priority, and Programmed Automatic Exposure Modes

l. Shooting modes of Single Frame (S), Continuous 3fps, Delayed Self timer mode and Quick Response Remote

m. Electronic vertical travel focal plane shutter with speeds from 30 to 1/8000 of a second in 1/3, ½ or 1 full stop increments, and Bulb setting

CAMERA SET-UP

In order to prevent unnecessary camera sensor contamination or potential damage, the user should ensure that either a camera body cap, or lens, is installed on the camera at all times.

Every time before a lens exchange or media card exchange is performed, the camera should be POWERED DOWN. This reduces the risk of sucking unwanted dust and debris into the camera body though positive electrical charge, or CF card corruption.

Additional recommendations for lens exchange in non-camera friendly environments, windy or dusty environments, include:

1. Power down the camera prior to exchange
2. Have backup lens ready to install before removing the previous lens or body cap
3. Point camera body downward during the exchange, or hold it against one's body (provided is wearing a clean, lint free shirt or jacket) until the other lens or body cap can be re-installed.

NOTE – Have a lens or body cap installed on the camera at all times. Storing or transporting a digital SLR camera without a lens or body cap installed will result in a dirty imaging sensor which will result in poor quality images, or images that contain artifacts. If this happens, most camera manufacturers recommend sending the camera back to a certified repair facility for sensor cleaning.

INSTALL SELECTED LENS ON THE CAMERA BODY - Align the red dot (mounting index) on the camera body with the mounting index on the camera lens. All compatible lenses will have a reference, or mounting index, that makes a lens exchange a simple, quick, and damage free process. The index on the lenses may vary in color and shape. Canon L series lenses have a corresponding red index dot. These indexes are situated at the base of the camera lens, where it would interface with the camera body.

INSTALL THE BATTERY - Most of the batteries in today's digital SLR cameras are rechargeable. When a battery sits on a charger for an extended periods of time it will drain. Although the battery charger may indicate a full charge, batteries that sit for extended periods of time should be recharged prior to going to a crime scene. One good method of checking battery life is by placing the battery in the camera, turning the camera on, and check the battery life in the camera's menu or with the camera's battery life meter. After confirming that the camera is turned off, open the battery chamber cover on the bottom of the camera and insert the battery (metal battery terminals facing into the camera body as it is inserted).

INSTALL THE CF CARD - After confirming that the camera is turned off, open the CF card door, located on the side of the handgrip. Once it is open, insert the card with the graphics and writing towards you. To remove the card, open CF card door and depress the gray ejector button, located immediately below the card.

LOCATE THE POWER SWITCH - The ON/OFF switch is located either near the middle bottom of the camera back or on the upper left, behind the Quick Control Dial.

FORMAT THE MEMORY CARD - After the card is properly installed in the camera body, it should be formatted (all images erased). Push the MENU button on the back of the camera and select the Setup Menu (wrench icon). Select Format and press OK, Select YES then OK to begin format process. Verify Format was successful by selecting Playback and message should indicate No image.



ADJUST THE DIOPTER- Vision is an important aspect of achieving sharp focus in photography. Many individuals will have varying degrees of vision, and the adjustment for this on your camera is known as the diopter. The diopter on this particular camera is located to the right of the viewfinder, a small wheel.

When making a diopter adjustment, the user should rotate the diopter wheel until the focus brackets in the viewfinder are rendered sharp, not the scene itself. The diopter adjustment does not focus an image, and has no influence on image focus when using an auto focus mode. The diopter simply adjusts the viewfinder according to an individual's vision.

LOCATE THE COMMAND DIALS - The Canon EOS cameras have a rear command dial. The rear command dial is used to select and control multiple camera commands, controls, and exposure functions when used in conjunction with other buttons.

LOCATE THE SHUTTER RELEASE BUTTON - The shutter release is the proverbial trigger for a camera. Depressing the shutter release completely will open the camera's focal plane shutter allowing light to stream though the lens and onto the camera's sensor, thus creating the image. The Canon EOS is equipped with a "two-stage" shutter release button. When the shutter release is depressed half way it will "wake the camera up" when it has gone into sleep mode, will activate and display important metering information, and focus when in an auto-focus mode. To take full advantage of the two-stage shutter release, the user should compose their shot, depress the shutter release halfway down and access the information before proceeding. When auto-focusing, the camera can give an audible signal when focus is achieved (unless disabled in the Custom Settings Menu). After the focus confirmation is acknowledged, the user should gently push the shutter the remainder of the way down to take the exposure.

LOCATE THE CAMERA METER ANALOG EXPOSURE DISPLAY-
When composing a shot or previewing a scene through the camera's viewfinder, the camera's reflective light meter display will illuminate when activated by a partial depress of the camera's shutter release button. The display is situated in the center bottom of the screen when looking through the viewfinder, and looks like a series of dashes with a minus
sign on the left, a zero in the center, and a plus sign to the right (- ------ 0 ------ +). The camera's meter is the tool that takes the guesswork out of achieving the "correct" exposure during photography. A "correct" exposure is indicated when the camera's meter is at the center 0 mark. Biasing the meter towards the + will result in an overexposed image and towards the – will result in an underexposed image. Obtaining a properly metered/exposed image is achieved by manipulating the main and sub-command dials which control aperture or shutter speed, or by making an adjustment in the ISO.

LOCATE AND SELECT A METERING MODE – There are four distinct modes to select from when metering (evaluating) a scene. Evaluative metering, Partial metering, Spot metering, and center-weighted average metering. Metering (weight of 75% given to 6, 8, 10, or 13mm diameter circle in center of frame, or Spot Metering (metering a 3mm diameter circle, approximately 2.0% of frame) centered on active focus area. Depending on how critical the user wants to meter a scene will dictate the metering mode to be selected. The three metering options can be selected by rotating the Metering Selector, which is located just to the right of the viewfinder.

SELECT AN EXPOSURE MODE - The user should select the appropriate shooting mode. The Nikon D3100 comes equipped with 4 shooting modes (Programmed Automatic, Aperture

Priority, Shutter Priority and Manual). These modes are represented by a P,A,S,M on the mode dial on the top of the camera body. To select a mode, rotate the mode dial until the desired mode is selected.

Program Mode - "P" In this mode the camera automatically adjusts shutter speed and aperture according to a built in program for "correct" exposures in most situations. This mode is recommended for quick easy shooting in optimal lighting conditions. **HI** or **LO** will be displayed in the control panel and viewfinder to indicate over or underexposure when the user attempts photography in lighting conditions outside of the limits of an "acceptable" exposure. Modifications to exposure in this mode can be achieved through use **EV** (Exposure Value **±**) compensation.

Shutter Priority Mode - "S" In this mode the user selects a shutter speed according to their objective. After making a shutter speed selection, the camera will automatically set an aperture based on the scene to achieve a "correct" exposure. This mode is useful when the photographer's objective is controlling motion. Shutter speeds from 30 seconds to 1/4000 can be achieved by rotating the rear command dial.

Aperture Priority Mode - "A" In this mode the user selects an aperture according to their desired "depth of field" needs and the camera sets a corresponding shutter speed based on the amount of light in a scene to provide a "correct" exposure. This mode is useful when the camera user is primarily concerned with controlling the amount of apparent focus from foreground to background within an image. Small apertures, large aperture numbers, will result in less light streaming through the camera lens but a greater depth of field. Large apertures, small aperture numbers, will result in more light streaming through the lens but a more shallow depth of field. Large apertures are also useful during lower light photography and to maximize the effective range of a camera's flash or speed light. Aperture settings are obtained by rotating the rear command dial and the range is dictated by the specific lens in use.

Manual Mode - "M" In this mode the user has complete control over exposure by having the ability to select both aperture and shutter speed according to their desired exposure,

or task at hand. This is an especially useful mode to master during evidentiary photography or in general photography. Through use of this mode the user will develop a stronger fundamental understanding of controlling motion, depth of field, and exposure manually. This becomes necessary when photographing difficult scenes, highly reflective objects, or when utilizing a specialized photographic technique i.e., painting with light. When using this mode the user will achieve a "correct" exposure by concentrating on obtaining a "0" in the camera's meter by adjusting aperture, shutter speed, or ISO (or a combination of all three to achieve the desired exposure) with the rear command dials.

Select a White Balance – White balanace selections are a very important component of the exposure. In order to achieve an accurate representation of color within an image the correct white balance (color temperature) must be set. The camera user should evaluate the type of lighting within a scene and make the necessary adjustments in white balance. Common lighting environments include daylight, shade, cloudy (outdoor environments), or (indoor scenes) flash, incandescent, fluorescent. Most digital cameras have an "Auto" white balance. This setting is appropriate for many environments, but is not recommended for use in incandescent environments because the color temperatures available when using Auto white balance are outside of actual color temperatures in an incandescent environment.

Select the ISO Sensitivity - ISO Sensitivity is the digital equivalent of film speed. The higher the ISO sensitivity, the less light needed to make an exposure, allowing higher shutter speeds or smaller apertures when in lower lighting environments. There is a direct correlation between higher ISO's and noise in an image. ISO selections should be made based on resolution and image quality vs. need. Higher ISO settings exhibit more visible digital noise.

Select a Focus Mode- depending on how the user wants to achieve focus, the correct focus mode must first be selected. The two primary options to select focus are camera controlled **auto focus**, or user controlled **manual focus**. When manually focusing a subject, object, or scene the user must select the manual focus mode from the focus mode selector located on the side of the lens. Once the manual focus mode is selected the user can adjust focus by manipulating the focal ring on the camera lens. In the auto focus mode, the user has additional options regarding how they want the camera to autofocus.

Identify the Nomenclature of the Canon Speedlite Electronic Flash Unit

The Canon Speedlite is the electronic flash unit currently in use by the Forensic Services Division. The unit integrates flawlessly with the Canon EOS cameras in use by the FSD, and various other Canon EOS SLR camera systems. This flash unit is used



to add artificial illumination in poorly lit scenes, accentuate detail during three dimensional impression photography, and illuminate large outdoor scenes at night using the painting with light technique. This flash unit can be used, and controlled, from the camera's accessory shoe (hot shoe) or by a wireless transmitter. It comes standard with a built-in bounce card, wide angle diffusion lens, and a stand for off-camera remote operation.

Canon Speedlite PARTS AND FUNCTIONS-

- A bounce card is located on the top of the flash head, slid in to a small compartment. This can be used to reflect light from the flash onto the subject in close-up situations or to create a highlight in a subject's eyes while using a bounce flash technique.
- The flash head is omni-directional, and can its position can be controlled by depressing the flash head tilting/rotating lock release button located on the side of the head (enclosed in a soft rubber boot).
- The battery chamber is accessed on the side of the flash unit. There is no indicator that establishes remaining battery life for the Canon Speedlite. A good gauge used to determine battery life is the recycle time between flashes.
- The built-in wide angle flash diffuser is located under the built-in bounce card and is used to increase the angle of coverage to match wide angle (14mm & 17mm) focal lengths of the lens being used.
- The AF Assist illuminator is located on the front of the Canon Speedlite, and automatically activates when using an autofocus mode in poor lighting conditions.
- The mounting foot is located on the bottom of the Canon Speedlite and is used to integrate the flash onto the camera's hot shoe or onto a stand for remote operation.
- The LCD panel is where all of the flash settings, menu options, effective ranges, and EV compensation settings are displayed.
- The control buttons for flash mode and menu options selections are located on the back of the flash unit under the LCD

The **Canon Speedlite** has various **modes** that can be selected for use. These modes offer automatic and manual flash operation.

1) E-TTL - In this mode, the flash illumination that is reflected back from the subject is detected by the camera's TTL auto flash sensor and the camera automatically controls the flash output level to give the correct exposure. More or less flash can be delivered using the control dial on the back of the Canon flash, depending on the need. This is referenced in the LCD as EV (exposure value).

2) MULTI - In this mode, the flash output level is automatically adjusted for a well-balanced exposure of the main subject and background.

3) MANUAL (M) - When using the manual mode the user will program flash output levels based on distance, ISO setting, and aperture. This is the most powerful flash mode and is most often used at nighttime crime scenes.

Digital Imaging File Formats

In film photography the resolution of an image and latitude for enlargement is determined by the format (negative size) of the actual camera, which in turn designates a particular film size. With digital photography there are numerous in camera options that will influence resolution, latitude for enlargement/analysis, quantity of images that can be recorded on the digital media, and even speed in which the camera user can capture images.

1. Lossy compression- digital cameras capture and collect data that can later be translated into photographs and images of scenes, objects, subjects or in our case, evidence. When this data is collected in a digital camera, the user can select from a host of options that influence how much data is actually collected. The sensor size, or megapixel count, of a digital camera influences how large these data files are. Multi megapixel high resolution digital cameras have the potential to generate enormous sized files. If all of the available data is not collected and stored, then compression occurs. Lossy compression is identified as being any compression format that permanently discards data to achieve smaller file sizes.

1. Lossless compression- A method for reducing the size of a photographic file so that when it is uncompressed, the resulting image matches the quality of the original source.

2. JPEG (Joint Photographic Experts Group) - A standard for image compression in digital imaging services. JPEG is a compression algorithm that takes 8x8 areas of pixels and compresses the information into the lowest common value. JPEG Fine compresses at a ratio of 1:4, JPEG Normal compresses at a ratio of 1:8, JPEG Basic compresses at a ratio of 1:16.

3. TIFF (Tagged Image File Format) – An uncompressed image file that is best for large printing or analysis.

4. RAW- An uncompressed raw file of the image data directly from the camera's sensor.

NOTE: As a general rule, image quality for crime scene and evidence photography should be set to minimum compression, JPEG Fine Large, or lossless compression. When photographing images intended for comparison (e.g. latent prints or impressions), the resolution setting should be non-compressed, RAW.

Functions and Operations of Various Camera Lenses

The versatility of SLR photography cannot be overstated, especially when compared to point and shoot style photography. This versatility is owed primarily to the ability to interchange lenses. The five dominant types of lenses are identified by perspective and function, they are: Standard, Macro, Wide-angle, Telephoto, and Zoom. There are countless manufacturers, types, and configurations of lenses available in the consumer marketplace. When deciding on a lens, several important questions should be answered, including: perspective, speed, minimum focusing distance, auto focus capability, quality, and vibration reduction technology.

- **STANDARD LENS-** A standard lens is a lens that makes the image in a photograph appear in perspective similar to that of the original scene. A standard lens has a shorter focal length and a wider field of view than a telephoto lens, and a longer focal length and narrower field of view than a wide-angle lens. An example of a standard or normal perspective lens is a 50mm lens (on 35mm film format). A standard lens, or a zoom lens with an available standard focal length, should be included in a law enforcement photographer's kit.
- **WIDE ANGLE LENS-** A wide angle lens is a lens that has a shorter focal length and a wider field of view (includes more subject area) than a normal lens. Extreme examples of this type of lens would be a 10mm or 14mm fisheye lens. The angle of coverage with these types of lenses is often 150 to 180 degrees.
- **MACRO LENS-** A macro lens is a lens that provides continuous focusing from infinity to extreme close-ups, often to a reproduction ratio of 1:2 (half life-size) or 1:1 (life-size). Canon offers both macro and micro lenses in various focal lengths. These types of lenses are essential in close-up and evidentiary photography and should be part of the law enforcement photographer's kit. The closer the lens and camera are to the subject, the higher the maximum possible resolution will be. This higher resolution translates into higher quality evidentiary photographs that are great for courtroom exhibits and could potentially yield positive results during analysis.
- **TELEPHOTO LENS-** A telephoto lens is a lens that makes a subject appear larger on film than does a normal lens at the same camera-to-subject distance. A telephoto lens has a longer focal length and narrower field of view than a normal lens. Although these types of lenses are not needed very often in crime scene or evidence photography, they are often used by law enforcement officers for surveillance details. Focal lengths for telephoto lenses usually begin around 85mm, and can extend into the super telephoto range of over 600mm.

  ZOOM LENS- A zoom lens is a lens in which the user can select from a wide range of focal lengths, rather than just one as in the case of a fixed focal length lens (which is also called a *prime* lens). There are countless combinations of focal lengths to choose from, depending on the desired purpose. This range of focal lengths offers the user some versatility, and often reduces the need to carry multiple lenses in their

kits. One potential drawback of zoom lenses is that they tend to be less sharp throughout their zoom range than a fixed focal length lens would be at any given focal length. However, for crime scene photography, the convenience of high-quality zoom lenses generally far outweighs this disadvantage.

– **LENS SPEED**- Lens speed is identified as the largest lens opening (smallest f-number) at which a lens can be set. A fast lens transmits more light and has a larger opening than a slow lens. The speed of a lens relates to its ability to record detail at a faster shutter speeds due to its light gathering ability, or maximum aperture. There usually is a direct relationship between cost and lens speed, the faster the lens the more expensive.

Photographic Shooting Platforms Available to the Photographer

1. In photography stability is an essential ingredient that helps create a sharply focused image. Whether it be a large outdoor crime scene at night to be painted with light or an examination-quality photograph of an item from the scene of a violent crime intended for later analysis, the camera in each of these examples must be as stable as it can be to produce the best quality image possible.



a. **TRIPOD**- The tripod is probably the most common and widely used shooting platform available. This three legged device will provide exceptional stability for long exposures, or even inverted for shoe and tire impression photography. Countless versions of tripods and tripod heads are available on the consumer market. Many configurations have numerous options and are very flexible in any application.

b. **MONOPOD**- This one legged device is a good tool to use during surveillance or action photography, but does not have much use in crime scene photography.

c. **QUADPOD**- A quadpod is a four legged portable device used in a variety of photographic applications. The quadpod can be a useful tool in documenting smaller items of evidence, shoe and tire impression evidence, or mass photographic copying of photographs and document evidence.

d. **COPY STAND**- A copy stand is a stable platform used primarily in a lab environment for analysis grade photography of evidence. This device allows the user to mount the camera on a telescoping and adjustable arm, and control focus and composition by the adjustment of the arm.

Chapter Review

1. An understanding of the digital SLR camera and auxiliary flash nomenclature is an essential component in the success of the crime scene photographer who is tasked with documenting crime scenes or physical evidence.
2. The understanding and selection of the proper image file format is an important aspect of crime scene digital photography, and will ensure additional latitude in printing of courtroom exhibits and use of images for analysis.
3. Various types and configurations of lenses are available in the consumer marketplace. The selection of the proper lens is a very important aspect of photography, and should be considered carefully based on the objectives prior to beginning a photographic assignment.

Stability in photography is critically important in order to achieve a sharply focused image. A variety of shooting platforms is readily available throughout the consumer market, including tripods, monopods, quadpods, and copy stands. The proper selection and use of these will most certainly increase the chances of success for the crime scene photographer.

CHAPTER FIVE:
Digital Imaging

CHAPTER DESCRIPTION:

This block of instruction is designed to acquaint the student with digital imaging software and the various tools within the software that can be used to enhance their law enforcement images. This block of instruction will also acquaint the student with the desktop printer, and the various settings necessary in producing high quality prints of evidentiary photography.

GOAL:

Given digital images of items of evidence, the student will open the images in Adobe Photoshop®, perform various traditional enhancement techniques which result in properly exposed and composed digital images, and produce prints that could be used as an exhibits in a court of law.

PERFORMANCE OBJECTIVES:

1. Identify the function of image editing software and the various enhancement and editing tools available in Adobe Photoshop®
2. List the Traditional Enhancement Techniques recommended by the Scientific Working Group on Imaging Technologies (SWGIT)
3. Identify the operation, various custom settings, and maintenance of the desktop printer

Chapter Introduction

With the global transition from conventional film based photography to digital imaging, the forensic science professional must have a solid working knowledge of digital imaging software, along with the various accepted techniques used to enhance and archive their evidentiary photographs. Laboratory professionals should also have a firm understanding of the desktop printer and the various custom settings that can be used to produce higher quality prints which could be used as exhibits in a court of law.

Functions of Image Editing Software and Various Enhancement and Editing Tools Available in Adobe Photoshop®

The primary function of image editing software is to access, view, edit, archive, and print images taken with a digital camera.

By virtue of its name a digital image is different than a traditional gelatin film photograph. In film photography, reflected light striking a light sensitive film creates a negative that can be printed positive in a darkroom during a chemical process. Digital images are different, in that they are recorded using a semiconductor or computer chip that contains a finite number of picture elements, also known as pixels or photo-sites. Pixels are the smallest individual element in a digital image, holding specific values that represent the brightness of a given color at any specific point. The digital semiconductors contain rows and columns of pixels. Light striking a digital semiconductor is converted into electrons at the pixel cells and is assigned a value associated with the amount of its charge. This value is converted into computer language, or binary code, being a 1 or 0. This binary data is then sent to the camera's digital media where it is stored, becomes removable, and is arguably more stable than gelatin film.

Most individuals today associate the potential quality (resolution) of a digital image in terms of the amount of pixels available in the camera's semiconductor, or chip. One million picture elements represent a megapixel. Digital cameras currently available in today's consumer market range from about 10 megapixels to about 21 mega pixels. There appears to be a direct correlation between the price of today's digital cameras and the amount of pixels that they contain.

In order to read the 1s and 0s as a photograph, some type of imaging software must be used. Virtually every camera manufacturer provides a copy of their proprietary software with the purchase of a new digital camera. This software allows the user th view and print images taken with a digital camera from their personal computer and desktop printer. Standard issue digital imaging software that is provided with the purchase of a digital camera is often times limited in terms of its ability to edit or enhance digital images. Some camera manufacturers are beginning to market and sell more powerfuland feature packed versions of image editing software. Stand-alo software manufacturers currently lead the industry in photo editing software.



The Adobe® Software Company manufactures a variety of image editing software programs ranging from inexpensive consumer versions (including Photoshop Elements® and Lightroom®), to high end and powerful professional versions (e.g. Photoshop Creative Cloud®). Adobe updates its software line frequently (at least annually) and new tools or functions are often added.

TOOL BOX – The Tool Box, either fixed in the left hand corner of the screen when the editing function is opened or floating around, contains various tools that are used to preview, edit, and enhance digital images. Some tools are not recommended for law enforcement image editing and will not be identified in this text. Various useful and accepted tools commonly used in a law enforcement application will be identified.



MOVE TOOL - The Move tool is located in the upper left hand corner of the tool box. It is identified by an arrow pointing up and to the left, and a cross shape symbol with arrow ends immediately to the right. This tool is used to move around certain items that have been placed within your image in a separate layer, i.e. text, or other photographs. A keystroke shortcut that can be used to access the Move tool is the letter "V" on the keyboard.



ZOOM TOOL - The Zoom tool is located in the upper right hand corner of the tool box. It is identified by a symbol that resembles a magnifying glass. This tool is useful in magnifying specific areas within an image for a closer look or for analysis, i.e. fingerprints, tool marks, shoe and tire impression evidence, etc. Once selected the zoom tool can be used by left clicking until the desired magnification is achieved. To zoom back out, depress and hold the Alt key and left click. A keystroke shortcut for this tool is Ctrl + to magnify or Ctrl – zoom out. Another keystroke shortcut that can be used to access the Zoom tool is the letter "Z" on the keyboard.

HAND TOOL - The Hand tool is identified by a symbol that resembles a white gloved hand. This tool is useful in viewing specific areas within evidentiary photographs while zoomed in at increased magnifications. Once selected from the tool box (a left click) the Hand tool can be used by left clicking on the screen and holding the left click down while moving the mouse on the mouse pad. This moves the image around the screen so that the desired area of the image can be viewed at increased magnifications. A keystroke shortcut that can be used to access the Hand tool is the letter "H" on the keyboard, or the spacebar.



MARQUEE TOOL - The Marquee tool is identified by a dashed rectangle or a dashed ellipse, and is usually located under the Hand tool. This tool is used when applying an enhancement to a localized region of your image, or copying a specific area out of an image. It is selected by a left click, then once selected it can be used by left clicking in an area of your image that the enhancement will be applied. The size of this tool can be regulated by holding down the left click of the mouse and dragging until the desired area for enhancement/copy is selected. Any enhancements done after this selection is made will be localized, or applied only to the area that the marquee is covering. The arrow in the lower right corner of



this tool selection is used to toggle between a rectangular or elliptical marquee. A keystroke shortcut that can be used to access the Marquee tool is the letter “M” on the keyboard.



LASSO TOOL - The Lasso tool is a selection tool used to select specific areas within an image that do not follow the shapes offered with the standard rectangle or elliptical Marquee selection tools. As with the Marquee tool, the Lasso tool offers multiple versions of a lasso that can be used to make a selection, identified by the arrow in the bottom right corner of the box. The three versions offered of the Lasso tool are: standard lasso, magnetic lasso (will lock on contrasting detail), and the polygonal lasso (used when dealing with various geometric shapes with definite angles). Once an area is selected using the lasso tool, it can be locally enhanced or copied into another image or document. A keystroke shortcut that can be used to access the Lasso tool is the letter “L” on the keyboard.



TYPE TOOL - The Type tool is a tool used to insert text into a photograph. This tool is identified with a capital T on the left hand side about middle way down the tool box. This is a useful tool to identify the significance of specific item evidence within a scene, or when doing a composite. The Type tool is also useful in doing photo-spreads, wanted posters, or BOLO’s. As with various other tools within the tool box, an arrow in the lower right corner of the Type tool indicates that the user has options with this tool as well. Horizontal or Vertical Type can be selected when using this tool. A keystroke shortcut that can be used to access the Type tool is the letter “T” on the keyboard.



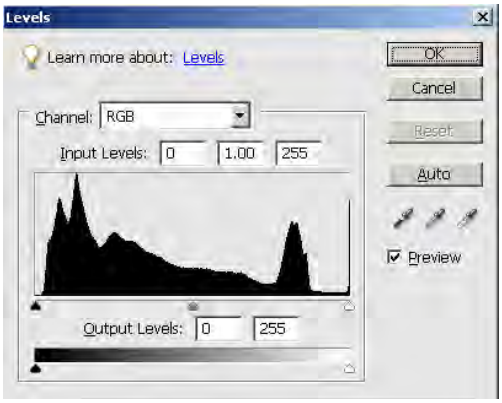
CROP TOOL - The Crop tool is a tool used to either crop detail out of an image, or to re-size an image to a specific size for printing. This tool is located to the right of the Type tool and is identified with a square symbol with lines protruding from the corners and the center. A left click will select this tool for use, then clicking and dragging within the image will identify the area to be cropped. Once the tool is selected a user can enter specific width, height, aspect ratios, and resolution settings into the Options Bar. When cropping a section of a photo, or cropping to resize, a minimum resolution of 300ppi should be selected. A keystroke shortcut that can be used to access the Crop tool is the letter “C” on the keyboard.

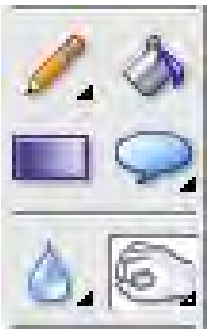
IMAGE ADJUSTMENTS - Adobe Photoshop® offers various functions/tools that can be used to enhance, edit, or modify a photograph. The tools that will follow are the ones that are suitable for law enforcement image editing.

BRIGHTNESS ADJUSTMENT - We often make photographs that are underexposed, overexposed, or lack the necessary amount of contrast to be considered a “proper”

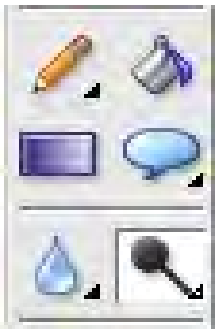
exposure. Various functions and tools can be used to increase the exposure (brighten) of an under exposed image, or decrease the exposure (darken) an image that is over exposed. These enhancements can be performed either **locally**, to just the area in need of enhancement, or **globally**, to the entire image. This ability to select whether or not an enhancement is performed to an entire image, or just to a specific area within an image is a very useful function of Adobe Photoshop®. The ability to perform selective enhancements within an image affords the user the opportunity to bring back detail in certain areas without compromising others.

LEVELS ADJUSTMENT - One of the most effective methods to correct for exposure related problems in an image is to use a Levels adjustment. The Levels function is usually located under **"Enhancement"** in the options bar. Once **"Enhancement"** is selected with a left click, various options appear, one being **"Adjust Lighting".** When "Adjust Lighting" is selected additional options become available, one being **"Levels".** Once "Levels" is selected a histogram will appear (illustrated to the left of this margin). The histogram contains the tonal information of the selected image. Three arrow shaped "sliders" are located directly under the histogram, these are **input sliders**. The one on the right represents the highlight values, the one in the center is for mid-tone values, and the one to the left represents the shadow detail. The flow and structure of the histogram represents how many pixels are represented in the particular regions. Images that are grossly over or under exposed will spike in the respective regions on the histogram. Global adjustments can be made to the image by sliding the input sliders in the direction of the exposure problem. If an under exposed image is spiking toward the black, the white slider can be slid in that direction to globally increase the exposure, or brighten the image. Localized adjustments can be done in selected regions of an image using a marquee or other selection tool. Once the area to be adjusted is selected, Levels can be selected and any adjustments will be isolated to the region within the selection.



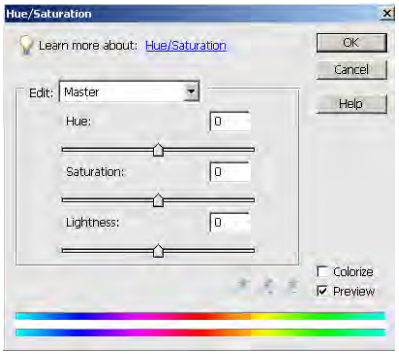


DODGE AND BURN - Another method to locally adjust the brightness and contrast in a region of an image is using the Dodge and Burn tools. Pictured to the left, the **Burn tool** (referenced with a hand symbol), will locally darken the selected area. The **Dodge tool** (referenced with a symbol that resembles a lollypop), will locally brighten the selected area. Once these tools are selected with a left mouse click a circle will appear on the image. This circle represents the area that will be adjusted, and can be adjusted using the bracket keys.



CONVERTING TO BLACK & WHITE - Many times when examining images of forensic value, the colors within the backgrounds become distracting and make it difficult to distinguish important detail. Examples of this may include a processed latent fingerprint on a multi-colored background of a soda or beer can, a ninhydrin fingerprint on a check with multiple-colored security printing, a colored ink signature on a questioned document with a colored background, or maybe even blood or other bodily fluid on an article of colored clothing. In situations like these it is often helpful to "drop", or isolate the colors of an item so that a proper analysis can be made of the item in question. In Adobe Photoshop® there are several ways to isolate colors for the purpose of extracting information from an image. Different versions of Photoshop® will offer different color isolation tools and techniques.

GRAYSCALE CONVERSION - Images are most often photographed in standard RGB color. One method to remove color from an image is to convert the image profile from RGB (Red-Green-Blue) to grayscale. To do this using Photoshop® go into the options bar and select Image, once Image is selected a dropdown will appear that will afford various options, one being Mode. Once Mode is selected another dropdown will appear that will offer additional options, one being Grayscale. Select Grayscale for the conversion. Depending on the version of Photoshop® being used, several other options will appear that can be used to convert from a colored to black and white image. Lab Color and CMYK are two of these.



HUE AND SATURATION - Another method to convert an image to black and white, or to isolate colors and with a substantial degree of control, is using the hue and saturation function. In the options bar select Enhance. Once Enhance is selected a dropdown will appear with various options, one being Adjust Color. Once Adjust Color is selected another dropdown will appear that will contain several other options, one being Hue and Saturation. Once Hue and Saturation is selected, a control box with sliders will appear (featured to the left of this margin). The edit selection box is one important feature of this function, as it affords the user the opportunity to select whether or not they will adjust the hue and saturation for all colors at once, "Master", or isolate individual color channels. To the right of the Edit Box is a drop down that will avail all of the individual channels. These channels include the primary colors of Red, Green, and Blue, as well as complimentary colors of Cyan, Magenta, and Yellow. Isolating colors using this feature is a powerful tool for the forensic photographer. A keystroke shortcut to bring up this function is Ctrl U.

IMAGE CALIBRATION - A common aspect of forensic imaging is the need to produce or reproduce prints and exhibits at a known scale. The function of producing a photograph at a known scale, or re-sizing an image on screen to actual size for analysis, is known as **calibration.** As with many of the functions in Adobe Photoshop®, image calibration can be achieved in several ways. The following will illustrate the necessary steps of one method of image calibration:

1. Set viewing magnification to 100%. To do this use the zoom tool or the keystroke shortcut of Ctrl + until 100% appears in the dialog box that indicates viewing magnification.
2. Select the Crop Tool from the tool palette, or use a key stroke short cut by pressing the letter “C”.
3. If using a CS version of Adobe Photoshop® go to the “View” menu (on the top of the screen) and find the option marked “Snap”. If there is a check mark to the left of “Snap”, click on it and remove it. This is one area that the options will vary depending on which version of PS you are using.
4. If an axis in your image (the scale section) is not aligned vertically or horizontally with your computer screen, you may choose to straighten the image. This will help you out later and will only take a second. In a CS version of Adobe Photoshop® find your ruler tool in the tool palette (it hides under the tool icon that looks like an eyedropper). Once you have selected the ruler tool, drag the ruler along an axis in your image (an edge on your scale). After letting go of the left button on your mouse your ruler will remain on the screen. Now, go to the top of your screen and select the “Image” menu. Once the drop down appears, find “Rotate Canvas” and go into it. Once inside Rotate Canvas find the option listed as “Arbitrary”. Select the “Arbitrary” rotation and the adjustment will be made based on the axis that you defined with your ruler tool. This is also good for straightening an out of alignment horizon related photo (sunrise/sunset) as well. Many of the Elements versions of Photoshop® will offer a straightening tool in the tool box.
5. You are about to crop a section out of this image. The section that you crop will be a known distance on your scale (i.e. if your image contains about ten centimeters of scale, you select three or four for the crop). You may decide during this step that you want to take a closer look at the area being cropped, or magnify it on your screen for the selection. If you do, hold down the Ctrl key and depress the + button a couple of times to magnify. If you go too far, hold the Ctrl key and strike the – key, or Ctrl and 0 to get back to where you were. The more accurate you crop during this step, the more accurate and true to size your print will be (if you start the begin point of your crop at the center of the one centimeter line, make sure you end at the same area at the end point of your selection.) Drag your crop tool along a pre-determined distance of the scale (the larger the selection the more accurate the results). Once the crop has been highlighted, press the enter key, or the green check mark to execute the crop.
6. Go to the “Image” menu and select the option labeled “Image Size”. Once Image Size is selected another menu will appear. Make sure the function within this menu that is labeled “Resample” is disabled. A check mark should not appear in the box next to the word “Resample”. There should be what appears to be a chain link between the height, width and resolution.
7. While this menu is open you will enter the known distance” of your crop into the width or height area (depending on how you cropped). Make sure you select

mm, cm, or inches when inputting this information. After entering the known distance take note (write it down) of the value in the resolution field, or highlight and copy it. Once you have the resolution value from the resolution field, close the image size dialog box.

8. You are now going to “Undo” your crop on your image. To do this you can depress the Ctrl/Alt keys simultaneously then strike the “z” key. This is a key stroke undue, or step back function.
9. Select the “Image” menu then choose “Image Size”. Once this dialog box opens double check and make sure that the “Resample” function is still turned off. If not, do it now.
10. Highlight the value displayed in the Resolution field (left click and drag).
11. Paste/Input the resolution value that you previously copied into the Resolution field.
12. Click OK to accept your new 1:1 calibrated image and close the Image Size dialog box!

Traditional Enhancement Techniques Recommended by the Scientific Working Group on Imaging Technologies (SWIGIT)

“The Scientific Working Group on Imaging Technology (SWGIT) was created to provide leadership to the law enforcement community by developing guidelines for good practices for the use of imaging technologies within the criminal justice system. Although digital imaging technologies have been used in a variety of scientific fields for decades, their application in the criminal justice system is more recent. Consequently, there has been a need to gather and disseminate accurate information regarding the proper application of this and other imaging technologies (including silver-based film and video) in the criminal justice system. The mission of the Scientific Working Group on Imaging Technology (SWGIT) is to facilitate the integration of imaging technologies and systems within the criminal justice system (CJS) by providing definitions and recommendations for capture, storage, processing, analysis, transmission, and output of images.” (SWGIT) The complete SWGIT guidelines can be found at: https://www.swgit.org/.

Traditional Enhancement - “Traditional enhancement techniques have direct counterparts in traditional darkrooms. They include brightness and contrast adjustment, color balancing, cropping, and dodging and burning. These traditional and acceptable forensic techniques are used to achieve an accurate recording of an event or object.” (Section 5 Recommendations and Guidelines for use of Digital Image Processing in the Criminal Justice System)

BRIGHTNESS AND CONTRAST - This traditional enhancement technique is used to brighten detail in an image or to increase or decrease the contrast. Global or localized image enhancements can be accomplished when using a selection tool in conjunction with a levels, brightness and contrast, or exposure related function

COLOR BALANCING- when photographing with a digital camera it is very easy to shoot with the incorrect white balance setting. This can be corrected a couple of ways in order to achieve accurate reproduction of the scene, which is important in law enforcement photography. The different versions of Photoshop® offer different methods to correct for color balancing problems. More advanced versions of Photoshop®, including PS7, PS CS, PS CS2, and PS CS3, offer a "White Balance" adjustment for photographs shot in RAW. This adjustment works quite well but may not be available, depending on the available version of the software. Another method of correcting white balance is using the Hue and Saturation function, and adjusting the color sliders until the image reflects an accurate color balance.

CROPPING- the crop tool can be used to selectively control the composition of a law enforcement photograph, excluding unnecessary or irrelevant information. It can also be used to re-size an image for a particular print paper or court exhibit. When cropping a section of a photo, or cropping to resize, a minimum resolution of 300ppi should be selected.

DODGING AND BURNING- this final traditional enhancement technique will allow the user to conduct isolated brightness and contrast adjustments to their image. Various brush sizes can be selected by using the bracket keys. This allows the user to adjust a smaller or larger area within the image during the enhancement.

Operation, Various Custom Settings, and Maintenance of the Desktop Printer

Printing photo quality images from a desktop printer is a common function of today's forensic science professional. Whether it is a general documentation photograph for a page of bench notes, a photograph that will be used to compare two pieces of evidence to render a conclusion, or an exhibit that a prosecutor needs for trial, desktop printing is a regular element of our occupation. Different printer manufacturers offer different setup and maintenance selections, but most offer intuitive step by step procedures for achieving the best possible print quality and rectifying maintenance related issues.

The three common types of desktop printers include inkjet, laser jet, and dye sublimation. Each of these printers function in different ways, but all are capable of producing high resolution photo quality prints <u>when set up properly</u>.

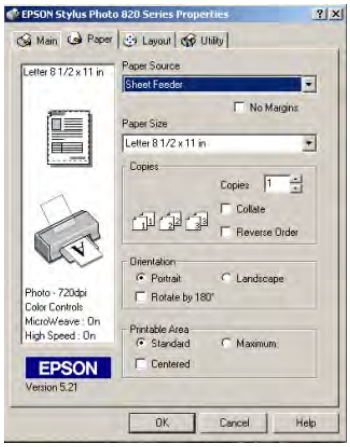
Inkjet printers spray tiny droplets of ink onto the paper from cartridges within the printer.

Laser printers utilize toner that adheres to an electronically charged drum which is then released onto the print paper as it feeds through the printer.

Dye Sublimation printers work by heating up colored films that are in a cartridge and melting the colors onto photo paper as it cycles through the printer.

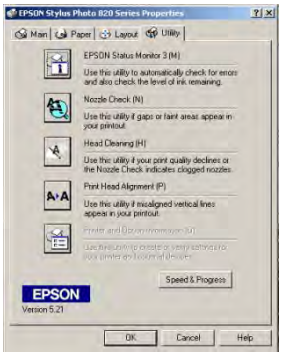


PAPER TYPE - When printing photographs from a desktop printer, the user must select the proper photographic quality paper to be used. Black and white or color photographs will not print well, or contain the requisite level of resolution, when printed on plain copy paper. There are countless companies that manufacture printer papers of all different sizes, textures, and sheens. Acid free and archive quality print papers are also available. After sending a print to the printer from the file menu of Photoshop® the printer properties screen will generally appear. It is from this screen that the user can control and influence the print quality. One of the first settings should be to set the proper "Media Type" from this screen's dropdown menu. A number of types of print papers are available to choose from in this dropdown. A **quality** slider is also present on this tab, and can be adjusted from normal to photo quality. Also available from this screen is a mode selection. When the "Custom" mode is selected the user has more quality control options, one being to de-select the "high speed" print function. This will result in a better quality print.



PAPER SIZE- The next tab on the screen is the Paper tab. Once selected the user has several options to select from in terms of print paper size. This screen also offers an orientation selection and printable area selection. These must be set according to the orientation of the print and the desired print size.

MAINTENANCE - One of the most challenging issues associated with desktop printing is poor quality related to head clogs and vertical banding that appear in the prints. This is a common dilemma associated with ink jet printers, but an easy one to fix. Open the Utility tab to access the maintenance options. Within the maintenance options you can check ink levels, realign



the print head, or clean the head. Selecting nozzle check will offer a print that will show any deficiencies, or clogs in the head. From there the user can conduct a head clean which will most often remedy the problem. Leaving an inkjet printer turned on for long periods of time, and long intervals between printing are most often the culprits behind head clogs. Turning the printer off between jobs and routine head cleaning is recommended for consistent quality printing.

Chapter Review

The primary functions of image editing software include accessing, viewing, editing/enhancing and printing digital images. There are various tools within Adobe Photoshop® that can be used during law enforcement image processing to bring about better exposures, or to conduct forensic analysis.

The Scientific Working Group on Imaging Technologies (SWGIT) is a working group dedicated to providing a foundation for digital imaging for law enforcement professionals. There are a host of recommendations (seventeen to date) developed by the SWGIT concerning law enforcement digital imaging. PDF printable versions of the "guidelines" and a host of additional information concerning various law enforcement forensics and technology related applications can be accessed through the International Association of Identification at www.theiai.org.

The desktop printer is often a workhorse for the law enforcement professional. When set up and used properly many of today's desktop printers can output high resolution photo quality prints that can be used for general documentation, comparison examinations of evidence, or courtroom exhibits. The proper paper, setup, and maintenance are essential in achieving a professional-looking high quality print.

CHAPTER SIX:
Flash Photography

CHAPTER DESCRIPTION:

This chapter is intended to introduce the student to the operation and many uses of electronic flash in photography. Objectives and techniques instructed during this block include direct on camera flash operation, bounce flash operation, off camera cabled operation, off camera wireless remote operation, multiple flash wireless remote operation, and diffused-close-up flash operation.

Goal:

Given a digital SLR camera system and auxiliary electronic flash unit, the student will photograph a variety of items of simulated evidence under various lighting conditions resulting in properly exposed photographs that could be used as evidence in a court of law.

PERFORMANCE OBJECTIVES:

1. Identify the methods of controlling the auxiliary flash unit
2. List the three primary angles of lighting commonly used in conjunction with an electronic flash
3. List various techniques for controlling the effects of illumination from the electronic flash unit

Chapter Introduction

One of the most important, but also most challenging aspects of photography is flash photography. A solid understanding of the various methods and techniques associated with controlling the effects of the electronic flash is essential to the forensic scientist and crime scene photographer. Whether documenting individual items of physical evidence, injuries on human skin, or overall crime scenes, flash photography in an integral component for the crime scene photographer.

Methods of Controlling the Auxiliary Flash Unit

When used in conjunction with many of today's digital SLR camera systems, the

auxiliary electronic flash unit can be controlled in a variety of ways. Depending on what the photographic objective is, one particular type of flash operation may produce better results than another.

ON-CAMERA OPERATION- one of the most common applications for flash photography is having the flash unit mounted on top of the camera's accessory shoe, or "hot shoe". This on-camera application, when used properly, can produce outstanding results for overall scene photography in diminished lighting conditions, or when photographing items that are in need of additional illumination in order to accentuate detail hidden by shadows.

Select proper flash mode from the mode selector on the Canon Speedlite based on objective or desired effect.

a) E-TTL - Camera automatically controls the flash output level to give correct exposure based on exposure control information).

b) MULTI (Stroboscopic) - This operating mode allows the flash to fire repeatedly, during a single long exposure.

c) M (Manual Operation) - A fully manual mode. User selects proper flash output based on distance, aperture, ISO, and focal length.

OFF-CAMERA OPERATION - Another method of operation that may yield desirable results in various situations is off-camera flash operation. This method is most commonly used in crime scene photography when oblique lighting of the subject (e.g. impression evidence) is required.

WIRELESS OFF-CAMERA OPERATION – Requires the use of the proper wireless transmitter mounted to the camera's hot shoe and the flash unit to be set to the proper wireless mode (Slave).

CABLED OFF-CAMERA OPERATION- Requires the use of a cable, of which one end is attached to the flash and the other end is mounted on the camera's hot shoe.

The Three Primary Angles of Lighting Commonly Used in Conjunction with an Electronic Flash

1. **Front Lighting**- Front lighting is suitable for many applications associated with crime scene photography. Front lighting typically refers to the flash being on the same axis of the camera lens, firing from the camera in the direction of the subject or object. This type of flash offers a lot of supplemental illumination in most cases, however, could cause uncomplimentary hard shadows that may hide important detail or even

other items of evidence. Hard shadows are created as a result of silhouetting that occurs when the powerful illumination originating from the flash head strikes the subject, or object, and continues on to light the background with the exception for the areas that are on the opposite side of where the illumination struck, thus creating a deep dark void in an image. Front lighting can include bounce flash.

2. **Back Lighting**- Back lighting is a technique used when photographing an item of evidence on a surface that is opaque or virtually transparent. Examples of this may include a latent fingerprint processed with cyanoacrylate fuming technique ("Superglue"). In this lighting technique, a light source is placed behind the object (electronic flash or constant light source) and the item is photographed. The photographer may choose to place a dark or light card in the background (depending on the color of the evidentiary item) to accentuate the contrast and detail of the actual print. Back lighting is also commonly used in subject or portrait photography to highlight the subject from the background.
3. **Side Lighting**- Side lighting, also known as oblique lighting, is a technique commonly used in law enforcement photography to accentuate detail in the troughs and furrows of 3-dimensional impression evidence. Items like shoe tracks, tool marks, vehicle tire tracks, bite marks, physical injuries from assaults with weapons, and indented writings are all good examples of evidence that can be photographed using this technique to bring out detail which would otherwise be latent. Using direct lighting on 3-dimensional evidence can fill in the detail that examiners and laboratories are looking for when making comparisons, and could prove to be counterproductive. Oblique and low angle lighting can be used in conjunction with a deflector card to better control the effects of this technique.

- Set-Up- When photographing 3-dimensional evidence at the scene for later analysis, the proper composition and set up are essential. The camera should be mounted on a tripod. The tripod legs should be extended enough so that the evidence can be composed in such a fashion that it fills the frame. The camera should be at a 90° angle to the surface of the evidence (an angle finder can be used to transpose surface angles to the tripod head and camera back). Consider inverting the head of the tripod on models that will allow this. The evidence should be composed squarely within the frame with little information showing other than the actual item of evidence and a scale (exclude all non-relevant items from the composition).
- Select a shooting mode (manual). Set the shutter speed to the flash synchronization speed (1/250). Set aperture to one that will afford suitable depth of field (*f*11-*f*22). Pick an ISO setting that will afford suitable quality with minimal noise or artifacts (ISO 100-200). <u>DO NOT METER THE EXPOSURE!</u>
- Cable the flash to the camera's hot shoe using a TTL flash cord, or program flash for wireless operation.
- Install shutter release cable or use 2-second timer delay setting.
- Eliminate strong ambient lighting by use of a dark cloth, umbrella, or other shield.
- Position the flash head at an oblique angle to the impression. The correct angle of flash during oblique flash photography is dependent upon a few variables. The

distance from flash to subject, flash output, and the depth of the impression being photographed will together determine the correct angle of flash to subject. The use of a flashlight can aid in the selection of the correct angle of light necessary to achieve the desired exposure with complimentary shadows. Too high of an angle of light will cause detail in the impression to be washed out. Too low of an angle of light may cause valuable detail to be hidden in the hard shadow region. Angles from 45° down to 15°, or lower, may be necessary to achieve the desired results. The use of a reflector card positioned on the opposing side of the flash may also be used to bring back some of the detail of the impression, while still accentuating the majority of the track with the stronger shadows. With long impressions, such as shoe and tire prints, take several photographs with the flash positioned at intervals around the impression (all at the roughly the same oblique angle). This will ensure all the detail in the impression is recorded.

Various Techniques for Controlling the Effects of Illumination from the Electronic Flash Unit

Flash photography often turns into somewhat of an unbridled horse for many crime scene professionals, difficult to control and easy to get away from us. Over exposure, under exposure, or partial exposures and unacceptable hot spots are common occurrences when photographing important evidence. However, there are dozens of techniques that we can use to regain control of the electronic flash that will result in great exposures that will boost confidence and the value that our photographs can add to a criminal investigation.

Bounce Flash

When photographing crime scenes, evidence, or subjects while using an electronic flash we often create undesirable hard shadows and areas that are overexposed. One method to control these hard shadows is to bounce the flash off of a ceiling or wall to soften the effects while reducing the hard shadows. The bounce flash technique is also an effective technique to use when photographing highly reflective surfaces, i.e. mirrors, picture frames, writing, serial numbers, or printing on metallic objects. A couple of important things to note about using this technique:

a) Bouncing the flash off of a colored wall will give the subject or scene the color cast of the wall that the flash was bounced off from (select a white wall or ceiling when possible).

b) Anytime a bounce technique is used, a reduction in flash efficiency will occur. This relates to the inverse square law. As the distance of light doubles, its intensity is quartered. When using an automatic flash program (mode), the flash will generally

compensate for the loss of efficiency by increasing output. When using manual flash and a bounce technique, the user will have to compensate from one to two full stops, depending on the ceiling height.

c) As a rule of thumb, the optimal distance between the bounce-point for the flash and the subject/object being photographed when using this technique is about mid-way. A good way to achieve this distance is by estimating the half-way point between subject and photographer and drawing an imaginary vertical line from the subject to the ceiling. Once a point on the ceiling has been established, it will become the area where the flash is directed for the bounce technique.

Diffused Flash

Objects that are highly reflective will commonly result in extreme overexposure when photographed using an electronic flash. These “hot spots” can be controlled using a diffused lighting technique.

The Canon Speedlite comes standard with a built-in diffusion lens (also doubles as a wide-angle lens) that can be extended over the front of the flash to soften the effects of the harsh light. Alternatively, a diffusion dome may be placed over the head of the flash.

The flash can also be used with a diffusion dome in conjunction with a bounce technique to soften the effects of harsh light while controlling any undesirable shadows.

The crime scene photographer is commonly tasked with photographing metallic objects (e.g., handguns, door knobs, knives, burglary tools), or blood and/or fingerprint evidence that is on metallic objects. There are several field-expedient tools that may used to evenly illuminate these types of objects or surfaces. One example of this is a stainless steel revolver photographed on a stand that is inside a Styrofoam cooler with multiple flash units firing from outside of the cooler to evenly illuminate the object without any overexposure. A white five-gallon painter’s bucket can also be used in a similar fashion to accomplish desirable results. When the flash is fired from outside of the enclosure, the light is diffused and spreads throughout, virtually eliminating shadows and hot spots. There are dozens of flash domes and soft boxes available on the consumer market that are used to diffuse the effects of the electronic flash, but these products can be easily created using a host of readily available items from the garage, home, or office. The TTL or manual flash modes can be used with this technique.

Other items that can be used to diffuse the effects of the electronic flash may include a white handkerchief or plain white piece of paper positioned in front of the flash unit. If the effects of the flash are still too much, the photographer can fold the handkerchief or paper in half to further diffuse the light. One of the nice aspects associated with digital photography is that the camera operator can preview in between shots until achieving the correct exposure.

Distance

Another method for controlling the concentration and effects of the electronic flash unit is to increase or decrease the distance between the flash and the subject being

photographed. This method works best when operating the flash in the manual mode, as when operating in an automatic mode the flash unit will attempt to compensate for distance modifications by increasing or decreasing the output. When operating in the manual mode the user can apply the inverse square law, which states that light diminishes by the inverse square of the distance traveled. As the distance the light travels doubles, its intensity is quartered.

Aperture

Opening the aperture of the lens or stopping it down is one of the most effective methods of controlling the effects of the electronic flash. When operating the flash in an automatic mode (E-TTL, MULTI) the flash unit will attempt to compensate for exposure value changes in aperture by increasing or decreasing flash output. When operating in the manual mode at a specific output value, the user can regulate the level of exposure by adjusting the aperture. If more exposure is needed, the user can open the aperture and adjust accordingly. If less exposure is needed, the user can stop down the lens aperture and adjust accordingly. The user should preview each image between exposures until the correct exposure is achieved.

Shutter Speed

Shutter speed is an important component of using an electronic flash. The proper synchronization speed must be set in order for the flash to fire at the exact time that the shutter curtain is completely open. When using the Canon EOS digital SLR camera, a range of shutter synchronization speeds are available. This range typically ranges from $1/60^{th}$ of a second to $1/250^{th}$ of a second. Incremental changes in shutter speed can be used to increase or reduce the influence of the electronic flash on an exposure.

Chapter Review

The electronic flash opens countless photographic opportunities to the crime scene photographer. Through the proper use of flash, the photographer is no longer bound to optimal lighting conditions when photographing subjects, scenes, or evidence.

Flash photography tends to be one of the single most challenging aspects of photography. The variables associated with controlling an exposure while using an electronic flash can become barriers to achieving the correct exposure. A solid understanding of how to control the effects of electronic flash through use of aperture, bouncing techniques, or diffusion is essential for success in crime scene photography.

CHAPTER SEVEN:
Specialized Photography Techniques

CHAPTER DESCRIPTION:

This lesson includes an interactive lecture followed by a comprehensive hands on laboratory in which students will have the opportunity to learn and demonstrate various techniques associated with conducting high quality forensic photography on a host of challenging subjects and surfaces.

GOAL:

Given a forensic based photographic objective on a difficult or challenging surface, the student will select the appropriate photographic technique that is necessary to acquire properly composed, properly focused, and properly exposed evidence quality images of the subject.

PERFORMANCE OBJECTIVES:

1. Photograph evidence on highly reflective surfaces
2. Photograph evidence on curved surfaces
3. Photograph evidence on clear surfaces
4. Photograph 3-dimensional impression evidence
5. Photograph watermarks in paper
6. Conduct close-up photography of extremely small evidence using extension tubes

Chapter Introduction

Capturing high quality photography of evidence on reflective, curved, and other non-typical surfaces can pose a challenge to the crime scene photographer. Documenting watermarks, 3-dimensional impression evidence, trace evidence, fracture matches, and extremely small objects or text, involves photographic procedures that deviate from the norm and require specialized techniques. This block of instruction will introduce the student to various techniques associated with capturing high quality images of a variety of evidence on a host of challenging surfaces.

Photography of Evidence on Highly

Reflective Surfaces

Scenes that contain highly reflective surfaces can pose significant problems for the crime scene photographer when using an electronic flash. The distracting 'hot spots' and over exposed areas from reflective objects can ruin an otherwise good photograph.

This problem is exacerbated when conducting close-up photography of metallic objects or evidence on reflective surfaces.

Crime scene photographers are commonly tasked with making high quality photographs of various metallic objects including firearms, knives, tools, jewelry, etc. In addition to photographing the object itself, latent prints are frequently developed on reflective surfaces that require additional photography.

Light striking reflective surfaces is not absorbed by the object and generally reflects directly back into the camera lens, causing overexposed areas commonly referred to as 'hot spots'.

When conducting close-up photography of latent or processed friction ridge evidence, these reflective areas can compromise the quality and detail of the print. Losing detail during the preservation of friction ridge evidence could make the difference in identifying the suspect or not.

1. When photographing this type of evidence on location ("*in situ*"), the photographer may have no control over removing the object from the scene for additional photography in a more controlled environment. An example of this type of evidence may be as common as a processed latent fingerprint on the door knob at a residence. In these situations, the photographer should identify the origin of the harsh reflections, usually the overhead lights, and eliminate them from the equation by turning them off. If the culprit is stray ambient light streaming in through a window, simply close the blinds or block the incoming light from reaching the subject of the photograph.
2. Once the lights are eliminated, a tripod mounted camera is essential due to the long exposure times that a reduced lighting scene will generally require. Most scenes will still have sufficient residual lighting streaming in from windows or from other rooms to conduct photography.
3. In cases where turning off the overhead lighting creates a completely dark environment, a bounce flash or diffuse lighting technique may have to be used to sufficiently illuminate the subject.
4. In situations where the overhead lighting cannot be turned off, the photographer can attempt to eliminate the harsh reflections by opening an umbrella and positioning it between the ceiling lights and the subject of the photograph.
5. When a persistent reflection exists, a diffusion tent of translucent material may be constructed and placed over the object. The goal here is to provide soft even illumination and eliminate the harsh glare of uncontrollable light on the reflective object.

   A field-expedient diffusion tent can be constructed in minutes from a wide variety

of readily available materials that include: a white pillow case, a white lamp shade, a white five gallon bucket, white shower curtain material, a large Styrofoam cup or Styrofoam cooler, etc. When using a translucent material other than white in color, the subject may assume a color cast that is consistent with the diffusion material; this is why white material is essential for diffusion.

When constructing a diffusion tent, a hole for the camera lens must be made in the material. The material, depending on the type, can then be secured to the lens with a rubber band. The material is then draped or positioned around the reflective object and ambient light is softened and evenly distributed as it passes through the material, eliminating the harsh reflections.

- When visible latent fingerprint evidence exists on extremely reflective surfaces, such as compact discs, the axial or coaxial lighting technique may produce favorable results.
- Coaxial lighting (sometimes called front directional lighting) involves the use of a clear piece of flat glass positioned at about a 45 degree angle between the camera lens and the subject. A relatively strong light source is then directed at the angled bottom side of the glass (side closest to the subject) so that the light beam is reflected onto the subject. The photograph is taken through the piece of glass, so a hot spot from the light may be seen on the glass in the final photograph.Therefore, it may be necessary to move the light source and clear glass around at various angles and distances until the best lighting for the evidence is obtained.

  Equipment:

  - Tripod, copy stand, or Quadra pod mounted SLR camera system.
  - Film/sensor plane parallel to the subject.
  - Close-up lens, i.e. macro or micro.
  - Cabled or infra-red remote control.
  - Clear piece of glass larger than the subject being photographed

  Procedure:

  - Select appropriate resolution, white balance, and film speed settings.
  - Use Manual shooting mode.
    - Select the appropriate aperture for the subject. Squarely fill the frame/viewfinder with as much of the subject as possible while not cropping out detail.
    - Position clear glass between lens and subject
    - Make the necessary adjustments to the glass while illuminating it with a concentrated light source from the side. Adjust until the evidence can be clearly visualized in the viewfinder.
    - Manually focus lens on subject.

- Acquire photograph of subject and confirm exposure, composition and focus by carefully previewing the image in the LCD.
- Acquire additional examination quality images of the subject by including a scale.

NOTE: The coaxial lighting technique can also be used to illuminate evidence inside of containers, or deep inside an area that light cannot reach, e.g. inside the barrel of a firearm that contains biological or other types evidence.

Visible or processed latent friction ridge evidence on mirrors can also be a challenge to accurately document with photography.

When positioning the camera directly above any evidence on a mirror, the camera equipment, photographer and background are generally captured along with the subject of the photograph.

A common technique used to eliminate the photographer and equipment from the image in situations like these involves positioning the camera equipment at an angle to the subject so that the equipment is not included in the composition. This technique could introduce some angular distortion that would require post capture correction with imaging software, and will not eliminate a secondary image that is created with photographing evidence on most mirrors.

To eliminate the secondary image—photographer and camera equipment from being captured when photographing evidence on a mirror—the photographer can position a section of white card or foam core board between the lens and subject. Then, drill a small hole, slightly larger than the physical size of the aperture in the card and line up with the aperture of the lens. This technique will allow the evidence to be photographed without distortion or background interference.

Photography of Evidence on Curved Surfaces

Processed friction ridge evidence on curved surfaces is a common subject during forensic or crime scene photography. An example of this may include the earlier mentioned processed latent fingerprint on a door knob, or the curved section of a counter top. The goal of the photographer is to preserve the evidence while capturing as much detail of the friction ridge evidence as possible. Depth of field and proper composition are of primary concern during this type of photography. These types of photographs can be taken in either the aperture priority or manual modes.

- Relate the evidence to the scene with midrange/relationship photography.
- With a tripod mounted camera, with a macro or micro lens installed, compose

a close-up photograph of the friction ridge evidence so that it fills the frame in the camera's viewfinder.

- Select an aperture that will maximize depth of field, i.e. between *f* 11 – *f* 22.
- Acquire a test photo of the subject and zoom the image during preview to confirm critical focus throughout the image.
- Once the exposure settings are established, make an examination quality photograph of the subject.

NOTE: Examination quality photography requires that a properly labled scale is included in the composition. The scale should be flat and thin, and at a minimum should contain the date, the photographer's initials, and the number of the item being photographed. The scale should be positioned at the same focal plane, and as close as possible to the impression/object being photographed.

In situations involving a large section of friction ridge evidence that extends beyond the acceptable depth of field, the photographer may have to re-position the camera to capture additional detail. In cases such as this, overlapping coverage of the detail should be acquired.

Photography of Evidence on Clear Surfaces

Photographs of friction ridge evidence on clear surfaces can lack the necessary contrast for making an identification. In an effort to produce the highest quality image, the photographer must attempt to produce a photograph that contains sufficient contrast so that a thorough examination is possible.

- One simple technique to photograph evidence on clear/transparent surfaces is by placing a contrasting colored card behind the subject. An example of this may be a visible latent, or a faint latent print developed with a cyanoacrylate fuming technique on a clear drinking glass or plastic bag. If the print is light in color, place a dark colored card behind the print and front light the subject with diffused lighting. If the print has been processed with a dark powder, use a white or light colored card behind the print. This technique will generally produce acceptable results by

  providing the contrast necessary to visualize the print detail. This technique may also produce acceptable results when photographing processed and latent fingerprints on windows.
- Another method used to photograph visible or processed latent prints on clear surfaces is to use a transmitted or back lighting technique. When using this technique, the subject (surface fingerprint evidence) should be positioned between the camera lens and a light source. The light is then transmitted through the clear surface but blocked by the friction ridge evidence, providing contrast. Depending on

the subject, either a diffuse transmitted or direct transmitted light may produce better results. Experimentation with both may be necessary to make a determination.

- ✓ Tripod, copy stand, or Quadra pod mounted SLR camera system.
- ✓ Film/sensor plane parallel to the subject.
- ✓ Close-up lens, i.e. macro or micro.
- ✓ Cabled or infra-red remote control.
- ✓ Select appropriate resolution, white balance, and film speed settings.
- ✓ Manual or aperture priority shooting mode.
- ✓ Select an aperture that will ensure critical focus throughout the subject, i.e. *f* 11 – *f* 22.
- ✓ Squarely fill the frame/viewfinder with as much of the subject as possible while not cropping our detail.
- ✓ Position contrasting card or material behind subject to increase contrast in subject, or…Illuminate subject from behind with diffuse or direct transmitted light.
- ✓ Manually focus lens on subject.
- ✓ Integrate wireless or cabled remote electronic flash unit.
- ✓ Acquire photograph of subject and confirm exposure, composition and focus by carefully previewing the image in the LCD.

Photography of Three-Dimensional Impression Evidence

Evidence that contains texture, or three dimensional detail, should be photographed so that the detail can be can be clearly visualized in the image.

Common subjects that contain three dimensional detail include, but are not limited to: footwear and tire impressions, indented writings, bite marks, tool marks and even fingerprint impressions left in certain malleable materials.

Front lighting these types of subjects can fill in the troughs and furrows of the evidence with light and can be counterproductive in defining the three dimensional detail.

To effectively capture the three dimensional detail of textured subject, the photographer should utilize oblique lighting techniques.

- ✓ Tripod, copy stand, or Quadra pod mounted SLR camera system.
- ✓ Film/sensor plane parallel to the subject.
- ✓ Close-up lens, i.e. macro or micro.
- ✓ Cabled or infra red remote control.
- ✓ Select appropriate resolution, white balance, and film speed settings.

- ✓ Manual or aperture priority shooting mode.
- ✓ Select an aperture that will ensure critical focus throughout the subject, i.e., *f* 11 – *f* 22.
- ✓ Squarely fill the frame/viewfinder with as much of the subject as possible while not cropping our detail.
- ✓ Manually focus lens on subject.
- ✓ Integrate wireless or cabled remote electronic flash unit.
- ✓ Photograph in ambient lighting conditions without side lighting.
- ✓ Re-photograph subject with the flash positioned at varying degrees of angle, i.e. 10 - 45 degrees.

The angle of the flash that produces the best results will depend on the depth of the impression being photographed. Deeper impressions will require a higher angle, while shallow impressions may produce better results when photographed at a lower angle.

Once the best angle for the impression is determined, the photographer should acquire multiple photographs from various positions around the impression while duplicating the flash distance and angle. Example: photograph a shoe impression from heel to toe, and from side to side between the legs of a tripod. Doing this may produce better detail in an area of the impression hidden by shadows from another angle.

NOTE: When the electronic flash unit—in manual mode—is integrated with the manual camera exposure mode, care should be taken to ensure selection of the proper flash synchronization shutter speed, as well as the proper flash output based on flash to subject distance, aperture setting, and film speed. This tends to be quite a challenge for new photographers. One option; photograph the subject using the camera's aperture priority mode in conjunction with the TTL flash mode. If exposure adjustments are necessary, the photographer can increase/decrease the flash output by adjusting the EV (exposure value) setting on the flash unit. An option to the flash on some impression evidence may be a powerful flashlight. This technique works well in a field application with indented writings. When using this technique, a small aperture and longer exposure time will allow the photographer to record the indented writing with an even exposure with a 'painting' technique, or by moving the flash light across the impression to evenly expose the subject.

Preview image in LCD and confirm proper exposure, composition, and focus.

Photography of Watermarks in Paper

Unique watermarks appear in a wide variety of stationary and official documents. These watermarks may be helpful in establishing the authenticity of a document or perhaps linking a suspect back to a particular crime.

Photography using a backlighting technique is a simple yet effective process that can be

used to record watermarks in evidence.

- ✓ Tripod, copy stand, or Quadra pod mounted SLR camera system.
- ✓ Film/sensor plane parallel to the subject.
- ✓ Close-up lens, i.e. macro or micro.
- ✓ Cabled or infra red remote control.
- ✓ Select appropriate resolution, white balance, and film speed settings for forensic photography.
- ✓ Position subject on a neutral background, i.e. photographic gray card.
- ✓ Squarely fill the frame/viewfinder with as much of the subject as possible while not cropping our detail.
- ✓ Manually focus lens on subject.
- ✓ Acquire an available light photograph and confirm exposure, composition and focus by carefully previewing the image in the LCD.
- ✓ Remove gray card and illuminate subject from behind using a diffuse lighting technique, i.e. lightboard, or soft even light source from behind.
- ✓ Once the subject has been illuminated from behind, adjust the exposure settings for the back lighting and re-photograph.

Close-Up Photography of Extremely Small Evidence Using Extension Tubes

When the evidence that needs to be photographed is extremely small, and a macro or micro lens is just not powerful enough to bring out the necessary detail in the object, specialized equipment is available to enlarge the subject.

The integration of an extension tube between a close focusing lens and an SLR camera system can enable the photographer to enlarge the subject by decreasing the minimum focusing distance of the lens. By decreasing the focusing distance the sensor can be filled by the subject, hence increasing detail in small objects. Depending on the focal length of the macro lens, the photographer can achieve extreme magnification of minute evidence.

Depending on the design of the tube, different maginification factors can be achieved. The tube itself contains no optical glass, they are hollow in design and come in various sizes that allow for increased magnification. The increased magnification is acheived through a decrease in minimum focusing distance. The tubes can be ‘stacked’ together, and used in conjunction with macro or micro lenses of all focal lengths to achieve extreme close-up photography.

Depending on the camera system used in conjunction with an extension tube, certain camera functions may or may not be supported. Many of today’s consumer camera

systems will not support metering or auto focus options once an extension tube is integrated into the equation. In cases such as these, the photographer should first acquire an accurate exposure setting based on the focal length and aperture settings of a lens, and transfer or maintain these settings once the extension tube is installed.

- ✓ Tripod, copy stand, or Quadra pod mounted SLR camera system
- ✓ Film/sensor plane parallel to the subject
- ✓ Close-up lens, i.e. macro or micro
- ✓ Cabled or infra red remote control
- ✓ Select appropriate resolution, white balance, and film speed settings for forensic photography
- ✓ Position subject on a neutral background, i.e. photographic gray card
- ✓ Squarely fill the frame/viewfinder with as much of the subject as possible while not cropping our detail
- ✓ Manually focus lens on subject
- ✓ Acquire an available light photograph of the entire subject and confirm exposure, composition and focus by carefully previewing the image in the LCD
- ✓ Make note of the exposure settings and install the necessary amount of extension tubes for desired magnification. Make the necessary notes in the photo log regarding the set up
- ✓ As the magnification increases, it may be necessary to move the subject so that the composition includes the area of interest

Chapter Review

1. Acquiring high quality forensic photographs of certain tricky subjects or evidence on difficult surfaces can be a challenge for the law enforcement photographer.

2. Reflective subjects can generally be controlled by eliminating the light source causing the harsh reflections. Additional techniques that involve diffusion or a coaxial lighting technique may be necessary on items like compact discs.

3. Curved surfaces require maximum depth of field. When photographing evidence on a curved surface, stopping the lens down to apertures between *f* 11 and *f* 22 will generally produce favorable results.

4. Evidence on clear surfaces may be photographed by just positioning a contrasting colored card or material behind the subject. Other techniques that involve backlighting the subject can also produce acceptable results.

5. Three dimensional impression evidence, e.g. indented writings, footwear and tire impression evidence etc. can be best photographed when using oblique lighting.

Shallow impressions will generally require extremely low angle light, whereas deeper impressions may require a higher angle of light to produce favorable results. Once the proper exposure is established, photographing the subject while the light source is positioned at various locations around the impression will ensure that all of the necessary detail is captured.

6. When the evidence that has to be photographed is so small that it is barely visible to the unaided eye, integrating extension tubes can produce extreme magnifications that allow for high quality photography that can be used for later examinations, analysis, or exhibits.

CHAPTER EIGHT:
Low Light Photography

Chapter Description:

This chapter and lesson will identify various situations in which law enforcement personnel will conduct low light photography. Several techniques will be discussed and demonstrated during the lecture and lab portion of the program that can be used to exploit evidence not readily visible to the unaided eye. Following the lecture, the students will have the opportunity to make high quality photographs of various scenes and evidence under diminished lighting conditions.

GOAL:

Given a scene with diminished lighting conditions, the student will select and utilize the appropriate photographic techniques necessary to acquire properly exposed evidence quality images of subjects, evidence, and the overall scene.

PERFORMANCE OBJECTIVES:

1. Photograph a large outdoor crime scene using the painting with light technique
2. Photograph a large outdoor crime scene using a timed exposure technique
3. Photographically document a crime scene containing trace amounts of blood using a chemluminescing agent
4. Photographically document the flight path of bullet trajectory in a crime scene using lasers

Chapter Introduction

One of the most challenging aspects of photography that confronts many law enforcement professionals is conducting photography in a diminished lighting environment. Although challenging, the need to photograph crime scenes, evidence, or subjects when the sun goes down, or in low light conditions, is extremely common. Law enforcement professionals tasked with making evidence quality photographs should possess the fundamental knowledge and techniques necessary to succeed regardless of the lighting conditions.

This block of instruction will provide various techniques that can be used to acquire high quality images of scenes, evidence, and subjects under conditions once thought of as being impossible to photograph in, the dark.

The Painting with Light (PWL) Technique for Photographing a Large Outdoor Crime Scene

Large outdoor crime scenes, serious traffic accident scenes, or even large indoor scenes, are quite common to the law enforcement photographer or criminal investigator to document. Scenes such as these are typically quite simple to preserve with photography during daylight conditions. Once the sun sets and the lighting conditions change, the parameters in which the photography is conducted must also change. The painting with light technique is helpful when photographically documenting any large scene in which the burst from a single electronic flash would be inadequate to properly illuminate the entire location and associated evidence.

The painting with light technique involves utilizing multiple bursts of light from an electronic flash unit, or systematic "light painting" with a powerful flashlight or spotlight. The technique can be accomplished with a single person, or with a photographer and either one or two assistants.

Note: The advantage to using multiple assistants during the painting with light technique is associated with the abbreviated exposure time necessary to accomplish the properly exposed photograph. In many cases long or timed exposures with a digital camera can exhibit an unacceptable amount of noise. Reducing exposure times with a digital camera may produce an image with less distracting noise.

TWO PERSON PAINTING WITH LIGHT TECHNIQUE

Evaluate the physical size and boundaries of the scene. This will help determine approximately how many bursts of light will be required to sufficiently illuminate the location.

a) Larger scenes will require more bursts from a flash unit.

b) Smaller scenes will require fewer bursts from a flash unit.

IDENTIFY ANY AMBIENT LIGHT SOURCES AT OR NEAR THE SCENE.

Street lights, traffic signals, and other stray light sources should be identified and intentionally excluded from the photographic composition when possible. This may include lanes of traffic in which vehicles are still permitted to travel during the photography.

Stray ambient light included in the composition of a timed exposure could create distracting over exposed areas in the image. Vehicle lights traveling near or

through the scene of a timed exposure will be rendered as distracting streaks of light that may have to be explained later during judicial proceedings.

Eliminating the potential for distractions in an image will force the viewer's attention to the subject of the photograph rather than an interesting or distracting photographic phenomenon.

CAMERA AND EQUIPMENT SET UP.

- ✓ Position the SLR camera on a sturdy **tripod** at full standing eye level.
- ✓ Select an **aperture** that will provide adequate depth of field, e.g. *f* 5.6 - *f* 8. Just remember, the smaller the aperture the less light allowed through the lens. Since these types of scenes are generally large, and the photographer is positioned at a significant distance from the evidence, a larger aperture may provide adequate depth of field while at the same time properly illuminating the scene with fewer bursts of light from the electronic flash.
- ✓ Select the **BULB** setting for shutter speed. This is typically the last shutter speed setting available, and is usually found after the 30" setting. This setting may be referenced as "TIME" in some digital SLR camera systems.
- ✓ Select an **ISO** suitable for low light photography, e.g. ISO 400 - 800+. Newer generation digital SLR cameras have proven able to provide much lower noise at higher ISOs. If acceptable image quality can be achieved at higher ISOs, using them may provide a better exposure with the same or fewer amounts of electronic flash bursts.
- ✓ Select a **white balance** consistent with the dominant light source. When using an electronic flash, use the flash white balance setting. If using a rechargeable flash light, i.e. Stream Light or Mag Light, the correct white balance setting is Tungsten.
- ✓ Install cabled **remote shutter release**, or program camera for the IR remote shutter release mode. Using a cabled or remote release is essential during a timed exposure. This helps ensure that the camera doesn't move during the long exposure.
- ✓ Turn off any **vibration reduction** option on the lens.
- ✓ Set the camera to the **manual focus** mode. Auto focus is generally not an option during the painting with light technique due to the low light environment. When having difficulty seeing to focus, an option may be to use the distance scale on a lens to pre-set focus at a specific distance.
- ✓ Illuminate the scene with a flash light or spot light to select the proper focal length and **composition**. Make sure that the composition includes as much of the evidence that you intend to illustrate in the image as possible. This is an overall, or establishing, composition that is intended to show as much of the scene and evidence as possible.
- ✓ Illuminate the scene with a flashlight, or spotlight, and **focus** the lens. With large scenes, it may be helpful to focus on an object/area approximately 1/3rd

into the composition. This will help ensure the maximum distribution of depth of field throughout the photograph.

- ✓ Acquire your **black card** and ready your partner for the exposure.

NOTE: An in camera menu option that should be considered when doing timed exposures is the **Long Exposure Noise Reduction**. Most digital SLR camera systems are equipped with this option, which reduces distracting long exposure noise as the file is processed through the camera. When this option is activated, it is common to have an equivalent internal processing time as the actual exposure time itself. This may be referenced in the camera's LCD as **Job NR.** This is not an error message, merely a message letting the photographer know that the image is being processed for noise.

COMMUNICATING WITH YOUR PARTNER(S), CREATING THE IMAGE.

- ✓ Prior to beginning the exposure using the two person technique, the team must establish and agree upon a set of terms in which will be used during the exposure. As a suggestion, the terms **OPEN, READY** and **GO** can be used. Keeping the terms as simple as possible will help eliminate confusion during the exposure.
- ✓ Photographer is positioned at the tripod mounted camera with the black card in hand.
- ✓ Assistant is equipped with **two electronic flash units** that have **fresh batteries** installed. Using two flash units will cut down on the exposure time, by always having a freshly recycled flash ready to go when in position.
- ✓ The electronic flash units are used in the manual mode.
- ✓ Full 1/1 power setting is selected on the flash unit.
- ✓ The flash is triggered by pushing the test button on the unit.
- ✓ The test button is very small and at times difficult to trigger. An option may be to install the flash on another digital SLR camera system and activate the flash with an exposure on the second camera. The flash directionality and output settings should be the same as if the flash were manually fired using the test button.
- ✓ The photographer opens the shutter curtain with the remote control while the front element of the lens is covered by the card. The photographer communicates **OPEN** to the assistant, letting them know that they are prepared to begin the exposure.

Note: When moving the card away from and back into position in front of the lens, the photographer should ensure that he/she does not accidently bump the camera or lens with the card. The photographer should also ensure that they are aware of the location of the tripod legs so that they don't accidently bump them while moving around during the exposure. Bumping the lens with the card, or kicking a tripod leg, could ruin the exposure by rendering the scene out of focus.

- ✓ Once the assistant (flash operator) is in position, and the flash is charged and

ready to fire, he/she signals to the photographer that they are **READY**. The photographer removes the black card from in front of the camera lens, and signals **GO** to the assistant. Once the **GO** signal is communicated, the assistant fires the first flash into the scene. Once the flash fires, the photographer immediately covers the camera lens with the black card and awaits the next ready signal from the assistant.

Note: As a general rule, the flash operator should attempt to stay outside of the camera's field of view when firing the camera flash. Positioning a set of cones, or photo numerical markers, just outside of the field of view during set up may help establish some boundaries during this technique. The flash should held slightly overhead, be pointed across the field of view (perpendicular to the camera angle), and angled down slightly. The flash should not be pointed back towards the camera position, as this will be visible in the finished photograph as a solid concentrated light source that could be mistaken as a street light.

- ✓ After the assistant fires the first flash into the scene, they should walk **approximately five casual paces** down the imaginary line outside of the field of view to set up for the next flash. Once in position, the assistant signals **READY** to the photographer, and awaits the **GO** signal. This process is repeated until the entire scene is properly illuminated. Depending on the size of the scene, it may not be uncommon to have 8-12 individual flash bursts to provide proper and even illumination. This can be achieved by firing **overlapping flash bursts from two sides** of the scene. In some cases this may be impossible, but when possible firing the flash from two sides can produce better results.
- ✓ Following the final flash burst, the photographer closes the shutter curtain with the remote control and awaits the image review on the camera's LCD. Once the review appears, the photographer should carefully examine the image to ensure that the scene was properly exposed, focused, and that all relevant evidence was contained within the composition. If any areas within the image suffer from a poor exposure (over or under exposed), the scene should be re-photographed until the correct exposure is achieved.

SINGLE PERSON PAINTING WITH LIGHT TECHNIQUE

The single person painting with light technique can be done when the help of an assistant is impossible to secure. When using this technique, the scene can be 'painted' in with an electronic flash as illustrated above, or with a powerful rechargeable flashlight or spot light from behind the camera's position. This sub-section will discuss this technique **using an electronic flash**.

- ✓ Camera settings are identical as mentioned above. The only exception is that the non-reflective black card is not necessary using this technique.
- ✓ The scene settings and boundaries that were established using the two person method are also identical.
- ✓ The photographer opens the camera's shutter curtain and locks it open in the **BULB**

setting.

- ✓ The photographer then walks outside of the field of view and fires a camera flash, perpendicular to the camera angle into the scene. The photographer repeats this at intervals of '**five casual paces'** down and back both sides of the scene until the scene has been properly illuminated.
- ✓ Once the final flash has been fired, the photographer closes the shutter curtain with the remote control and waits for the results to appear on the LCD.
- ✓ Once the completed image appears on the camera's LCD, it is carefully inspected for exposure, focus, and content. If the image suffers from exposure, focus, or content problems it is re-taken until the desired results are achieved.

As mentioned above, the single person painting with light technique can also be done using a powerful **rechargeable flashlight, or spotlight**.

- ✓ Camera settings are identical as mentioned above. The only exception is that the non-reflective black card is not necessary using this technique.
- ✓ The scene settings and boundaries that were established using the two person method are not as important using this technique, as the photographer will operate the light source from behind the camera.
- ✓ The photographer opens the camera's shutter curtain and locks it open in the **BULB** setting.
- ✓ Using a powerful flashlight, or spotlight, the photographer will systematically paint in the scene. Steady, even, 'brush strokes' with the light source from top to bottom throughout the scene will generally produce great results. This may be an option when the photographer has to photograph the scene alone, or when an auxiliary electronic flash becomes inoperable.
- ✓ Once the final 'brush stroke' of light has been 'painted', the photographer closes the shutter curtain with the remote control and waits for the results to appear on the LCD.
- ✓ Once the completed image appears on the camera's LCD, it is carefully inspected for exposure, focus, and content. If the image suffers from exposure, focus, or content problems it is re-taken until the desired results are achieved.

The Timed Exposure Technique for Photographing a Large Outdoor Crime Scene

Another option for photographing a low light scene is through use of an extended or timed exposure technique. This technique, when done correctly, can make a dimly lit night time scene look like daylight.

This technique is done with a single photographer, and requires very little set up or planning.

1. Attach the digital SLR camera system to a tripod.
2. Select an **aperture** that will provide adequate depth of field, e.g. *f* 5.6 - *f* 8.
3. Select the **BULB** setting for shutter speed.
4. Select an **ISO** suitable for low light photography, e.g. ISO 800 - 1600.
5. Select a **white balance** consistent with the dominant light source. When a scene contains multiple light sources, including natural star and moonlight, use the auto white balance setting on the digital camera.
6. Install cabled **remote shutter release**, or program camera for the IR remote shutter release mode.

NOTE: Using a cabled release is essential during a timed exposure. This helps ensure that the camera doesn't move during the long exposure.

7. Turn off any **vibration reduction** option on the lens.
8. Set the camera to the **manual focus** mode.
9. Illuminate the scene with a flash light or spot to select the proper focal length and **composition**. Make sure that the composition includes as much of the evidence that you intend to illustrate in the image as possible. This is an overall, or establishing, composition that is intended to show as much of the scene and evidence as possible.
10. Illuminate the scene with a flashlight, or spotlight, and **focus** the lens. With large scenes, it may be helpful to focus on an object/area approximately 1/3rd into the composition. This will help ensure the maximum distribution of depth of field throughout the photograph.
11. Open the shutter curtain with the remote control and make a 'test' exposure for approximately one minute.
12. Review the image and make a determination regarding the exposure.
13. If the photograph is too dark, an additional minute of exposure time (2 minute exposure) will have a one stop positive effect on the overall image. If necessary, adjust and re-photograph until the desired effect is achieved.

Photographically Document Trace Amounts of Blood Using a Chemiluminescing Agent

The presence of fresh or dried blood in a crime scene is typically very obvious to detect, and quite simple to document and preserve with conventional photography.

However, when a suspect makes an attempt to hide blood evidence by cleaning it up, the detection and photographic documentation of that evidence becomes increasingly difficult.

Chemical reagents that fluoresce when exposed to trace amounts of blood evidence are available through most forensic supply companies, and include Bluestar and Luminol. Research and regular field use have established that these chemicals have the potential to respond and fluoresce to trace amounts and dilutions of blood at ratios down to 1:5,000,000.

Other applications for these types of chemicals involve blood scenes that have not been cleaned up by the suspects, but that the dark background that contains the blood evidence conceals it from detection. Examples of this may include dark colored floor coverings, window treatments, comforters and bed linens, clothing, and wall paint or wall paper.

- Prior to contaminating the scene with a chemical agent, it should be photographed in its pristine condition with overall/establishing photography.
- An initial evaluation of the scene is required prior to beginning the low light Luminol/Bluestar photography technique. This evaluation should include a search for trace amounts of blood; blood drops, spatter, dark stains, or specific areas that have been aggressively cleaned that are inconsistent with other areas within the scene.

NOTE: When the use of these types of chemicals becomes necessary, the investigator typically doesn't know exactly where the hidden blood evidence may be located. Often times, through the investigatory process, a general location is narrowed down, and the search for cleaned up blood evidence is attempted. This location may show signs of recent aggressive cleaning in a specific location, not consistent with the remainder of the scene, or even some residual dark stains on a surface. As soon as the chemical agent produces some positive results, the low light photography technique used to document these types of scenes can begin.

With a tripod mounted digital SLR camera, use **available light** to photograph the scene **as is**.

- Aperture priority, or manual mode, at about *f* 8 – *f* 11 to maximize depth of field.
- Normal to wide focal length. Wider focal lengths will increase the field of view and could increase the chances of capturing fluorescing areas within the scene once the chemical has been introduced.
- Set the correct white balance based on the dominant light source in the room, typically incandescent or fluorescent.
- Install/use a remote shutter release cable or infrared remote shutter control to minimize camera shake.

Prepare the chemical agent that is going to be used to search for the blood evidence. Depending on which agent is used, some mixing and wait time may be necessary. With Bluestar this process takes about ten or so minutes. This brief delay allows for camera set up while you wait.

- Bluestar is packaged in a two tablet pack that is mixed together in about 4 ounces of water per kit and misted through a spray bottle or pump sprayer onto the suspected surface.
- Luminol is packaged either in a spray bottle in liquid form, or in a dry chemical form in a pouch that is mixed and sprayed onto the suspected surface just as Bluestar is.

Adjust camera settings for a low light **timed exposure** on your tripod mounted digital SLR camera

- Set the camera shutter speed to the **BULB** setting and prepare for about a **90 – 120 second exposure**. Use a stopwatch or second hand on a wrist watch to keep track of the exposure time. Or use a long exposure rather than the bulb setting.
- Set an aperture that will afford moderate depth of field while still allowing for an acceptable exposure time, e.g. ***f* 5.6** or so.
- Set the ISO to an acceptable ISO for a long exposure, e.g. **ISO 400 – ISO 800+.**
- **Disable** any **vibration reduction** option on the camera lens.
- **Manually** set and lock **focus** on a subject about one third into the scene. This will help maximize the distribution of depth of field.
- Stand by to open shutter curtain once the fluorescence begins.

Turn off all available room lighting and block any stray ambient light streaming through windows or under door cracks.

- Total darkness for this technique is preferred.
- The darker the scene, the more obvious the fluorescing results from the chemical agent and the better the photography results.
- Cardboard, towels, or other like material can be used to block light at windows and doors.

Although this technique can be accomplished alone, the assistance from a helper assigned the duty of spraying the chemical agent onto the suspected area is preferred.

- The fluorescence from the reaction with blood is quite obvious when using Bluestar.
- Luminol will produce similar results, but will generally not fluoresce as bright as Bluestar. When using Luminol, the exposure times may have to be increased

to achieve similar results.

NOTE: When spraying the chemical solution onto vertical painted walls or non-porous vertical surfaces, the liquid will begin to run and spread the fluorescing results into other areas within the scene. Caution should be taken not to spray too much solution into any one specific vertical area.

Once the chemical is sprayed into the scene, and the fluorescing begins, the **camera's shutter curtain should be opened and locked open** in the BULB setting for approximately 90 – 120 seconds.

When approximately ten seconds remain in the exposure, **a burst from an electronic flash** should be bounced off of the ceiling in the room. The flash output power will depend on the size of the scene and the ceiling height, but as a general rule **½ power output** will provide adequate results to sufficiently illuminate the scene without overpowering the fluorescence of the Bluestar/Luminol.

After closing the shutter from the exposure, the photographer should await the results of the image in the camera's LCD. Once the image appears, it should be carefully examined for exposure, content, and focus. If any adjustments are necessary, the photographer can repeat the exposure until the desired results are obtained.

Using a timed exposure may be appropriate rather than using the bulb setting and bounce flash. Trial and error may be needed to find the best settings.

NOTE: Caution should be exercised in repeating the chemical processing too many times, as this could potentially degrade the blood evidence through excessive dilution. It should also be noted that it is possible to visualize and photograph a 'false positive' reaction using Bluestar and Luminol. Research in this area has established that certain high fiber food products and certain paints and varnishes will produce intense false positive reactions. These are potentially distinguishable due to their intense reaction.

Photographically Document Bullet Trajectories in a Crime Scene Using Lasers

Reconstructive efforts at shooting scenes can include documenting the position of the shooter relative to the location of the bullet's impact, or bullet flight path trajectory. Many times this evidence can be extremely valuable, as it can be used to corroborate or discount statements made by suspects and or officers involved in shooting situations.

This technique may also aid in the search for, and recovery of, valuable evidence that is left behind at a crime scene by a suspect. This evidence may be found at the area of origin from where the weapon was fired from, which could remain undetected if never established.

This technique may also be used in locating expended bullet projectiles by tracing the path through an object and beyond. These projectiles could then be collected and submitted for analysis, which may provide valuable evidence during the investigation and later adjudication.

This particular block is included in the low light photography lesson plan, because it involves many of the same principals and photographic techniques associated with the three previous performance objectives.

Two points must be present to properly determine trajectory. Shooting scenes that contain “through and through” bullet holes can potentially yield the most accurate results when using this technique. Examples of “through and through” bullet holes may include bullet penetration through both sides of an interior or exterior wall, through a door, through two sides of a vehicle panel or vehicle door, through furniture, filing cabinets, or other like items. This technique, when used with a thin solid core material may only aid in determining a general directionality of the flight path of the bullet.

The through and through holes allow for the insertion of laser mounted trajectory rods that will ‘point back’ to the location of the shooter(s). Some of the advantages to using this technique over a string technique include: less likely for the flight path to sag or droop over distance, you will not run out of laser as you will string, potentially more accurate and visible in photography.

The technique discussed in this performance objective will provide best results in a darkened environment. Outdoor scenes should be documented at night using this technique and indoor scenes should be intentionally darkened. With the addition of laser(s), the darker the scene, the more visible the results. The use of neutral density filters and extremely small apertures may be an option when the necessity to document these scenes in daylight conditions exists.

- When through and through bullet holes are present in the scene, first photograph them in their pristine condition with parallel photography. Additional photography that illustrates their relative location to the scene should also be acquired, e.g. midrange/relationship photography.

Following the pristine parallel photography of the bullet hole evidence, assign a number or letter for each of the bullet holes and affix an adhesive label with the corresponding letter or number next to the hole. Measurements should be taken for each bullet hole and documented on a sketch. Place a plumb measured scale from ground level extending upward and slightly beyond the highest bullet hole, and re-photograph. A tape measure may be used if necessary. This photograph may prove valuable in later forensic or ballistic analysis, but must include scale.

Carefully insert the projection rods from the trajectory kit into the bullet hole, and through the inner wall and outer wall of whatever object you are working with. Repeat this step for multiple bullet holes. If the distance between the “walls” exceeds the length

of the projection rod, additional threaded rods can be added so that the correct angle between the “walls” remains accurate. Once all of the projection rods are inserted through the bullet holes, additional photographs should be taken that include this step should be taken.

After photographing the projection rods, establish the angle of trajectory by using an angle level or a protractor. The angle level included in the laser trajectory kit will rest comfortably on the protrusion rod. An angle can then be acquired, and documented, for each numbered or lettered bullet hole. This important information should be noted in any corresponding report. Photographs of the angle for each bullet hole can be made with the angle finder in place, but may be extremely time consuming when documenting multiple bullet holes.

Following the bullet hole photography set up a tripod-mounted camera at a position within the scene so that you can capture both the bullet impact area(s) and the suspected location of the shooter(s). This may have to be established once the flight path is tracked with the laser, but if shell casing evidence or witness testimony suggests a general area then include it in the composition.

- Thread the laser(s) into the end(s) of the protrusion rod(s).
- Set tripod-mounted digital SLR camera in BULB setting for a timed exposure.
- Set aperture at *f* 5.6 – *f* 8.
- Set ISO to 400 – 800.
- Manually focus on an object about 1/3rd into the composition.
- Turn laser(s) on.
- Darken the scene.
- Mist the scene with a particulate that will suspend in the air for several seconds or longer (see note below).

NOTE: Recording a laser with a digital camera is an additive process. This cannot be achieved unless the laser can be visualized. To visualize the laser, a suspended particulate or non reflective card must be used. Various particulates may be used in conjunction with this technique. Some options may include a “canned fog,” a Halloween Fogging device, or even water spayed from a spray bottle. Caution should be exercised when using a Halloween Fogging device indoors, as it will activate fire alarms. When using a card technique, a non reflective white in color card can be used. The card is positioned in front of the laser beam, and moved along the flight path at a steady gait while the camera’s shutter is open.

Once the laser can be visualized, open the camera’s the shutter with the remote control and leave it open until the entire laser has been fogged into the scene. When photographing multiple bullet trajectories, multiple lasers can be used at the same time and fogged in the same fashion as the first one.

When using the card technique to document the bullet trajectory, with a darkened

scene an individual positions a non-reflective white card so that the laser beam is in the middle of the card. Once the beam is visualized on the card, the individual walks at a steady gait while maintaining the laser beam in approximately the same position on the card.
This technique is repeated for multiple bullet trajectories.

When conducting this technique in an indoor scene that has been darkened, at the end of the laser documentation the photographer can fire an electronic flash toward the ceiling of the room to illuminate the remainder of the scene while not overpowering the path of the laser. This can also be accomplished with a very quick switch of the overhead lights in a room. This technique, if done quick enough, can provide a well illuminated scene throughout, while still rendering the distinct color laser along the flight path that the bullet traveled.

Another method is to document the overall scene and the laser trajectory together. Using this technique the photographer would first acquire an available light photograph of the properly illuminated scene. A second photograph is then taken from the same exact location, but in a darkened scene to capture the laser trajectory. These two photographs are later merged using non-destructive layers in Adobe Photoshop®. This can also be accomplished in camera in many of today's digital SLR camera systems with a "multiple exposures" option.

NOTE: When using lasers to document multiple bullet trajectories from more than one weapon/suspect, the photographer may choose to utilize multiple colors of lasers to distinguish in the photograph the different individual's relative positions during the shooting incident. An example of this may include using a green laser to identify law enforcement personnel and a red laser to identify suspects in cases of officer involved shootings. Blue lasers are also available in the consumer market, however are quite expensive in comparison to red and green lasers.

Chapter Review

When conducting photography in diminished lighting conditions, the evidence photographer must have a fundamental understanding of how to properly document these types of scenes so that the scene and the evidence are sufficiently illuminated.

The ability to photographically document blood scenes by using a chemluminescing agent could provide powerful evidence during the investigation.

Documenting bullet trajectories in shooting scenes with lasers has the potential of providing valuable insight during the investigation. The graphical illustration also helps establish the locations of individuals involved in a gunfight, and could help answer important questions as well as aid in the recovery of valuable evidence in these types of investigations.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 10/10/2016	**NUMBER:** DE.01 - Services
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Services	

I. The Digital Evidence Unit provides the following services.

A. Audio Enhancement

1. Improving the intelligibility of the voice or non-voice signals of an audio recording.

B. Image Enhancement

1. Improving the clarity of an image or portion of an image.

C. Video Enhancement

1. Improving the clarity of a video or portion of a video.

D. Audio, Video, and Image Production

1. Editing Audio, Video, and Image files for presentation.
2. Redacting Audio, Video, and Image files.
3. Converting file formats.

E. Field Services

1. Assistance with extracting files from audio, video, and image equipment in the field

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 05/05/2019	**NUMBER:** DE.02 - Quality Assurance
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ANAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Quality Assurance	

I. The Digital Evidence Unit adheres to the Quality Assurance policies in the Division Manual with the following additions and clarifications:

A. **Evidence Handling FSD.35**

1. Only digital evidence will be accepted for processing.
    a. Peripheral devices (monitors, keyboards, mice, etc.) unrelated to the analysis will not be accepted. Unknown devices may be accepted at the discretion of the Digital Evidence Unit.
    b. Documentation will not be accepted as evidence. Photocopies of field notes, passwords, photographs, etc. may be attached to the service request as administrative records.
    c. Analog evidence will not be accepted (film, photographs, audio or video magnetic tapes, etc.).
2. Agencies may submit non-evidence media as destination media. For example, an agency may request that a copy of a video enhanced by the Digital Evidence unit be placed on a submitted non-evidence USB thumb drive.
    a. Non-evidence destination media shall be labeled as “destination media” followed by the hardware description in LIMS.
    b. Non-evidence media used for one-to-one copies (dd, restoration, etc.) will be wiped prior to use by the Digital Evidence Unit. The submitting agency will be notified of this policy.
3. To protect the integrity of internal computer components (hard drives, RAM, etc.), examiners will take precautions against static electricity.
    a. Examiners may use anti-static mats and wrist straps while handling these items or
    b. Examiners may place these items in anti-static bags while handling them.

B. **Test Records FSD.42**

1. Digital Evidence Unit test records will include the following additional items:
    a. The equipment used during the examination.
    b. The software and version number used during the examination.
    c. MD5 hash values of the below items. The hash values may be
        i. Pre-examination and post-examination MD5 hash values of forensic images used during an analysis.
        ii. If no forensic image was made, MD5 hash values of the original files and logically copied files.
        iii. MD5 hash values of output files.
2. The following digital files produced during an examination will be archived on the Digital Evidence Network Attached Storage (NAS):
    a. Working files, metadata files, hash value files, log files, and output files.
    b. Copies of the original evidence will not be maintained.
3. Amendments to records
    a. Non-contemporaneous revisions to test records must be recorded in the test record.
    b. Examples:

i. The settings for a filter during an enhancement are finalized on day one. On day two the examiner changes the final settings of the filter. The settings for the filter on day one and day two will be recorded in the test record.

ii. The order of audio filters applied for an enhancement are finalized on day one. On day two the examiner changes the order for the final enhancement. The order of the filters on day one and day two will be recorded in the test record.

C. **Test Reports FSD.43**

1. The Digital Evidence Unit may produce digital examination results.
   a. Digital examination results will be given to the requesting agency on non-rewritable optical media (preferable) or other digital media at the discretion of the examiner.
   b. A copy of digital examination results will be archived at the laboratory.
2. If an agency supplies destination media, the LIMS description of destination media will be updated after the examination results have been placed on it.
3. Any CD or DVD that has apparent pornographic images of children copied on it as part of the examination will be labeled with the following: “This media may contain contraband and is intended for use by law enforcement in an official criminal investigation. Dissemination of this material may result in a criminal violation.”
4. Agencies may request redacted copies of digital examination results.
5. The administrative review milestone in LIMS reflects both the technical and administrative review of the report.

D. **Equipment FSD.33**

1. The Digital Evidence Unit will be furnished with equipment for conducting examinations.
2. Equipment will be distinguishable by a combination of make, model, serial number (when available), and laboratory ID. This does not include peripheral devices.
3. If a piece of equipment stops functioning, examiners will notify the Digital Evidence Supervisor for maintenance or replacement.

E. **Performance Verification and Calibration FSD.27**

1. No equipment in the Digital Evidence unit requires calibration.
2. Equipment used for examinations will undergo performance verification at the following intervals:
   a. Prior to first use
   b. Once per year
   c. After maintenance
   d. After being out of the control of the laboratory, e.g. sent to a vendor for repairs.
3. For computers and stand-alone equipment, a successful Power-On-Self-Test (POST) and successful loading of the operating system will be considered a successful performance verification.
4. For hardware write-blockers, each port will be verified to protect against writing data by using an authorized tool or axiomatic operating system data-writing command (DOS copy, click-and-drag, etc.).
5. Examiners authorized to perform casework may perform performance verifications and validations on equipment related to that type of casework.

F. **Equipment and Maintenance Log FSD.33**

1. An equipment and maintenance log will be maintained by the Digital Evidence Unit.
2. The logs will contain the date the equipment was put into service, performance verifications, maintenance, and the date the equipment was taken out of service.
3. The logs will also document firmware or BIOS updates with the version number.
4. Only maintenance issues related to critical hardware components should be recorded, i.e. replacing hardware in a computer, or updating the firmware of a write-blocker. Routine exchange of non-critical hardware and changes in software configuration will not be recorded.

G. **Technical FSD.17 and Administrative Review FSD.18**

1. The Digital Evidence unit will follow the division polices for technical and administrative review with the following additions and clarifications.
2. All reports by the Digital Evidence Unit will be technically reviewed.
    a. The technical reviewer will evaluate the case notes and report to ensure the the respective Digital Evidence technical procedures were followed, including the following items when applicable:
        i. The requested work is in the "Request" section of the report (LIMS finding, "Case Synposis"). All items in the request section must be addressed in the report.
        ii. Original media is write-blocked.
        iii. Hash values of copied files match the original.
        iv. Appropriate enhancements were applied, the settings were recorded, and the enhancements are listed in the report.
        v. Encoding settings for enhanced files are recorded.
        vi. The result of the examination is clearly stated in the report.
    b. If the technical reviewer rejects a technical element (observation, data, or test result), the reviewer will initial and date, and write the reason for the rejection in the notes.
    c. Changes made by the examiner based on the technical review will be initialed and dated.
    d. The completion of the technical review will be documented electronically in LIMS.
3. All reports by the Digital Evidence Unit will be administratively reviewed.
4. Technical and Administrative reviews will include digital examination results.
5. Technical reviews will be documented with the Technical and Administrative Review Checklist (DEF.04). Administrative reviews will be documented with the LIMS milestone.

H. **Legal Authority**

1. A copy of the legal authority must be submitted along with the examination request form when a search is required of the evidence.

I. **Technical Lead**

1. Roles and Responsibilities: The Technical Leader will work closely with the Unit Supervisor and be responsible for the following duties in the Digital Evidence Unit:
    a. Oversee the technical operations.
    b. Oversee quality assurance.
    c. Evaluate and document the approval of all validations and methods, and approve new or modified procedures.
    d. Review and approve training records and qualifications for new hires.
    e. Review unit procedures.
    f. Review and approve training, quality assurance measures, and proficiency testing program.
    g. A newly appointed Technical Leader will be responsible for reviewing relevant validation studies and methodologies currently used by the Unit.
    h. Perform technical and administrative review of casework.
    i. Assist in assigning and administering proficiency and competency tests.
    j. Assist in technical problem solving.
    k. May recommend suspension of casework for an individual or for the Unit.
2. Qualifications: The Technical Leader must be a full time employee of the Laboratory and have, at a minimum, the following education, experience, and training:
    a. Meet the education requirements of a Criminalist.
    b. A minimum of four years of full-time laboratory experience conducting casework in Digital Evidence.

3. Authorization: The Technical Leader will meet the same requirements for authorization to conduct casework as other examiners.

J. **Assuring the Quality of Tests** (FSD.29)

1. The Digital Evidence Unit monitors the validity of tests with the following methods:
    a. Functional and intermediate checks of testing equipment
        i. See FSD.33 and DE.03 for more information regarding equipment maintenance testing.
    b. Review of reported results
        i. See FSD.17 for more information regarding analyst responsibilities for checking reported results and conclusions
    c. Technical and administrative review
        i. See the "Technical and Administrative Review" section above for information regarding technical and administrative review.
    d. The data derived from monitoring activities above are documented the following ways:
        i. Equipment Logs.
        ii. Level 2 Corrective Actions.
        iii. Division Level Corrective Actions.
    e. Monitoring
        i. The outcome of monitoring is reviewed, at minimum, annually during an internal audit.
    f. Methods not used to monitor tests:
        i. Currently the Digital Evidence Unit does not use reference materials, quality control materials, alternative instrumentation, control charts, replicate testing, correlating results of different characteristics of a different item, intralaboratory comparisons, or testing of blind samples.
        ii. The unit does not retest retained items as all evidence items are returned to submitting agencies.

K. **Ordering Supplies and Services** (FSD.30)

1. An individual with budget authority, typically the Chief or a Forensic Manager, will authorize the purchase of supplies and services. Personnel within the Digital Evidence Unit may order supplies according to FSD.30 & CLER.CRIM.12.
2. Supplies and services are designated into two broad categories:
    a. General supplies and services that do not affect the quality of tests, (e.g. office supplies). Requirements in this policy do not apply to these items.
    b. Supplies and services that affect testing and have an impact on the quality of results (e.g. proficiency test providers).
3. The Unit Supervisor or Technical Lead will evaluate external providers and products to ensure their suitability based on one or more of the below criteria. Criteria will be maintained on the Digital Evidence network share.
    a. Proficiency tests purchased from an ISO 17043 supplier
    b. Subcontracting services supplied by an ISO 17025 laboratory
    c. The laboratory has a prior history of satisfactory service with the vendor product.
    d. The equipment meets specified criteria (must be performance verified or validated prior to use).
4. The Unit Supervisor or Technical Lead will monitor external providers to ensure their suitability for use based on the following criteria:
    a. Checking a scope document to ensure the service being requested is within the scope of the vendor or subcontractor.
    b. Checking an accreditation certificate to ensure that accreditation has not lapsed.
    c. Ensuring the product/service is of sufficient quality.
    d. Ensuring the product/service is provided in an acceptable time frame.

e. Ensuring the product/service still meets the Digital Evidence Unit's suitability criteria.

5. Receiving

   a. When supplies are received, the shipping documents must be reviewed and the items inspected to verify that all supplies ordered were received and conform to the Unit's requirements. This is typically done by the analyst who placed the order. All staff in the Digital Evidence Unit may review the order.

   b. If the order does not conform to the Unit's requirements or the correct product was not received, the Unit will not accept the order. The Unit Supervisor or Technical Lead will be notified, and action will be taken.

   c. Once the order is reviewed and accepted, the packaging slip should be signed/dated and forwarded to the Clerical Unit.

6. The Digital Evidence Unit will communicate the following to external providers:

   a. Products to be provided

   b. Acceptance criteria

   c. Competence, including required qualifications of personnel

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 04/24/2019	**NUMBER:** DE.03 - Tool Use
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ANAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Equipment Use	

I. Examiners must use approved equipment during examinations. Equipment includes hardware devices (computer workstations, write-blockers, stand alone imaging devices) used to access media (hard drives, SD cards, CDs) and software (forensic imaging software, Photoshop) used to access media.

A. The Digital Evidence Unit will maintain an electronic list of approved equipment.

1. The equipment list will minimally contain the tool name, manufacturer, version, validation or performance verification results, approval date, and approving authority.

2. The equipment list will describe the training requirements for equipment as designated by the Technical Lead or Supervisor.

3. Examiners are required to be authorized to use equipment prior to using the equipment in casework. Equipment authorization will be documented with the Tool Authorization Form (DEF.03).

B. Validations and performance verifications.

1. Commercial, off-the-shelf equipment (hardware and software) are considered validated and will be performance verified prior to use in casework.

2. Custom software will be validated prior to use. Custom software includes macros, scripts, or batch files that use custom calculations. Custom software does not include macros, scripts, or batch files without custom calculations or settings built into commercial software.

C. Deviations from the approved equipment list

1. In exigent circumstances, the Digital Evidence Supervisor or Manager may approve a deviation from the approved tool list.

2. The deviation and approval will be documented in the case record.

3. A validation or performance verification of the deviation tool should be performed within 60 days of the tool usage.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 12/22/2016	**NUMBER:** DE.04 - Field Services
	RELATED ORDERS: CS.01 - Field Services	
APPROVED BY: Terence Wong and Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Field Services	

I. The Digital Evidence Unit follows the Forensic Services Division Evidence Field Services policy (CS.01) with the following additions and clarifications.

A. The Digital Evidence Unit is available for field services in acquiring audio, video, and image evidence. The Digital Evidence Unit will not assist with on-site forensic imaging or computer triage.

1. A copy of the legal authority will be provided to the Digital Evidence Unit by the agency with the service request.

2. Agencies will notify the Digital Evidence Unit with as much time as possible prior to the date of the search warrant service.

3. Agencies will provide as much background information on the audio, video, image, or computer equipment to the Digital Evidence Unit as possible.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 9/01/16	**NUMBER:** DE.05 - Evidence Inventory
	RELATED ORDERS: FSD.35	
APPROVED BY: Terence Wong, Debbie McKillop & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Procedure - Evidence Inventory	

I. Purpose

A. To document the physical condition of evidence.

B. To properly catalog all devices and media.

II. Scope

A. This procedure applies to all evidence submitted to the Digital Evidence Unit.

III. Limitations

A. Some hardware may be dangerous, damaged, or too complicated to disassemble and reassemble.

B. The examiner shall determine if disassembly is necessary.

C. Not all manufactured characteristics are readily available.

IV. Procedure

A. Determine if any suspected hardware traps may be in place, such as additional external wires attached to components that may be connected to an alarm or triggering device and take appropriate action.

B. Mark the evidence in accordance with FSD.35.

1. If an item is too small to be marked, or may be damaged by marking, the proximal container may be marked instead.

C. Describe the item.

1. In general, an item description should include several manufactured characteristics such as make, model, type, storage size, and a unique identifier (e.g. serial number). Other manufactured characteristics may be used, such as carrier branding, interface, physical size, etc. The manufactured characteristics used to describe items are up to the discretion of the examiner.

2. Custom or home-built computers may be described as Custom Built from Parts (CBP). When necessary, the parts inside the device may be used to describe it.

D. Document or photograph any wear, damage, or alterations.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE: 9/01/16**	**NUMBER:** DE.06 - Imaging
	RELATED ORDERS:	
APPROVED BY: Terence Wong, Debbie McKillop & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Procedure - Imaging	

I. Purpose

A. To create forensic images of digital media.

II. Scope

A. Writable digital media from an evidence item (e.g. hard drives from DVR systems, removable media from recording devices) shall be imaged prior to examination when technically possible.

B. If a submitted item is a copy created by the submitting agency, a forensic image does not need to be created; however, the media should be write-blocked prior to reading the data when possible and working copies of the files must be used for examinations.

III. Limitations

A. It is not technically possible to capture a write-blocked image of the data for some types of data, such as embedded cell phone storage.

1. The examiner will document the circumstances if the media cannot be write-blocked during acquisition.

2. The examiner will document the type of copy and the method used to create copies of files (e.g. logical copies of allocated files made using Windows drag-and-drop).

IV. Procedure

A. Remove media from hardware when applicable.

B. Write block the media.

1. Hardware write-blockers are preferred; however, approved software write-blockers may be used.

C. Create a forensic image with an approved tool.

1. For RAID arrays, a copy of the individual drives and a logical copy of the RAID array is recommended because it may not be possible to reconstruct the RAID when the drives are not attached to the RAID controller.

D. Verify the forensic image and original digital evidence media with and MD5 hash when applicable.

1. Verification may not be performed due to exigent circumstances or time constraints.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 07/25/2018	**NUMBER:** DE.07 - Image Enhancement
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ANAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Procedure - Image Enhancement	

I. Purpose

A. To improve the visibility of an image or part of an image.

II. Scope

A. This procedure applies to image files where enhancement has been requested.

B. The image may be extracted from a video file.

C. Image enhancements include any process that changes the brightness or color of any area of an image for the purpose of increasing visibility. Enhancements do not include changes to images that do not alter the content or do not increase visibility (e.g. cropping, rotating, labeling, and converting file types). See DE.10 Data Editing/Conversion for non-enhancement editing procedures.

III. Limitations

A. It is not always possible to improve the visibility of an image or part of an image. Many factors may limit the ability to improve visibility, including noise, not enough resolution, not enough contrast, overexposure, underexposure, etc.

B. Due to the numerous variables involved with computers, monitors, and lighting conditions, viewing images on equipment other than the examiner's equipment may not accurately reflect the examiner's enhancement.

C. All enhancements are intended for digital output and viewing. Prints of enhanced images may not accurately reflect the digital output.

IV. Procedure

A. All enhancement procedures will be done on working copies of the evidence.

B. Preparing files:

1. If a file must be extracted from another file (e.g. a proprietary player, or a single frame from a video), record the extraction steps.

2. If a file must be converted due to software compatibility, record the conversion steps.

C. Review the submitted image to locate the pertinent areas based on the request.

D. Evaluate the pertinent areas and note the factors detrimental to the visibility.

1. If the image file is determined to be unsuitable for enhancement, record the observations for this conclusion.

E. Applying, evaluating, and adjusting filters:

1. Apply the appropriate filter based on the evaluation and request.
2. Evaluate the filter's effects.
3. Adjust the filter to the optimal settings (based on the examiner's subjective opinion).
4. Add, evaluate, and adjust more filters as appropriate.
5. Record the final settings and the effect of each filter for the filters used to create the final enhanced file. Screenshots of filter settings from the software are encouraged.
6. For files where the visibility cannot be increased, record the filters and settings used with the best results, and record the observations of why the visibility could not be increased.
7. The filter settings and observations of the filters' effects are the basis for the examiner's opinion.
8. When possible, the working copy of the video with non-destructive editing states should be saved with the case record.
9. Save the enhanced file to an uncompressed image format. Use a new file name that indicates that it is the enhanced version.

V. Reporting Results, Interpretations, and Opinions

A. **Positive** - the examiner applied filters to the file and the requested image was enhanced.

1. Reporting: state the image was enhanced and list names of the filters used for the enhanced file.
2. Suggested statements:
    a. "I enhanced the image file with Camera RAW and smart sharpen filters."

B. **Negative** - the examiner attempted to enhance the file with filters, but the requested area's visibility could not be increased.

1. Reporting: state the names of the filters with the best results. Filters with no results do not need to be listed.
2. Suggested statements:
    a. "I attempted to enhance the image file with Camera RAW and smart sharpen filters, but I was unable to enhance the visibility of the requested license plate due to the low resolution of the image."
    b. "I attempted to enhance the video file with Camera RAW and smart sharpen filters, but I was unable to enhance the visibility of the requested subject; the subject was too underexposed."

C. **Inconclusive** - the examiner applied filters to the requested image, but was unable to determine if the requested visibility was increased.

1. Reporting: state the names of the filters used for the enhanced file.

2. Suggested statements:

    a. "I enhanced the video file with Camera RAW and smart sharpen filters. I was unable to determine if the visibility of the subject was increased."

D. **Unsuitable** - the submitted file could not be examined, or the requested area was not present.

1. Reporting: state the reasons the file was unsuitable for enhancement.

2. Suggested statements:

    a. "The submitted file could not be opened or converted to a readable format. No enhancement was possible."

    b. "The suspect's face was turned away from the camera in the submitted file. No enhancement of the suspect's face was possible."

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 07/25/2018	**NUMBER:** DE.08 - Audio Enhancement
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ANAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Procedure - Audio Enhancement	

I. Purpose

A. To improve the intelligibility of the voice or non-voice signals of an audio recording. Audio enhancement includes playing the recording, analyzing it, determining the most effective filtering, and producing enhanced copies.

II. Scope

A. This procedure applies to audio recordings where enhancement of a signal has been requested.

B. Audio enhancements include any process that changes the volume of any section of an audio recording for the purpose of increasing intelligibility. Enhancements do not include changes to audio files that do not alter the content or do not increase intelligibility (e.g. splitting channels or converting file types). See DE.10 Data Editing/Conversion for non-enhancement editing procedures.

III. Limitations

A. It is not always possible to improve the intelligibility of a signal, particularly in recordings with a poor signal-to-noise ratio or severe distortion.

B. Results may not accurately reflect the examiner's enhancement when listened to on equipment other than the examiner's equipment. For example, low-quality headphones may not reproduce the same subtle audio signals as the examination equipment.

IV. Procedure

A. All enhancement procedures will be done on working copies of the evidence.

B. Preparing files:

1. If a file must be extracted from another file (e.g. a proprietary player or an audio channel from a video file), record the extraction steps.

2. If a file must be converted due to software compatibility, record the conversion steps.

C. Review the submitted files to locate the pertinent segments based on the request. Files may be reviewed with a combination of visual (spectral waveform) and audible review.

D. Evaluate the requested segments and record what the detrimental factors may be, such as broadband noise, wind, low signal-to-noise ratio, low volume of voices, electrical

interference, etc.

1. If the audio file is determined to be unsuitable for enhancement, record the observations for this conclusion.

E. Applying, evaluating, and adjusting filters:

1. Apply the appropriate filter based on the evaluation and request.
2. Evaluate the filter's effects audibly and visually.
3. Adjust the filter to the optimal settings (based on the examiner's subjective opinion).
4. Add, evaluate, and adjust more filters as appropriate.
5. Record the final settings and the effect of each filter for the filters used to create the final enhanced file. Screenshots of filter settings from the software are encouraged.
6. For files where the intelligibility cannot be increased, record the filters and settings used with the best results, and record the observations of why the intelligibility could not be increased.
7. The filter settings and observations of the filters' effects are the basis for the examiner's opinion.
8. When possible, the working copy of the file(s) with non-destructive editing states should be saved with the case record.

F. Save the enhanced recording to a new file with a name indicating that it is the enhanced version.

G. Copy the enhanced file to the destination media for the requesting agency and perform an MD5 hash check on the original and copied files.

V. Reporting Results, Interpretations, and Opinions

A. **Positive** - the examiner applied filters to the file and the requested signal was increased.

1. Reporting: state the audio was enhanced and list names of the filters used for the enhanced file.
2. Suggested statements:
    a. "I enhanced the audio file with levels, de-hum, and spectral de-noise filters."

B. **Negative** - the examiner attempted to enhance the file with filters, but the requested signal could not be increased.

1. Reporting: state the names of the filters with the best results. Filters with no results do not need to be listed.
2. Suggested statements:
    a. "I attempted to enhance the audio file with levels, de-hum, and spectral de-noise filters, but I was unable to enhance the intelligibility of the apparent voice due to the low signal-to-noise ratio."
    b. "I attempted to enhance the audio file with equalizer and dialogue-isolate filters, but I was unable to enhance the intelligibility of the apparent conversation due severe distortion."

C. **Inconclusive** - the examiner applied filters to the requested signal, but was unable to determine if the requested signal was increased.

1. Reporting: state the names of the filters used for the enhanced file.
2. Suggested statements:
    a. "I enhanced the audio file with levels, de-hum, and spectral de-noise filters. I was unable to determine if the requested signal was increased."

D. **Unsuitable** - the submitted file could not be examined, or the requested signal was not present.

1. Reporting: state the reasons the file was unsuitable for enhancement.
2. Suggested statements:
    a. "The requested video file did not have an audio channel to enhance."
    b. "At the requested time of the audio file (1:42min), no voice signal was present. No enhancement was possible."

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 07/25/2018	**NUMBER:** DE.09 - Video Enhancement
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ANAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Procedure - Video Enhancement	

I. Purpose

A. To improve the visibility of a video or part of a video.

II. Scope

A. This procedure applies to video files where enhancement has been requested.

B. Video enhancements include any process that changes the brightness, color, or clarity of any area of an video for the purpose of increasing visibility. Enhancements do not include changes to images that do not alter the content or do not increase visibility (e.g. cropping, rotating, labeling, and converting file types). See DE.10 Data Editing/Conversion for non-enhancement editing procedures.

III. Limitations

A. It is not always possible to improve the visibility of a video or part of a video. Many factors may limit the ability to improve visibility, including noise, not enough resolution, not enough contrast, overexposure, underexposure, etc.

B. Due to the numerous variables involved with computers, monitors, and lighting conditions, viewing videos on equipment other than the examiner's equipment may not accurately reflect the examiner's enhancement.

IV. Procedure

A. All enhancement procedures will be done on working copies of the evidence.

B. Preparing files:

1. If a file must be extracted from another file (e.g. a proprietary player), record the extraction steps.

2. If a file must be converted due to software compatibility, record the conversion steps.

C. Review the submitted video to locate the pertinent areas based on the request.

D. Evaluate the pertinent segments and note the factors detrimental to the visibility of the areas, such as compression artifacts, long shutter speed/motion, over or under exposure, etc.

1. If the video file is determined to be unsuitable for enhancement, record the observations for this conclusion.

E. Based on the request or upon discretion of the examiner, images from the video may be extracted and enhanced instead of video. Enhancement of images from videos follows the image enhancement policy (DE.07)

F. Applying, evaluating, and adjusting filters:

1. Apply the appropriate filter based on the evaluation and request.

2. Evaluate the filter's effects.

3. Adjust the filter to the optimal settings (based on the examiner's subjective opinion).

4. Add, evaluate, and adjust more filters as appropriate.

5. Record the final settings and the effect of each filter for the filters used to create the final enhanced file. Screenshots of filter settings from the software are encouraged.

6. For files where the visibility cannot be increased, record the filters and settings used with the best results, and record the observations of why the visibility could not be increased.

7. The filter settings and observations of the filters' effects are the basis for the examiner's opinion.

8. When possible, the working copy of the video with non-destructive editing states should be saved with the case record.

G. Rendering the enhanced video:

1. The video render settings are at the discretion of the examiner and based on the request and original video parameters.

2. Record the video settings and render the video.

3. Name the enhance file with a name indicating that it is the enhanced version.

4. Review the enhanced video to confirm the enhancements were not significantly affected by the rendering.

H. Copy the enhanced file to the destination media for the requesting agency and perform an MD5 hash check on the original and copied files.

V. Reporting Results, Interpretations, and Opinions

A. **Positive** - the examiner applied filters to the file and the requested video was enhanced.

1. Reporting: state the video was enhanced and list names of the filters used for the enhanced file.

2. Suggested statements:

a. "I enhanced the video file with levels, shadow/highlight, and unsharp mask filters."

B. **Negative** - the examiner attempted to enhance the file with filters, but the requested area could not be increased.

1. Reporting: state the names of the filters with the best results. Filters with no results do not need to be listed.

2. Suggested statements:

    a. "I attempted to enhance the video file with levels, shadow/highlight, and unsharp mask filters, but I was unable to enhance the visibility of the requested license plate due to the low resolution of the video."

    b. "I attempted to enhance the video file with levels, shadow/highlight, and unsharp mask filters, but I was unable to enhance the visibility of the requested subject; the subject was too underexposed."

C. **Inconclusive** - the examiner applied filters to the requested video, but was unable to determine if the requested visibility was increased.

1. Reporting: state the names of the filters used for the enhanced file.

2. Suggested statements:

    a. "I enhanced the video file with levels, shadow/highlight, and unsharp mask filters. I was unable to determine if the visibility of the subject was increased."

D. **Unsuitable** - the submitted file could not be examined, or the requested area was not present.

1. Reporting: state the reasons the file was unsuitable for enhancement.

2. Suggested statements:

    a. "The submitted video stopped playing after 10 seconds. The requested time could no be viewed. No enhancement was possible."

    b. "At the requested time of the video file (1:42min), the requested vehicle was not present. No enhancement was possible."

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 07/25/2018	**NUMBER:** DE.10 - Data Editing/Conversion
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Procedure - Data Editing/Conversion	

I. Purpose

A. Data editing and conversion of audio, video, or images related to investigations or court without enhancement. Requests may include, but are not limited to:

1. Converting a video to a different wrapper (file extension)
2. Extracting a short clip or screenshots from a video
3. Editing multi-camera videos to single-shot videos
4. Creating a “wanted” video for social media
5. Redaction (obscuring faces, voices, etc.)
6. Combining multiple files of a similar type into a single file

II. Scope

A. Data Editing/Conversion requests may be performed on submitted Audio, Video, or Image evidence.

III. Limitations

A. Data Editing/Conversion requests do not include any process that changes an audio, video, or image file for the purpose of increasing visibility or intelligibility (enhancements).

B. Data Editing/Conversion requests may be combined with enhancement or analysis requests (e.g. demultiplexing a video followed by enhancement). Combined requests will be categorized as an enhancement request.

IV. Procedure

A. All production procedures will be done on working copies of the evidence.

B. Review the submitted media to locate the pertinent areas based on the request.

C. Use software tools to produce the requested result.

1. Document the tool settings used to produce the final result. Screenshots of tool settings are encouraged. Full command line arguments are required for command line tools and batch files.

2. Some editing requests may be complex; summaries of the procedure are sufficient if they are in the correct order and have enough detail for another competent examiner to replicate the results.

3. Record the settings used for encoding video and audio files.

4. Audio and image files will be saved as an uncompressed format, unless requested otherwise.

5. Video files will be saved in a compressed format. The examiner will review the video to ensure no significant changes were introduced due to the compression.

V. Reporting Results, Interpretations, and Opinions

A. **Positive** - the examiner created the requested result.

1. Reporting: state the request was completed and the tools used.

2. Suggested statements:

a. "I converted the 243 .dav files to one .avi file using FFMPEG."

b. "I created a linear video of the requested vehicle from the four submitted surveillance videos using Adobe Premiere Pro."

B. **Negative or Unsuitable** - the examiner attempted the request but could not complete it, or the submitted files were unsuitable. Include any tools that were used.

1. Reporting: state the request could not be completed and the reasons why.

2. Suggested statements:

a. "I could not extract clips of the submitted video. The video was embedded in a proprietary player and did not have an export function."

b. "I could not convert the submitted video files. The videos were encoded with an unknown CODEC and could not be converted."

C. **Inconclusive** - the examiner created the requested result, but was unable to confirm the results. Include any tools that were used.

1. Reporting: state the request was completed, the tools used, and the reason the results could not be confirmed.

2. Suggested statements:

a. "I converted the video 360-degree VR video format with Adobe Premiere Pro, but the laboratory does not have VR hardware to confirm the results. Please resubmit the video if any errors are found."

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 04/06/2018	**NUMBER:** DE.11 - Non-conforming Work
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Quality	**SUBJECT:** Non-Conforming Work	

I. Policy: Non-conforming work is an incident or problem encountered in casework, proficiency testing, testimony or the quality assurance program. When non-conforming work is encountered in the Digital Evidence Unit, action is taken to address the non-conformity.

A. The level of corrective action taken for any non-conformity is dependent on the type of incident or problem and its severity. In general, the greater the severity or its substantive nature, the higher the level of corrective action taken. The appropriate QA Action-Correction (QAC) taken is based on the type of non-conformity, the magnitude and scope of the problem, and whether it is a single event or repetitive. Types of non-conforming work and their corresponding level of corrective action are described below.

B. **QAC-1** (**most significant**): Quality system non-conformities are discrepancies or incidents that raise immediate concern regarding the overall quality of the unit's work product or the competency of an analyst. These non-conformities rise to the level of significant concern for the quality system or a systemic problem within the Unit.

1. Quality system non-conformities include but are not limited to:

   a) Erroneous or falsified tests, results, conclusions, records, or testimony

   b) Improper or deliberate misuse of methods, equipment, or evidence

   c) Audit findings

   d) Unsuccessful proficiency test

   e) Repeated QAC-2 errors

2. A significant quality system non-conformity requires documentation of the corrective action per Division policy and procedure. See FSD.15, QA.18, FSDF.06, FSD.44 for more information about the evaluation of significance, required elements of a corrective action, documentation and retention of corrective action records.

C. **QAC-2 (somewhat significant)**: These discrepancies or incidents are not serious enough to cause immediate concern for the quality system or the Unit's overall work product, but do have an isolated effect on the work product, tend to be individual events, and are addressed on a case-by-case basis. These non-conformities are

typically detected prior to the release of results and conclusions, and have the potential to be remediated.

1. Level 2 incidents include but are not limited to:

    a) Improper use of methods or equipment when it is demonstrated their use did not impact the quality of work or validity of the result.

        (1) using equipment that has not been properly checked

    b) Procedure not being followed when it is demonstrated that its use did not impact the quality of work or validity of the result

    c) Improper conclusions or lack of documentation of conclusions

    d) Repeated QAC-3 errors

2. Documentation of a QAC-2 non-conformity will be maintained within the unit and will be evaluated by the supervisor. The documentation should include the following applicable sections:

    a) An explanation of the error or non-conformity. (What is the problem?)

    b) An evaluation of the impact on casework, equipment, etc. (How significant is the problem?)

    c) An explanation of how the error on non-conformity occurred. (Why did it happen?)

    d) An explanation of the action taken to correct the error or non-conformity. (What was done to correct the problem?)

    e) A summary of any monitoring or follow-up. (Was the correction effective?)

D. **QAC-3** (**least significant)**: Discrepancies or incidents that do not affect the significance of a conclusion, a reported test result, or impact on the quality system, are unlikely to recur, are not systemic, and do not affect the fundamental reliability of the work product.

1. Examples of a QAC-1 non-conformity include, but are not limited to:

    a) transcription errors: switching the month and day when documenting the date of an exam step

    b) grammatical or typographical errors: spelling or grammar mistakes in reports or notes, wrong agency case number or requester in LIMS, etc.

    c) omission errors: omitting relevant information (e.g. the data storage size of a hard drive)

d) When brought to the analyst's attention, this type of non-conformity is typically corrected immediately by the analyst. A record of the correction is captured when the analyst initials and dates the correction as outlined in the Case Record Division Policy FSD.42 and the Test Reports Policy, FSD.43 .

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Technical Unit Manual	**REVISION DATE:** 10/10/2016	**NUMBER:** DE.12 - Abbreviations
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Digital Evidence	**SUBJECT:** Abbreviations	

I. Common Abbreviations

Additional abbreviations for commonly used terms in the forensic science community may not be listed.

ADSL - Asymmetric Digital Subscriber Line
AGP - Accelerated Graphics Port
AMD - Advanced Micro Devices
ASCII - American Standard Code for Information Interchange
ASIC - Application Specific Integrated Circuit
AT- Advanced Technology Attachment
ATI - ATI Technologies Inc.
ATX - Advanced Technology Extended
AVI - Audio Video Interleaved
BIOS - Basic Input Output System
BMP - Bitmap
BNC - Barrel Nut Connector
bps - Bits per second
Bps - Bytes per second
CAS - Column Address Signal
CD - Compact Disk
CDR - Compact Disk Recorder
CDRW - Compact Disk Re-Writer
CD-ROM - Compact Disk - Read Only Memory
CF - Compact Flash
CLI - Command Line Interface
CMOS - Complementary Metal Oxide Semiconductor
CPU - Central Processing Unit
CRT - Cathode Ray Tube
CSV - Comma Separated Values
DAT - Digital Audio Tape
DDR - Double Data Rate
DDR-SDRAM - Double Data Rate - Synchronous Dynamic Random Access Memory
DIMM - Dual Inline Memory Module
DNS - Domain Name System
DOS - Disk Operating System
DPI - Dots Per Inch
DRAM - Dynamic Random Access Memory
DSL - Digital Subscriber Line

DVD - Digital Versatile Disc
DVD-RAM - Digital Versatile Disk - Random Access Memory
DVR - Digital Video Recorder
ECC - Error Correction Code
ECS - Elitegroup Computer Systems
EDO - Extended Data Out
EEPROM - Electrically Erasable Programmable Read-Only Memory
EPROM - Erasable Programmable Read-Only Memory
eSATA - External SATA
FAT - File Allocation Table
FDC - Floppy Disk Controller
FDD - Floppy Disk Drive
FPS - Frame Per Second
FPU - Floating Point Unit
FSAA - Full Screen Anti-Aliasing
FSB - Front Side Bus
FTP - File Transfer Protocol
GB - Gigabytes
GDI - Graphical Device Interface
GHz - GigaHertz
GIF - Graphics Interchange Format
HDD - Hard Disk Drive
HSF - Heatsink-Fan
I/O - Input/Output
IC - Integrated Circuit
IDE - Integrated Drive Electronics
IRQ - Interrupt Request
ISA - Industry Standard Architecture
ISO - International Standards Organization
JPG - Joint Photographic Experts Group
LAN - Local Area Network
LCD - Liquid Crystal Display
LED - Light Emitting Diode
MAC - Media Access Control
MB - MotherBoard or Megabyte
MBR - Master Boot Record
MHz - MegaHertz
microSD - Micro Secure Digital
MIPS - Million Instructions Per Second
MMX - Multi-Media Extensions
MPEG - Motion Pictures Experts Group
NAS - Network Attached Storage
NAT - Network Address Translation
NEC - NEC Corporation
NIC - Network Interface Card
NTFS - NT File System
OC - Overclock
OEM - Original Equipment Manufacturer
OS - Operating System
PC - Personal Computer
PCB - Printed Circuit Board
PCI - Peripheral Component Interconnect
PCIe - PCI Express
PDA - Personal Digital Assistant

PCMCIA - Peripheral Component Microchannel Interconnect Architecture
PGA - Professional Graphics Array
PnP - Plug 'n Play
POST - Power On Self Test
PPPoA - Point-to-Point Protocol over ATM
PPPoE - Point-to-Point Protocol over Ethernet
PS/2 - Personal System/2
PSU - Power Supply Unit
RAID - Redundant Array of Inexpensive Disks
RAM - Random Access Memory
RAMDAC - Random Access Memory Digital Analog Convertor
RDRAM - Rambus Dynamic Random Access Memory
RGB - Red, Green, Blue
ROM - Read Only Memory
RPM - Revolutions Per Minute
SATA - Serial Advanced Technology Atachment
SCA - SCSI Configured Automatically
SCSI - Small Computer System Interface
SD - Secure Digital
SDRAM - Synchronous Dynamic Random Access Memory
SECC - Single Edge Contact Connector
SODIMM - Small Outline Dual Inline Memory Module
SOHO - Small Office Home Office
SPARC - Scalable Processor ArChitecture
SRAM - Static Random Access Memory
SSD - Solid State Disk
SSE - Streaming SIMD Extensions
SVGA - Super Video Graphics Array
S/PDIF - Sony/Philips Digital Interface
TB - Terabytes
TEC - Thermoelectric Cooler
TIFF (TIF)- Tagged Image File Format
UART - Universal Asynchronous Receiver/Transmitter
USB - Universal Serial Bus
UTP - Unshieled Twisted Pair
VCD - Video CD
VPN - Virtual Private Network
WAN - Wide Area Network
WAP - Wireless Access Point
WiFi - Wireless Fidelity
WLAN - Wireless LAN
WMA - Windows Media Audio
WMV - Windows Media Video
WYSIWYG - What You See Is What You Get
XGA - Extended Graphics Array
XMS - Extended Memory Specification
XT - Extended Technology

II. Digital Evidence Unit Abbreviations

CBP – Custom Built from Parts
Comm Log – Communications Log
CP – Child Pornography

CVIP – Child Victim Identification Program
FFT – Fast Fourier Transform
FTK - (Access Data) Forensic Tool Kit
KFF – Known File Filter
MD5 – Message Digest algorithm 5
MISC – miscellaneous
PP - (Adobe) Premier Pro
PS - (Adobe) Photoshop
SHA1 – Secure Hash Algorithm (160-bit)
SHA256 – Secure Hash Algorithm (256-bit)
SN or S/N – Serial Number
TSBPB – tape-sealed brown paper bag
TSCB – tape-sealed cardboard box
TSCE – tape-sealed coin envelope
TSME – tape-sealed manila envelope
TSPB – tape-sealed plastic bag
TSSB – tape-sealed slide box
TSSE – tape-sealed soil envelope
VC - Video Cleaner
VM – Virtual Machine

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:**07/25/2018	**NUMBER:** DET.01 - Digital Evidence Training Manual Overview
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ANAB:**	
CHAPTER:	**SUBJECT:** Digital Evidence Training Manual Overview	

I. The Digital Evidence Unit training program will be used to train examiners in the knowledge, skills, and abilities required to perform digital evidence analysis.

II. Introduction

A. New employees undergo a Forensic Services Division (FSD) orientation program prior to the commencement of Digital Evidence training. The FSD orientation covers several topics including safety, ethics, and quality assurance. Refer to FSDF.01 for a list of topics covered under orientation.

B. The Forensic Services Division Digital Evidence Unit training manual is designed to provide training in the fields of digital evidence analysis.

C. Digital evidence is a highly technical and rapidly changing field. Trainees are not expected to memorize the vast quantity of computer knowledge, but instead be able to research, find, and apply the information to casework.

D. Job titles held within the Forensic Services Division are listed within (FSD.03). The minimum qualification for an analyst to perform enhancements, forensic imaging, and field services is a bachelor's degree in a natural science and successful completion of the appropriate training modules.

E. Working within Digital Evidence requires specialized training and an aptitude for the discipline. Unlike many fields of scientific study, the skills and aptitudes that are requisite for examiners cannot be fully addressed in the academic environment. Degrees and coursework in computer science, computer programming, and related fields are not prerequisites for an assignment to the Digital Evidence Unit. A strong interest in the field and a desire to learn coupled with a strong investigative curiosity are indicators of a successful examiner.

F. Examiners will be warned that working in the field of digital evidence will involve material that is highly offensive, such as sexually explicit erotica, bestiality, graphically violent images, child pornography, etc.

III. Training Coordination

A. The training program will be implemented by the digital evidence supervisor and a training coach.

B. The digital evidence supervisor oversees the training program including scheduling classes, acquiring equipment, and coordinating the training program with the coach.

C. A training coach will be assigned to each trainee. A training coach is an experienced examiner who will mentor their trainee through the training program. They may be responsible for in-house training, demonstration, supervised practice casework, and other duties that benefit the trainee's progress. The training officer will maintain the trainee's progress (form DET.02) and update the Digital Evidence Supervisor of the trainee's progress.

IV. Trainee Expectations

A. Complete each training module on a schedule determined by the training coach and supervisor. The entire training program will take approximately six months, with adjustments due to training and casework in other units.

B. Actively participate in discussions related to each training module.

C. Participate in professional discussions with any member of the Digital Evidence Unit.

D. Maintain training notes and records of training.

E. Communicate any feedback or concerns with the training to the training coach or supervisor.

V. Training Coach Expectations

A. Work with the trainee and Digital Evidence Supervisor to create a schedule to complete the training program.

B. Actively participate in discussions related to each training module with the trainee.

C. Periodically review the trainee's Digital Evidence Training Record (DEF.02) to ensure accuracy.

D. Teach the trainee part or all of a training module.

E. Demonstrate casework to the trainee.

F. Communicate any feedback or concerns with the training to the trainee or supervisor.

VI. Training Modules

A. The **Objectives** outline the purpose of each study segment.

B. The **Study Questions** have a number of purposes:

1. To provide the trainee a guide for the depth of knowledge expected for each of the topics.

2. To promote active discussions between the coach and trainee using the questions as a starting point.

3. To prepare the trainee for potential expert testimony questions.

C. Answers to questions may be written or verbal as determined by the coach, and will be discussed with between the coach and trainee.

D. **Practical Exercises** are designed to provide the trainee firsthand experience with the main concepts of each study segment.

E. **Court and Legal Procedures -** Training modules include courtroom procedures, testimony, and legal information as it relates to each training module. Moot court may be combined for several modules when appropriate and will be noted in the training record.

F. **Suggested Reading and References** list some reading and reference material that should be read to successfully complete the study segment. Website locations may have changed since the module was created; trainees should attempt to find the new website location and inform the Digital Evidence Supervisor.

G. **Classes** – Training received out of the laboratory may meet training module goals. The supervisor may approve some or all of a training module after reviewing the content of the training. Practical, written, or oral technical exams may also be administered.

VII. Training Documentation

A. Training will be documented on the Digital Evidence Training Record (DEF.02). Each section of a training module will be initialed and dated by the trainee and coach. At the completion of a training module, the entire module will be reviewed and signed by the trainee, coach, and supervisor. The trainee will also maintain their training record in LIMS in accordance to FSD.21.

VIII. Evaluating the Effectiveness of Initial and Ongoing Training

A. The effectiveness of initial and ongoing training will be monitored and evaluated by the Digital Evidence Unit Supervisor and Technical Lead in one or more of the following ways:

a. Requiring a teach-back or feedback from the analyst attending training.

b. Evaluating yearly proficiency test results.

c. 100% Technical and Administrative review of casework.

d. Court testimony monitoring (FSD.26)

e. Rotational presentations of various topics to the unit by staff.

IX. Training of Experienced Personnel

A. The Digital Evidence Supervisor will assess the qualifications of newly hired experienced examiners and may approve the completion of a training module.

B. Methods of verifying the completion of prior training may include, but is not limited to, reviewing the individual's job application, statement of qualifications, transcripts or prior training records.

C. Practical, written, or oral technical exams may also be administered.

D. Experienced examiners are required to pass a competency test prior to performing casework.

X. Successful Completion of Competency Tests

A. After completion of the training the trainee will be given a competency test. Upon passing the competency test, the trainee will be granted authorization to perform casework (DEF.01). The supervisor should monitor the new analyst's casework following

authorization. In addition, the supervisor, coach, or another qualified examiner should observe the newly qualified examiner in court testimony.

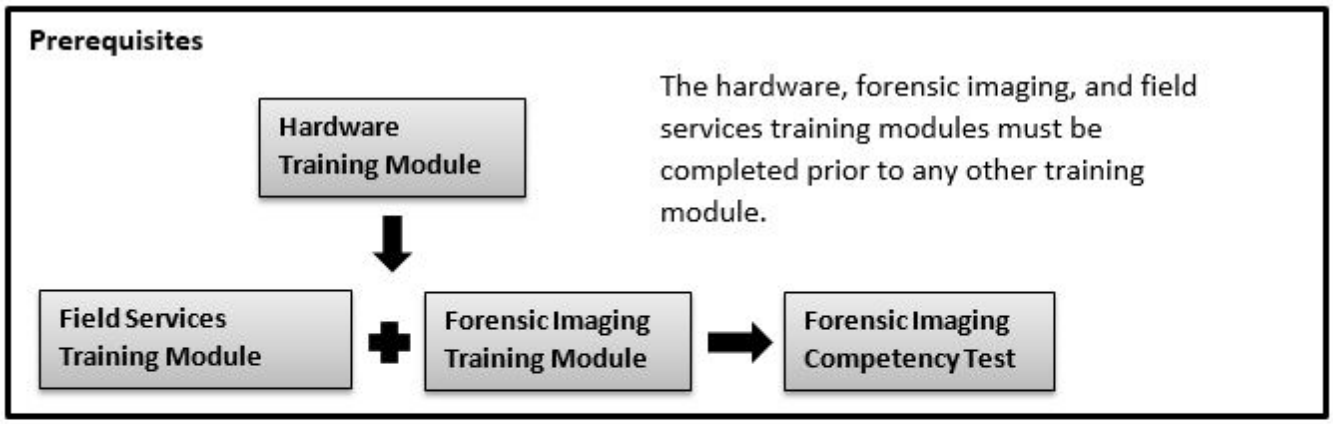
XI. Continuing Education

A. Digital Evidence is a difficult discipline in which to maintain up-to-date information. New hardware, software, operating systems, media, parts and devices are constantly introduced by the technology industry.

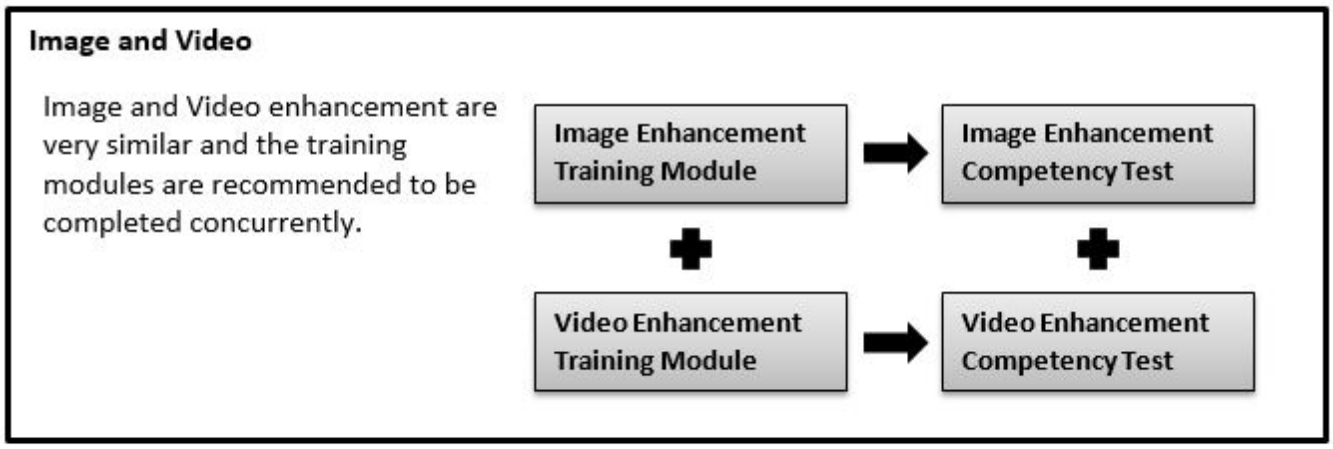
B. Digital Evidence Examiners should participate in continuing education to keep up with the rapidly evolving discipline. Examiners can keep up by reading technology websites and blogs.

C. Formal training classes on forensics topics will be taken as outlined in QA.12.

XII. Training Summary



Image, Video, Audio Enhancement and Field Services may be completed in any order after the prerequisites.





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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** DET.02 - Hardware
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Hardware	

The hardware module is designed to familiarize the trainee with computer and electronics hardware commonly encountered in digital evidence examinations and field work. The focus of the training is to be able to figure out what an item is through research, rather than memorization.

I. Objectives: Research and become familiar with the topics below. The target audience of the hardware should be consumer to small business level – common hardware found in the field and submitted for evidence. Specialized hardware for professionals, audiophiles, or enterprise settings are not in the scope of this training. The overall objective for this module is to learn where data can be stored.

A. **Common computer components**

1. Chassis (desktop, server, laptop, all-in-one, etc.)
2. Motherboard
3. Hard drives
4. Optical drives
5. Ports, plugs, and cables you can find in a computer
6. Expansion slots and expansion cards (laptop and desktop)
7. RAM
8. CPU and CPU sockets
9. Heat sinks and fans
10. Power Supply
11. Peripheral devices

B. **Storage media**

1. Hard drives (internal and external)
2. Solid State Drives
3. RAID
4. NAS, SAN, cloud drives
5. USB thumb drives

6. Flash storage media (CF, SD, microSD, etc.)
7. Optical disks
8. Magnetic tape storage
9. Legacy disks
10. Ports, plugs, and cables related to storage media

C. **Learn how to remove media from a various computer hardware chassis.**

D. **Build a computer from parts.**

1. The goal of this section is building a custom built from parts (CBP) computer, as well as understanding what each part does and how it interacts with the rest of the computer.

E. **Networking hardware and their uses**

1. NIC
2. Cables
3. Hubs, switches, etc.
4. Wireless devices
5. Home network devices (router, cable modem, DSL)

F. **Display hardware and connections**

1. Monitors, projectors
2. Various display cables
3. Analog vs. Digital
4. Monitor vs. all-in-one

G. **Audio hardware and connections**

1. Receivers
2. Speakers, headphones
3. Microphones
4. Audio cables

H. **Recording devices**

1. Cameras
2. Webcams
3. Microphones
4. Surveillance cameras

II. Study Questions

A. **Common computer components**

1. What is a motherboard?
2. As a consumer, list some pros and cons between SSDs and platter hard drives.
3. Do peripheral devices normally contain storage media?
4. Name three different ways to connect an SSD to a motherboard.
5. Come up with an analogy to explain how the components of a computer work with each other.
6. What are some methods for identifying a port or plug?
7. How do you differentiate between a USB thumb drive and a wireless USB dongle? What should you do if you're not sure?

B. **Storage media**

1. Name some common internal storage media used in computers.
2. How does a platter hard drive work? What are some ways it can break?
3. What is the purpose of a RAID?
4. Describe the method for storing data in solid state and magnetic media.
5. How do you access the common administrative interface for a home NAS?
6. Can NAS devices run software? What kind? What complications can this create?
7. List some problems with optical media, specifically when dealing with rewritable discs.
8. What is the TRIM command?
9. Unlike other storage media, what is the major problem with reading data off of a magnetic tape?

C. **Removing media from devices**

1. What are some search terms to use to find guides on removing hard drives?
2. What is the best resource for Apple product take down guides?
3. What are some options if removing media is difficult, time consuming, or may damage the device?
4. How do you remove the disc in an optical drive if the computer or drive will not power on?

D. **Computer building**

1. You turn a computer on an it starts beeping. What is going on?
2. Can you build a CBP Mac?
3. What are three methods for cooling a CPU?
4. List some issues with buying and installing RAM.
5. What is thermal paste used for?

6. List the minimum parts required for a working computer running an operating system.
7. Does every computer need a removable video card?
8. What are fans for?
9. What is a computer POST?
10. Detail the boot process of a computer.

E. **Networking hardware**

1. What are the two common networking devices found in a home? What does each one do? Can they be combined into one device?
2. How can a person hide network connected storage media in their house?
3. You are assisting with serving a search warrant at a house. The wireless network has no password. What are some complications for the investigation with a wireless network without a password?

F. **Display hardware**

1. What is the primary difference between an analog signal and a digital signal?
2. Why does a digital signal produce a better image?
3. What should you look for to determine if a monitor is a display vs. an all-in-one?
4. How can a monitor be directly connected to storage media?

G. **Audio hardware**

1. What should you look for to see if audio hardware has internal or external media storage?
2. Can you store more than audio data?
3. Is speaker wire analog or digital?

H. **Recording devices**

1. List some storage media for recording devices.
2. Can you store non-image files on a compact flash card?
3. List useful metadata that may be recorded with photos.
4. Do surveillance cameras normally have internal storage? Where is the recorded data stored?

III. Practical Exercises

A. Identify various electronic parts and the components of each. Explain the purpose of each. Name any predecessors or successors to the parts of components.

B. Identify various cables and ports. Explain the purpose of each. Name any predecessors or successors to the parts of components.

C. Build a computer from parts and disassemble it.

D. Install 2-3 operating systems on the computer you just built (each as a clean install).

E. Remove the hard drive from various computers.

F. Discuss the various methods to access a computer's BIOS.

G. Go to a computer store and look for new hardware and components. Discuss the implications to Digital Evidence.

IV. Court and Legal Procedures

A. The trainee shall receive instruction and training on courtroom procedures, presentation of evidence, and legal procedures. Topics may include: penal codes, statute of limitations, search warrants, subpoenas, discovery, court structure, rules of evidence, voir dire, (expert) witness demeanor and ethics, and observation of testimony.

B. Moot court: The trainee will participate in oral mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits.

C. Court and Legal Procedures training may be combined for several training modules and will be noted as such in the Digital Evidence Training Record.

V. Suggested Reading and References

A. Docter, Q. et al (2015) CompTIA A+ Complete Study Guide. Sybex.

B. White, R. (2014). How Computers Work 10th Edition. Que Publishing

C. Sammons, J. (2012) The Basics of Digital Forensics: The Primer for Getting Started in Digital Forensics. Syngress.

D. Tom's Hardware - How to Build a PC

E. pcityourself.com (animated guide to building a PC)

F. pcpartpicker.com

G. Anandtech.com

H. Arstechnica.com

I. iFixit.com

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:** 12/21/2017	**NUMBER:** DET.03 - Forensic Imaging
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Forensic Imaging	

The Forensic Imaging module is designed to teach the trainee how to create forensic images of electronic media to be used in examinations.

I. Objectives: research and become familiar with the topics below.

A. Evidence Handling and Case Records

B. Approved Tools

C. Logs

D. Case Records (notes)

E. Hardware and software write-blockers

F. Stand-alone imaging devices

G. Create forensic images of media (.E01, mirror)

H. Create forensic images of RAID arrays

I. Hash values and verifying images

J. Access a computer's hardware settings (BIOS, firmware)

K. Wiping hard drives and other media

L. Restoring images

M. Logical copying

II. Study Questions

A. **Hardware and software write-blockers**

1. What is a hardware write-blocker?
2. How do you confirm a hardware write-blocker is working?
3. What is a software write-blocker?
4. What does forensic boot media do?

B. **Stand-alone imaging devices**

1. Describe some advantages and disadvantages of stand-alone imaging devices.

2. What are each of the limiting factors that dictate the speed of imaging?

C. **Create forensic images of media**

1. What is the purpose of creating a forensic image? What advantage does this have over other forensic fields?
2. What is an .E01 image?
3. What is a mirror copy?
4. What are some advantages to using .E01 images? How is an .E01 image different than a mirror copy? How is it the same?
5. Do you need to wipe a drive before writing an .E01 image on it? Mirror? Why?
6. What is a live acquisition?
7. What are some options if removing media is difficult, time consuming, or may damage the device?
8. How do you differentiate between a USB thumb drive and a wireless USB dongle? What should you do if you're not sure?

D. **Create forensic images of RAID arrays**

1. What two steps should you do when imaging a RAID array? What order should these steps be done?
2. What is the difficulty with working on individually imaged hard drives from a RAID?

E. **Hash values and verifying images**

1. What is a hash value?
2. Without using math, describe how a hash value is calculated.
3. Why does changing a single bit drastically change a hash value?
4. What is MD5 collision? Why is it not an issue in forensic imaging?
5. What is a verification hash? What does this tell you?

F. **Access a computer's hardware settings (BIOS, firmware)**

1. What is targeted disk mode and when do you use it?
2. What is the generic method for accessing the BIOS settings in a PC?
3. What is dangerous with removing a hard drive from a DVR?

G. **Wiping hard drives and other media**

1. What are some physical methods for erasing data on a hard drive?
2. What is the forensic method for erasing a hard drive, and why do we use it?

H. **Restoring images**

1. Why do you need to wipe a hard drive before restoring an image to it?

I. **Logical copying**

1. When is logical copying an option?
2. Can you verify logical copies of files?
3. What is not transferred with logical copies?

III. Practical Exercises

A. Image several different types of media on a computer with a hardware write-blocker. Verify the image and compare the hash values of the original media to the image.

B. Image several different types of media with a stand-alone imaging device.

C. Create a mirror copy.

D. Wipe several different types of media.

E. Restore an .E01 image.

IV. Court and Legal Procedures

A. The trainee shall receive instruction and training on courtroom procedures, presentation of evidence, and legal procedures. Topics may include: penal codes, statute of limitations, search warrants, subpoenas, discovery, court structure, rules of evidence, voir dire, (expert) witness demeanor and ethics, and observation of testimony.

B. Moot court: The trainee will participate in oral mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits.

C. Court and Legal Procedures training may be combined for several training modules and will be noted as such in the Digital Evidence Training Record.

V. Suggested Reading and References

A. Sammons, J. (2012) The Basics of Digital Forensics: The Primer for Getting Started in Digital Forensics. Syngress.

B. Carrier, B (2005) File System Forensic Analysis. Addison-Wesley.

C. Sammons, J. (2012) The Basics of Digital Forensics: The Primer for Getting Started in Digital Forensics. Syngress.

D. Wikipedia MD5

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:** 12/21/2017	**NUMBER:** DET.04 - Image Enhancement
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Image Enhancement	

The Image Enhancement Module is designed to teach the trainee how to enhance image files. Many topics covered in Image Enhancement overlap with Video Enhancement as the filters applied to images may also be applied to video. The Image Enhancement and Video Enhancement training modules should be completed concurrently. This training module will also qualify the examiner for Image Production such as converting, annotating, fixing compatibility, and other fucntions with image files.

I. Objectives: Research and become familiar with the topics below.

A. **Evidence Handling and Case Records**

1. Archives
2. Working copies
3. Approved Tools
4. History log
5. Case Records (notes)

B. **File Formats**

1. Uncompressed (TIFF, BMP, etc.)
2. Compressed (JPEG, GIF, etc.)
3. RAW
4. PSD, TIFF with layers

C. **Metadata**

1. EXIF, IPTC
2. Adobe Bridge, EXIFTool, MediaInfo, GSpot

D. **Photoshop**

1. **Saving, exporting**
2. **Histogram**
3. **Layers, Smart Layers, Smart Objects**
4. **Camera RAW**
5. **Brightness and Contrast Adjustments**
    a. Curves
    b. Levels
    c. Exposure
    d. Contrast
    e. Whites and Blacks
    f. Shadows and Highlights
6. **Smart Sharpen, Unsharp Mask**
7. **Shake Reduction**
8. **Frame averaging**
9. **Deinterlacing**

II. Study Questions

A. **Evidence Handling**

1. **Archives**
    a. Why do we create archives?
2. **Working copies**
    a. Define a working copy.
    b. Why do we use working copies?

3. **Approved Tools**
    a. Why do we limit tools to the approved list?
4. **History log**
    a. What does the history log function in Photoshop do?
5. **Notes**
    a. What are the differences between the Photoshop history log and case notes?

B. **File Formats**

1. **Uncompressed (TIFF, BMP)**
    a. What is the definition of an uncompressed image file?
2. **Compressed (JPEG, GIF)**
    a. Describe image compression
3. **RAW**
    a. What is a RAW file?
    b. How is a RAW file different than a JPEG of TIFF created on a camera?
    c. Why does a RAW file have more data than a JPEG or TIFF?
4. **PSD**
    a. What is a PSD file?
    b. Why is it important to save layer settings in case files?

C. **Metadata**

1. **EXIF, IPTC**
    a. Cell phones (and some cameras) add what metadata that is extremely useful for investigations?
2. **Adobe Bridge**
    a. Bridge can be used to quickly access metadata, but what can Bridge do with Photoshop?

D. **Histogram**

1. Explain what a histogram is and how to read it.
2. How does a histogram work in a curves adjustment?
3. How does a histogram work in a levels adjustment?

E. **Layers, Smart Layers, Smart Objects**

1. Why is a smart adjustment layer most flexible than a filter?
2. What are the advantages of converting a raster layer to a Smart Object?
3. Why is it important to convert to Smart Object prior to Transforming a layer?

F. **Camera RAW**

1. Prior to using the Camera RAW filter, what should you do to the editing layer?
2. Can you use the Camera RAW filter on any image file type?
3. Explain the difference between using Camera RAW and each of the individual filters.

G. **Brightness and Contrast Adjustments**

1. Curves, Levels, Exposure, Contrast, Whites and Blacks, Shadows and Highlights - Describe each of these adjustments, what each adjustment tries to

H. **Smart Sharpen, Unsharp Mask**

1. Smart Sharpen vs. Camera RAW sharpen – What is the primary difference?

I. **Shake Reduction**

1. What is camera shake?
2. What artifacts are used to identify camera shake?

J. **Frame averaging**

1. Describe the theory behind frame averaging.
2. How does frame averaging remove noise?
3. Describe some situations where frame averaging may be used.

K. **Deinterlacing**

1. What is deinterlacing?
2. Where do interlaced images come from?

III. Practical Exercises

A. For the following exercises, create a working copy, take case notes (include metadata), and save an uncompressed output file. Show the working copy, notes, and output file to your coach.

1. Use a histogram to show that an area of an image is over or underexposed and no data is available in that area to enhance.
2. Use several types of brightness and contrast adjustments on the same file and note the differences in the result. Minimally include Camera RAW filter, curves, and levels. Use smart objects and smart filters for each.
3. Sharpening and blur reduction exercises
4. Frame averaging exercise
5. Deinterlacing exercise

IV. Court and Legal Procedures

A. The trainee shall receive instruction and training on courtroom procedures, presentation of evidence, and legal procedures. Topics may include: penal codes

B. Moot court: The trainee will participate in oral mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits.

C. Court and Legal Procedures training may be combined for several training modules and will be noted as such in the Digital Evidence Training Rec

V. Suggested Reading and References

A. Adobe (Latest) Adobe Photoshop CC Classroom in a Book. Adobe Press.

B. G. Reis (2007) Photoshop CS3 for Forensic Professionals. Sybex.

C. Adobe Bridge - http://www.photoshopessentials.com/essentials/bridge-cc/what-is-adobe-bridge/

D. Image Sharpening - http://photo.net/learn/digital-photography-workflow/advanced-photoshop-tutorials/sharpening/

E. Shake Reduction Filter - http://www.creativebloq.com/adobe/how-reduce-camera-shake-photoshop-cc-71412367

F. Frame Averaging - https://helpx.adobe.com/photoshop/using/image-stacks.html

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:** 11/12/2019	**NUMBER:** DET.05 - Video Enhancement
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Video Enhancement	

The Video Enhancement Module is designed to teach the trainee how to enhance video files. Many topics covered in Image Enhancement overlap with Video Enhancement as the filters applied to images may also be applied to video. The Image Enhancement and Video Enhancement training modules should be completed concurrently. This training module will also qualify the examiner for Video Production such as converting, annotating, fixing compatibility, and other fucntions with video files.

I. Objectives: Research and become familiar with the topics below.

A. **Evidence Handling and Case Records**

1. Archives
2. Working copies
3. Tools
4. Notes

B. **File Formats**

C. **Metadata**

1. GSpot, MediaInfo

D. **Video File Structure**

1. Wrapper
2. Video Codecs
3. Audio Codecs
4. Frame Size
5. Frame Rate
6. Aspect Ratio
7. Pixel Aspect Ratio

E. **Compression**

1. MJPEG
2. MPEG-1, 2, 4

3. H.264
4. Interframe compression
5. i, p, and b frames
6. Group of Pictures (GOP)

F. **Format Conversion and Source Extraction**

1. **FFMPEG and FFPLAY**
   a. Commands and batch files
   b. Playback, forcing codecs,
   c. Changing wrappers without affecting the codec
   d. Extracting i-frames
2. **VirtualDub**
   a. Plug-ins and opening files
   b. Extracting frames and video segments
   c. Saving files and uncompressed AVIs

G. **Video Cleaner**

1. Applying enhancements

H. **Premier Pro**

1. Converting videos to play in Premier Pro
2. Screen Capture
3. Basic Editing
4. Adding text and highlights
5. Enhancements
6. Stabilization

I. **After Effects**

1. Adding text
2. Stabilization

II. Study Questions

A. What is the proper method for identifying metadata in a video file?

B. Explain the structure of a video file, including wrappers and codecs.

C. What is the difference between a wrapper and a codec?

D. What is a common type of video where we encounter pixel aspect ratios?

E. Explain interframe compression, and how i, p, and b-frames are used in it.

F. Why are i-frames preferred for enhancement?

G. What is FFMPEG?

H. What is the purpose of using different wrappers?

I. What is a potential problem when changing codecs?

J. What does stabilization do, and when can it be useful?

III. Practical Exercises

A. Enhance the practice files. Describe the issues in each file, then attempt to enhance them. Explain the purpose behind each filter you use.

B. Edit and convert the practice files. Document the process for each.

IV. Court and Legal Procedures

A. The trainee shall receive instruction and training on courtroom procedures, presentation of evidence, and legal procedures. Topics may include: penal codes, statute of limitations, search warrants, subpoenas, discovery, court structure, rules of evidence, voir dire, (expert) witness demeanor and ethics, and observation of testimony.

B. Moot court: The trainee will participate in oral mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits.

C. Court and Legal Procedures training may be combined for several training modules and will be noted as such in the Digital Evidence Training Record.

V. Suggested Reading and References

A. Adobe (Latest) Adobe Premier Pro CC Classroom in a Book. Adobe Press.

B. Korbel, Frantisek (2012) FFMPEG Basics

C. Wikipedia - Video Compression Picture Types https://en.wikipedia.org/wiki/Video_compression_picture_types

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:** 12/21/2017	**NUMBER:** DET.06 - Audio Enhancement
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Audio Enhancement	

The Audio Enhancement module is designed to teach the trainee how to enhance audio files. This training module will also qualify the examiner for Audio Production such as converting, fixing compatibility, and other fucntions with audio files.

I. Objectives: Research and become familiar with the topics below.

A. **Evidence Handling**

1. Archives
2. Working copies
3. Tools
4. History log
5. Notes

B. **File Formats**

C. **Metadata**

D. **Sound**

E. **Frequency range of the human ear**

F. **Waveform display, spectral frequency display**

G. **Noise, masking, common problems with recordings**

H. **Distortion/clipping**

I. **Impulse**

J. **Signal to noise ratio (speech to noise)**

K. **Audio filters**

1. Pass Filters
2. Notch/Comb
3. Graphic Equalizer
4. Spectral Subtraction
5. Reference Canceller

II. Study Questions

A. What is sound? How is sound created? How is sound transmitted?

B. What is the general difference between cheap and quality speakers (headphones)?

C. What is noise?

D. What is the frequency range of the human ear?

E. What is the frequency range of the human voice?

F. What does the Nyquist Theorem explain?

G. What is “masking”?

H. How can you identify distortion in a recording? What causes distortion during recording? Why is this a problem for audio enhancement?

I. Explain why repeated sounds (motors, fans) are easier to remove than random noise.

J. Describe the following audio filters:

1. Pass Filters
2. Notch/Comb
3. Graphic Equalizer
4. Spectral Subtraction
5. Reference Canceller

III. Practical Exercises

A. Enhance the practice files. Describe the issues in each file, then attempt to enhance them. Explain the purpose behind each filter you use.

IV. Court and Legal Procedures

A. The trainee shall receive instruction and training on courtroom procedures, presentation of evidence, and legal procedures. Topics may include: penal codes, statute of limitations, search warrants, subpoenas, discovery, court structure, rules of evidence, voir dire, (expert) witness demeanor and ethics, and observation of testimony.

B. Moot court: The trainee will participate in oral mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits.

C. Court and Legal Procedures training may be combined for several training modules and will be noted as such in the Digital Evidence Training Record.

V. Suggested Reading and References

A. Adobe (Latest) Adobe Photoshop CC Classroom in a Book. Adobe Press.

B. Aldrich, Nika (2005) Digital Audio Explained for the Audio Engineer.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Digital Evidence Unit Training Manual	**REVISION DATE:** 12/22/2017	**NUMBER:** DET.07 - Field Services
	RELATED ORDERS:	
APPROVED BY: Terence Wong & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Field Services	

The Field Services module is designed to teach the trainee how to recover audio, video, and image files from digital video recorders (DVR). Due to the numerous hardware, software, and operating systems in DVRs this training module is not designed to teach a step-by-step method for each DVR system. Instead, this training module is intended to introduce the trainee to different methods of recovery and to expose the trainee to different hardware, software, and operating system configurations.

I. Objectives: Research and become familiar with the topics below.

A. **Review the following Crime Scene policies:** CS.01 CS.02, and CS.03

B. **Evidence Handling and Case Records**

1. Legal Authority
2. Case Records (notes)
3. Photographs
4. Sketches with camera placement
5. Evidence collection
6. Technical assist

C. **Evidence photography**

D. **DVR Hardware**

1. Stand-alone systems
2. PC-based systems
3. Cameras
4. Cables

E. **Manuals**

1. Default passwords

F. **Recording DVR settings**

1. Hardware information
2. Time and date
3. Calculating time and date offset
4. Video recording settings

G. **Exporting data**

1. Choose appropriate media
2. Native file format
3. Network export
4. Video signal capture

5. Screen recording
6. Hard drive imaging
    a. Problems with HDD imaging

H. **Scene considerations**

II. Study Questions

A. Is DVR recovery a full crime scene or a technical assist?

B. List some of the required items in a search warrant related to DVR recovery.

C. Describe the photographs you should take when recovering video from a DVR.

D. PC-based DVR systems may also run other software for a business. What issues does this introduce?

E. Is it possible to have two identical DVRs with different operating systems?

F. Describe some useful information found in DVR manuals.

G. Why is it important to record a DVR's time and date setting?

H. What are some words DVRs use to describe saving data to external media?

I. What is a native file format and what are some positive and negative consequences of it?

J. List some limitations of video signal capture.

K. List some complications with recovering videos from an imaged hard drive.

III. Practical Exercises

A. Recover videos from several DVR systems using different methods (native, video signal capture, network export, etc.) Document the systems with photographs and notes.

IV. Court and Legal Procedures

A. The trainee shall receive instruction and training on courtroom procedures, presentation of evidence, and legal procedures. Topics may include: penal codes, statute of limitations, search warrants, subpoenas, discovery, court structure, rules of evidence, voir dire, (expert) witness demeanor and ethics, and observation of testimony.

B. Moot court: The trainee will participate in oral mock testimony that includes direct and cross examination as well as the introduction of evidence/exhibits.

C. Court and Legal Procedures training may be combined for several training modules and will be noted as such in the Digital Evidence Training Record.

V. Suggested Reading and References

A. Best Practices for the Retrieval of Video Evidence from Digital CCTV Systems
https://www.rcfl.gov/downloads/documents/video-evidence-from-cctv-system-flipbook

B. SWGIT Best Practices for Retrival of Digital Video
https://www.swgit.org/pdf/Section%2024%20Best%20Practices%20for%20the%20Retrieval%20of%20Digital%20Video?docID=141

VI. Digital Evidence Field Services Training and Competency

1. The recommended (but not required) training for Field Services training is the Federal Bureau of Investigation's DIVRT (Digital Imaging Video Response Team) class.
2. The Field Services competency test is contained within the Forensic Imaging competency test.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 02/26/2018	**NUMBER:** LP.01 - Introduction of Technical Section
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Introduction of Technical Section	

I. General Information: The Latent Print Unit analyzes friction ridge detail from the palmar sides of the hands and the soles of the feet. The friction ridge detail may come in the form of latent prints, inked prints, livescan prints, major case exemplars, patent prints, plastic prints, body parts, or digital images.

A. The unit manual policies and procedures apply to all forms of friction ridge detail testing.

B. The term *latent print* is used most commonly throughout the manual, but the same methodology applies to all forms of friction ridge detail examinations.

II. Services Provided:

A. **Comparisons**

1. The latent unit tests friction ridge detail, developed on items processed in the laboratory or collected out in the field. Usable prints are compared to persons submitted as suspect or elimination.

2. Refer to LP.19 for further information on the use of the ACE-V method for friction ridge testing.

B. **Automated Biometric Database Searches (ABIS)**

1. Friction ridge impressions that qualify, may be routinely searched through the following databases:

   a. Local Database: Contra Costa County and Alameda County fingerprint and palm print records.

   b. California Department of Justice (DOJ) Database: fingerprint and palm print records.

   c. Federal Bureau of Investigation (FBI) Database: fingerprint and palm print records.

2. Refer to LP.28 for further information on the use of an ABIS database for friction ridge testing.

C. **ABIS Notifications**

1. Agencies will receive an ABIS notification when an enrolled latent print has a potential match in the Unsolved Latent Database.

2. Once notified, agencies are responsible for following through on the ABIS notification, by re-submitting the evidence with a comparison request to the laboratory for further testing.

3. Refer to LP.14 for further information on ABIS notifications.

D. **Latent Print Development**

1. The latent unit uses a wide variety of chemical, lighting, photography, and physical techniques to process and collect friction ridge detail for further testing.

2. Refer to LP.31 for a complete list of approved processing techniques, policies, and procedures.

E. Consultation

1. The latent unit may provide consultation or assistance with the collection of known prints. For example, collection of exemplars from deceased or incarcerated individuals.

2. Qualifying analysts may provide consultation to other FSD staff during examination in other disciplines.

   a. Note: Quality interpretation for ridge detail present on items tested in another unit must be reported.

F. All testing will have a written report; communicated in a clear, accurate, and unambiguous manner.

G. Analysts may be called to provide expert testimony.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/29/2019	**NUMBER:** LP.02 - Terminology and Abbreviations
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: General Information	**SUBJECT:** Terminology and Abbreviations	

I. **The following are standard terminology used in Friction Ridge Examination:**

A. Glossary:

1. **Analysis:** The first step of the ACE-V method. The assessment of an impression to determine suitability for comparison.
2. **Anchor Point:** Any feature that gives discernible anatomical orientation and location (e.g., core, delta, distinct minutiae grouping, crease).
3. **Arch**:
    1. Plain Arch: A pattern type in which the friction ridges enter on one side of the impression and flow, or tend to flow, out the other side with a rise or wave in the center.
    2. Tented Arch: A pattern type that possesses either an angle, an upthrust, or two of the three basic characteristics of a loop.
4. **Artifact**: Any distortion or alteration not in the original friction ridge impression, produced by an external agent or action.
5. **Belly-out**: Typical ridge flow of the Hypothenar area.
6. **Bifurcation**: The point at which one friction ridge divides into two friction ridges.
7. **Blind Verification**: The independent examination of one or more friction ridge impressions at any stage of the ACE process by another competent examiner who is provided with no, or limited, contextual information, and has no expectation or knowledge of the determinations or conclusions of the original examiner.
8. **Bridge**: A connecting friction ridge between, and generally at right angles to, parallel running friction ridges.
9. **Carpal Delta**: Area of the palm containing a delta formation nearest the wrist.
10. **Characteristics** (Features): Distinctive details of the friction ridges, including Level 1, 2, and 3 details.
11. **Cognitive Bias**: The effect of perceptual or mental processes on the reliability and validity of one's observations and conclusions.
12. **Comparison**: The second step of the ACE-V method. The observation of two or more impressions to determine the existence of discrepancies, dissimilarities, or similarities.
13. **Competency**: Possessing and demonstrating the requisite knowledge, skills, and abilities to successfully perform a specific task.

14. **Complex Examination**: The encountering of uncommon circumstances during an examination (e.g., the existence of high distortion, low quality or quantity, the possibility of simultaneity, or conflicts among examiners).

15. **Conclusion**: Determination made during the evaluation stage of ACE-V, including individualization, inconclusive, and exclusion.

16. **Confirmation Bias**: The tendency to search for data or interpret information in a manner that supports one's preconceptions.

17. **Conflict**: A difference of determinations or conclusions that becomes apparent during, or at the end of, an examination.

18. **Consultation**: A significant interaction between examiners regarding one or more impressions in question.

19. **Contextual Bias**: The effect of information or outside influences on the evaluation and interpretation of data.

20. **Core**:

    1. The approximate center of a fingerprint pattern.

    2. A specific formation within a fingerprint pattern, defined by classification systems such as Henry.

21. **Crease**: A line or linear depression; grooves at the joints of the phalanges, at the junction of the digits and across the palmar and plantar surfaces that accommodate flexion.

22. **Cross-Hatching**: Multiple interwoven creases, very commonly found in the Thenar area of the palm.

23. **Crows Feet**: Bifurcating creases which are part of the top crease, or at the base of the outside fingers, that tend to open toward the outside of the hand.

24. **Delta**: The point on a friction ridge at or nearest to the point of divergence of two type lines, and located at or directly in front of the point of divergence.

25. **Deposition Pressure**: The amount of downward pressure during the deposition of a print.

26. **Development Medium**: The substance used to develop friction ridge prints.

27. **Deviation**:

    1. A change in friction ridge path.

    2. An alteration or departure from a documented policy or standard procedure.

28. **Discrepancy**: The presence of friction ridge detail in one impression that does not exist in the corresponding area of another impression.

29. **Dissimilarity**: A difference in appearance between two friction ridge impressions.

30. **Dissociated Ridges**:

    1. Disrupted, rather than continuous, friction ridges.

    2. An area of friction ridge units that did not form into friction ridges, generally due to a genetic abnormality.

31. **Distal Transverse Crease**: The crease which separates the Interdigital and Hypothenar areas of the palm and is also known as the "Top Crease".

32. **Distortion**: Variances in the reproduction of friction skin caused by factors such as pressure, movement, force, and contact surface.

    1. Terms used to describe these variances may include, but are not limited to drag marks, compression, shifting, smudging, smearing, contrast issues, displacement, pressure, voids, misaligned ridges, and reversal.

33. **Dot**: An isolated friction ridge unit whose length approximates its width in size.

34. **Double Tap**: A subtle double impression where additional friction ridges will coincide or be close to running in the same direction, and in close proximity, as the existing ridge flow.

35. **Edgeoscopy**: Contour or shape of the edges of friction ridges.

36. **Elimination Prints**: Exemplars of friction ridge skin detail of persons known to have had legitimate access to an object or location.

37. **Enclosure**: A single friction ridge that bifurcates and rejoins after a short course and continues as a single friction ridge.

38. **Ending Ridge**: A single friction ridge that terminates within the friction ridge structure.

39. **Erroneous Exclusion**: The incorrect determination that two areas of friction ridge impressions did not originate from the same source.

40. **Erroneous Individualization**: The incorrect determination that two areas of friction ridge impressions originated from the same source.

41. **Evaluation**: The third step of the ACE-V method wherein an examiner assesses the value of the details observed during the analysis and the comparison steps and reaches a conclusion.

42. **Exclusion**: The determination by an examiner that there is sufficient quality and quantity of detail in disagreement to conclude that two areas of friction ridge impressions did not originate from the same source.

43. **Exemplar/Known Prints**: The prints of an individual, associated with a known or claimed identity, and deliberately recorded electronically, by ink, or by another medium.

44. **False-Negative Rate**: The proportion of the comparisons between mated prints that result in an erroneous exclusion conclusion.

45. **False-Positive Rate**: The proportion of the comparisons between non-mated prints that result in an erroneous individualization conclusion.

46. **Fault Line**: Shadowing in an impression in the form of a curved line. A visual clue that distortion may exist.

47. **Fingerprint**: An impression of the friction ridges of all or any part of the finger.

48. **Fish-Eye Void**: This is created by a small ball of fingerprint powder being left behind during the latent development phase which prevents the latent lift tape from sticking completely to the surface of the item, leaving behind an empty space with a small powder dot in the center, resembling an eye.

49. **Friction Ridge**: A raised portion of the epidermis on the palmar or plantar skin, consisting of one or more connected ridge units.

50. **Funnel Area**: Convergence of ridge flow near the top of the Hypothenar toward the center of the palm.
51. **Furrows**: Valleys or depressions between friction ridges.
52. **Ground Truth**: Definitive knowledge of the actual source of an impression.
53. **Half-Moon**: Typical ridge flow of the Thenar area.
54. **Henry Classification**: An alpha-numeric system of fingerprint classification named after Sir Edward Richard Henry used for filing, searching, and retrieving tenprint records.
55. **Hypothenar**: Area of palm below the Interdigital region on the ulnar or little finger side.
56. **Identification/Individualization**: The determination by an examiner that there is sufficient quality and quantity of detail in agreement to conclude that two friction ridge impressions originated from the same source.
57. **Impression**: Friction ridge detail deposited on a surface.
58. **Incipient Ridge**: A friction ridge not fully developed that may appear shorter and thinner than fully developed friction ridges.
59. **Inconclusive**: The determination by an examiner that there is neither sufficient agreement to identify, nor sufficient disagreement to exclude.
60. **Interdigital**: Area of the palm below fingers and above the Thenar and Hypothenar.
61. **Joint** (of the finger): The hinged area that separates segments of the finger.
62. **Latent Print**:
    1. Transferred impression of friction ridge detail not readily visible.
    2. A generic term used for unintentionally deposited friction ridge detail.
63. **Lateral Pressure**: Force applied parallel to the surface that the skin is touching (resulting in drag).
64. **Level 1 Detail**: Friction ridge flow, pattern type, and general morphological information.
65. **Level 2 Detail**: Individual friction ridge paths and associated events, including minutiae.
66. **Level 3 Detail**: Friction ridge dimensional attributes, such as width, edge shapes, and pores.
67. **Lift**: An adhesive or other medium used to transfer a friction ridge impression from a substrate.
68. **Loop**: A pattern type in which one or more friction ridges enter upon one side, recurve, touch or pass an imaginary line between delta and core and flow out, or tend to flow out, on the same side from which the friction ridges entered.
    1. Left slant loop: Pattern flows to the left of the impression
    2. Right slant loop: Pattern flows to the right of the impression
    3. Radial loop: Pattern flows in the direction of the radius bone of the forearm (toward the thumb)
    4. Ulnar loop: Pattern flows in the direction of the ulna bone of the forearm (toward the little finger).

69. **Major Case Prints**: A systematic and complete recording of all friction ridge detail appearing on the palmar side of the hands but may also include the plantar side of the feet. This includes the extreme sides of the palms, joints, tips, and sides of the fingers.

70. **Matrix**: The substance that is deposited or removed by the friction ridge skin when making an impression.

71. **Minutiae** (Galton Detail): Term referring to friction ridge characteristics attributed to the research of English fingerprint pioneer, Sir Francis Galton. Event along a ridge path, including bifurcations, ending ridges and dots.

72. **Morphology** (Friction ridge detail): An area comprised of the combination of ridge flow, ridge characteristics, and ridge structure.

73. **Open Field**: An area of uninterrupted ridges.

74. **Overlay**: A double impression where additional friction ridges overlap an existing friction ridge image. Overlays will not coincide with ridge flow and may exhibit some type of checkering. Overlays are not immediate double impressions of ridge detail, and may or may not be the same finger impression or be made by the same individual.

75. **Palm print**: An impression of the friction ridges of all or any part of the palmar surface of the hand.

76. **Patent Print**: Friction ridge impressions which are visible and have been caused by the transfer of foreign material from a finger onto a surface (e.g. impressions in blood or paint).

77. **Plastic Print**: Friction ridge impression left in a material that retains the shape of the ridge detail (e.g., prints left in clay, candle wax, putty, or thick grease deposits).

78. **Pattern Area**: The part of a fingerprint that contains the cores, deltas, and ridges that are used for classification.

79. **Pattern Force (Area):** A region of friction ridge skin in which minutiae of a particular type are forced to form due to the flow of the ridges. For example, in the outflow of a loop where ridges are converging, forcing many ridge endings as space runs out; or in the delta area of a loop or whorl. Because the pattern forces these minutiae to form predictably and their configurations are more common and less random, they are properly assigned less weight towards an association between two impressions than other areas of friction ridge skin.

80. **Pattern Type**: Fundamental pattern of the ridge flow: arch, loop, whorl.

    1. Arches are subdivided into plain and tented arches.
    2. Loops are subdivided into radial and ulnar loops; or right slant and left slant loops.
    3. Whorls are subdivided into plain, double loop, central pocket loop, and accidental whorls.

81. **Poroscopy**: A study of the size, shape, and arrangement of pores.

82. **Proficiency**: The ongoing demonstration of competency.

83. **Proximal Transverse Crease**: The crease that runs across the middle palm and usually ends in the funnel region of the Hypothenar and is also known as the "Middle Crease".

84. **Quality**: The clarity of information contained within a friction ridge impression.

85. **Quantity**: The amount of information contained within a friction ridge impression.

86. **Radial Longitudinal Crease**: The crease that enters with or directly below the middle crease and exits the palm on the thumb side of the carpal delta. It is also known as the "Bottom Crease".

87. **Ridge Flow**: The direction of one or more friction ridges; a component of Level 1 detail.

88. **Ridge Path**: The course of a single friction ridge; a component of Level 2 detail.

89. **Scar**: A mark remaining after the healing of a wound.

90. **Short Ridge**: A single friction ridge beginning, traveling a short distance, and then ending.

91. **Simultaneous Impression**: Two or more friction ridge impressions from the same hand or foot deposited concurrently.

92. **Source**: An area of friction ridge skin from an individual from which an impression originated.

93. **Specificity**: The subjective weight of a feature depending on its rarity in a given location (how specific the feature is).

94. **Spur**: A bifurcation with one short friction ridge branching off a longer friction ridge.

95. **Streaking Ridges**: When the ridges touch down on a surface and move, they can leave streaks in the furrows.

96. **Substrate**: The surface upon which a friction ridge impression deposited.

97. **Sufficiency**: The product of the quality and quantity of the objective data under observation (e.g., friction ridge, crease, and scar features).

98. **Sufficient**: The determination that there is sufficiency in a comparison to reach a conclusion at the evaluation stage.

99. **Suitable**: The determination that there is a sufficiency in an impression to be of value for further analysis or comparison.

100. **Target Group**: A distinctive group of ridge features (and their relationships) that can be easily recognized.

101. **Thenar**: Area of the palm below the Interdigital region associated with the radial or thumb side.

102. **Tolerance**: The amount of variation in appearance of friction ridge features to be allowed during a comparison, should a corresponding print be made available.

103. **Tonal Reversal**: A transferred impression representing the furrows of a friction ridge impression rather than the ridges creating the reverse effect than expected. Occurrence can be attributed to excess moisture present on the substrate or skin, as well as heavy deposition pressure.

104. **Transient Crease**: Creases which are not permanent.

105. **Type Lines**: The two innermost friction ridges associated with a delta that parallel, diverge, and surround or tend to surround the pattern area.

106. **Verification**: The independent application of the ACE process as utilized by a subsequent examiner to either support or refute the conclusions of the original examiner, and the final step of the ACE-V method.

107. **Vestige**: A group of ridges that flow perpendicular, or near perpendicular, to the ridges around them, normally found in the Thenar region.

108. **Waterfall**: Ridges that begin between the index and middle fingers, that flow outward towards the ulnar or little finger side of the palm.

109. **Whorl - Accidental**:

    1. A pattern type consisting of the combination of two different types of patterns (excluding the plain arch) with two or more deltas.

    2. A pattern type that possesses some of the requirements of two or more different types of patterns.

    3. A pattern type that conforms to none of the definitions of a pattern.

110. **Whorl - Central Pocket Loop**: A pattern type that has two deltas and at least one friction ridge that makes, or tends to make, one complete circuit, which may be spiral, oval, circular, or any variant of a circle. An imaginary line drawn between the two deltas must not touch or cross any recurving friction ridges within the inner pattern area.

111. **Whorl - Double Loop**: A pattern type that consists of two separate loop formations with two separate and distinct sets of shoulders and two deltas.

112. **Whorl - Plain**: A pattern type that consists of one or more friction ridges that make, or tend to make, a complete circuit, with two deltas, between which, when an imaginary line is drawn, at least one recurving friction ridge within the inner pattern area is cut or touched.

113. **Wobble**: Small movements during the touch on a surface resulting in the impression having an odd shape without indication of heavy shifting in any particular direction.

114. **Writer's Palm**: The outer edge of a palm print typically left on a document when people write. This impression includes the outer portion of the Hypothenar and may include the outer edge of the Interdigital region and little finger.

II. **The following are common abbreviations/acronyms used in the Latent Print Unit. Additional abbreviations commonly used in society or Law Enforcement may not be contained in this list.**

A. Fingers/Fingerprint Classification

1. Accidental whorl: X
2. Arch: A
3. Central pocket loop whorl: C
4. Double loop whorl: D
5. Extreme fingertip: TIP
6. Fingerprint: FP
7. Joint: JT
8. Left index: #7 / LI
9. Left little: #10 / LL
10. Left middle: #8 / LM
11. Left ring: #9 / LR

12. Left slant loop: L
13. Left thumb: #6 / LT
14. Lower joint: LJ
15. Plain whorl: PW
16. Right index: #2 / RI
17. Right little: #5 / RL
18. Right middle: #3 / RM
19. Right ring: #4 / RR
20. Right slant loop: R
21. Right thumb: #1 / RT
22. Second joint: 2J / 2nd J
23. Tented arch: T
24. Third joint: 3J / 3rd J
25. Whorl: W

B. Palm Prints

1. Carpal delta: CARP
2. Hypothenar: HYPO / HYPOTHEN
3. Interdigital: I / INT / INTER
4. Left palm: LP
5. Palm Print: PP
6. Right palm: RP
7. Thenar: T / THEN

C. Analysis/Comparison/Evaluation

1. Alphabetical: ALPHA
2. Alternate: ALT
3. Applicant: APP
4. Available: AVAIL
5. Background: BKGRND
6. Between: BTW
7. Black and White: B&W
8. Compression: COMP
9. Contain or Containing: C: / C (with a line above)

10. Deposition: DEP
11. Detail: DET
12. Distortion: DIST / DISTORT
13. Double: DBL
14. Double Tap: DBLTAP
15. Duplicate(s): DUP / DUPS
16. Elimination: ELIM
17. Evaluation: EVAL
18. Exclusion Value: EV
19. Exemplars: EXEMPS
20. Exterior: EXT
21. Fingerprint Exemplar: 10-print
22. Friction Ridge Skin: FRS
23. From: FM
24. Identification: ID / IDENT
25. Identified: ID'd
26. Incipient ridges: INCIP
27. Inconclusive: INC
28. Insufficient- (applies to the exemplar): INS
29. Interior: INT
30. Latent(s): LAT / LATS
31. Latent Print: lp
32. Lateral Displacement: LATDIS
33. Left: LT
34. LiveScan: LS
35. Located: LOC
36. Medium: MED
37. Manual Identification: MID
38. Minutia difference: M
39. Movement: MOVMT
40. Multiple impressions of the same finger: 2X (twice), 3X (three times), etc.
41. Need Exemplar(s): NE

42. No Dissimilarities: ND / NO DIS
43. No Prints Visible: NPV
44. No Record Located: NRL
45. No Record: N/R
46. No usable print(s): NV
47. Not compared: N/C
48. Not Compared Same Surface: NCSS
49. Obscured Region: OR
50. Observation: OBS
51. Obvious: OBV
52. Palm print exemplar: PPE
53. Palm print to Latent Inquiry: P/LI
54. Pattern: PATT
55. Pattern & Minutia difference: PM
56. Pattern difference: P
57. Peer Review: PRV
58. Possible: POSS
59. Post Mortem: POST MORT
60. Pressure: PRESS
61. Pressure Distortion: PRESS DISTORT
62. Pressure Reversal: PRES REV / PR
63. Present: PRES
64. Previously Identified: PREV IDENT / PI
65. Record: REC
66. Registered: REG
67. Returned: RET
68. Ridge Flow: RF
69. Right: RT
70. Rotational: ROT
71. Ten print to Latent Inquiry: T/LI
72. Through: THRU
73. Undisclosed Location: UNDIS LOC

74. Unidentified: UNIDENT
75. Unknown: UNK
76. Victim: VIC / V
77. Visible: VIS
78. With: W/

D. Processing

1. Alternate Light Source: ALS
2. Amido Black: AM BLK / AB
3. Apparent : APP
4. Approximate(ly): APPROX
5. Atmospheric Chamber: ATMO / ATMOS
6. Bi-chromatic: BI-CHRO
7. Black: BLK
8. Black Powder: BP / BLK PDR / BLK PWDR
9. Blank Reaction Negative: BLANK- / B-
10. Cardboard Box: CB
11. Cartridge(s): CART / CARTS
12. Control Reaction Positive: CONT + / C+
13. Cyanoacrylate Ester: CA / CAE
14. Developed: DEV / DEVEL
15. De-Ionized water: DI
16. Electrical: ELEC
17. Envelope: ENV
18. Evidence: EVID
19. Expiration: EXP
20. Fingerprint Envelope: FPE
21. Headstamp(ed): H/S
22. Hungarian Red: HR / HUN
23. 1,2-Indanedione: IND
24. Laboratory Evidence and Latent Envelope: LE
25. Latent Print Envelope: LPE
26. Magazine/Pistol Magazine: MAG

27. Magnetic Powder: MAG PWDR
28. Manila Envelope: ME
29. 7-(p-methoxybenzylamino) 4-nitrobenz-2oxa-1,3-diazole: MBD
30. Model #: MOD #
31. Ninhydrin: N / NIN
32. Page: PG / P.
33. Paper bag: PB
34. Physical Developer: PD
35. Plastic Bag: PLSB / PLB
36. Powder: PWDR
37. Processed: PROC'D
38. Quality Check: QC
39. Relative Humidity: RH
40. Rhodamine 6G: R6G
41. Rhodamine 6G, Ardrox, 7-(p-methoxybenzylamino) 4-nitrobenz-2oxa-1,3-diazole: RAM
42. Ruthenium Tetroxide: RTX
43. Serial #: SER # / S# / SN
44. Small: SM
45. Submission: SUB
46. Substance: SUBST
47. Tape Sealed: TS
48. Tape Sealed Controlled Substance Envelope: TSCSE
49. Tape Sealed Envelope: TSE
50. Tape Sealed Fingerprint Envelope: TSFPE
51. Tape Sealed Manila Envelope: TSME
52. Tape Sealed Cardboard Box: TSCB
53. Tape Sealed Paper Bag: TSPB
54. Tape Sealed Plastic Bag: TSPLB
55. Ultraviolet Light: UV
56. Vacuum Chamber: V / VAC
57. Visible: VIS
58. White: WHT

59. Ziploc plastic bag: ZLPB

E. Acronyms/Symbols

1. A latent print that is qualified to search a database: *
2. Alameda County Sheriff's Department: ACSD
3. Also Known As: AKA
4. Analysis, Comparison, Evaluation, and Verification: ACE-V
5. Automated Biometric Identification System: ABIS
6. Automated Fingerprint Identification System: AFIS
7. Automated Latent Print Search: ALPS
8. California: CA
9. California Drivers License: CDL
10. California Law Enforcement Telecommunication System: CLETS
11. Captain: CAPT
12. Contra Costa County Sheriff's Office: CCCSO
13. Contra Costa Identification Number: CCIN
14. Corporal: CPL
15. Criminal Identification and Information: CII
16. Date of Arrest: DOA
17. Date of Birth: DOB
18. Department of Justice: DOJ
19. Deputy and Department: DEP
20. Detective: DET
21. Drivers License: DL
22. Federal Bureau of Investigation: FBI
23. Integrated Automated Fingerprint Identification System: IAFIS
24. Jail Management System: JMS
25. Lieutenant: LT
26. Next Generation Identification: NGI
27. Organization of Scientific Area Committees: OSAC
28. Person File Number: PFN
29. Record Management System: RMS
30. Scientific Working Group on Friction Ridge Analysis, Study and Technology: SWGFAST

31. Sergeant: SGT
32. State Identification Number: SID
33. Technical Lead: TL
34. Ten-Print to Latent Inquiry: T/LI
35. Training Coordinator: TC
36. Training Officer: TO
37. Unsolved Latent Database: ULDB

References:
SWGFAST, Document #19, Standard Terminology of Friction Ridge Examination (Latent/Tenprint), 03/14/13, ver. 4.1
Michele Triplett's Fingerprint Terms: http://www.fprints.nwlean.net/s2.htm
Ron Smith, Palm Print Terminology

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Prints Technical Unit Manual	**REVISION DATE:** 08/28/2019	**NUMBER:** LP.06 - Requests for Service
	RELATED ORDERS: FSD.14, LP.09 & FSDF.16	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: General Information	**SUBJECT:** Requests for Service	

I. Requests for Latent Unit services must be on the appropriate FSD Request Form (See FSDF.16) or Latent Lift Envelope Request Form. The request will be reviewed to determine if the laboratory has the capability to perform the work requested. See FSD.14 for more information.

A. Latent Request Information

1. A Criminalistics Request form or Latent Lift Envelope (also a request form) should be completed by the submitting agency.
2. The form should indicate the evidence being submitted (items for processing, latent lift cards, etc.) and what work is being requested. If the request form is submitted without evidence, the "Request only" box should be checked, or otherwise indicated.
3. Subjects to be compared (Suspect or Elimination) should be listed on the request form along with the individual's Date-Of-Birth.
4. If the request is a Rush, the appropriate area should be filled in on the request form, including the reason if known.
    a. Rush and Expedite/ASAP cases will be prioritized. Any case requiring unusually fast turn around time should be approved by a Supervisor, Manager, or designee. If the assigned analyst cannot meet the agreed upon completion date, the unit Supervisor, Manager, or designee must be notified.
5. The clerical staff should verify that the above criteria are met prior to logging the request into Laboratory Information System (LIMS).
6. Clerical staff must scan the request form and chain of custody information into LIMS. If either is not in LIMS, it is the responsibility of an analyst to complete this task prior to Admin Review.
7. Once logged in, clerical staff will typically transfer the evidence to the Evidence Storage Room and give the Request Form or Assignment Notification to the Latent Unit.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 10/17/2018	**NUMBER:** LP.09 - Evidence Handling
	RELATED ORDERS: FSD.35, LP.06 & CLER.CRIM.02	
APPROVED BY: Kathryn Novaes, Debbie McKillop	**ANAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Evidence Handling	

I. Evidence Handling Policy: The latent print unit will maintain the integrity of evidence in the custody of the laboratory by handling and storing evidence in a way that will minimize loss, degradation, contamination and deleterious change. While in the custody of the latent unit, staff will maintain control and track evidence by recording secure evidence transfers using LIMS.

A. See LP.64 for information on contamination prevention while handling evidence.

B. Refer to FSD.35 and QA.09 for more information on evidence handling.

C. **Accepting & Receiving Evidence**

1. Evidence submitted for latent testing will be accompanied by a properly filled out request form. For information on requests for analysis, see FSD.14, and for the Criminalistics Request form, see FSDF.16.

2. Staff will determine if evidence received meets evidence acceptance requirements listed in FSD.35 and latent specific requirements below.

   a. The latent unit may choose not to process items under the following circumstances:

      i. evidence previously handled without gloves by the submitting agency.

      ii. items not conducive to latent residues, and are unlikely to yield favorable results.

      iii. evidence that pose a threat to the health and safety of staff.

   b. When staff choose not to process an item submitted for testing, the report will indicate the reason the item was not processed.

      i. The report will also indicate the disposition of the evidence, *including* evidence that is sent to another unit for testing.

   c. For information on halting *In-Progress* work, see LP.14.

3. Evidence is logged into the Laboratory Information Management System (LIMS) and is tracked through the electronic Chain of Custody. See CLER.CRIM.02 and FSD.35.

   a. Evidence returning to the laboratory for further testing after the original request is completed, will be given a subsequent request in LIMS.

i. Whenever possible, the analyst who completed the original request, will also be assigned to the subsequent request.

4. **Latent Print Cards**

a. Should be submitted in a Latent Print Evidence Envelope (also serves as the request).

b. For over-sized or numerous lifts, a larger Manila Envelope or Paper Bag may be used.

c. Request information must be filled out and include the chain-of-custody.

d. Packaging must be properly tape-sealed, including the initials of the person sealing the evidence.

5. **Items to Be Processed**

a. Items requiring processing for latent prints are submitted in various types of packaging depending on the size and shape of the item. Packaging information must be filled out and include a chain of custody. Packaging must be properly tape sealed including the initials of the person sealing the evidence.

b. Occasionally evidence can not be packaged and properly tape sealed due to the size and shape of the item. In this situation, all efforts to protect the surface areas of the evidence will be made.

i. Gloves must be worn by any laboratory staff handling the evidence.

ii. Once logged in, the item will be transferred in LIMS to an evidence storage location based on available space.

c. Firearms **must** have an **Unloaded** label with date and initials indicating the firearm is unloaded. Upon verifying the presence of the sticker, mark the unloaded checkbox in LIMS, under the *Additional Data Field*.

6. **Exemplar Prints**

a. Exemplar fingerprints and palm prints are not evidence and do not need to be in a sealed container, nor do they require a chain of custody.

b. Exemplars potentially contaminated with body fluids should be sealed in a clear plastic container, allowing the contents to be examined through the plastic.

D. **Chain of Custody & Evidence Transfers**

1. A chain of custody record provides a comprehensive and documented history of each case submission. All evidence will be securely transferred when the examiner obtains custody of the item or transfers the item to a person or designated location.

2. Transfers of evidence are recorded in LIMS contemporaneously with the physical transfer of evidence to a location or person. The evidence transfer must be recorded in LIMS prior to breaking the seal on the evidence package.

E. **Inventory, Marking and Sealing of Evidence**

1. When practicable, seals should not be disturbed to gain access to the evidence.

2. Care must be taken when more than one container is opened to prevent loss, cross transfer, contamination or deleterious change.

3. The contents of an evidence container will be inventoried as soon as it is opened and compared with the evidence description in LIMS, on the container, and the Request Form.

    a. If a discrepancy is found, the examiner must document the discrepancy in their case notes and correct the evidence description in LIMS accordingly. See FSD.42 for more information on discrepancy documentation requirements.

    ii. Depending on the situation and type of evidence discrepancy, analyst discretion will dictate whether or not clarification is needed from the requester or requesting agency. When necessary, the analyst may attempt to contact the agency for clarification and document the communication.

4. **Each item of evidence will be marked with the examiners initials, the laboratory number with request number, the item number, and the date**.

    a. Under the following circumstances, the identifying information may be placed on the container as opposed to the evidence itself:

        i. The evidence is too small for the information.

        ii. Marking the evidence will damage the evidence or interfere with subsequent examinations.

        iii. The nature or texture of the item prevents it from being marked.

        iv. The number of items makes it impractical to mark each one.

        v. If evidence items are placed in secondary containers for convenience, the new container(s) must have the identifying markings as listed above.

5. Upon completion of the examination, evidence will be tape sealed; tape initialed and dated; and securely transferred to the appropriate location.

6. On Firearms evidence, ensure the firearms-processing checklist label is marked: check the latent box to indicate latent processing was completed, or "N/A" as appropriate.

F. **Storage of Evidence**

1. Prior to examination, evidence should be stored in the Evidence Room and its location recorded in LIMS.

2. ***In progress*** evidence will be stored in the examiner's personal workstation, holding-file, or processing room (indicated in LIMS as the analyst), and may be unsealed. **Care must be taken to secure the evidence to prevent loss or deleterious change.**

3. Evidence awaiting verification will be appropriately and securely clipped or closed, then transferred in LIMS to the appropriate Fingerprint Holding File, or directly to an examiner for review.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 02/26/2018	**NUMBER:** LP.10 - Itemization
	RELATED ORDERS: FSD.38 Evidence Itemization, QA.09 Adding, Itemizing, and Transferring Evidence in LIMS	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Itemization	

I. Policy: All evidence submitted to the laboratory, or generated at the laboratory, will be itemized according to FSD.38.

A. It is the responsibility of the analyst to account for all evidence within a submission, itemizing at level 2 and below in LIMS, to capture evidence information concisely.

B. Packages containing a single digital image, or one latent lift card, will be itemized, as will single item evidence submitted for latent processing.

1. If another unit in the laboratory does work on evidence prior to the latent unit, the item number reported for that evidence is maintained.

C. Lab-Generated Evidence is evidence that has been created from laboratory examination.

1. CDs and DVDs created by the analyst, containing digital images of latent prints collected during laboratory processing, are considered lab-generated evidence.

2. When beginning the electronic chain of custody in LIMS, analysts will use the agency representative Lab-Generated Evidence under the Forensic Services Division agency.

3. See QA.09 (Lab-Generated Evidence) for more information and procedures.

D. Split Chain of Custody: the purpose of this process is to split the chain of custody of a child item from its parent in LIMS.

1. An example of a time when split chain of custody would be used is when swabs are collected from an item.

2. Ensure that the parent and child item are in the analyst's personal custody.

3. See QA.09 (Split Chain of Custody) for more information and procedures for splitting the chain of custody.

E. Containerizing is grouping any split LIMS items into a new or different package.

1. See QA.09 (Containerize Evidence) for more information and examples of containerizing.

2. When beginning an electronic chain of custody in LIMS, analysts will use the agency representative Lab-Containerized under the Forensic Services Division

agency.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/19/2019	**NUMBER:** LP.14 - Test Records and Entering Information into LIMS
	RELATED ORDERS: Test Reports FSD.43 and Test Records FSD.42	
APPROVED BY: Kathryn Novaes & Debbie McKillop	ANAB:	
CHAPTER: Test Records	**SUBJECT:** LP.14 - Test Records and Entering Information into LIMS	

I. POLICY: The test record includes all data, information, results and interpretations, and documentation from carrying out tests. The Latent Unit adheres to the requirements of the Division Manual in regards to Test Records (FSD.42) and Test Reports (FSD.43) with the following additions and clarifications.

A. **Test Records**: technical records and administrative records pertaining to testing performed. The following test record documentation is in LIMS or housed with the case file, and are included in the scope of the administrative and technical review process. For LIMS imaging procedures see QA.14.

1. **Technical Records**: data, documentation, and information from carrying out tests are included in the test record.

a. Technical records to support a test report will contain sufficient information such that another reviewer possessing the relevant knowledge, skills, and abilities could evaluate what was done and interpret the data.

i. Abbreviations used by the latent unit are specified in the Terminology and Abbreviations policy: LP.02

b. LIMS will contain: original observations, tests conducted, reagents and equipment used, results, and analyst interpretations of all examinations. Additionally:

i. Date evidence was received: pulls automatically from LIMS and prints on report.

ii. Date(s) the evidence was opened and inventoried: in notes.

1. cases must be assigned to an analyst in LIMS upon start of examination.

iii. Date(s) when each test was performed: in notes.

iv. Date, or range of dates of testing: pulls automatically from LIMS and prints on report.

1. In the *additional data* field, enter the start and end dates of testing.

v. Any supplementary pertinent case related information, or unusual circumstances with the case or appearance of evidence will be documented in the test record.

vi. Discrepancies in inventory of evidence will be changed in LIMS and noted in the test record.

1. the evidence description in LIMS **must** reflect what is physically present in the evidence submission, even if different from the description provided by the submitting agency.

2. items with high theft potential, such as controlled substances, money, or jewelry, must be verified by another employee of the laboratory as soon as practicable.

vii. Consultations: Documentation of significant interactions must be included in the test record notes and the ***Consultation*** box (check box located in the ***additional data field***) selected. See LP.19 for more information on consultations.

viii. Any deviations from procedures will be documented and approved by the Supervisor, Forensic Manager, or Technical Lead prior to use in casework, and the justification will be included in the notes.

ix. Notes regarding other analysts who assisted on the case must be included (dated and initialed as necessary).

1. Tests performed by an analyst other than the assigned case analyst will be reported.

x. Quality Log: populated by LIMS for every compared individual, and printed for verification documentation. See LP.24 for Quality Log procedures.

1. If a verification was completed, the analyst(s) will be named in the Supplemental Information area of the report.

xi. Processing cases, when applicable, will have the following documented in LIMS:

1. Presence of an appropriately labelled "Unloaded" sticker on gun containers (checkbox in the *additional data* tab in LIMS).

2. Collection of biological evidence.

3. Number and location of swabs collected.

4. Presence of any visible prints prior to processing.

5. Circumstances that interfere with or prevent the evidence from being processed.

6. Type of processing techniques used, the sequence or order of techniques applied, and the results.

7. Reagent Lot#s and expiration dates.

8. Specific Equipment used.

9. The results of control and blank reagent tests.

10. Location of where latent prints were developed.

11. Number of latent lift cards or digital images collected.

12. See LP.31 for more processing information and requirements.

c. Additional documentation to support tests included in the case file:

i. ABIS Printouts: for required printout documentation see LP.28.

ii. ACE-V documentation: for required GYRO documentation see LP.19.

iii. Exemplars used for comparison testing; dated and initialed by analyst and verifier when applicable.

iv. Digital images (See LP.45) and Latent lift cards (See LP.15).

1. Images of friction ridge evidence will be stored in Veripic. Refer to QA.21 for more information about uploading images to Veripic.

2. **Administrative Records**: records that do not constitute data or documentation resulting from testing. The following administrative records are in LIMS and are included in the test record:

a. Communications (phone logs or emails from client agencies)

b. Request form

c. Chain of custody

d. **Exception: Police reports:** to protect analysts from potential biasing information, the latent unit does not review and retain police reports prior to conducting tests. Police reports will not be contained within the test record.

B. **Procedure for entering information into LIMS.**

1. Enter the names of all **verifiers**, **processing staff, reviewers of processing results,** date(s) of testing, additional pages, and *Unloaded* checkbox for firearm evidence, in the ***additional data*** field of the Request tab.

2. Enter new individuals for comparison under the ***Individuals Tab,*** and relate to the latent request.

a. Each person should be associated with the corresponding description of elimination, suspect, victim, or other. Persons may need to be added more than once if they are already associated with multiple requests. Include the name, DOB, and record number (ID#). An alternate name (AKA) will need to be entered separately to appear on the report. Additional DOBs or AKA information for subjects may be added as an *Examination Result* in LIMS.

3. **Latent Result (Result Type): The information entered into this section will appear only in the notes.**

a. Select the appropriate evidence item, right click and select ***add result.***

b. From the ***Result Type*** drop-down menu, select ***Latent Result.***

c. Apply notes into the large note field and use the ***Ellipses*** button to add the check-box information, or to check that a consultation occurred on the case. This module is used to document a variety of notes, such as:

i. Processing: notes are entered into notes field and use ***Ellipses*** button to: select all techniques used, processing results (see below for options),

and if photos were taken (yes or no).

ii. Any clearly specified notes documenting the ACE process (for example, analysis notes).

iii. The use of Photoshop to enhance images for comparison (***Ellipses***).

d. The ACE information entered into this field will be pulled into the Quality Log when the evidence has an associated compared individual.

e. Applicable notes and check boxes will need to be applied for each item of evidence.

f. Print Quality: use ***Ellipses*** button: apply anatomical location and suitability value of print.

i. The ***Screening*** drop down menu is used when there is a latent print sufficient for comparison, to indicate the anatomy of the print (Fingerprint, Palm Print, Foot print, or Latent Print).

ii. The following are ***ScreenValue*** drop down menu options (for descriptions of latent value determinations, see LP.19):

1. ABIS Value: the latent print is sufficient for an ABIS search, and is also suitable for a comparison.

2. Identification Value: the latent print is sufficient for identification or exclusion, but not an ABIS search.

3. Exclusion Value: the latent print is sufficient for exclusion, but not an Identification or an ABIS search.

4. No Value: no ridge detail, or partial ridge detail visible, but not suitable for further examination.

g. The following are ***Processing Result*** drop down menu options:

i. No Ridge Detail Developed: no latent prints (ridge detail) were developed.

ii. Ridge Detail Developed: ridge detail developed and suitability will be determined subsequently.

iii. Ridge Detail: ridge detail developed and suitability will be determined in subsequent report. This is only selected when a separate Comparison or ABIS request is generated in addition to the Processing report for the same case.

iv. The drop down (Yes/No) selection for ***Photos Taken*** will be applied to indicate if photos were taken as a result of developing ridge detail.

4. **Latent Search (Result Type).** This module is used to populate which latent database(s) were searched, and any clearly specified notes pertaining to the search of the database(s). A record of all database search transactions must minimally be documented in the notes. For more information on documentation requirements, see LP.28 .

a. Select the appropriate evidence item, right click and select ***add result.***

b. From the ***Result Type*** drop down menu select ***Latent Search.***

c. Enter search date(s), analyst(s) performing the search, and any search related notes into the *large note field*, select ***apply.***

i. The information entered into this section will appear only in the notes.

d. Select the ***Ellipses*** button.

i. For each latent print, select the appropriate check box for the database(s) searched. If the search resulted in a hit, also select the check box from which database the hit occurred.

ii. If a print is suitable for an ABIS search, but is identified and subsequently ***not searched***, add the Latent Search result type without any boxes checked. This will automatically generate a statement on the report that the print was not searched through an ABIS database.

5. **Compared Individuals (Result Type)**. This module is used to populate comparison notes and results pertaining to the related compared individual.

a. Select the appropriate evidence item, right click and select ***add result.***

b. From the ***Result Type*** drop down menu select ***Compared Individuals.***

c. Enter dates and other comparison notes into the *large note field*, select ***apply.***

i. This information will appear in the notes and will be pulled into the Quality Log.

d. Select the ***Ellipses*** button.

e. Select the appropriate name from the Compared Individual drop down menu.

f. The following are the *Stat Code* drop down menu options:

i. ABIS HIT: a hit was made from an ABIS search that resulted in an identification.

ii. Exclusion: based on the available data, the named individual was excluded from the latent print.

iii. Inconclusive: the named individual could neither be identified to, nor excluded from the latent print.

1. include in notes, why the result is inconclusive, and to which area of friction ridge skin.

iv. INS: the exemplars available were not sufficient to perform a comparison to the latent print.

v. MID: the named individual was identified.

vi. Not Compared: the individual was not compared to the latent print. Analysis documentation is not required when the latent is not compared.

vii. NRL: no record (exemplar) was located for a comparison to the named individual.

viii. NRL/DOB: a date-of-birth for the named individual was not provided by the requester, but is necessary to obtain exemplars.

g. When an identification is made, select the appropriate area of friction ridge skin from the following drop down menus:

i. L/R

ii. Anatomy

h. When an exclusion is made, complete the checkbox section to indicate how the comparison resulted in an exclusion.

i. Level 1 = pattern/ridge flow differences

ii. Level 2 = minutiae differences

i. Select the Hide DOB/ID box when the individual identified is a law enforcement officer, or when the date-of-birth and reference identification number needs to be suppressed from the report and notes.

j. Use the *Insufficient Comment box* for the following information, which when entered, will appear on the report:

i. If the Stat code selected is INS, type in the specific area of friction ridge skin needed. For example, finger-tips or palm prints.

ii. If the Stat code selected is NRL, type in the specific area of friction ridge skin needed. For example, palm prints or footprints.

6. **Notes (Result Type)**. Information added into this field will only be printed in the notes, under the selected evidence description.

7. **Examination Results (Result Type)**. Information added into this field is printed in the report and the notes. Information added to this field may include:

a. Items that were not tested and why they were not examined.

b. Statements indicating AKA or alternate date-of-birth information.

c. Disposition of all evidence forwarded to another unit in the laboratory.

d. Examinations performed by analysts other than the author of the report.

8. Under ***Activities,*** enter the time spent on the case with the appropriate date range and the type of examination.

9. After the examiner has determined that the case is complete, LIMS will be utilized to set the milestone to ***Draft Complete,*** and the report, note packet, and evidence (if applicable) will be submitted for review.

a. Include the technical review worksheet with the case file for review. LPF.50

C. **Summary in Report**

1. **Comparison/ABIS:** A summary will appear on the report depending on selections made in LIMS under result type Compared Individuals. The summary automatically populates the report when:

a. at least one identification is made.

b. individual is completely excluded.

c. individual is completely inconclusive.

2. **Processing:** A summary will appear on all processing cases. The default summary will state "The item(s) below have no useable prints" **unless** the following box(es) are checked in the request additional data field:

    a. Usable Prints in Summary: when this box is checked, the summary will state: "The item(s) below have useable prints." **Check this box when useable prints have developed on at least one of the items processed.**

    b. Swab in Summary: when this box is checked, the summary will state: "Item(s) were swabbed for potential DNA testing." **Check this box when at least one of the items were swabbed for DNA.**

3. No work reports will have no summary.

D. **ABIS Notification**

1. Agencies will be informed of their cases with potential matches in the Unsolved Latent Database (ULD) via an ABIS notification.

2. ABIS Notification reports require a verification and a technical review.

    a. the verifier will document their review of the hit on the ABIS hit print-out with their initials and date.

    b. the technical review will be reflected in LIMS as a milestone, or encompassed with the Administrative Review signature.

3. To complete the ABIS notification in LIMS, select ***Case Synopsis*** and include the following information, if known:

    a. the location or object from where the latent print was collected.

    b. the agency's item number(s) and the lab's item number(s).

    c. the name of the individual in the potential match.

    d. a disclaimer describing the qualitative significance of the positive association.

    e. a statement that the potential hit must be confirmed by resubmitting the evidence to the laboratory for examination.

    f. a disposition statement that the print record was deleted from the ULD database.

4. The notes to collaborate the ABIS Notification must include the ABIS hit printout(s), and may include other supporting documentation, such as the following:

    a. copy of lift card(s) from LIMS.

    b. report or notes from original request.

E. **In-Progress work halted**

1. If work must be stopped and can not continue without further information or clarification from the client agency, or for any other reason, staff will do either of the following:

    a. Report the work completed prior to stopping, and include in the report:

        i. a statement indicating what is needed to complete testing, or

ii. the reason(s) that work was halted and not completed.

b. Contact the client agency to get the required information or clarification to complete the work.

i. retain the communication documentation in the test record.

F. **No Work Done Reports**

1. When the Latent Unit determines that the requested work cannot or will not be performed, a report will be issued to the customer. The reason the requested work was not performed will be articulated in the report.

2. When the agency cancels a request for service and no work has been performed, a report will be issued. The identity of the individual cancelling the request will be included in the final report.

3. The following steps will be taken to document No Work Done Reports:

a. In the Additional Data Field for the request in LIMS, select the "no work done" box.

b. Select Edit Findings and choose Summary from the drop down to include the required information as stated above.

c. If the unit chooses not to process an item, the evidence must be fully documented, including overall images, to be included in the test record.

d. The report will also include a disposition of the evidence. For example, the item was forwarded to another unit for analysis.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 02/26/2018	**NUMBER:** LP.15 - EPSON Scanner
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ISO/IEC 17025:**	
CHAPTER: Case Documentation	**SUBJECT:** EPSON Scanner	

I. Policy: Images of all friction ridge evidence must be legibly maintained in the test record. Latent lifts, or other friction ridge evidence, will be scanned on the EPSON perfection V700 PHOTO scanner for on-screen examination and retention in Veripic.

A. **Procedure**

1. All images scanned for the purpose of on-screen analysis and comparison will be scanned at a minimum of 1000 ppi.
2. Grayscale imaging will be set at a minimum of 8 bits.
3. Color digital imaging will be set at a minimum of 24 bits.
4. Friction ridge impression digital images, used for comparison purposes, will be stored and transmitted without compression, or with lossless compression. TIFF format is appropriate for scanning.
5. Refer to QA.21 for more information about uploading images to Veripic.
6. Refer to instruction manual for more information on the Epson scanner: INSLP.18
7. After opening the Epson Scanner software, make the following selections from the Epson Scan Screen:
    a. **Mode**: Professional Mode
    b. **Document type**: Reflective
    c. **Document Source**: Document table
    d. **Auto Exposure Type**: Photo
    e. **Image type**: 8-bit Grayscale **or** 24-bit Color
    f. **Resolution**: 1000 or 1200
8. Due to file size, the image may need to be cropped for a successful upload to Veripic.
    a. the **non-evidentiary** side of lift cards may be loaded into Veripic at a lower resolution, with image format type JPEG.
9. **Select Scan (**on the lower right corner of the screen).
10. A ***File Save Settings*** screen will open.
    a. **Location**: choose location to store the scanned image

b. **File Name**: choose a file name; for example Lab number

c. **Image Format**: TIFF

B. **Quality Assurance**

1. **Purpose**

a. SWGFAST, SWGIT and NIST guidelines specify friction ridge impressions to be used for comparison purposes will be captured (color or grayscale) at a minimum resolution of 1000 pixels per inch (ppi) when the image is sized 1x or 1:1. While the 1000 ppi resolution standard permits the capture of level three detail in latent prints, it does not mean that any image recorded at a lower resolution would necessarily be of no value for comparison purposes.

b. The relationship between nominal resolution and achievable resolution (resolving power) can vary greatly from different manufacturers. To determine that a scanner is capable of capturing an image at a given resolution, it is necessary to use a test target. The purpose of this procedure is to test the ability of the scanner to capture the necessary level of detail when viewed on a monitor.

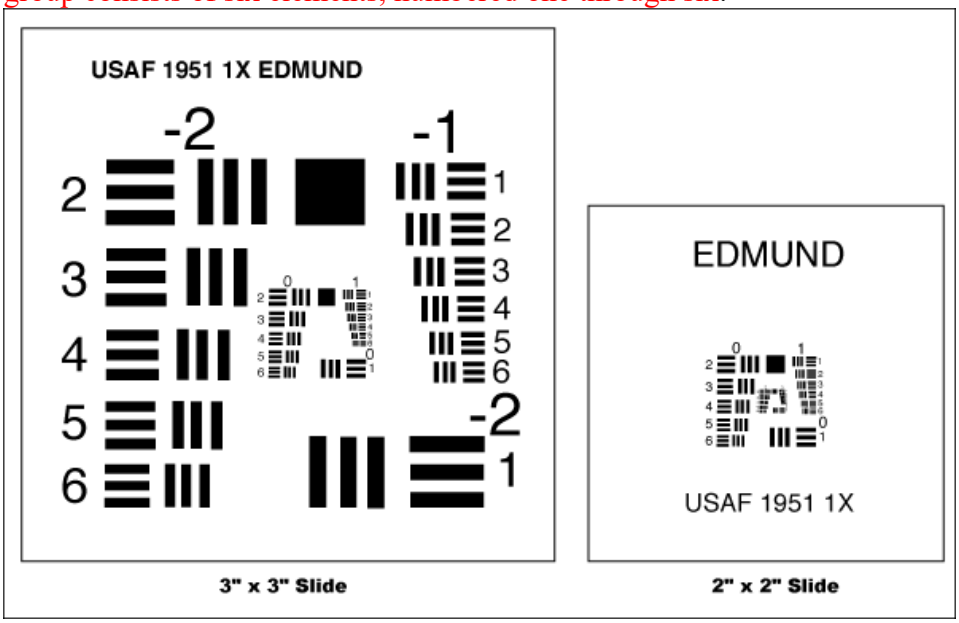
2. **Frequency**

a. In order to consistently and reliably capture images at the required resolution (1000 ppi), the scanners shall be tested annually.

3. **USAF 1951 Resolution Test Target**

a. The test target used in the Latent Print unit is a 2" x 2" piece of glass from Edmund Industrial Optics with a positive (chrome on clear background) resolution test pattern. The pattern tests the resolving power of the scanner to capture latent prints for on screen analysis and comparison purposes.

b. The format consists of six "groups" in three layers of patterns. The largest groups, forming the first layer, are located on the outer sides. The smaller layers repeat the same pattern but are progressively smaller towards the center. Each group consists of six elements, numbered one through six.



c. Resolution for the test target is stated as line pair per millimeter (lp)/mm. The patterns repeat at a given frequency and may be referred to as cycles per unit of distance. Line pair means a black and white line.

d. Because nominal resolution of 1000 ppi corresponds to an achievable resolution of approximately ***9.8 - 13 cycles per millimeter***, any target within this range would be sufficient. The highlighted sections of the table correspond to an acceptable performance check (at least Group 3, Element 3 or higher). A performance check resulting in a resolution higher than 1000 ppi is also considered acceptable.

e. **Reference Table** (from Edmund Optics Website)

	Group	Group	Group	Group	Group	Group	Group	Group	Group	Group
Element	-2	-1	0	1	2	3	4	5	6	7
1	0.250	0.500	1.00	2.00	4.00	8.00	16.00	32.0	64.0	128.0
2	0.280	0.561	1.12	2.24	4.49	8.89	17.95	36.0	71.8	144.0
3	0.315	0.630	1.26	2.52	5.04	10.10	20.16	40.3	80.6	161.0
4	0.353	0.707	1.41	2.83	5.66	11.30	22.62	45.3	90.5	181.0
5	0.397	0.793	1.59	3.17	6.35	12.70	25.39	50.8	102.0	203.0
6	0.445	0.891	1.78	3.56	7.13	14.30	28.50	57.0	114.0	228.0

f. A resolution lower than the ***9.8-13 cycles per millimeter*** (approximate 1000 ppi) is considered unsatisfactory. If there is an unsatisfactory performance check, the check will be repeated. If negative results continue, a Supervisor must me notified immediately and steps taken to correct the problem which may include, servicing or replacing the scanner(s).

4. **Procedure: Using the test target**

a. Place the resolution test target face up on the scanner platen (similar to the placement of a latent print).

b. Crop the image using the Preview feature to approximately 1 inch x 1 inch (similar to how a latent print would be cropped with a scale), then **Scan**.

c. Open the image in the Windows Picture and Fax Viewer or in Photoshop.

d. Do not manipulate or rotate the image.

e. Scanners may have different resolutions in vertical and horizontal directions. To measure those independently, the resolution target has horizontal and vertical oriented bars.

i. With the view set at 100% (original view), look **on the computer screen** for the element in which you can just differentiate with your eyes, two adjacent bars and still recognize the white gaps.

ii. Read the element's number and group affiliation, then determine the resolution of the scanner using the reference table in the policy.

5. **Documentation**

a. A ***printscreen*** of the test target in the viewer will be printed out and the element number and group affiliation from the test will be recorded. The date, staff member performing the check, and scanner # will be documented on the printout which will be retained in the maintenance binder with the completed maintenance log (LPF.10) for the appropriate scanner.

C. **References**

1. 1951 USAF Glass Slide Resolution Targets at www.edmundoptics.com/testing-targets
2. USAF 1951 SilverFast Resolution Target at www.silverfast.com
3. SWGFAST, "Standard for Friction Ridge Detail Imaging", version 1.1, 09/14/09.
4. SWGIT, Section 21: "Procedure for Testing Scaner Resolution for Latent Print Imaging", version 1.0 2012.01.12

II. Images of documents may be scanned using the ESPON scanner for retention in LIMS.

A. **Procedure**: The following are setting selections for scanning documents into LIMS (for example: chain of custody or case-related email communication).

1. After opening the Epson Scanner software, make the following selections from the Epson Scan Screen:
   a. **Mode**: Professional Mode
   b. **Document type**: Reflective
   c. **Document Source**: Document table
   d. **Auto Exposure Type**: Photo
   e. **Image type**: 8-bit Grayscale
   f. **Resolution**: 200
2. **Select Scan**
3. A ***File Save Settings*** screen will open appear:
   a. **Location**: choose location to store scanned image
   b. **File Name**: choose file name
   c. **Image Format**: JPEG (*.jpg)
   d. The "*show this dialog box before exit scan*" checkbox should be checked.

B. Refer to QA.14 for more information about uploading images to LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 07/24/2018	**NUMBER:** LP.16 - Test Report
	RELATED ORDERS: FSD.43	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Test Report	

I. Policy: The results of all testing will be reported, and include all the information requested by the customer, and the information necessary for the interpretation of the results. The latent unit will provide a written test report to the customer that contains the results, conclusions, and interpretations reached, from all work performed, in a clear, accurate, and unambiguous manner. The Laboratory Information Management System (LIMS) is the primary location for laboratory case information.

A. **General Information**

1. Reports will be generated in LIMS for all testing completed by the latent unit. Latent service types include:
   a. Comparison, ABIS, Processing, ABIS Notification, Latent Amendment, Latent Discovery, and Latent Proficiency and Competency.
2. It is the responsibility of the analyst to ensure reports are accurate, error free, and clearly state the appropriate results for the type of request submitted.
3. The reported results will be supported by examination documentation, including:
   a. Computer generated print-outs, photographs, known exemplars, legible copies of latent prints, ACE-V documentations, quality logs, relevant email correspondences, notes and observations, or any additional documentation related to the case that supports the results and interpretations. The documents must be retained and retrievable.
   b. See **LP.14** for more information about test records and entering results into LIMS.
   c. See FSD.43 for required information to appear on the report.
4. If an analyst, other than the author of the report, contributes to the testing of casework, that individual will be named in the report.
5. If an analyst from another unit performs testing on a latent request that is outside of the latent unit's scope of testing, the following is required:
   a. the results of the testing will be included in the report.
   b. the identity of the analyst performing the test will be in the report.
   c. the notes from the analyst conducting the test will include their initials, date(s) of testing, how test results should be reported, and a technical review of the work from another authorized analyst.

i. notes will be retained in the test record.

B. **Test Reports** will minimally include the following:

1. All test results for Processing, Comparison, and ABIS work that was done.

2. Complete description of the item(s) examined.

   a. For latent lift cards, **if** provided by the agency or lab staff, the location from where the lift was collected will be denoted in quotation marks. For example, latent lift card from "car door."

      i. When location information is ***not*** provided on the lift card, the description should indicate: *lifted from undisclosed location with or without a sketch;* and quote the location indicated on the request form, if provided.

   b. If an item was submitted for testing but was not examined, the report will indicate that the evidence was not processed for latent prints.

3. Print quality, or level of suitability, will be given for each latent print, and lift card or digital image, in accordance with **LP.19**.

4. Processing techniques used, including any swabs collected and the disposition of the swabs.

5. Databases in which the print(s) was searched (scope of the search), including the search results (Hit/No Hit).

6. Comparison examination results, including the name, date of birth, and record number (if one is located), for all individuals requested to be compared.

   a. Examinations that result in an ***Identification*** must include the area of friction ridge skin that was identified. For example, the Right Thumb or Right Palm.

      i. a qualifying statement regarding the *strength of association* for an interpretation decision of identification is provided in the Supplemental Information area of the report.

   b. Examinations that result in an ***Exclusion*** must indicate that the individual was excluded from the latent print.

      i. an exclusion decision is defined in the Supplemental Information area of the report.

   c. Examinations that result in an ***Inconclusive*** must include a qualification statement supporting the decision.

      i. a qualification statement is reported on the Supplemental Information area of the report, but the analyst will specify details regarding the inconclusive decision in their notes.

   d. If exemplars are deemed to be insufficient to complete a comparison, the report will specify the area of friction ridge skin that is required for comparison.

   e. If exemplars were not located, the report must state that exemplars were not located and would be needed for comparison.

7. The report will state when a latent print(s) is "Not Compared" to an individual(s) under the following circumstances:

    a. Not compared same surface: when additional latent prints are found on the same surface as an already identified latent print. See **LP.19** for more information.

        i. exceptions: if the individual identified is the victim, or the case is a homicide.

    b. ABIS hit: when there has been an ABIS hit resulting in an identification, the remaining (non-ABIS quality) prints may not be compared to that individual. See **LP.28** for more information.

        i. exceptions: if the ABIS hit is to the victim, or the case is a homicide.

8. If testing was carried out in a different location than the laboratory, the location of testing must appear in the body of the report.

    1. The name and address of the laboratory, where most testing occurs, already appears on the report header.

9. A description of, the condition of, and unambiguous identification of the items tested, items received (including items not tested), and items created (that were or could be tested).

10. See FSD.43 for information on releasing results prior to completion of a test report, and distribution of test reports.

C. **Supplemental Information on report** contains the following:

1. Client address.

2. Receipt of Evidence information.

3. Outer package(s) were received by the laboratory in tape-sealed condition.

4. Date(s) of testing.

5. Evidence not pending further laboratory analysis will be returned to the requesting agency or Contra Costa County Property Services.

6. A statement to resubmit evidence if further comparison testing is needed on unidentified prints.

7. Database statements:

    a. A statement indicating why a latent print may not have been identified as a result of a latent print search.

    b. The latent prints searched and not identified are enrolled to the unsolved latent database and continue to search until deleted.

8. The latent unit will routinely search for known exemplars throughout the State of California.

9. Statements that define:

    a. Identification

    b. Exclusion

c. Inconclusive

d. Sufficient and Insufficient print quality

10. The names of staff assisting with latent testing.

11. Statement regarding Photoshop enhancements.

D. **No work and partial work reports**

1. If laboratory staff or the client agency determine work is no longer going to be done, after a request for service has been generated, a report will be issued by the latent unit.

a. The reason the requested work was not performed will be articulated in the latent report.

b. If the agency cancels a request for service, the name of the individual cancelling the request will be included in the latent report.

c. For procedures on completing a "no work" report, see LP.14.

d. If work is halted, results of all partial testing will be reported, as well as the reason for stopping the work in progress.

E. For information on **Amended Reports, Confidential Reports, and Restricted Reports**, see FSD.43.

F. For information on **Latent Discovery reports,** see LP.70 and FSD.45.

G. For information on **ABIS Notification reports**, see LP.14.

H. For information on **Latent Proficiency and Competency reports**, see LP.63.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/27/2019	**NUMBER:** LP.18 - Equipment Maintenance
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB: 6.4**	
CHAPTER: Quality Assurance	**SUBJECT:** Equipment Maintenance	

I. Policy: The maintenance of equipment will be performed by Division Staff or outside service technicians to ensure their proper working order. All maintenance records will be retained in the corresponding equipment maintenance log which is stored in the Latent Unit - Equipment Maintenance Binder. ABIS maintenance is documented on the ABIS Maintenance Log located on the G-Drive in the Latent Folder. Maintenance records include calibration dates and results, adjustments or modifications made, damage to and repair of, planned intermediate checks and cleaning details, and other similar documentation. The Latent Unit will maintain a list of approved Equipment including Software/Firmware, Reagents, and Instruments. The list will include the equipment identity, manufacturer, version, or other unique identifying information.

A. **Routine Cleaning of Equipment**

1. Routine cleaning of equipment, work stations and work surfaces prior to use to prevent contamination and maintain clean work areas is not required to be documented.
2. **All equipment will be checked for cleanliness and cleaned by users on a routine basis.** Some examples include:
   a. wiping surfaces down with dilute (10-20%) bleach solution
   b. using soapy water to clean respirators
   c. cleaning camera or microscope lenses
   d. cleaning scanner glass
3. Refer to LP.64 for contamination prevention requirements.

B. **Equipment Maintenance**

1. If a problem with a piece of equipment or system is detected, the piece of equipment will be taken out of service, and labeled as such, until functioning properly.
   a. The Unit Supervisor or Technical Lead will be notified of any equipment failure or improper function.
   b. Actions taken to repair or correct the problem will be documented in the corresponding maintenance log.

C. **Equipment Use and Maintenance including Intermediate Checks**

1. **Digital Scale**- Balances are used to weigh latent processing chemicals. The amount of chemical used to prepare processing reagents is **not** a critical measurement and there is no acceptance criteria for their purpose in the Latent Unit. **See table below.**
   a. *If there is an indication of a technical issue*, the digital scale will be checked in-house against a series of NIST (National Institute of Standards and Technology) traceable reference standards. Records of the calibration checks will be maintained in the Latent Print Unit Maintenance Binder (**Digital Scale Maintenance Log**). LPF.03
   b. To prevent unintended adjustments after yearly calibrations, the balance will be left in place and not moved from it's location in the Latent Unit.
   c. *Annually*, the balance is serviced and calibrated by an external calibration service that is NIST compliant. A service record sticker will be placed on the instrument by the vendor documenting the re-certification and due date of next calibration. A copy of the annual NIST certification will be maintained in the Latent Print Unit Maintenance Binder including the calibration results and any adjustments made.
2. **Chemical Fume Hoods**-The filtered fume hood enclosures are used to prevent unnecessary exposure of hazardous materials to staff.
   a. *Ongoing*, when an issue with the performance of the hood is detected or suspected prior to the annual scheduled maintenance, such as the smell of vapors outside the hood, the air flow should be checked with an anemometer. Using the anemometer/flow meter, check the face velocity of air drawn at the sash opening of the fume hood. If the minimum average face velocity is less than 100 linear feet per minute, the Supervisor must be notified and the vendor may be contacted for service.
   b. *Monthly*, the air flow will be checked with an anemometer or flow meter and records maintained in the Latent Print Unit Maintenance Binder. The face velocity of the air drawn through the sash should be 100 linear feet per minute or greater. If the air flow is not within the specified limits, the filter may need to be changed. Notify the Supervisor and the vendor may be contacted for service as needed.
   c. *Annually*, hoods are checked for proper air flow and certified. A service record sticker will be placed on the hoods by the vendor documenting the re-certification. The annual re-certification document(s) will be maintained in the Latent Print Unit Maintenance Binder. The filters will be replaced by the vendor as needed when proper air flow is not being met. The air filters (pre-filters) should also be changed annually by division staff.
   d. All maintenance will be documented in the Latent Print Unit Maintenance Binder (**Fume Hood Maintenance Log**). LPF.12
3. **Microscopes**
   a. *As needed*, the microscope may be cleaned.

i. Use canned air to blow dust off the eyepieces, the stage and the objectives.

ii. Use a non-abrasive wipe (e.g. Kimwipe) to clean the objectives, eyepieces, stage, and body.

iii. A soft cloth dampened with water or a mild cleaner may be used as needed.

iv. The microscope should be covered with a dust cover when not in use.

b. *Annually*, a preventative annual external maintenance check is conducted on the stereo-microscopes to ensure compliance with specifications by a qualified vendor. Records of this will be maintained on the microscopes and on the **Microscope Maintenance Log** (LPF.06) located at the workstation near each microscope**.**

c. Microscopes are used to magnify latent prints for better visualization and do not have acceptance criteria for their purpose in the Latent Unit.

4. **Respirators**-N95 and Full Face Respirators

a. *Annually*, a medical evaluation will be completed to determine if there are medical issues that would prevent staff from performing their duties while wearing the respirator. After successful completion of the medical evaluation, a fit test will be performed to ensure proper fit of the respirator. See SAF.08.

b. N95 Respirators

i. Ensure a proper seal prior to use.

ii. Dispose of respirator after use.

c. Full Face Respirators

i. Ensure the respirator forms a tight seal before use.

ii. Dispose of filter cartridge after use.

iii. Use positive and negative pressure to test respirator. If proper suction occurs the respirator may be used. If proper suction does not occur, re-tighten straps and test again. If a proper seal is not achieved, do not use the respirator and inform a Supervisor or Manager.

5. **Comparator**

a. *As needed*, maintenance performed will be documented in the Latent Print Unit Maintenance Binder (**Comparator Maintenance Log**). LPF.09

6. **Ridge Pro Plus Magnifier**

a. *As needed*, maintenance performed will be documented in the Latent Print Unit Maintenance Binder (**Ridge Pro Plus Maintenance Log**). LPF.46

7. **Fingerprint Brushes**

a. *Periodically*, brushes will be discarded as needed to prevent cross contamination, or if degradation of latent prints may occur due to the condition of the brush.

8. **Super Glue Wands**

a. *With every use*, a performance check is completed using a test print on a test strip, and the results documented in the case record.

b. *As needed*, maintenance performed will be documented in the Latent Print Unit Maintenance Binder (**Superglue Wand Maintenance Log**). LPF.17

9. **Canon Digital Cameras** - The cameras are used to capture images of the evidence and to photograph latent prints developed on items during latent print processing. SWGIT, NIST, and SWGFAST guidelines recommend ensuring images used for comparisons are captured at minimum resolution of 1000 ppi. Though cameras are marketed at a given resolution, it is understood that actual achieved resolution may not be the same**.**

a. *Annually*, each camera used in casework will be checked using a USAF 1951 resolution target to ensure the achieved resolution is at least 1000 ppi. Records of the achieved resolution will be maintained in the Latent Print Unit Maintenance Binder on the corresponding **Camera Maintenance Log**. LPF.08

b. *As needed*, maintenance performed will be documented on the corresponding camera maintenance log in the Latent Print Unit Maintenance Binder.

10. **Rofin Poli-Flare**

a. *With every use*, a performance check is completed using a chemically processed test strip and the results documented in the case record.

b. *As needed*, maintenance performed will be documented in the Latent Print Unit Maintenance Binder (**Poli-Flare Maintenance Log**). LPF.15

11. **Rofin Polilight**

a. *With every use*, a performance check is performed using a chemically processed test strip and the results documented in the case record.

b. *As needed*, maintenance performed will be documented in the Latent Print Unit Maintenance Binder (**Polilight Maintenance Log**). LPF.16

12. **Coherent TracER Laser**

a. With every use, a performance check is completed using a chemically processed test strip and the results documented in the case record.

b. As needed, maintenance performed to the Laser will be documented in the Latent Print Unit Maintenance Binder (**Coherent TrasER Laser Maintenance Log**). LPF.48

i. A service call may be made to Coherent (Arrowhead Forensics or other service vendor) as necessary.

c. Periodically some maintenance may be needed, however the Laser is designed to be relatively maintenance free.

i. The fan filter in the rear of the laser box should be monitored and occasionally wiped for dust to prevent it from becoming clogged. If the filter becomes clogged, overheating may occur, however the built in thermal interlock will prevent damage to the Laser.

ii. The output optic on the hand piece may be gently wiped occasionally with a non-scratch cloth.

13. **Automated Biometric Identification Systems (ABIS)**- The ABIS used in the Latent Print Unit are maintained by technical services, Records and Identification Unit, Cogent, the California Department of Justice and the FBI.

a. *Quarterly*, performance checks will be done by searching one latent fingerprint and one latent palm print known to have a corresponding exemplar enrolled in the Cogent database. The performance check need only be done on one work station as CAFIS is the same at each work station. The performance check and other maintenance will be documented on the **ABIS Maintenance Log** located on the Sheriff's Network, in the Latent Folder.

b. Gateway and ULW searches testing the DOJ and FBI (NGI) databases are not permitted outside of new software upgrades. Only the Local CAFIS database may be tested regularly.

i. Ongoing performance checks are done by DOJ and FBI to ensure proper function.

14. **Foster + Freeman Superglue Chambers**

a. *Monthly*, if in use, the glass windows will be cleaned and decontamination performed using the UV lights. Any superglue residue on the wire mesh of the humidity sensors should be cleaned using a soft brush; the mesh may be sprayed with compressed air (while wearing appropriate protective gear) to remove any lodged particles.

b. *With every use*, a performance check is completed using a test print on a test strip and results are documented in the case record.

c. *As needed*, any maintenance required and performed will be documented on the appropriate log. Examples may include:

i. **Changing the door seal**: Appearance of white deposits may be an indication of superglue fumes escaping indicating a poor seal. Staff may phone consult with the manufacturer to change the seal in-house. Door seals may need to be replaced every 2-3 years.

ii. **Cleaning the fans**: MVC3000 has a fan in the upper portion of the door and MVC5000 has two fans inside the cabinet door. The fans should spin freely by hand. Compressed air may be used to remove any particles lodged inside (while wearing appropriate protective gear).

iii. **Changing the batteries on the control unit**: An "ERROR" or "REPLACE BATT" message indicates new battery is needed. The battery life is approximately 3years.

d. *Annually*, the hot plate temperature and chamber relative humidity (RH) will be checked using the **Fluke t3000 K-type thermometer and the Vaisala HM40 hand-held Thermometer-Hygrometer.** *The two instruments may be used simultaneously during one chamber cycle.*

i. **Fluke t3000 K-type Thermometer:**

1. Remove the hot plate ring and secure the end of the probe to the center of the superglue hot plate using heat resistant metal duct tape.

2. Ensure the end of the probe is making tight contact with the surface of the hot plate and add another piece of tape to ensure the probe is secure. Replace the ring and turn on the Fluke thermometer.

3. Set the thermometer to ***Celsius*** temperature reading and rest the thermometer outside of the chamber.

4. Close the door and start the glue cycle. Begin to take readings from the chamber display and the Fluke thermometer.

5. **Acceptance Criteria:** During the glue cycle, the temperature reading must reach within ±10ºC of 120ºC, but doesn't need to stay for the duration of the cycle, to be considered passing. If the chamber is not within this tolerance after two attempts, a service call will be needed and the instrument will be taken out of use.

ii. **Vaisala HM40 hand-held Thermometer-Hygrometer:**

1. Turn the instrument on. The display should automatically turn on to the temperature and relative humidity readings screen, and should appear in Celsius (°C). If not, adjust the settings with the up and down arrows.

1. Refer to the user guide or the "quick guide" located with the thermometer-hygrometer in the carrying case for more information on device settings.

2. Place the Thermometer-Hygrometer on the center of the center most shelf in the chamber, positioned so the display can easily be read through the cabinet window.

3. Fill the cup with deionized water, close the door and begin the cycle.

4. **Acceptance Criteria:** Once the chamber reaches 80% RH (relative humidity) it **automatically** switches from the humidity cycle to the glue cycle. During the humidity cycle, the humidity reading on the Vaisala instrument must be within ±10% RH of the chamber display of 80 % RH to be considered passing. If the chamber is not within this tolerance after two attempts, a service call will be needed and the instrument will be taken out of use.

iii. **Troubleshooting**

1. If necessary during a service call, staff can access the service mode sequence. The chamber must be in the "***Ready***" mode, then press the small round buttons ("***Aux***" and "***!***") on the chamber panel in the following sequence: "***Aux***", "***!***", "***Aux***", "***!***". The service menu will appear with functions listed on the left and factory settings on the right.

2. If the keypad becomes unresponsive, hold down the on/off button until it beeps multiple times. If this does not work, hard reset the cabinet by turning off, then back on, on the 24 volt unit (gray box on the controller).

e. *Filters*: The superglue chambers are self-contained with carbon filters to protect employees from potentially dangerous superglue fumes. The safe use of the chambers requires replacing the active carbon filter every **75-80 cycles**, as recommended by the manufacturer.

i. The user is responsible for checking the cycles remaining to ensure the filters get changed appropriately. The number of cycles left prior to the filters needing replacement can be checked upon turning on the unit or bringing it out of "stand-by" mode.

ii. Follow the instructions in INSLP.12 (**MVC5000**) and INSLP.14 (**MVC3000**).

iii. To "re-set" the counter to 80, after the filters have been changed, the equipment must "filter fault" by having the filters removed from the chamber (while the unit is off or in "stand-by" mode). **Without** the filters in place, turn the unit back on, and navigate through the menu on the display pad to the "renew filter" screen and press the "up" arrow to change from "NO" to "YES", then exit the menu screen. Turn the equipment to "stand-by" mode and replace the fresh filters. When powered back on the number of cycles should automatically reset to 80.

f. All maintenance will be documented in the Latent Print Unit Maintenance Binder, on the corresponding **Superglue Maintenance Log**. Foster + Freeman MVC3000 (LPF.04) or Foster + Freeman MVC5000 (LPF.05).

15. **Scanners**- The scanners located at each work station are used to scan latent prints into ABIS, Veripic, and/or for ACE-V processing and documentation. SWGIT, NIST, and SWGFAST guidelines recommend ensuring images used for comparisons are captured at minimum resolution of 1000 ppi. Though scanners are marketed at a given resolution, it is understood that actual achieved resolution may not be the same.

a. *Annually*, each scanner used in casework will be checked using a USAF 1951 resolution target to ensure the achieved resolution is at least 1000 ppi. Records of the achieved resolution will be maintained in the Latent Unit on the corresponding **scanner maintenance log** (LPF.10) located in a binder by each scanner. For further instructions on using the test target see LP.45

16. **CARON Heat and Humidity Development Chamber**

a. *Annually*, the temperature and humidity will be checked using the **Vaisala HM40 hand-held Thermometer and Humidity Meter**. The results will be documented in the Latent Print Unit Maintenance Binder (**Chamber Maintenance Log**). LPF.13

i. ***NOTE:*** if the CARON chamber is not in use for casework, the annual temperature and humidity check does not need to be performed. However, an intermediate check following the directions below will be done prior to use in casework if it has been longer than 1 year since the equipment was checked.

ii. To use the Vaisala thermometer-hygrometer, lay the probe inside the chamber as close to the center as possible. Leave the display outside of the chamber and close the door.

iii. Turn the instrument on. The display should automatically turn on to the temperature and relative humidity readings screen, and should appear in Celsius (°C). If not, adjust the settings with the up and down arrows.

1. Refer to the user guide or the "quick guide" located with the thermometer-hygrometer in the carrying case for more information on device settings.

iv. **Acceptance Criteria:** The instrument temperature reading must be within ±10ºC of the chamber temperature display, once the chamber reaches the set points, to be considered "passing." If the chamber is not within this tolerance after two attempts, a service call will be needed and the instrument will be taken out of use.

1. The temperature of the chamber will be checked at the two set points used in casework: 100ºC and 85ºC.

v. **Acceptance Criteria:** To check the humidity, set the chamber to **85°C** and **65%RH.** Once the chamber display indicates **85°C** and **65%RH**, take 3-5 RH readings with the thermometer-hygrometer over five minutes. The average RH reading must be ***at least 60%RH*** to be considered passing. If the chamber is not within this tolerance after two attempts, a service call will be needed and the instrument will be taken out of use.

b. *As needed*, maintenance performed will be documented in the Latent Print Unit Maintenance Binder.

c. *Periodically*, the window should be cleaned of any residue build up.

d. *With every use*, a performance check is completed using a test print on a test strip and results are documented in the case record.

17. **Fluke t3000 K-type Thermometer**

a. *Biennially (once every two years)*, the thermometer is calibrated by an external calibration service.

b. The calibration will be NIST traceable but does not need to be ISO 17025 compliant. **See table below.**

c. Calibration results may be evaluated for acceptance even if the result falls outside the originally stated tolerance criteria for this instrument.

18. **Vaisala HM40 Hand-Held Thermometer-Hygrometer**

a. *Biennially (once every two years)*, the humidity and temperature meter is calibrated by an external calibration service.

b. The calibration will be NIST traceable but does not need to be ISO 17025 compliant. **See table below.**

c. Calibration results may be evaluated for acceptance even if the result falls outside the originally stated tolerance criteria for this instrument.

19. **Reagents:** Refer to LP.32

20. **External Calibration Table for all applicable equipment in Latent Unit: Objective evidence for NIST traceable calibration is located in the maintenance binder.**

Instrument:	Frequency of External Calibration:	Requireme
Balance	Annually	NIST trac
Hygrometer-Thermometer and Thermometer	Biennially (every other year)	NIST trac

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 07/31/2018	**NUMBER:** LP.19 - ACE-V Method and Application
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Technical Standard Operation Procedures	**SUBJECT:** ACE-V Method and Application	

I. Introduction

A. Friction ridge impression examinations are conducted by examiners using the Analysis, Comparison, Evaluation, and Verification (ACE-V) method, which includes both qualitative and quantitative aspects to interpret data (details within friction ridge skin) that ultimately lead to conclusions. ACE is not generally applied as a strictly linear process because it may include a return to any previous step of interpretation. Application of ACE includes observations, measurements, assessments, decision-making and documentation, which are enabled by the education, training, skill, and experience of the examiner.[1]

B. The examination of friction ridge impressions and the resulting conclusions are based on examiner interpretations of ridge flow and ridge paths; the location, direction, and spatial relationships of minutiae; and ridge structure present in a print. [1]

C. Unless reported otherwise, all latent lift cards, digital images, castings, or other forms of media generated internally (from latent print processing at the laboratory or at a crime scene), or submitted to the lab from outside agencies, will be analyzed to determine suitability and value of any latent prints present, as well as examined to discover potential donors of the friction ridge skin.

D. An analyst should seek the advice of another competent analyst if there is a question of whether or not a latent print is of value.

II. Examination Factors for Data Interpretation

A. The following factors affect the qualitative and quantitative aspects of friction ridge impressions. Examiners will understand these factors, recognize that they occur in friction ridge impressions, and understand how they influence friction ridge impression reproducibility. These factors may cause an apparent dissimilarity between impressions from the same source. Failure to properly assess the occurrence and influence of these factors could result in misinterpretation. When applicable, the following factors must be considered in all steps of the ACE-V method:

1. Anatomical aspects include the condition of the skin (e.g., scars and warts) and the morphology of the hand and foot relative to the shape and contour of the substrate.

2. Transfer conditions include pressure applied during transfer, slippage or twisting, sequence of deposition (e.g., double taps and overlays) and an understanding of the limitations of friction ridge pliability.

3. Matrix includes bodily secretions and contaminants (e.g., sweat, blood, paint, dirt, oil, grease).

4. Detection techniques can be one or more of the following:

   a. optical (e.g., light sources and illumination techniques)

   b. physical

   c. chemical processing techniques

5. Recording or preservation techniques (e.g., photography, lifting, live-scan, ink).

6. Substrate (e.g., porous, non-porous, semi-porous, smooth, rough, corrugated, pliable, or textured surfaces).

7. Environmental conditions (e.g., protected, unprotected, wet, dry, cold, hot).

III. Levels of Friction Ridge Impression Detail for Examination

A. Level 1 detail refers to the overall ridge flow.

B. Level 2 detail refers to individual friction ridge paths, friction ridge events (e.g., bifurcations, ending ridges, dots, and continuous ridges) and their relative arrangements.

C. Level 3 detail refers to ridge structures (edge shapes and pores) and their relative arrangements. Creases, scars, warts, incipient ridges, and other features may be reflected in all three levels of detail.

IV. Procedure for Friction Ridge Impression Examinations (ACE-V Method) and Data Interpretation

A. Analysis

1. The analysis phase leads to the determination of suitability. The determination of suitability is based on the assessment of the discriminating strengths of the features and their arrangements. Suitability is the determination that there is adequate quality and quantity of friction ridge features in an impression to continue to the next step.

2. Analysis includes the assessment of the impression to determine its value based on Level 1, 2, and 3 detail. The assessment is affected by other relevant information and factors as described above in section II, as well as possible anatomical origin and orientation.

3. The examiner will assess the friction ridge skin features and assign tolerances to the print to determine suitability. Tolerance is the allowance of variation in appearance of friction ridge features that will be accepted during comparison, should the corresponding print be available.[1]

4. If the impression is determined not to be suitable for comparison, the examination will stop at the analysis phase and will be reported as such.

5. Quality

   a. Quality is the assessment of the clarity of ridge features. Generally as quality increases so does the discern-ability and reliability of the ridge features. It is recognized that quality is not necessarily constant

throughout an impression. The assessment of quality may represent just the areas of highest quality, a range of qualities, or a map or rating system of quality of various regions in a single impression.

b. The level of quality determines the degree of tolerances that will be used during the comparison process. High quality will lead to low tolerances and conversely low quality will require high tolerances.

6. Quantity

a. As applied in this section, quantity is the number of ridge endings, bifurcations, and dots (minutiae) in contiguous ridges, determined without any reference to known impressions. All minutiae are considered here including indistinct minutiae for which type or exact location cannot be established.

b. It is recognized that this is an incomplete measure of the overall quantity of detail in a print. Level 2 detail encompasses more than minutiae counts (including the ridge path, areas with open fields, and selectivity of minutiae). Minutiae counts remain, however, as a discrete, measurable aspect of all prints and their enumeration is part of the systematic, formal consideration of quantity.

7. Data to be considered during the analysis phase include but are not limited to: [2]

a. Overall shape of the latent print and pattern, if known

b. Anatomical region

c. Potential orientations

d. Rarity and specificity of: ridge flows, ridge counts, pattern regions, the shape of the delta, ridge lengths, location and type of minutiae, crease patterns and shapes, and scar detail

e. Delta location

f. Sequences of ridge lengths

g. Robustness of: ridge path curvature and angles, minutiae shapes, ridge and furrow widths, edge shapes, and pore positions

h. Presence and clarity of incipient ridges

i. Presence and significance of temporary features (temporary damage or disease)

j. Tolerance for within source variability due to distortion

k. Potential for between source similarity

8. **Criteria for Determining Latent Print Suitability** (Note: The listed criteria are based upon the combined experience of the Latent Print Unit and are *quality assurance standards* adopted to prevent false conclusions and provide a minimum standard with which to evaluate analysts' determination of suitability for comparison).

a. **ABIS Value**: observation determination during analysis, prior to comparison:

i. Should have at least ten clear minutiae for fingers or palms, **AND** one or more of the following:

1. Discernible distal orientation.

2. At least one focal point (e.g., core, delta, crease, scar).

3. At least one region of robust and distinct target data.

b. **Identification Value**: minimum number of discernible minutiae located during analysis, prior to comparison:

i. Eight minutiae **AND** one or more of the following:

1. Discernible distal orientation.

2. At least one focal point (e.g., core, delta, crease, scar).

3. At least one region of robust and distinct target data.

c. **Exclusion Value**: the determination that the latent print likely contains insufficient detail to identify but has clear level one detail and/or enough clear minutiae to potentially exclude an individual. In analyzing a latent print, if it is determined there is sufficient information to exclude even one subject, that latent print will be marked "***Exclusion Value***".

i. A latent print of this value has limited comparison potential, and will likely not be able to identify an individual.

ii. The following will be considered in assessing exclusion value:

1. Use of first and/or second level detail in the latent print to exclude a subject

2. Location and orientation of latent print

3. Focal points

9. Discernible Detail

a. Discernible minutiae do not necessarily have to be continuous if the analyst can explain the breaks in the ridge paths (e.g., "ridge shift consistent with a decrease in pressure and movement").

10. Flexibility

a. Due to the extreme variability of latent prints, a print that does not meet the above-listed criteria may be marked suitable for comparison at the discretion of the case analyst.

i. For instance, a latent print may lack eight minutiae, but have other significant data (e.g., incipient detail, scar detail, or seven highly selective minutiae) or high clarity. The additional data will contribute to the determination of suitability for comparison.

ii. The analyst will document which data permitted the determination of suitability for comparison when a latent print does not meet the above-listed criteria.

11. Search parameters

a. Markings and notations should indicate how the analyst interpreted the anatomical region and distal orientation of the print. Any uncertainty should also be captured or noted.

b. Latent prints determined to be of comparison value will be marked with a red alpha or numeric character, following the LIMS designated itemization scheme. Prints meeting the ABIS value criteria will be marked with an asterisk after the alpha/numeric identifier (e.g., **A***). See LP.10 for more information on LIMS itemization for latent prints.

12. Not suitable for comparison

a. A print is referred to as having "***no value***" (for comparison) when no information is present in the latent print that can be used in any of the comparison groups specified above. This assessment is made when a print lacks sufficient and/or clear first and/or second level detail.

B. Comparison

1. The comparison phase involves observations and collection of data of similarities and dissimilarities between the latent print and the exemplar print.

2. Certain orientation focal/anchor points such as recurves, deltas, creases, and scars may provide specific guidance as to where to begin the comparison. If the analysis phase provides indicators as to the probable anatomical area, a side-by-side comparison with the appropriate area of the known print will be conducted. In the absence of indicators, all areas of available known impressions must be compared.

3. Comparison is accomplished through the side-by-side observation of all levels of details to determine whether the two impressions are in agreement or disagreement based upon features, sequences, and spatial relationships within the tolerances of clarity and distortion.

4. While there are many tools available for analysts to conduct a side-by-side comparison (i.e., hand held magnifying glass, fingerprint comparator etc.), latent prints of ***Exclusion Value*** or of overall low quality will be compared to the known exemplar by scanning and viewing on the monitor or by using Photoshop for optimal visualization.

5. Comparison begins with the determination of dissimilarity or similarity between two impressions at Level 1. If similarity is determined within tolerance at Level 1, a target group is selected from the features observed during the analysis phase and is then searched within the selected area of the other impression. When similarity with the target group exists, additional continuous arrangements of features are compared between impressions in a cyclical or recurring process from the unknown to the known impression to evaluate disagreement or agreement between the impressions. The process can extend to comparing features in the known with features in the unknown that were reanalyzed during the comparison phase. If the initial target group is not found, alternate target groups will be selected and compared.

6. Observation of agreement or disagreement between the impressions initiates the evaluation phase.

C. Evaluation

1. In the evaluation phase, the analyst will ultimately decide whether the latent print is from a different source or the same source as the exemplar print; is inconclusive to the exemplar print; or if better exemplars are needed.

2. The conclusions are based on the following premises:

    a. Friction ridge skin bears an extremely complex, unique and persistent morphological structure.

    b. Notwithstanding the pliability of friction ridge skin, the contingencies of touching a surface, and the nature of the matrix, an impression of friction ridge skin structure may be left following contact with a surface.

    c. The impression may display features of varying quality (clarity of ridge features) and specificity (weighted values and rarity).

    d. Notwithstanding variations in clarity and specificity, the unique aspects of friction ridge skin may be represented as highly discriminative features in impressions.

    e. An impression that contains sufficient quality and quantity of friction ridge features can be individualized to, or excluded from, a source.

3. Conclusions

    a. **Identification**: the determination the latent print and an exemplar print were made by the same source.

        i. The cumulative weight of the data in the latent print and exemplar print must be sufficient to:

            1. support the conclusion the impressions were made by the same source

            2. reduce the possibility the impressions were left by different sources to the point it can be disregarded

        ii. A ***quality assurance standard*** requiring a minimum of eight discernible minutiae with the same spatial relationship, type and direction and the overall ridge path in agreement to conclude identification was adopted to prevent false conclusions and provide a minimum standard with which to evaluate analysts' determination of identification.

        iii. Flexibility

            1. Due to the extreme variability of latent prints, latent print comparisons that do not meet the above-listed criteria may result in an identification at the discretion of the case analyst under certain circumstances, such as:

                1. A latent print may lack eight minutiae, but have other significant data (e.g., incipient detail, scar detail, or seven highly selective minutiae) or high clarity. The additional data will contribute to the determination of identification.

2. The analyst will document which data permitted the case analyst to determine the latent print was suitable for comparison and document the data used in both the latent print and the exemplar print to conclude identification when an examination does not have eight minutiae in agreement.

b. **Exclusion**: the decision that there are sufficient features in disagreement to conclude the two areas of friction ridge impressions did not originate from the same source.

i. The cumulative weight of the data in the latent print and the exemplar print must be sufficient to support the conclusion that the impressions were made by different sources.

ii. In order to render an exclusion, the analyst must ensure all necessary anatomical regions are clearly recorded for comparison within the exemplar prints.

iii. First and/or second level detail will be used to reach an exclusion decision. The following are required and must be documented, though neither on their own is sufficient for an exclusion:

1. **An anchor point** (for example, delta, core, major crease, distinctive ridge flow).

2. **Second level detail around the anchor point**.

iv. The analyst will use more than one target group of second level characteristics before reaching a conclusion of exclusion, whenever possible.

1. Using multiple groups ensures that sufficient features are in disagreement.

c. **Inconclusive**: the conclusion by an examiner that an unknown impression of comparison value cannot be identified to or excluded from an individual.

i. Reasons for an inconclusive decision may include:

1. The latent print lacks sufficiency of detail and/or clarity for Identification or Exclusion.

2. Corresponding features are observed but not sufficient to individualize.

1. Data exists to support the inclusion of exemplar print(s) as a potential source of the latent print; however, the quantity, clarity, and/or selectivity of the available corresponding data is not strong enough to disregard the possibility that another source could have left the print.

2. This potential source of the latent print may be reported to the agency **if** analyst documentation supports such a conclusion.

1. This conclusion will be verified.

3. Dissimilar features are observed but not sufficient to exclude.

1. This potential exclusion of the individual from of the latent print may be reported to the agency **if** analyst documentation supports such a conclusion.

1. This conclusion will be verified.

ii. Inconclusive results may only be rendered after the analyst has determined that additional exemplars will not permit a definitive conclusion.

4. **Other possible results from comparison:**

a. Insufficient Exemplar(s): the available exemplars are inadequate for comparison due to lack of quality and/or quantity of detail.

i. The latent print may or may not have limited detail in agreement with the exemplar prints.

ii. Additional exemplars of the friction ridge skin will be required and may permit the analyst to reach a definitive conclusion.

iii. The report and notes indicate better exemplars are needed and of which anatomical region.

b. No exemplars located: the determination that exemplars were not located after searching the various available databases throughout California to obtain exemplars of the appropriate anatomical region.

i. The report and notes indicate exemplars were not located and which anatomical region would be needed for comparison.

5. **Not compared**: the documentation that the latent print and exemplar prints were not compared.

a. Not compared same surface (NCSS): analysts may choose not to compare latent prints (excluding ABIS value prints) to the exemplar prints of a subject already identified to the same surface.

b. Not compared ABIS hit: analysts may choose not to compare additional latent prints (excluding ABIS value prints) to subjects (excluding victims or any individuals listed for comparison) that resulted from an ABIS hit.

c. The following are **exceptions**:

i. Victims (and subjects requested for elimination) will be compared to all prints of value.

ii. All ABIS value prints will be compared to all applicable subjects regardless of the location from where the prints were developed.

iii. All latent prints in homicide cases will be compared to all applicable subjects.

iv. Special requests from the client, the District Attorney's office, and/or the court asking that all prints in the case be compared. This may be subject to approval from the Supervisor or Manager.

D. **Verification**

1. The verification phase is an independent application of the ACE process utilized by a subsequent examiner to either support or refute the conclusions of the original examiner. Refer to LP.23 for verification procedures.

2. A conclusion of identification or exclusion will be verified.

3. A conclusion of inconclusive may be verified at the discretion of the Analyst, Technical Lead, or Supervisor.

a. Inconclusive decisions with weight leaning towards an identification or exclusion, and reported as such, **will be verified**.

V. Documentation

A. The ACE-V process will be documented on the LIMS generated Quality Log. (See LP.24)

B. The case analyst and verifier must have documentation to show the ACE process.

C. **GYRO** (described below) will be used to document the Analysis phase prior to the comparison phase for all latent prints that will be compared by the **case analyst**.

1. This includes prints that will be compared to listed individuals and prints that hit to individuals in ABIS.

2. Print or save the analysis documentation prior to adding more documentation during the comparison phase.

3. GYRO analysis documents must be included in the test record.

D. Comparison/Evaluation documentation (mark-ups) will be completed by the case analyst for every latent print identified, and included in the test record.

E. **The Verifier** will document their ACE (analysis/comparison/evaluation) using GYRO at a minimum of one mark-up per individual identified.

1. The verifier may document their ACE for subsequent identifications to the same individual on a GYRO worksheet or in the space provided "*Verifier Observations*" on the quality log.

F. **The Verifier** will document their ACE process for exclusions.

1. Documentation may be on the quality log in the space provided "*Verifier Observations*" or as a GYRO worksheet.

G. Additional forms of documentation are optional.

H. **GYRO** documentation of analysis:

a. The GYRO documentation system is an efficient and effective method for examiners to document the analysis and comparison stages of the ACE-V process. GYRO uses a color-coding system to convey the analyst's degree of confidence in the existence of a feature and the degree of variation to which that feature may appear in a corresponding exemplar print.

b. The primary benefit of GYRO is not just to communicate which features have been selected during the Analysis phase, but also to document the analyst's level of certainty regarding the existence of the feature and the amount of weight the analyst will assign to the feature during the Comparison phase. It also documents the level of expectation that the feature will be present in an exemplar if the exemplar and latent print were produced by the same area of friction ridge skin, as well as the tolerance that has been assigned for that feature.

c. In GYRO, the "**G**" stands for **GREEN**; the "**Y**" stands for **YELLOW**; the "**R**" stands for **RED**; and the "**O**" stands for **ORANGE**.

i. A feature marked with **Green** represents high confidence in the existence of that feature in the latent print. A green feature will then accordingly be given more weight during the Comparison phase and the analyst will have high expectations to find the green feature in the exemplar print.

ii. A feature marked with **Yellow** represents medium confidence in the existence of that feature in the latent print. A yellow feature accordingly will have medium weight during the Comparison phase, and the analyst will assign a medium level of tolerance to that feature.

iii. A feature marked with **Red** represents a great deal of uncertainty regarding the feature and it's existence in the latent print. Accordingly, a red feature will have high tolerance for how it may appear in the exemplar print. Red features should be given minimal weight during the Comparison phase because of the significant uncertainty the analyst possessed regarding the presence of the feature.

iv. A feature marked with **Orange** is used to represent features that were not observed initially in the Analysis phase, but rather were observed in the Comparison phase, while using the exemplar print to "see" the features in the latent print. Accordingly, orange features should be used cautiously and be minimally relied on to reach an identification decision. Orange features must not represent the majority color in a GYRO comparison documentation scheme.

v. Additional colors may be added to the color key of a mark-up documenting other features, such as 3rd level detail (creases, incipient ridges etc.) or areas of distortion.

VI. Consultation: A significant interaction between examiners regarding one or more impressions in question.

A. Consultations are a natural and positive part of the scientific process and should be supported.

B. Consultations may occur at any stage of the examination (analysis, comparison, evaluation, or verification), both before and/or after decisions are made.

C. Consultations may result in the recognition of differences in opinion between analysts, creating conflicts that require ***conflict resolution***.

D. Conflict resolutions must be documented. Any documentation generated by other analysts will be retained within the case record.

1. See LP.23 for Conflict Resolution during the Verification stage.
2. Conflict Resolution regarding suitability determinations will require the following actions:
    a. The unit supervisor will be informed of the conflict and will assign a 3rd party analyst to document their analysis of the print(s) in question (using "GYRO" or other documentation). The 3rd party analyst will not be informed of any prior opinions regarding the analysis of the prints(s) in conflict until after their analysis documentation has been completed.
    b. Upon completion of their analysis, the 3rd party analyst will discuss their opinion(s) with the original two analysts to determine if there is agreement. The consensus decision will determine the suitability for the print(s) in question.
    c. Depending on the results of the consensus decision, the case may be reassigned.

E. Consultations must be documented and the check box selected in LIMS within the Latent Result field (result data extension box).

F. Consultations can not occur on competency tests.

G. **Significant and Non-Significant Interactions**

1. Non-Significant Interactions are discussions falling below the level of a significant interaction that typically do not require documentation as those meeting the consultation standard. These typically have less potential to impact the key decision stages of ACE and are often related to case efficiency, strategy for workflow, or case management. Examples include, but are not limited to:
    a. Preliminary observations of suitability
    b. Searching efficiency “search smart clues”
    c. Processing choices
    d. Anatomical origin
    e. Orientation
    f. Determination of "lifter prints"
2. Significant Interaction examples include, but are not limited to:
    a. Presence of significant distortions impacting the analysis or comparison, outside of preliminary suitability determination
    b. Presence of specific features during the analysis or comparison
3. Flexibility:
    a. There may be situations where a discussion rises to the threshold of a consultation because it has a significant impact on the case.
    b. If there is doubt whether a discussion has risen to the level of a consultation, it should be treated as a consultation.

4. Documentation of a Consultation

   a. The purpose of documenting a consultation is to record information or guidance obtained as a result of the consultation.

   b. Discussions or other communications that do not reach the level of a consultation do not need to be documented.

   c. The documentation for a consultation must include the following:

      i. Specific friction ridge impression(s) reviewed or discussed

      ii. The nature and result of the consultation

      iii. Date and initials or signature of the examiners involved

      iv. Depending on the nature and extent of the consultation, the consultant examiner may satisfy the above minimum documentation requirements by including the information within the notes of the initial analyst. It is also possible in more extensive consultations that a separate set of notes, annotations, or images etc. be generated by the consultant examiner. These must be included in the case record.

      v. Consultants should not subsequently be used as verifiers.

H. References

1. SWGFAST Document #10, *Standards for Examining Friction Ridge Impressions and the Resulting Conclusions (Latent/Tenprint)* Ver. 2.0, 2013

2. Alice Maceo Presentation: *Inconclusive* and *Managing Technical Conflict*, CSDIAI Conference, May 2012.

3. Penny Dechant and Eric Ray Presentation: *Policies to Reduce Erroneous Exclusions*, IAI Conference, July 2012.

4. Glenn Langenburg and Christophe Champod article: *"GYRO System- A Recommended Approach to More Transparent Documentation"* JFI (61/4) 2011.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/27/2019	**NUMBER:** LP.20 - Screening
	RELATED ORDERS: LP.19- Guidelines for Latent Evaluation	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Screening	

I. Policy: Latent print evidence submitted to the Laboratory will be examined to determine if there is sufficient friction ridge detail present for a comparison or an ABIS search.

A. **General Information**

1. A pre-screening of latent evidence is a preliminary observation of the friction ridge detail present which determines if the case has potential for further examination.
2. A full-screening of latent evidence is a complete inventory of the usable friction ridge detail present, prior to the ACE-V process. This may include the potential quality assignment and anatomical region of the print.
3. Analysts will follow the evidence handling and inventory procedures as described in LP.09.
4. Analysts will utilize the criteria outlined in LP.19 , to determine the level of suitability of the friction ridge detail (if present) on the latent print cards or photos etc.
5. Upon first opening the evidence packaging, analysts will date and initial in the designated area. If the container is not a Latent Envelope, the date and initials should be written on the container in a location easily identified (for example, near the barcode).
6. The pre-screening process is not considered sampling.
7. To avoid mishandling of evidence, there should not be multiple unsealed or unclipped envelopes open at a time in the work areas.

B. **While pre-screening is not required, the following will apply to cases that are pre-screened:**

1. Cases that DO meet the following criteria during pre-screening will be retained at the Laboratory pending further examination:
   a. Examination requests with subjects listed for comparison must have at least one latent print meeting the criteria for Comparison Value (exclusionary or identification), or ABIS value.
      i. Once a print of value has been located, the pre-screening analyst may attempt to locate and obtain the required exemplars to conduct this

examination. For more information on the exemplar databases, see LP.27.

b. Examination requests with no subjects listed for comparison must have at least one latent print meeting the criteria for ABIS value. See LP.19 for more information about ABIS value.

c. Should a request be canceled by the agency following a pre-screening only, a report must be generated.

C. **Procedure for cases pending further examination going into the backlog after pre-screening**

1. The pre-screening analyst will mark the latent print of value in permanent red ink (or in Photoshop for digital prints) with the letter or number, as itemized by LIMS, in the correct anatomical orientation (if known), near the print. Marking the print indicates that it meets the minimum standard for ABIS and/or Comparison value. Though there may be more than one latent print of ABIS or Comparison value, only one will be marked during pre-screening.

2. All of the latent lifts or photos will be marked according to the evidence handling procedures in LP.09 and itemized in LIMS. See FSD.38 for more information on itemizing in LIMS.

3. The analyst will return the evidence to an evidence storage location at the completion of the pre-screening phase. The request form may be attached to the evidence (if stored together), or filed in a separate location.

4. The following documentation will be made in LIMS for each case that was pre-screened:

a. Under the ***Request Tab***, highlight and right click on the corresponding request to the case that was pre-screened and select ***Edit Findings***

b. Under the ***General Analytical Module***, highlight and right click on the corresponding evidence that was pre-screened and select ***Add Result***

c. Change the ***Result Type*** selection to ***Latent Result***

d. In the ***Large Notes Area,*** enter the ***date*** and ***initials of the analyst who performed the pre-screening,*** along with a note of what work was performed (opened, itemized, pre-screened, etc.).

e. Select ***Apply*** to save and close the documentation

D. **Cases that DO NOT meet the following criteria will be completed after the pre-screening phase. These cases will typically shift from a pre-screening into a full-screening of the evidence.**

1. The following are circumstances in which the evidence will be returned to the agency and a report will be issued reflecting the results of the submitted latent evidence:

a. Examination requests with subjects listed for comparison and:

i. The friction ridge detail does not meet the criteria for either Comparison or ABIS value **OR**

ii. Exemplars were not located for the listed individuals and there are no prints meeting the criteria for ABIS value. All prints suitable for

Comparison (in scenarios with no exemplars to compare) will be marked following the alphabetic or numeric itemization by LIMS, and itemized in LIMS.

b. Examination requests with no subjects listed for comparison (or no DOB provided for subjects listed), and the friction ridge detail does not meet the criteria for ABIS value. All prints suitable for Comparison (in scenarios with no exemplars to compare) will be marked following the alphabetic or numeric itemization by LIMS, and itemized in LIMS.

2. The case will be assigned and completed in LIMS. See LP.14 and LP.16 for further instructions on examination records and entering results into LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 07/31/2018	**NUMBER:** LP.23 - Verification Process
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Technical Standard Operating Procedure	**SUBJECT:** Verification Process	

I. Policy: Verification is the independent application of the ACE process, as used by a subsequent qualified examiner, to either support or refute the decision rendered by the original examiner. The verification process is the "V" portion of the ACE-V methodology used by the latent unit.

A. Interpretation decisions reached by an analyst of **Identification** and **Exclusion** will be verified by at least one qualified examiner, authorized to perform verifications.

1. An inconclusive decision is verified at the discretion of the analyst, Unit Supervisor or Technical Lead.

B. Blind verification may be used on casework at the discretion of the analyst, Unit Supervisor or Technical Lead.

II. Procedures

A. Requesting Verification

1. The evidence, quality log, and exemplars used are securely transferred in LIMS, with a secure PIN, to a *Fingerprint Holding File*, or directly to a qualified examiner. The LIMS entry must occur contemporaneously with the physical transfer of evidence.

2. The evidence will be securely clipped to the necessary documents to protect the evidence from loss, contamination, or deleterious change.

B. Verifier Responsibilities

1. The verifying analyst will perform the following duties:

a. In LIMS, transfer evidence and attached documentation to their possession.

b. Verify case(s) in a timely manner.

c. Initial and date all **agreed upon** results listed on the quality log. The date indicated on the quality log represents the date the verification was performed.

d. Initial and date all exemplars used during the examination. The date(s) indicated on the exemplar(s) represents the date(s) the exemplar(s) was used to perform the verification.

e. Documentation of ACE must be generated by the verifier for identification and exclusion decisions. Verifier documentation will be

returned to the original analyst to be included in the test record. **All original observations must be retained.**

i. See LP.19 for information on required documentation from the verifier.

f. If the verifier requires better exemplars, or exemplars from a different area of friction ridge skin, the verifier may locate suitable additional exemplars. If additional exemplars are not able to be located, the verifier will notify the case analyst, and the agency will be notified that additional exemplars are needed. All additional exemplars used for testing must be included in the test record.

g. Ensure all latent prints adhere to the suitability standards of quality defined in LP.19. Print Quality: ABIS, Identification, Exclusion, and No Value.

h. Upon completion of the verification, promptly transfer the evidence and documentation to an appropriate Holding File, or Analyst in LIMS. The physical transport of the case will occur contemporaneously with the electronic transfer in LIMS.

i. If the verifier observes non-conforming work beyond QAC-3, or a pattern of QAC-3 non-conformities, the verifier must bring it to the attention of the Unit Supervisor or Technical Lead. See LP.62 for more information on the levels of non-conforming work.

j. If the verifier does not agree with the interpretation decision(s) documented by the case analyst, the verifier will provide feedback that must be tracked. All evaluation decision disagreements from the verifier will be documented on the designated *"verifier observations"* area of the quality log.

i. If the case analyst agrees with the verifier, the case analyst will document the changes that were made on the designated "*changes made after verification"* area of the quality log.

ii. If the case analyst does not agree with the verifier, and there is no resolution through consultation, the two analysts will enter into conflict resolution (below).

C. **Conflict Resolution: Verification**

1. Conflict Resolution during verification is a process that takes place when the verifier does not agree with the result(s) determined by the case analyst, and there is no resolution through consultation.

a. Interactions that take place between analysts, during the verification process, regarding the result(s) of a comparison, are considered significant, and will be documented in the test record. Refer to LP.19 for information on documenting consultations.

i. Corrections needed for QAC-3 non-conformities are not considered significant.

2. The Unit Supervisor must be informed of the conflict resolution, and will assign a third analyst to examine the print(s) in conflict. The third analyst will not be informed of any prior examination decisions (written or verbal) until

after all three analysts have documented their findings. The Unit Supervisor will provide the necessary exemplars and evidence in conflict to the third analyst for examination.

3. Assigned Third Analyst duties:

    a. Document their ACE on GYRO mark-up worksheet(s).

    b. Discuss their decision(s) with the original and verifying analysts to determine if there is agreement. The reported result will be the consensus decision.

        i. If it is determined the comparison in question could have reliably rendered more than one result, the unit will report the **most conservative opinion**.

    c. If the original analyst does not agree with the final result, the case may be reassigned, but all documentation will be retained in the test record.

    d. Depending on the nature of the disagreement, the Laboratory may decide to have analysts outside of the FSD examine the print or case in question.

    e. **Original documentation of consultation and conflict resolution will be retained in the test record.**

    f. The Unit Supervisor will be advised of the outcome.

III. Criteria to be a Verifier

A. For an analyst to be authorized to conduct verifications, certain goals must be met to the satisfaction of the Unit Supervisor and/or Technical Lead. The following outline these requirements:

1. The analyst must have conducted comparison casework of varying levels of difficulty (including complex comparisons) for **at least one year.**

2. The analyst must complete a **minimum of 20** "supervised" verifications to the satisfaction of the Unit Supervisor and/or Technical Lead.

    a. The "supervised" verifications must include both Identifications and Exclusions.

    b. Feedback will be provided to the analyst by the Unit Supervisor and/or Technical Lead.

B. Once the above requirements are met, and the analyst has demonstrated competence in the Verification Process, Authorization will be granted.

IV. Reference

A. SWGFAST Document #8 - *Standard for the documentation of ACE-V (Latent)* Ver. 2.0, 2012.

1. http://www.swgfast.org/documents/documentation/121124_Standard-Documentation-ACE-V_2.0.pdf

B. SWGFAST Document #10 *Standards for Examining Friction Ridge Impressions and Resulting Conclusions* Ver. 2.0, 2013.

1. http://www.swgfast.org/Documents.html

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 02/26/2018	**NUMBER:** LP.24 - Latent Quality Log
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Technical Standard Operating Procedure	**SUBJECT:** Latent Quality Log	

I. POLICY: Analysts will use a LIMS generated Latent Quality Log to document friction ridge examination using ACE-V on all comparisons. Documentation of ACE will be made on the Quality Log at or near the time of the examination and prior to verification. Additional forms, such as GYRO analysis, or side-by-side comparison mark-ups, may be used as supporting documentation but will not replace a Quality Log for documenting the ACE-V process. The Quality Log will be retained as part of the case record.

II. Procedure

A. When a case is ready to be verified, the Quality Log is printed from LIMS by using Crystal Reports and selecting *LAP QA LOG* within the Report Category *Latent Fingerprint Unit*. The Quality Log will automatically populate from findings entered in LIMS. See LP.14 for procedures on entering ACE documentation into LIMS.

B. The Quality Log will document:

1. all prints and persons compared.
2. the lack of suitability of the exemplar, including area of friction ridge skin needed, when applicable.
3. the need for exemplars when not located, including area of friction ridge skin needed, when applicable.
4. the name, initials, and date(s) of examination of the verifier(s).
5. the *Screening Value* of each print.

C. Analysis Documentation

1. Latent prints used for a comparison will be analyzed according to criteria stated in LP.19. The analysis documentation will populate an area on the Quality Log that corresponds with the item number for the latent print being analyzed. Analysis documentation will be completed prior to comparison.
2. Although all comparison examinations require documentation, the extent of the documentation is dictated by the complexity of the examination and the *quality* and *quantity* of information present in the latent print. At a minimum

the following will be documented on the Latent Quality Log when a comparison is made:

a. Anatomical source (fingerprint/palm print/foot print).

b. Description of level 1 (pattern type or region of palm) and quality of print.

3. The Quality Log may contain further Analysis documentation, or may reference further documentation detailed on a GYRO/Mark-Up sheet, which may include, but is not limited to:

a. Substrate information

b. Preservation method (Lift Card, Digital Image)

c. Development medium (Powder, CAE+Dye Stain)

d. Distortions present (including possible interpretations for variations in appearance)

e. Matrix (apparent blood, wet)

f. Deposition pressure (heavy, light)

g. Movement (lateral, rotational, drag marks)

h. Presence of any Level 3 detail (ridge path, pores, incipient ridges, creases)

D. Comparison Documentation

1. A legible copy of the known exemplar prints used for comparison will be retained in the case record.

2. At a minimum, a unique identifier of the exemplar, such as the name, will be documented on the Latent Quality Log.

3. With the exception of Law Enforcement personnel, the DOB and any known Record Identification Number will also be present on the Quality Log for compared latent prints.

4. Notes or observations generated during the comparison phase will be retained in the test record.

E. Evaluation Documentation

1. The comparison conclusions for each latent print to individual(s) will be documented on the Latent Quality Log. The analyst will also document the date(s) in which the comparisons were made.

2. Identifications will be documented as follows:

a. Anatomical source of the identification (Right Thumb). This will populate on the log from LIMS when entered in the *Compared Individuals* field.

b. The comparison result for an identification will appear as "MID" or "ABIS hit".

c. The number of corresponding minutiae or other detail will be noted.

d. Whether or not any dissimilarities were observed may be noted.

3. Exclusions will be documented as follows:

a. The reason for the exclusion (differences of minutiae and/or differences of pattern).

b. This comparison result will appear as "Exclusion" on the Quality Log.

4. For Insufficient Exemplars and Exemplars Needed, the area of friction ridge skin lacking or missing will be noted, and the comparison results will appear as "INS" or "NRL" on the Quality Log.

5. Inconclusive results will appear as "Inconclusive" on the Quality Log. An explanation for inconclusive result is in the report; however, specific details about the inconclusive decision must be on the Quality log (comparison notes), including the reason for the decision and specifically to which fingers or palms.

F. Verification Documentation

1. When applicable, the verifier(s) will document agreement with the case analyst by initialing and dating next to the evaluation results on the Latent Quality Log. The verifier will also sign their name in the ***Verified By*** field at the top of the log.

2. If the verifier(s) does not agree with the evaluation documentation, or is requesting more information or consultation with the analyst, a date and initial is not needed, and the log will not be signed until there is agreement.

a. The Verifier will document disagreement of interpretation results in the "Verifier observation" area of the Quality Log.

b. The case analyst will document corrections made as a result of the verification in the "Changes made after verification" area of the Quality Log.

3. For more information on Verification procedures, see LP.23.

G. The ACE-V process should be considered circular rather than linear. If during any phase of ACE-V, additional or new information becomes clear which would change a previous step, supplemental notes will be added and dated. However, ***original observations will not be discarded***.

III. Reference

A. SWGFAST, Document #8: Standard for the Documentation of Analysis, Comparison, Evaluation, and Verification (ACE-V)(Latent), 9/11/12 ver 2.0

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 02/26/2018	**NUMBER:** LP.27 - Exemplar Databases
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Exemplars	**SUBJECT:** Exemplar Databases	

I. Policy: Exemplars are needed for latent comparison examinations, and are obtained from law enforcement agencies, in compliance with CORI (Criminal Offender Record Information) regulations.

A. Fingerprint and palm print exemplars used in examinations may routinely be obtained from the Contra Costa County Sheriff's Records and Identification Unit, Cogent Automated Fingerprint Identification System (CAFIS) WebArchive, California Department of Justice (DOJ), and the Federal Bureau of Investigation (FBI). On occasion, exemplars may also be obtained from other Local, State, or Federal Agencies.

B. Foundation: Analysts in the Latent Print Unit are **not** custodians of any exemplar records.

1. The custodians of the CAFIS WebArchive exemplar records, and the exemplar reference samples in the CAFIS, are the staff in the Record and Identification Unit of the Contra Costa County Sheriff's Office and staff of the Alameda County Sheriff's Office.

2. The custodians of the DOJ Automated Archive exemplar records are the staff in the California Department of Justice's Fingerprint Unit.

3. The custodians of the FBI exemplar records, and the exemplar reference samples, are the staff in the Federal Bureau of Investigation's Fingerprint Unit.

4. Priority will always be given to the ***most suitable*** exemplar over location (county) from which the exemplar originated. However, an attempt to locate a sufficient record should start with exemplars from ***Contra Costa County*** agencies. If the exemplars from Contra Costa County are not suitable, the analyst may attempt to find a suitable exemplar from another agency within the state of California. In some circumstances it may be necessary to obtain a suitable exemplar from another state, if available.

C. California Department of Justice : **CLETS Search**

1. _To obtain the DOJ record number, open the **MSS Web Workstation** or the **Automated Archive System** using the ***Internet Explorer*** web browser and Log in with ***User ID*** and ***Password.***

2. MSS Web Workstation:

a. _From the CLETS main page, in drop down selection by MASKS, select "RAPS-Criminal History" and select the GO button.

b. A Criminal History Inquiry screen will open, and the following mandatory information will need to be entered to obtain the DOJ record number:

i. **Route Data**: employee number and laboratory number associated with name being searched.

ii. **Alpha Name Inquiry (QHA)**: Last, First of name being searched.

iii. **Sex**: "M" for male, "F" for female, "X" for unknown.

iv. **DOB**: Year, month, and day of birth (yyyymmdd); if exact date of birth is unknown, the age may be entered instead.

v. When the FBI number or social security number is known, it can be entered here as well to search for the DOJ record number.

vi. Once the mandatory fields are completed, select the SEND MSG button.

vii. To retrieve the DOJ record number of the individual, select the NEXT MSG button.

viii. Locate the DOJ record number next to the individual listed with a corresponding name and DOB to that of the Criminal History Inquiry search.

ix. Records with ***DSP*** after them do not have fingerprint records on file.

3. Automated Archive System:

a. Enter **Name** and **DOB** in the field "Name and DOB" and select **Query Archive**.

b. A reason for the search (For example, Lab or employee number) must also be entered.

c. If a record exists matching the Name and DOB searched, a box will open with the DOJ record information for the individual.

d. If a record does not exist, "*No Hit on Name/Date of Birth*" will be indicated.

D. California Department of Justice Automated Archive: **Exemplars from DOJ**

1. Exemplars are printed using the **Automated Archive System**.

2. The **Query Archive** screen will open, fill in the following fields:

a. **SID**: enter the DOJ record number obtained from the CLETS search (see above).

b. **Reason**: enter the Laboratory number or other reason for the search and select **Query Archive.**

c. **Choose Document Type** window will open, select Document Type: **All** or **NIST Fingerprint Record.**

d. Select the ***Document List*** button and choose desired record(s) to print.

3. Prints not available in the Automated Archive System must be obtained by emailing the California Department of Justice.
    a. Send the request to the following email address: **email.prints@doj.ca.gov**
    b. The following wording for the request is recommended by DOJ (followed by your name and contact information):
        i. ***Please email fingerprints/palm prints for CII: (enter the number). A police department requested the subject be compared in a latent print examination as part of an ongoing active criminal investigation.***
    c. A response should be received within 48 hours.
4. Exemplars may also be obtained by contacting the California Department of Justice Expedite desk: (916) 227-3307 or (916) 227-3244.

E. Cogent Web Archive System: **Exemplars from CAFIS**

1. Open the Contra Costa Web Archive Program.
2. Enter the ***User Id*** and ***Password*** (case sensitive).
3. Select ***Search Archive.***
4. Fill in the ***Last Name, First Name*** and ***DOB*** (optional) fields and select ***Search.***
5. ***Search Archive Query Results*** - listing will appear if there are records on file.
6. Click on the corresponding record to the subject being searched, which will become highlighted once selected.
7. Select ***Details.***
8. The record will download and a ***NistViewer Screen*** will open.
9. Fingerprint Records:
    a. Select the ***Tree View*** icon, then ***Fingerprint Image Data.***
    b. To print a fingerprint record, select the ***printer*** icon.
    c. A notification will appear reminding the analyst to print to a certified printer, select ***OK.***
    d. A ***Print Options Dialog*** box will open.
    e. Select ***Tenprint on Paper***, then ***OK.***
    f. A **Print** box will open, select the correct printer, then ***print.***
10. Palm Print Records:
    a. Select the ***Tree View*** icon, then ***Palm Print Image.***
    b. To print a palm print record, select the ***printer*** icon.
    c. A notification will appear reminding the analyst to print to a certified printer, select ***OK.***
    d. A ***Print Options Dialog*** box will open.

e. Select ***Palm on Paper***, then ***OK.***

f. A **Print** box will open, select the correct printer, then ***print.***

F. Federal Bureau of Investigation: **Exemplars from FBI**

1. Exemplars can be requested by email through a LEO account.
2. Exemplars can also be obtained through the IRQ in ULW. ***See procedures below.***
   a. Open Transaction Manager
      i. Select ***Create Image Reques***t (IRQ) button.
      ii. A new box will open.
         1. Fill in the ***Subject Identifier*** with the FBI Number.
         2. Select a drop down option for ***Finger Number:*** 00 - Unknown or 20 Unknown Palm.
         3. Select a drop down for ***Image Type:*** 1 - Fingerprint (event) or 3 - Palm Print.
         4. If there is a specific record being requested, enter the BSI number from the search in the ***BSI*** section, or leave section blank if unknown.
      iii. Select ***Create IRQ and Submit.***
   b. Open up ***Inbound/Outbound***
      i. Select ***Send.*** A new box will open to upload file; click ***Browse*** to locate the Image Request file; select ***Open,*** then ***OK.***
      ii. A new box will appear indicating the request was received: select ***Close.***
      iii. The request will appear as EXEC in the Job Queue until the search is completed.
         1. To refresh the screen press F5, then RETRY in the box that appears.
      iv. A Green Box next to the search indicates the job is complete and ready to be reviewed.
      v. Click the Green Box next to the ***IRR*** search and select ***Save.***
   c. Go back to Transaction Manager
      i. Select the IRQ search.
      ii. Click ***Manually Add Response to Case*** button (under Case Preview tab).
      iii. Browse to find the Image Request Response for that case (may be in Downloaded files), and select ***Open.***
      iv. Select the ***IRR Preview*** tab, and then ***View Ten-Print Image.***
      v. A new window will open displaying the Ten-Print Image, select ***Print.***

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 11/14/2019	**NUMBER:** LP.28 - Automated Biometric Identification System (ABIS)
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Pamela Hofsass	**ANAB:** 6.4	
CHAPTER: Equipment	**SUBJECT:** Automated Biometric Identification System (ABIS) Software	

I. Policy: Unidentified latent prints meeting the minimum ABIS value standard are searched against the Local Cogent Automated Fingerprint Identification System (CAFIS Version 6.2) and any other applicable ABIS databases to attempt to establish the source of the prints.

A. **General Information**

1. Automated Biometric Identification System (ABIS) databases are used to attempt to establish the source of a latent print in casework (fingerprints or palm prints).
2. See LP.19 for minimum standards for search eligibility.
3. Latent Unit reports must include the scope of the database searches (Local, DOJ, FBI).
    a. The frequency, time frame, and potential deletion of enrolled prints will also be addressed in the reports. (See Compliance Statements LP.16).
4. Latent prints are searched through the following databases: Local (Contra Costa County and Alameda County regional database) and Federal Bureau of Investigation (FBI).
    a. The Next Generation Identification (NGI) database of the FBI is searched after there was no identification made by first searching the Local CAFIS database.
    b. The California Department of Justice (DOJ) database is not routinely searched, but *may* be searched after there was no identification made by first searching the Local CAFIS database.
5. Software for the ABIS databases are installed onto the computers of all staff in the Latent Unit.
    a. The individual ABIS workstations are not uniquely identified. If CAFIS (Local ABIS), DOJ (CA state ABIS), or NGI (FBI ABIS) are unavailable, all unit terminals will not have access.
6. All analytical conclusions made in casework are formed by a latent print analyst not an ABIS database.
7. Any case with a single usable print which hits in ABIS, and is subsequently identified, may be verified by more than one qualified analyst.
8. The top 15 candidates will be compared prior to determining a "Hit" or "No-Hit."
    a. If possible, when the same individual appears in the top 15 candidates more than once, more records will be reviewed until 15 ***different*** candidates have been compared.
        i. More 6-packs or side-by-side printouts will be needed to document the 15 ***different*** candidates.
9. Unidentified prints on Comparison Competency or Proficiency tests will not be searched in ABIS regardless of their quality.
10. The dates of all database searches must be captured in the technical record, including the name or initials of the analyst(s) performing the searches.
11. A screen shot displaying the minutiae selected for each print searched will be included in the technical record.

B. **Authorization**

1. The databases are restricted to personnel authorized by the Supervisor of the Latent Print Unit. See FSD.41.
2. ABIS users have different levels of access, authority, and responsibility depending on their assigned position.
    a. The Supervisor of the Latent Print Unit will coordinate with staff from Contra Costa County Sheriff's Technical Services to assign the appropriate user security level to each analyst (CAFIS user).
    b. Analysts in the Latent Unit have the ability to:
        i. search latent prints
        ii. view, edit, and delete (as necessary) enrolled latent print records
        iii. retrieve search results from latent print and ten print-latent print (T/LI)/palm print-latent print (P/LI) inquiries.
        iv. access WebArchive. (LP.27)
    c. Analysts in the Latent Unit **do not** have the ability to upload, alter, or delete exemplar samples.
    d. Staff from Contra Costa County Sheriff's Technical Services work with Cogent and the Department of Justice to maintain, install, and upgrade the ABIS.
        i. Software version upgrades are verified prior to use in casework. (LP.69)
3. A firewall within the CAFIS prevents the users in Alameda County from viewing, altering, or deleting the Contra Costa County latent print records within CAFIS.

C. **Quality Assurance**

1. To ensure CAFIS is working properly and continues to conform with specified requirements, a control print known to be enrolled in the databases will be searched quarterly on any one of the terminals utilizing an ABIS for casework. A positive control result occurs when the correct finger or palm from the expected source appears as one of the top fifteen candidates. The print will be searched and documented in accordance with current policies and procedures.
2. Major upgrades to Cogent software will require a performance verification.
3. For negative control results, when the known print **does not** appear as expected, the following steps will be taken:
    a. An additional search will be done.
    b. If the known candidate still does not appear as expected, the Supervisor and all analysts (CAFIS users) will be notified, the ABIS terminals will be taken offline and labeled "out of service," and a service call will be made to the appropriate Help Desk or Cogent representative.
4. Details of any damage, malfunction, modification to, or repair of ABIS software (including all databases being searched by the unit) will be documented on the **ABIS Maintenance/Performance Check Log** (LPF.07) located in the ABIS Maintenance Binder and electronically on the Sheriff's Network, in the Latent Folder.
    a. All technical interactions with a Cogent representative or Biometric Specialist will be documented on the log.
5. See LP.18 for further information on maintenance documentation and performance checks.
6. **Technical Review** of an ABIS search includes:
    a. a review of all screen-shots that contain minutiae and other markings used to launch a print through CAFIS.
        i. the technical reviewer will concur that the information selected by the analyst would result in a successful search.

ii. as deemed necessary, the technical reviewer may request for another search to be completed, using additional or different markings.

b. a review of any 6-pack (no-hit) printouts.

D. **CAFIS Procedures: Local Search**

1. Optimal screen resolution/display settings for Cogent applications are **1680 x 1050** and **Smaller**.

2. **Entering the latent print into CAFIS**

a. From the home screen, select **Scan.**

i. Select **Scan** if using the Epson Scanner to enter the latent.

ii. Select **File Import** if importing an image from a file, such as from a DVD.

1. Note: the image will have to be saved as a **JPEG** for importation into CAFIS.

2. If the image needs to be re-sized, from the drop down box **Resize to 100%**, select the **Resize by Ruler** option. Select a starting and ending distance on the ruler of the image and the system will change the image to the equivalent size. If this size is correct, select **apply**. If it is not correct, reset the distance until the system reads the image size properly.

b. A red crop box will appear on the image. Press and hold down the left mouse button to move the box over the latent print to be searched. Press and hold down the mouse wheel to rotate the box to ensure proper orientation (the thick red line should be at the bottom of the latent print). Select **Clip and Save**.

c. A **Clip and Save** dialog box will open. Adjustments to brightness and contrast may be made on this screen, as well as selecting **LT** for a fingerprint and **PL** for a palm print. Select **Save.**

d. The Demographic Entry Dialog box - Latent Document Information screen will open. The following fields must be completed:

i. **Case No.:** The Laboratory number including the request number.

ii. **Latent Card ID:** The item number - lift card number and alpha (for example: 1-1-A is entered as 1011).

iii. **Memo:** The agency case number and abbreviated agency name, **(for example: CCCSO 19-1234).**

iv. **Misc. No.:** miscellaneous information (optional as needed).

v. **Crime Date**: The date the latent print was lifted or photographed; or the offense date.

vi. **Crime Code**: The offense code.

e. Select ***S*ave/Clear** or **Save/Reuse** when completed.

i. Save/Reuse allows this information to be saved and applied to a subsequent latent search.

f. Select **Return.**

3. **Editing the latent print for search (Best Practices)**

a. Double click on the transaction in the queue, or highlight the transaction and select **Latent Processing**.

b. Edit the minutiae selection by adding or deleting minutiae, clearing the minutiae, or select **Reprocess.**

i. **Follow the ridges** and mark as many true events (ridge endings and bifurcations) as are present on the latent up to about 30, when present.

ii. Cogent trainers recommend looking for clusters or groups of minutiae to mark, preferably away from low specificity areas of the print.

iii. When possible, avoid crossing over large areas of the print (two marked minutiae with several intervening ridges not marked), as this may be misinterpreted as an open field.

iv. Avoid plotting detail in tightly curved areas, such as the core, as this may be read as "false minutiae" due to the known prints in the database not containing these features.

v. For more pointers on best searching practices, refer to the Latent Training Manual.

c. Latent fingerprints that have less than 20 to 30 minutiae plotted, may also have the core circled, **if one is present and if there is also a delta present**. Marking both the core and the deltas is particularly important for **whorl patterns**. For examples of when to mark cores and deltas, refer to the training manual.

i. To set the core, select the "Add and move a core" button and angle the tail to slant **with the ridge flow.**

ii. To set the delta(s), select the "Add and move a delta" button and adjust the circle to include the delta location. Select the left and right deltas for whorl patterns.

d. Not required, but the ridge flow **may** be edited as follows:

i. Select the "Edit ridge flow" button and shift the red lines until they are in concert with the flow of the ridges.

e. The pattern **may** be entered on the local search.

i. FBI searches will require pattern or finger position selections to lower the **file penetration**.

f. Once the latent has been correctly marked for search, select **Save and Return**.

g. Select **Yes** when the Latent Processing box opens asking "**Are you finished editing the record?**"

4. **Searching the latent print**

a. Select **Search**.

b. A Latent Search Parameter box will open. Ensure all appropriate finger(s) or palm region(s) to be searched are checked and select **Continue**.

c. All local searches should be at a priority 9. If a rush case requires an expedited priority, authorization from the Supervisor, Forensic Manager, or designee is needed to change the priority setting at the local level.

5. **Viewing the search candidates**

a. When the search is complete, the queue will display the search transaction as ***TP Hit/Wait 4 Verify*** *(for fingerprints),* or ***Wait: PP/Verify*** *(for palm prints)*. From the Verification Screen select **Candidates**.

b. The candidates may be viewed on either the **Single pair view** screen, or the **Six pack view** screen. More than fifteen candidates may appear, but staff must review the top **fifteen candidates** for potential identifications and exclusions.

c. If the latent is a palm print, the candidate box should be moved **as necessary** to allow for the correct anatomical region to be displayed and compared as a possible source.

6. **ABIS Hit**

a. A "Hit," or potential identification decision, is reached when an analyst observes a sufficient amount of agreement, without unexplained differences, between the search print and the known print candidate.

i. ABIS hits are preliminary observations that lead to full ACE-V examinations. See LP.19 for further information on the ACE-V method and process.

b. If a potential identification is made at the local level, there is no need to search the latent print in any other database.

c. If it is determined there is a hit, the analyst will still review the remaining top 15 candidates.

d. Hits must be marked as **Confirm Yes**.

e. To close out of the candidate view screen and complete the transaction, select **End Trans**.

f. A printout of the **Single Pair View** screen, showing the latent print next to the candidate from the potential hit, including pertinent queue information (for example: lab#, item#, record#), must be included in the technical record.

g. A screen shot displaying the minutiae selected for each search (excluding a relaunch for ULF enrollment) must be included in the technical record.

h. ABIS searches resulting in Identifications are meant to be investigative leads. If as a result of an ABIS search, a subject other than the victim is identified, staff may choose to compare the subject to only the ABIS value prints. All other prints are not required to be compared unless instructed to do so.

i. Exception: In homicide cases, all prints will be compared.

7. **ABIS No hit**

a. A "No-Hit" decision is reached when an analyst observes a sufficient amount of features in disagreement between the search print and the known print candidate. Other reasons for an analyst to determine a "No-hit" may include:

i. the known print is lacking adequate quality in the specific area of friction ridge skin present and clear in the latent print.

ii. the latent print contains an undetermined feature from smudging, background noise, or other distortion causing the latent to appear to have disagreement to the known print candidate.

b. If it is determined that the latent print did not hit to any of the top 15 candidates, mark **Confirm No** to the first candidate, then select **End Trans.** It is not necessary to indicate **Confirm No** to every candidate.

c. Printouts of the **Six Pack View** screens showing the latent print and the top fifteen candidates must be included in the technical record. Also included on the printouts will be the laboratory number, latent print identification number or item#, and any other pertinent queue information.

d. A screen shot of the first search and second search is necessary if the print was searched locally twice.

e. Searches that do not result in an identification **must be enrolled** in the local and FBI Unsolved Latent Database/Unsolved Latent File (ULD/ULF).

f. Unidentified prints searched through local CAFIS will subsequently be searched in the FBI's NGI (DOJ as required) database(s) using the Latent Gateway or ULW (see procedures below).

8. **No hit enrollment:**

a. **Local database:** To enroll a print into the ULD, select **Insert into DB**. Select **Return** to complete the transaction and return to the main queue.

b. **FBI databse:** To enroll a print into the ULF, relaunch the remote search to the FBI, In the box that opens, select "YES" for the drop down "Unsolved Latent File" - this will enroll the print once the search is completed.

c. For information on checking future subsequent results in the unsolved latent database, both CAFIS and NGI, as well as information on issuing ABIS Notifications, see LP.30.

9. As a quality assurance measure, prints that do not hit, are recommended to be searched again following the best practice examples listed above with slight differences from the original search. For example:

a. Do not add the core and delta

b. Try adjusting the ridge flow

c. Select a different cluster of minutiae to plot

d. Generally speaking, prints with about 30 minutiae marked will not require additional searches unless a large print has an additional area available to search. For example a large latent palm print.

e. To re-launch the print through the local database, select **Duplicate Transaction** and the analyst will edit then launch the print to search.

f. Upon completion of the second search, the analyst will print out a screen shot of the latent with plotted minutiae to maintain in the technical record.

i. For a No-hit on the second search, the screen shot along with "No hit" indicated by the analyst will be the only required documentation.

ii. For a Hit on the second search, a split screen ("single pair view") screen shot will be required showing the hit.

E. **Latent Gateway to search DOJ and FBI Databases**

1. Export From CAFIS

a. Complete the local search in CAFIS.

i. Note: The fingerprint pattern and palm or finger position may be selected prior to or after the initial CAFIS search.

b. Open the transaction to be searched against the DOJ or FBI database.

c. In the split screen window, select **Transaction** followed by **Remote Search.**

d. A box will open asking to relaunch search. **Select OK.**

e. A window will appear, select the appropriate remote database (DOJ or FBI) to be searched. Select Latent Friction Ridge Features Search (**LFFS**) as the *Type of Transaction*. **Select OK.**

i. An LFFS search is performed using the features that have been manually extracted from the selected image by the operator.

ii. Latent Friction Ridge Image Search (LFIS) is the other available *Type of Transaction* which is performed using automatically extracted features from the selected image. **This method is not used by the Latent Unit.**

f. An LFFS Entry Dialog window will open and the fields will be completed as follows:

i. CASE INFORMATION: ***Lab #, latent item#, agency and agency case#***

ii. LATENT INFO: ***Pattern and Latent Position***

1. Use this field to lower the penetration value of the search.

2. Note: It is highly recommended that the penetration percentage be lowered to at least 50% prior to launching an FBI search.

1. Palm searches will still indicate "100%" penetration; however, adding the search area (for example: left entire palm or left upper palm) will lower the search penetration.

iii. NAME ABBR FIELD VALUE: Attention Indicator: ***analyst launching search.***

iv. SUBJECT DESCRIPTION: **not used**.

g. Select **Search** when completed.

i. Note: If there is an error, ensure the "Case Identifier" or latent item number is present; it may need to be re-entered.

h. Return to queue.

2. Check Search Results

a. The phrase ***TP Hit/Wait 4 Verify*** **(for fingerprints)** and ***Wait: PP Verify*** **(for palm prints)** appears in the queue when the search is complete.

b. The comparison and documentation requirements are the same as for a local CAFIS search (see above).

c. If a transaction font turns Bold, or reads "Completed", this is an indication of an error or a non-candidate list return.

i. Relaunch the search to attempt to get a valid result. Try to lower the penetration further (may require multiple searches).

ii. If the same error occurs, a service call should be placed to the appropriate Help Desk or Cogent representative.

iii. To determine the type of error:

1. Highlight the transaction, right click to bring up the transaction menu, and select **Show Error Message.**

F. **Deletion from the NGI (ULF) database**

a. To delete a latent record from the FBI, select **Remote Database Review**

b. In the box that opens, select the following:

i. Remote Database Name: **FBI**

ii. Data Type: LT (finger) or PL (palm)

iii. Database Operation Type: **Delete a record from a remote database.**

iv. Note: TOT and ORI should already be populated.

v. ATTN (Operator ID) : **user name**

vi. **CIN Case Prefix: Transaction number**

vii. **CIN Case Identifier: Laboratory number (for example 19-123-1)**

viii. **CIX Case ID Extension: Print number (for example 1011)**

ix. **UCN: FBI number generated when ULM is returned. This is now also referred to as SCNA and is a ten-digit numerical number.**

x. Note: This number can be located under "CSI ID"

c. The queue will show the record as "deleting record" until the transaction is complete "Query completed."

G. **IRQ (Image Retrieval Submission) - FBI Hit**

1. Take the following steps to retrieve exemplars from the NGI:

a. Select **Remote Database Review**

b. In the box that opens, select:

i. Remote Database Name: **FBI**

ii. Database Operation Type: **QUERY a record from a remote database.**

iii. **Type in the FBI#/UCN (Universal Control Number)** into the provided field "FBI No."

iv. Note: **BSI** refers to a particular record, should that be necessary to retrieve from the NGI, but is not required.

c. The IRQ will return and appear in the Tenprints/Palm Prints queue.

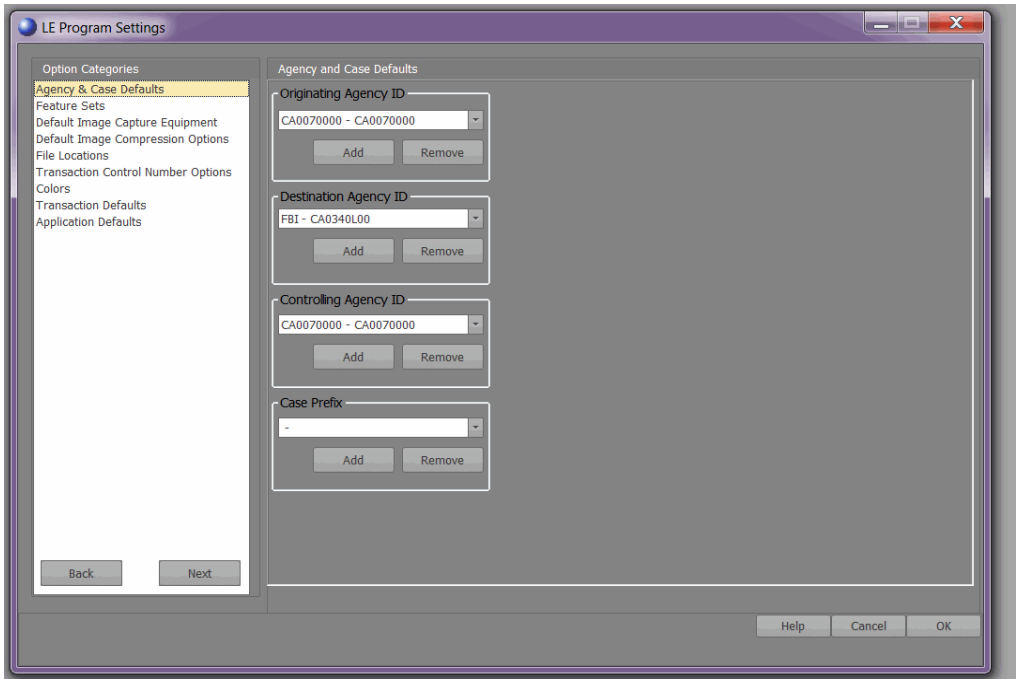
d. Right click on the highlighted IRQ and select open NIST package.

e. Print the exemplar as well as the demographic information provided within the NIST package.

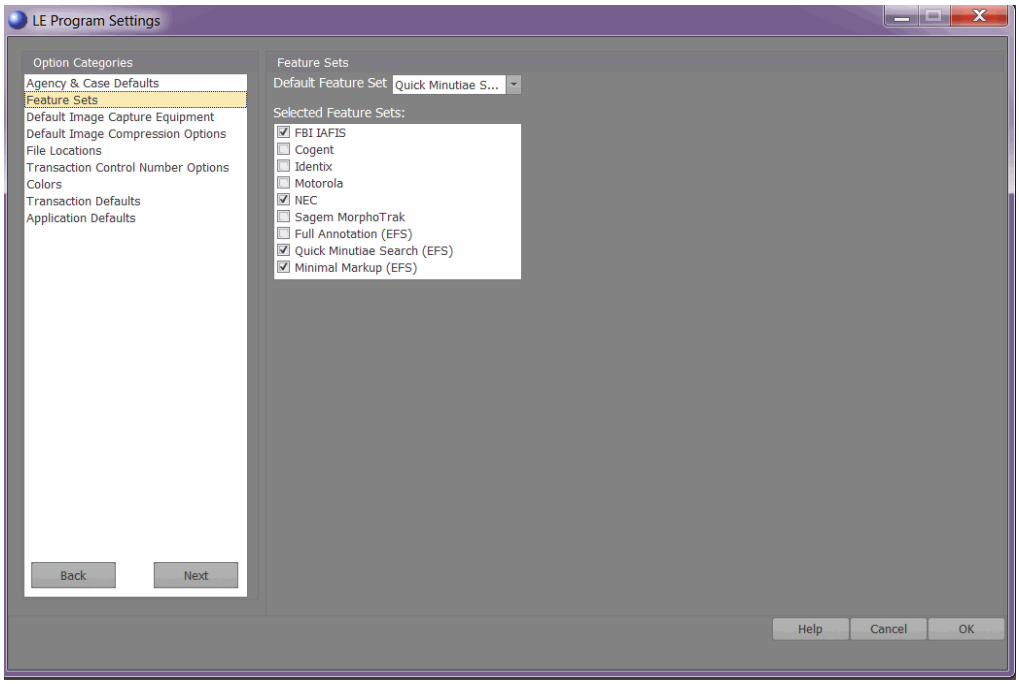
i. Note: the exemplar will not have any demographic information on it.

H. **Universal Latent Workstation (ULW) version 6.6.3 Inbound-Outbound Server for FBI Search (Finger and Palm latents)**

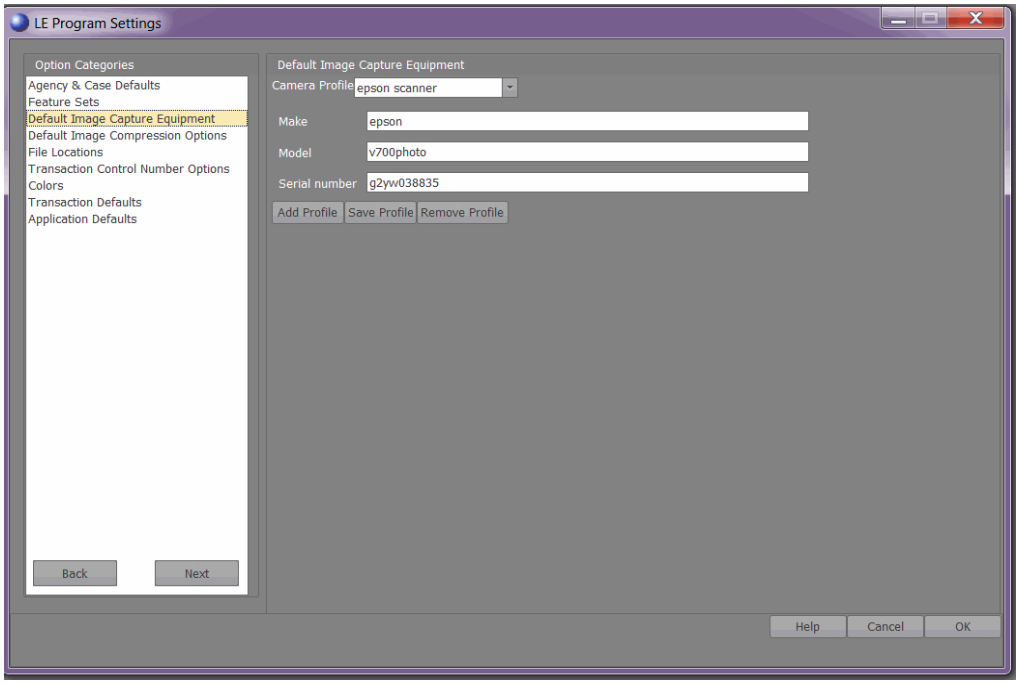
1. ULW version 6.6.3 is a modular software suite containing the Transaction Manager, Latent Editor, and Comparison Tool, which together enable examiners to search latents through the NGI.
2. Latent prints must be scanned as a **TIF** in **8-bit greyscale**, at **1000 dpi** for search in ULW.
3. Digital images captured at **1200 dpi**, will need to be scaled down to **1000 dpi** for search into ULW. The following steps can be taken prior to ULW upload:
   a. Open the image in Photoshop and open a new blank page
   b. Change pixels to inches (make the image 8.5 X 11)
   c. Change dpi to 1000
   d. Color mode: RGB 8-bit and click OK
   e. Return to latent image and select all (Ctrl+A), then copy (Ctrl+C)
   f. Return to blank page and paste (Ctrl+V)
   g. Image is 1:1 and may now be adjusted as needed
   h. File then Save As (Uncheck the "Layers" box) and ensure image is .tif, then Save
   i. Image is now ready for upload into Transaction Manager for ULW search
4. In Latent Editor, select File then Program Settings, and be sure the following settings are selected/added prior to use:
5.
   a.



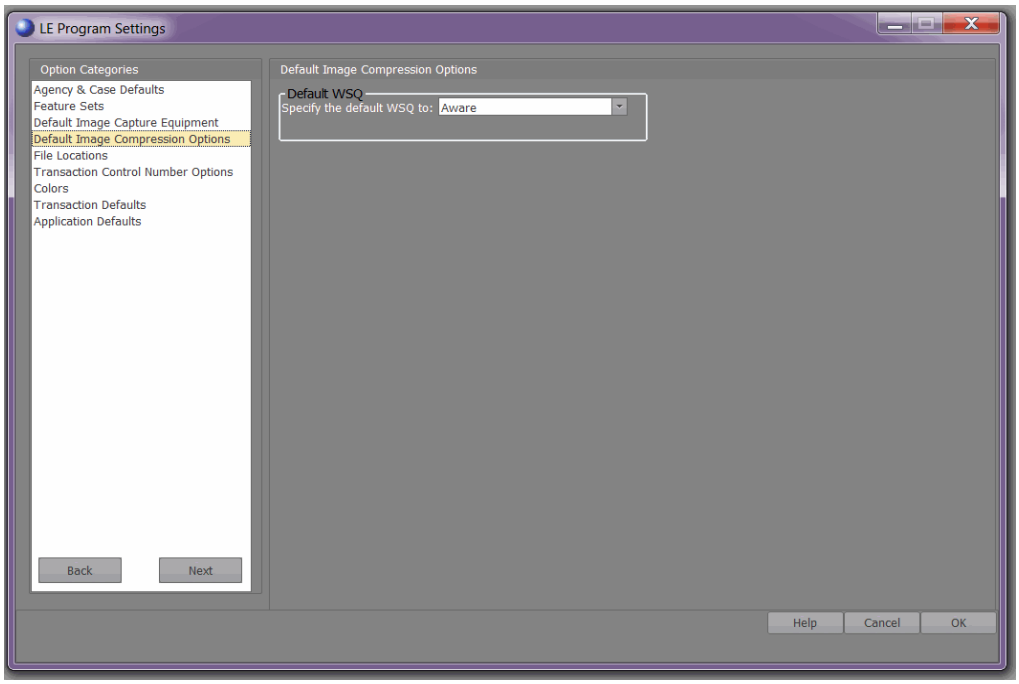
b.


LE Program Settings
Option Categories
Agency & Case Defaults
Feature Sets
Default Image Capture Equipment
Default Image Compression Options
File Locations
Transaction Control Number Options
Colors
Transaction Defaults
Application Defaults
Back
Next
Feature Sets
Default Feature Set
Quick Minutiae S...
Selected Feature Sets:
FBI IAFIS
Cogent
Identix
Motorola
NEC
Sagem MorphoTrak
Full Annotation (EFS)
Quick Minutiae Search (EFS)
Minimal Markup (EFS)
Help
Cancel
OK

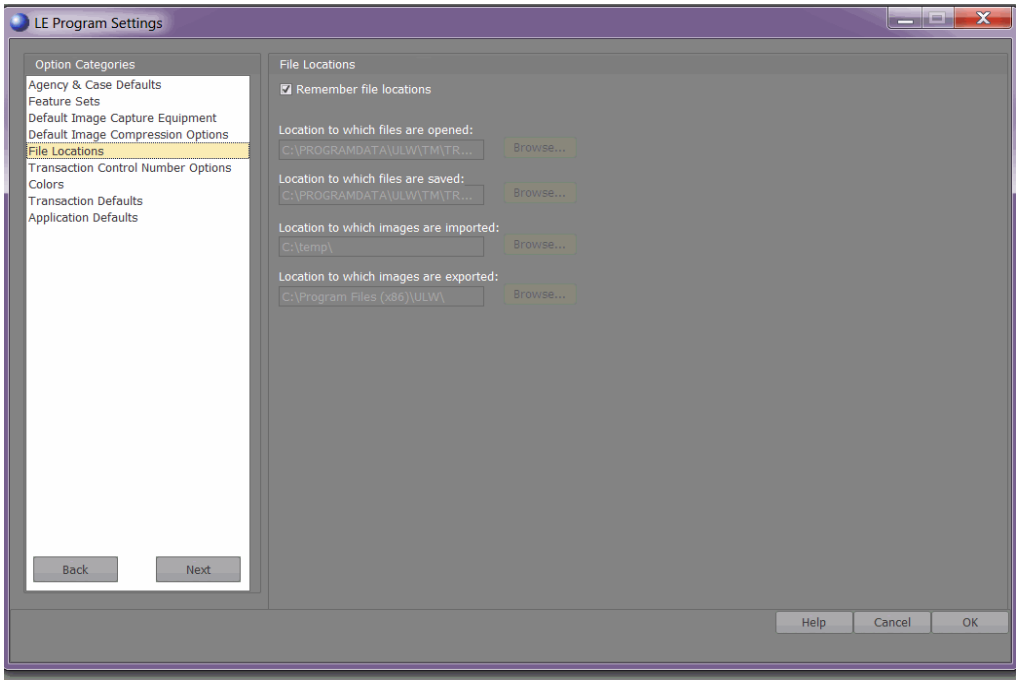
c.

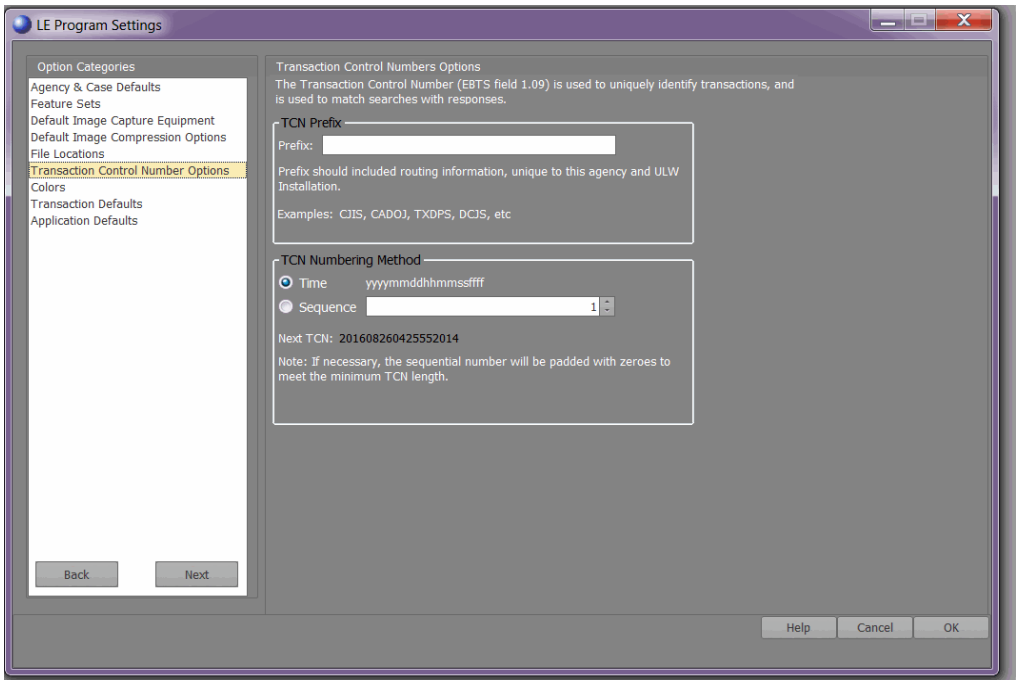

LE Program Settings
Option Categories
Agency & Case Defaults
Feature Sets
Default Image Capture Equipment
Default Image Compression Options
File Locations
Transaction Control Number Options
Colors
Transaction Defaults
Application Defaults
Back
Next
Default Image Capture Equipment
Camera Profile
epson scanner
Make
epson
Model
v700photo
Serial number
g2yw038835
Add Profile
Save Profile
Remove Profile
Help
Cancel
OK

d.

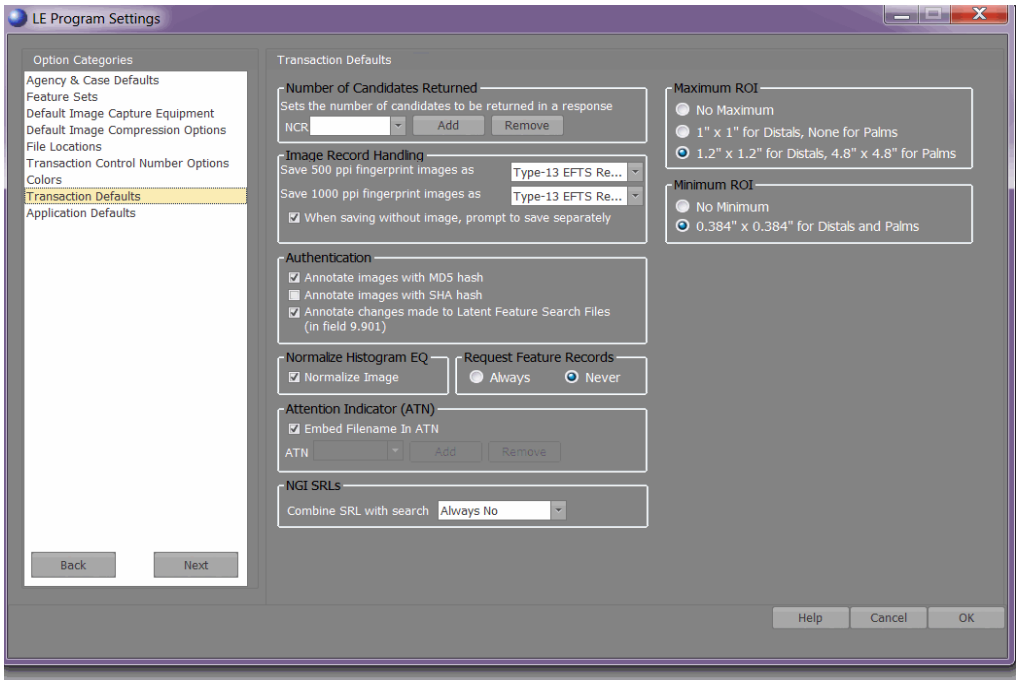

LE Program Settings
Option Categories
Agency & Case Defaults
Feature Sets
Default Image Capture Equipment
Default Image Compression Options
File Locations
Transaction Control Number Options
Colors
Transaction Defaults
Application Defaults
Back
Next
Default Image Compression Options
Default WSQ
Specify the default WSQ to:
Aware
Help
Cancel
OK

e.

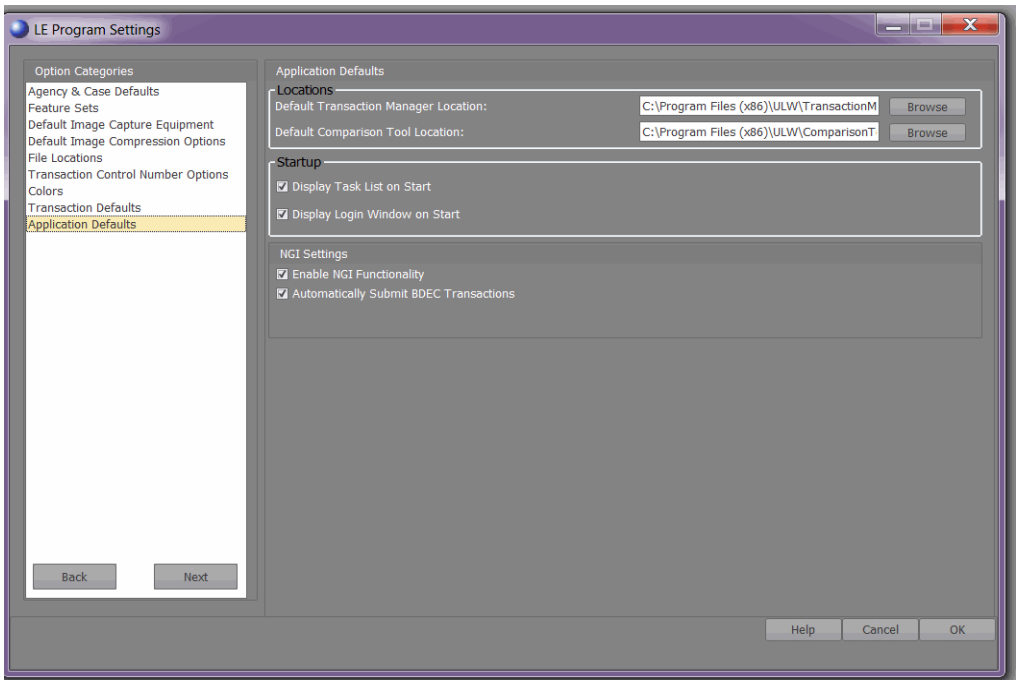

LE Program Settings
Option Categories
Agency & Case Defaults
Feature Sets
Default Image Capture Equipment
Default Image Compression Options
File Locations
Transaction Control Number Options
Colors
Transaction Defaults
Application Defaults
Back
Next
File Locations
Remember file locations
Location to which files are opened:
C:\PROGRAMDATA\ULW\TM\TR...
Browse...
Location to which files are saved:
C:\PROGRAMDATA\ULW\TM\TR...
Browse...
Location to which images are imported:
C:\temp\
Browse...
Location to which images are exported:
C:\Program Files (x86)\ULW\
Browse...
Help
Cancel
OK

f. 

g. **Note: the "Colors" tab is for preferences only and has no impact on system operations**

h. 

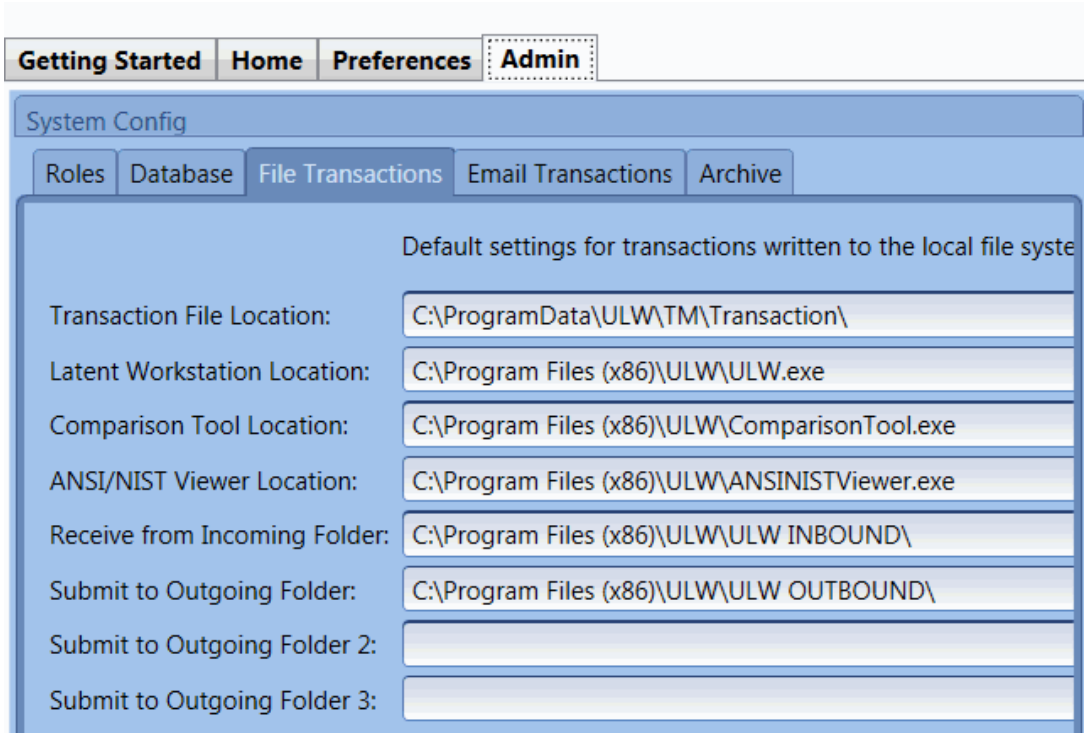
i.



6. A folder will need to be created for both latents ready to search **"ULW Outbound"**, and for search results **"ULW Inbound".** Once completed, ensure that the folder(s) are entered and saved in the following settings:

   a. The **"ULW Inbound" and "ULW Outbound"** folder locations will need to be saved under the **File Transactions Tab, within the Admin Tab, in the Transaction Manager** (see below)

   b.



   c. The **"ULW Outbound"** folder will also be saved in the **Latent Editor** under **File Locations**. (See F.4.e above)

7. See the instruction manual for more set-up and system information, as well as any optional searching procedures not mentioned in this policy. **(INSLP.16)**

8. Launching a search through ULW

a. Open the **Transaction Manager**.

   i. The first time transaction manager is used an ADMIN User will need to be created. Thereafter, Log-in as **ADMIN** (no password needed). This will enable users to manage and delete searches once they're completed.

b. Under the **Home** tab, in the upper left corner, select **Create Case.**

c. In the new window that opens, select **Import Image into New Case as Latent Feature Search (LFFS)**.

d. In the box that opens, the following information will need to be populated:

   i. Case Prefix: **LAB #**

   ii. Case ID**: Latent # (eg., 1011)**

   iii. Priority drop down: select 1 (high)

   iv. Select OK, then open the latent to be searched (location where latent was saved will automatically open if **Latent Editor** setup was done. See F.4.e above)

e. A **Case Preview** box will appear in the lower left corner containing the latent to be searched.

f. Select **Edit Search in ULW-LE** from the menu of options under "Actions to Current Case" (to the right of the Case Preview box).

   i. The **Latent Editor** will automatically open with the latent present ready to be edited prior to launch.

g. In the **Feature Markup** tab, the following tasks can be completed:

   i. Under Image Tools, to use the **Crop** feature (optional), drag the red square to the area of the latent to be searched. The square can be adjusted as needed, then select OK in the dialog box that appears. A larger view of the latent will appear.

   ii. Prints may also be **Inverted** if necessary and **Rotated** as needed under Image Tools.

   iii. If the position (fingers and palms) and/or pattern class (fingers only) are known, enter that information under the **Latent Info** section.

      1. While fingers can be searched at 100% File Penetration, it is encouraged that it be brought down to 50% or lower whenever possible.

      2. Palms search at 100% File Penetration.

   iv. Under the **Features** section, it is recommended to leave the Feature Set at **Quick Minutiae Search** (the default setting).

   v. The **Region of Interest (ROI)** must be drawn for the search to function properly. To select the ROI, draw a polygon with the mouse around the best area of the latent, leaving out unwanted ridge detail, artifacts, etc. If the polygon appears acceptable, select **Accept.** Select Cancel to try again if necessary.

   vi. Select **Find Minutiae** and minutiae will appear marked automatically.

      1. Individual minutiae marked can be removed by left clicking on them, and the number of minutiae marked can be decreased/increased by sliding the **Reject** scale.

      2. Select **Options**, then Accept all Minutiae as Shown.

h. Select **File then Save (NOT Save As)**, and close the Latent Editor.

i. Return to the Transaction Manager, and the latent will now appear on the task list with a check under the **Edited** tab.

j. Ensuring the latent that was edited is still highlighted on the task list, select **Submit Search** from the menu "Actions to Current Case."

k. A box will open with the latent and it's information; select **Save and Submit**.

l. On the task list in the Transaction Manager, a check under the **Submitted** tab will appear.

m. Open the **NEC ULW Inbound/Outbound** portal using Internet Explorer.

i. Select **Continue to this website (not recommended)** when the certificate error appears.

n. Log in to the Latent Access Server

i. The Agency ID is CA0070000

o. Select **Send** then **Browse** in the window that opens. Find the latent ready to search by Lab number in the "ULW Outbound" folder that was created.

p. Select **Open**, then **OK** and a box will appear indicating the request was received.

q. The latent will appear as "**EXEC**" in the Job Queue until the search is completed.

i. To refresh the screen press F5, then RETRY in the box that appears.

r. A Green Box next to the search indicates the job is complete and ready to be reviewed.

i. A Red Box next to the search indicates there was an error, in which case the search should be launched again. If an error appears again, after ensuring all steps were done properly, the FBI system may be down.

s. Select the Green Box and **Save As** then save to the folder created "ULW Incoming".

t. Once saved, select **Open** and the ULW Comparison Tool will open with the candidates appearing on the right side of a split screen.

u. Select **File**, then **Open EBTS File** and locate the saved search print from the "ULW Outgoing" folder for comparison.

v. The result will need to be printed.

i. Prior to printing a Side by Side "Hit" screen, the eraser tool can be used to remove minutiae counts that block ridge detail.

ii. To print a "No Hit" screen, select **Print Screen** on the keyboard and ensure all top 15 candidates appear on the list that is printed.

1. Optional: the candidate list may be isolated for printing by using the rectangle cropping feature on the print screen.

iii. Use the **SRL Preview** (lower left) tab in the Transaction Manager to view the candidate names, FBI#'s, etc., and/or if needed for printing.

9. See above (Quality Assurance) for intermediate checks of the ULW software.

10. Major upgrades to ULW software will require a performance verification.

I. **Missing Candidate Image**

1. Sometimes during a FBI search, an error ("Query candidate failed! It may have been removed or sealed from database") may occur when a potential hit is to a flat (4 finger or 1 thumb) impression which has a cropping error and the image returns as "missing". In this scenario, the following steps will need to be taken in order to compare the exemplar print to the latent.

a. Select OK inside the error box.

b. Click "Candidate" in the upper left corner and select "Query Candidate" from the drop down.

c. A new screen will open with the candidate exemplars that are missing which can be used for comparison to the latent print.

d. Click "Return" in the lower right corner and the split screen will appear again (after a quick automatic step back to the main transaction screen).

2. Should the error message occur on a local search, the above steps will not work because the record has been removed or sealed from the database.

J. **Documenting Searches:**

1. A record of all database search transactions must minimally be documented in the notes.
2. Opening the transaction search result to view the candidate list, constitutes work and must be reported.
    a. A search transaction deleted prior to viewing the candidate list is not considered work. This event should be rare and **must be documented** in the notes.
3. See LP.14 for instructions on entering results into LIMS.
4. See LP.27 for instructions on obtaining Exemplars.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 11/06/2019	**NUMBER:** LP.30 - Unsolved Latent Database
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Pamela Hofsass	**ANAB:**	
CHAPTER: Case Documentation	**SUBJECT:** Unsolved Latent Database	

I. POLICY: Latent prints not identified after a search in the Automated Biometric Identification System (ABIS) are registered in the Unsolved Latent Database (ULD) and must be reviewed periodically for potential matches.

A. **General Information**

1. In the ULD, registered latent prints are continuously searched against the changing database.
2. The ABIS produces a queue containing potential matches for some of the registered latent prints.
3. See LP.28 for further information on ABIS.

B. **CAFIS Procedure**

1. To review the ULD queue, log into the Cogent system under the latent region and select the **Tenprint/Palm print** field located in the upper right-hand corner of the screen. The queue will display all ULD transactions with potential matches waiting for review. The transactions will appear as "**Wait:LT/Verify**" for fingerprints, or "**Wait: PL/Verify**" for palm prints.
2. Right click in the tool bar area to change the column selection appearance of the queue, or the appearance within the verification screen.
3. The size of the queue defaults to **10,000** transactions, but can be increased as needed to view all potential matches in the ULD. Take the following steps to increase the queue size when the transactions in the queue are greater than 10,000:
    a. Open the Configuration tool.
    b. Select "General" in the "Transaction Queue."
    c. Enter the desired queue size in the "Number of Transactions to Display" field and select Apply.
4. Determination of a potential Hit
    a. Double click on the transaction to open a side-by-side comparison screen.
    b. If the latent to tenprint/palm print is **not** a hit, select "**Confirm NO**," then select "**End Trans**" and return to the queue. This will complete the

transaction for that latent, removing it from the potential match queue, and no further work is necessary.

c. If the latent to tenprint/palm print appears to be a hit, print out the side-by-side latent and candidate images, and ensure that all pertinent latent and candidate information is captured on the printout. The case and candidate information is needed to open a subsequent request (**ABIS Notification**) for laboratory analysis. Select "**Confirm Yes**," then select "**End Trans.**" This will remove the latent print from the queue.

i. It is the responsibility of the analyst issuing the ABIS Notification report to ensure the prints (latent and known) on the side-by-side printout are in fact a hit. **The hit will also need to be verified.**

ii. Once the latent print has been verified, delete the enrolled print from the ULD using the **Database Query**.

iii. The **ABIS Notification** will inform the requesting agency that further work can be done on a case. To complete the comparison of a hit, the evidence and a comparison request form will need to be submitted by the agency receiving the ABIS Notification report.

iv. Whenever possible, the new comparison request will be assigned to the original analyst, or the analyst who issued the ABIS Notification report.

v. **For information on completing an ABIS Notification report, see LP.14.**

C. **Unsolved Latent Match (ULM)**

1. The **Tenprints/Palm Prints** queue will accommodate the Unsolved Latent Match (ULM) transactions from remote database enrollments.

2. If the ULM transaction errors, the print may have been removed from the database. Otherwise the following may be attempted to retrieve the transaction for a comparison:

a. Highlight the ULM transaction in the **Tenprints/Palm Prints** queue.

b. Right click and select **Side By Side View**.

c. When the side by side view window appears, change the following settings on the right side, then click the **Query** button:

i. Data Source: Drop-down selection: **Database**

ii. Database Name: Drop-down selection: **Criminal Database**

iii. Record Type: Drop-down selection: **LT/PL**

iv. The query button opens the **Query Criteria** window. In the **Case No**. field, enter relevant case number and click **OK**.

v. The query will bring up all the enrolled transactions for the case number entered. If known, select the appropriate transaction, or **Select All**, and click **OK**.

vi. In the side by side view window, selected transactions will appear on the right in the split screen with the latent from the ULM on the left.

Move through the candidate transactions by using the **Next Pair/Previous Pair** buttons.

d. If the ULM transaction does not appear, the record was removed from the database and the transaction may be completed as a No-Hit.

3. If the ULM is a hit, follow the steps above for a hit and ABIS Notification. Refer to LP.28 for procedures on deleting a record from the NGI.

4. To retrieve demographic information on a ULM hit, take the following steps:

   a. Highlight and right click on the ULM transaction from the queue.

   b. Select **View NIST packet.**

   c. Select **Descriptive Text** and all case related and exemplar print information for a potential hit will be located under **Descriptive Data.**

   d. **Print all necessary information before selecting "Confirm Yes" and "End Trans."**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/28/2019	**NUMBER:** LP.31
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Processing	

I. Processing Techniques

A. The following techniques have been approved and may be utilized in casework:

1. Amido Black (LP.36)
2. Cyanoacrylate Ester (LP.42)
3. Dye Staining of Superglue-Fumed Latents (LP.39)
4. Fingerprint Powders and Magnetic Powders (LP.33)
5. Hungarian Red (LP.38)
6. Ninhydrin (LP.40)
7. Physical Developer (LP.41)
8. RTX (LP.37)
9. Wet Print (LP.35)
10. WETWOP (LP.34)
11. 1,2-Indanedione (LP.71)

B. **Sequencing**: While there is some analyst discretion as to choice of approved processing techniques to use, proper sequencing of multiple techniques **must** be followed. The following are some acceptable technique sequences:

1. Porous Evidence:
   a. Ninhydrin followed by Physical Developer.
   b. 1,2-Indanedione followed by Ninhydrin.
2. Non-Porous Evidence:
   a. Cyanoacrylate Ester followed by Dye Stain.
      i. This is the preferred and most sensitive technique available and should be used on most non-porous items.
      ii. This will be the selected sequence of techniques for a homicide case whenever feasible.
      iii. Fingerprint Powder can be applied after the Dye Stain.
   b. Cyanoacrylate Ester followed by Fingerprint Powder.
3. Semi-Porous Evidence:
   a. Cyanoacrylate Ester followed by Fingerprint Powder, then a porous technique (e.g. Ninhydrin and/or Indanedione).
      i. Depending on the surface, magnetic powder is usually recommended.
      ii. Some semi-porous surfaces have too glossy of a finish to absorb a porous development technique. If the item does not appear like it's able to absorb a porous development technique, test a small area of the item with dye stain prior to using powder. Some apparent semi-porous (high gloss or plastic) substrates are better suited to be processed as non-porous.
4. Blood Evidence:
   a. Cyanoacrylate fuming may be detrimental to Amido Black processing. The appropriate technique or sequence of techniques should be determined based on the case circumstances.
5. Adhesive Evidence:
   a. Wetwop or Cyanoacrylate Fuming followed by Wetwop.
6. RTX must be used prior to any other methods.

C. **Flexibility**

1. It is understood that various types of evidence may be submitted to the laboratory (i.e. porous, non-porous, adhesive, patent, etc.) and the nature of the case or evidence and/or subsequent examinations may require use of a specific technique which does not

follow normal procedure. The best technique will be determined by the analyst; however, if it involves using the technique in a manner not validated or outside the scope of approved use for the technique the supervisor must be notified prior to processing to ensure the appropriate documentation is completed.

D. **Preservation**

1. Usable latent prints present prior to processing, or that develop on processed evidence will be preserved for examination. Latents will be preserved with digital images (LP.45), latent lifts, castings, or other forms of media. Photographed images taken for examination purposes must be taken with a camera and lens combination that passed the resolution test.

II. Quality Assurance

A. As a quality assurance measure, test strips will be photo-documented for all applied processing techniques and included in the test record. The photo does not need to be uploaded to Veripic.

1. If the control reaction is "weak" the following steps will be taken:

a. **Check the expiration date**. If the reagent is close to expiring, make a new batch or use a new lot# and discard old reagent.

b. **Check if reagent was newly made.** If the reagent is being used for the first time, check the reagent log and talk to the preparing analyst to ensure it was made correctly.

c. **Check the environmental conditions.** Humidity or more time developing may need to be added for a better result.

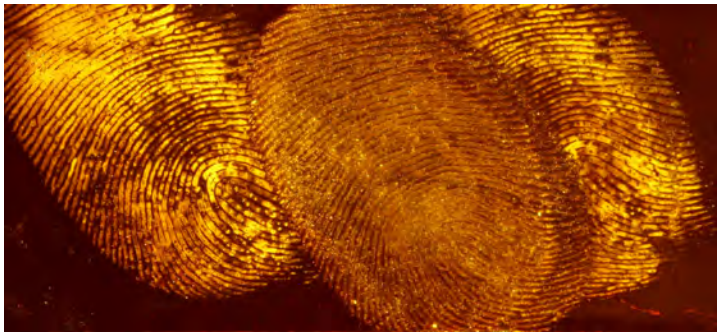
d. **Check the equipment**. Was the equipment properly maintained recently? Did the processing cycle run as expected?

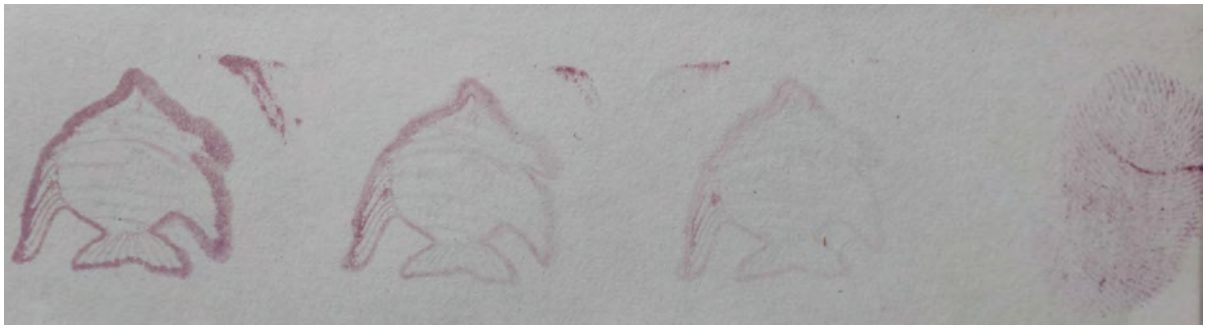
e. **Re-run the process/application using a new test strip.**

2. Below are examples of **good test strip reactions**:

a.







B. The purpose of a test strip (control) is:

1. to ensure equipment is working as expected.

2. to ensure prints can develop when following the selected sequence of processing for the evidence. When testing a sequence of techniques, the test strip will mimic the evidence.

C. All items of evidence will be reviewed by a competent examiner other than the case analyst ***to confirm that ridge detail present has no value***. This may be accomplished by reviewing the evidence in person (peer review) or by reviewing digital images. See LP.14 for further information on reporting results.

1. Ridge detail categorized as having **no value**, is anything insufficient of or lesser than an ***Exclusion Value*** print.

2. Ridge detail determined to have **no value** must be digitally captured if the latent **could** be categorized by another competent examiner as having value or potential value for comparison. An example of potential value would be ridge detail with probable Level 1 (ridge flow) determination ***and*** no or very little (less than 3) discernible Level 2 features.

3. See LP.19 for the definition and description of an **Exclusion Value** print.

D. All control, chemical, lot#, and equipment information must be recorded in the test record.

E. Use caution when making decisions for processing that may have a negative effect on downstream evidence collection, particularly on potential DNA. For example:

1. Steps that require multiple solvents or washes.

2. High-intensity lasers or UV light pointed directly at the evidence for a period of time.

3. Excessive heat.

III. Collection of Possible Biological and/or Trace Materials

A. At the request of the agency, or when evidence preservation may be necessary, potential biological stains, touch DNA, and trace material will be collected prior to and/or following latent print processing.

1. Wear proper PPE (e.g. lab coat, gloves, and mask) to prevent possible contamination of the evidence. **Change gloves between handling different items of evidence.**

a. For more information on cross-contamination prevention, see LP.64.

2. Moisten the swab(s) using sterile water without making contact with the swab. Use a QC'd sterile water ampule or other sterile water source.

a. Record in the notes the lot number of the sterile-deionized water that was used.

3. Rub the swab(s) rigorously over the target area. Optimally, use the entire surface area of the swab to collect as much material for potential biological testing.

4. If necessary, for non-porous surfaces, use a dry swab to collect the residual moisture from the target area.

5. For stained areas, a substrate control may be collected. Repeat the above procedure on a visually *unstained* area.

6. A substrate control is not necessary when evidence collection is for contact DNA.

7. Package the swab in a properly labeled evidence envelope and allow it to dry completely.

8. Swabs from different items or locations must be packaged separately.

B. For typical firearm biological collection, collect three to four swabs from the following three areas and package separately:

1. Trigger and trigger guard

2. Sight areas, muzzle, slide

3. Grips

a. At times using two swabs maybe necessary depending on how textured the grip is or how saturated and torn the swab becomes during collection.

4. Some modifications may be needed to the areas of collection depending on the firearm.

5. If collecting contact DNA swabs from unfired cartridges or fired cartridge cases, collect one wet and one dry swab from each group of cartridges or cartridge cases. If necessary, comparative evidence unit staff may be consulted to determine groups based on class characteristics. For large groups of cartridges or cartridge cases (over 10), multiple pairs of wet and dry swabs may be needed. Package the swabs from a single group together in one envelope.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.32 - Reagents
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB: 6.4**	
CHAPTER: Equipment	**SUBJECT:** Reagents	

I. Reagents must adhere to the applicable equipment requirements listed in Division Policy.

A. Reagents are stored in the Latent Unit at room temperature unless otherwise stated on the container, in the specific policy, or on the reagent log.

1. Refrigerated or Frozen storage must be indicated on the container.

2. Room temperature storage is in a darkened cabinet in the latent unit separated by flammable and non-flammable.

B. Appropriate NFPA or pictogram labels will be placed on all reagent containers.

C. All latent unit reagents are used in the laboratory.

II. Reagents prepared in the laboratory must include the following information on the container and corresponding reagent logs:

A. Identity of the reagent.

B. Individual who prepared the reagent.

C. Components used in making the reagent (Log only).

D. Reagent lot number (includes date of preparation).

1. The designated lot number for reagents prepared by staff is: the date the reagent was prepared with the analyst's initials. For example, Lot# **010119KN.**

E. When applicable, the container will also indicate the expiration date.

F. **Reagents will be prepared in accordance with the approved reagent procedures published in PowerDMS.**

1. Once prepared, reagents will be tested prior to use with a positive and negative control.

2. Reagent logs stored in the latent unit reagent binder are used to document the preparation and quality control information of stock and working solutions.

G. **Deionized Water** is obtained from the biology unit.

1. The biology unit maintains the records for the filtration system.

2. The lot number for the water is the date the container was filled and the initials of the staff member who filled it.

III. Purchased pre-made reagents and kits

A. Containers will be marked with analyst initials and both: date of receipt and date opened.

B. Staff will use the lot number provided by the vendor for documentation in the test record unless otherwise indicated in the specific policy.

C. As needed, purchased reagents may be tested prior to use and must be tested following the intermediate checks described below.

IV. Quality Assurance and Maintenance

A. To ensure a reagent is working as expected, intermediate checks will consist of a positive and negative control run prior to, or concurrent with, all evidence processing casework.

1. The results of the reagent check will be documented in the test record.

2. Reagents that fail intermediate (control) checks will not be used on casework.

3. See individual reagent procedures for further information on failed reagent checks and troubleshooting.

4. Failed reagent testing must be brought to the attention of the Supervisor or Technical Lead.

V. Safety

A. The appropriate personal protective equipment will be worn when working with all chemicals.

B. Apply a "CAUTION: EVIDENCE CHEMICALLY TREATED, HANDLE WITH GLOVES" sticker or similar label on the outside of the evidence package for all processed items.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.33 - Fingerprint Powder Development
	RELATED ORDERS: LP.09 Evidence Handling	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Fingerprint Powder Development	

I. Introduction

A. Fingerprint powders for latent development are available in a variety of types and colors to provide contrast and friction ridge visualization depending on the substrate being examined.

B. Powders will adhere to most moisture or contaminants present on evidence, such as sweat or oils; irregularities on a surface, such as texture or scratches; and to superglue polymers deposited on an item.

C. Powders work well on non-porous and semi-porous surfaces, such as glossy magazine pages. However, powders have a tendency to fill in the background of coarser paper or cardboard.

II. Quality Assurance

A. A test print is laid down on a non-porous or semi-porous surface (piece of plastic, foil, or similar surface to the item to be processed) and processed with a powder.

1. If the powder does not develop a visible test print then do the following:
    a. Re-apply the powder
    b. Re-hydrate the test print (iron or humidifier with deionized water)
    c. Use a different test print donor
    d. If the test print still does not develop, try another powder or choose another development technique, such as dye-stain.
2. If the evidence has been fumed, the superglue control print should be used to test the powder.

B. The test print (Control) result must be documented in the case notes.

C. Disposable brushes and powders are used whenever possible to avoid cross contamination.

1. If powder is being used from a larger jar, pour the desired amount into a secondary container for use rather than dipping the brush directly into a large container.

D. All brushes, including Zephyr, Feather or Camel Hair should be discarded if soiled.

E. New brushes will be used on evidence if it is known that the evidence may later be tested for the presence of DNA.

F. Typically fingerprint powders do not have expiration dates; however, when small ball-like chunks begin to form, the powder should be discarded to avoid creating "fish-eye voids" during processing.

G. Brushes and powders are considered disposable. If not working properly, they are discarded and replaced.

III. Application

A. Brushes

1. Use one brush for each color of powder.

a. Fiberglass brushes are typically used with regular fingerprint powders (for example, black, white, or bi-chromatic powders).

b. Feather brushes are commonly used with fluorescent powders because of their finer texture. Fluorescent powder must be used very sparingly to avoid filling in the background of the item being processed.

c. Magnetic wands/applicators are used with all magnetic powders.

B. Fingerprint Powders

1. Powder should be applied sparingly to the bottom of the brush fibers and any excess powder shaken off prior to dusting the evidence. The brush should then be lightly brushed over the area to be processed.

2. A visual examination with light at various angles will usually reveal any latent prints developed. An ALS (Alternate Light Source) or Laser must be used at the appropriate setting for the type of powder selected to visualize and photograph developed fluorescent prints.

3. A latent print that will only accept a light deposit of powder can be humidified and re-powdered to improve contrast.

C. Magnetic Powders

1. Place the end of the magnetic applicator into the magnetic powder and withdraw, shaking slightly to remove any excess powder. A ball of magnetic powder will have formed, making a "brusk-like" appearance at the base of the wand or applicator.

2. Gently move the ball of powder over the surface to be processed being careful not to let the head of the applicator touch the evidence surface, as this could scratch the latent print. Continue until the latent print has developed.

3. Over a disposable or secondary container, lift the rod in the center of the applicator to remove the excess powder from the wand.

4. Place the clean applicator over the area just processed to pick up any excess powder.

IV. Preservation of the developed Latent Print

A. Once a latent print is developed it must either be preserved by digital capture of the latent in place, or by lifting the latent with lifting tape; or both.

B. Latent print lifts:

1. Fingerprint tape will be carefully pressed over the latent print(s) to be lifted. If applicable, a directional arrow will be marked on an area of the tape with no latent prints. The tape is then slowly pulled off of the surface and placed onto the **glossy side** of a latent lift card of a color that will contrast with the color of the powder used.

2. Tape that tears easily when used or is known to have been in use for more than 3-4 years should be discarded and replaced.

3. The back of the latent lift card will be filled out with at least the following:

   a. Lab number.

      i. Agency case number (if known).

   b. A description from where the lift was collected and a sketch of the item.

      i. The sketch should also have an arrow matching the proper orientation of the directional arrow drawn on the fingerprint tape.

   c. LIMS Item number, if known.

   d. The analyst's initials or signature and date of collection.

C. Photographs of latent prints

1. Images of latent prints developed will be captured following the procedures described in LP.45.

V. Safety

A. Whenever possible, the application of powders should be performed in the fume hood with the sash lowered. If it is not possible to process items inside the fume hood, the NIOSH-approved particle mask may be worn, see SAF.08 Respiratory Protection Plan. Also a lab coat and gloves must be worn.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/10/2019	**NUMBER:** LP.34 - Wetwop
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Wetwop	

I. Introduction

A. Wetwop is a non-flammable pre-made liquid that is physically attracted to the oily components in latent print deposits.

B. Wetwop is most commonly used on the adhesive side of tapes and on various types of gloves.

C. Application is with a camel hair brush.

1. The brush must be bleached prior to use on evidence known to be later examined for potential DNA.

D. Cyanoacrylate Ester may be applied prior to Wetwop; however, it is not required.

1. See LP.42 for more information on Superglue fuming.

E. Wetwop is currently available in black and white. Color selection depends on the color of the evidence item. Select the color that would provide the most contrast for visualizing developed prints.

II. Procedure

A. Agitate the Wetwop container prior to use.

B. Pour a small working amount into a shallow container and apply the liquid onto the item using a camel hair brush.

C. Allow the item to set for approximately 15 seconds, then rinse the excess Wetwop under running cool tap water.

D. Lay the item in the fume hood (if possible) and allow to dry.

E. After examining the processed item for latent prints, re-application of Wetwop may be done to darken any ridge detail.

1. Photograph developed ridge detail prior to re-application of Wetwop.

F. Latent prints developed in this manner must be photographed for preservation and further examination.

III. Quality Assurance

A. Intermediate Checks

1. All results from Wetwop reagent testing must be documented in the notes.

2. For the control, obtain a piece of non-evidence tape similar to the evidence and place a test print on the adhesive side.

3. If the evidence item is not tape, use a similar item as the control, if available. Otherwise use tape.

4. Proceed to develop the test print following the procedure above.

5. If the reagent is not reacting to the test print, re-apply the Wetwop or start over with a new test print (a new donor may also be required).

6. If the Wetwop is still not reacting to the test print on the second attempt, discard the bottle. A new bottle may be required regardless of expiration date, especially if the Wetwop appears to be drying out.

    a. The shelf-life for Wetwop is <u>one year after</u> the date the bottle was opened.

B. Wetwop and camel hair brushes are disposable. Both are discarded when not working properly.

IV. Safety

A. A lab coat, goggles and gloves should be worn while using this product.

B. Non-hazardous disposal.

C. Refer to SDS for more safety information.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/10/2019	**NUMBER:** LP.35 - Wet Print
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Wet Print	

I. Introduction

A. Wet Print is a liquid fingerprint powder solution that works well with wet or previously wet non-porous evidence items.

B. Wet Print may work on evidence items that have been lightly washed.

C. Wet Print may be used on items where mud, dirt, or heavy dust have covered the surface making ridge detail difficult to develop by conventional means.

D. Wet Print is currently available in black and white. Color selection depends on the color of the evidence item. Select the color that would provide the most contrast for visualizing developed prints.

II. Safety

A. A lab coat, protective eye wear, and gloves should be worn while using this product.

B. If reagent gets sprayed into the eyes, immediately flush with large amounts of water for at least 15 minutes. If reagent gets sprayed onto skin, immediately wash with soap and water.

C. Non-hazardous disposal.

D. Refer to SDS for more safety information.

III. Quality Assurance

A. Intermediate Checks

1. All results from Wet Print reagent testing must be documented in the notes.

2. For the control, place a test print on a strip of plastic or foil and dampen with tap water.

3. Proceed to develop the test print following the procedure below.

4. If the reagent is not reacting to the test print, re-apply the Wet Print solution or start over with a new test strip (a new donor may also be required).

5. If the control print is still not developing as expected after the second attempt, discard the Wet Print reagent. A new kit may be required regardless of expiration date, especially if solution appears to be drying out.

    a. The expiration date for Wet Print should be located on the kit.

b. If the expiration date is not located, shelf-life is one year after the date the kit was opened.

IV. Procedure

A. Shake "Wet Print 1" container to disperse solids.

1. Turn spray nozzle to *OFF* before shaking and after use to prevent leakage.

B. Adjust spray nozzle for a fine soft spray.

C. Spray "Wet Print 1" onto the item allowing the solution to roll down and spread over the evidence surface.

D. Repeat "Wet Print 1" spray 3 to 4 times or until ridge detail is completely developed, allowing about 30 seconds between each subsequent application.

E. Rinse as necessary with tap water using "Wet Print 2" sprayer from kit to clear off excess Wet Print solution.

F. If developed ridge detail appears to be clogged with residual Wet Print solution, spray a fine mist of tap water from the "Wet Print 2" container over the print.

G. Once prints are fully developed, photograph and let air dry.

H. Dried prints may then be re-photographed as needed and may also be lifted by conventional means.

1. Be sure prints are dry before lifting.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 05/03/2019	**NUMBER:** LP.36 - Amido Black
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Amido Black	

I. Introduction

A. Amido Black, also known as Naphthalene Blue-Black, Naphthol Blue Black or Naphthalene Black 12B, is a biological dye that stains the protein present in blood producing a dark blue color.

B. Amido Black should only be used to enhance apparent bloody ridge detail.

II. Precautions

A. Amido Black may be detrimental to biological examinations; therefore, blood samples for DNA analysis should be collected **prior** to latent processing. A consultation with staff from the Forensic Biology Unit is highly recommended prior to processing potentially bloody evidence.

B. **Potentially usable ridge detail** must always be photographed prior to application of Amido Black.

C. Apparent blood impressions should be dry before applying the Amido Black stain.

D. Use caution to not **overdevelop** ridge detail through reagent over-saturation. This can be particularly easy to do on porous items.

III. Incompatibilities

A. Amido Black should be used prior to other techniques.

B. Superglue fuming may be detrimental to the development of ridge detail with Amido Black.

C. Painted surfaces may be deteriorated by the methanol based developer and rinse solutions.

D. The water based method and the optional second rinse with distilled water in the methanol based method are **not** recommended for use on surfaces that may suffer from corrosion, such as **firearms**.

E. Amido Black may interfere with examinations for handwriting, inks, paper, and indented writing.

F. Amido Black may interfere with fiber, hair, paint, and other similar evidence types.

G. Use caution and watch development time closely when using Amido Black on heavily blood saturated evidence, as well as on porous items.

IV. Quality Assurance and Intermediate Checks

A. Amido Black will be tested with a blood standard control at the time the reagent is made and the results will be documented on the appropriate reagent log.

B. The reagent will be tested with a blood standard control and must obtain positive results just prior to use in casework. The control test results will be documented in the test record.

C. Control Procedure:

1. A known blood sample will be obtained from the Biology Unit for use as a control and the records for the blood sample are maintained therein.

    a. Using the designated stamp, apply blood and create several blood standard strips for testing the reagent.

2. Use the pre-made blood strip standards to test the reagent prior to use on evidence and record those results in the test record.

    a. The QC Lot number for the blood standards are maintained in the Latent Unit and will be documented in the test record.

    b. The Lot number should also be recorded on the bottom of the reagent log for reference.

3. Apply the reagent to the swatch containing the known blood sample.

    a. If the known blood control turns a blue-black color it is a positive result. If the known blood does **not** turn a blue-black color it is a negative result.

    b. If a negative result is obtained, re-apply the Amido Black onto a new swatch. If negative results continue, the reagent must be discarded and a new solution must be made and tested.

    c. When a reagent fails the control test after reapplication, the Technical Lead or Supervisor must be notified.

D. Shelf Life (water-based and methanol-based):

1. Literature indicates the shelf life for Amido Black is indefinite. However, for quality assurance purposes, the expiration date will be **two years after preparation.**

V. Water Based Formula with Fixer (Fischer 98)

A. Amido Black water-based formula is a one-step process that includes a blood fixer and a tap water rinse. The sensitivity and color intensity of the process are similar to that of the Amido Black methanol-based formula.

B. Reagent Preparation (LPF.21 Amido Black Water Based Reagent Log)

1. Developer Working Solution:

    a. The working solution is prepared on a stirring device by combining the following ingredients in the order in which they are listed and mixing for about 30 minutes.

        i. 500 ml Distilled water

ii. 20 grams 5-Sulfosalicylic acid

iii. 3 grams Naphthol blue black

iv. 3 grams Sodium Carbonate

v. 50 ml Formic acid (slowly pour)

vi. 50 ml Glacial Acetic acid

vii. 12.5 ml Kodak Photo Flo 200

b. Dilute the mixture to 1 Liter using distilled water. Although this mixture will be ready to use following dilution, allow the mixture to stand for several days prior to use *for best results.*

2. Rinse Solution: Rinse with tap water.

C. Application Procedure

1. Ensure all reagents are evenly distributed through the container prior to applying to the control stain and evidence by shaking the sealed bottle or by using a stirring device.

2. Spray/Squirt Bottle Method:

a. Apply Amido Black by spraying or squirting the reagent to the surface in a uniform manner.

b. Allow the Amido Black to stay on the surface for approximately 3-5 minutes or until blue-black ridge detail is visible.

c. Rinse.

3. Tray Immersion:

a. Immerse the item in the developer working solution for 30-60 seconds.

b. Remove from solution and rinse, or immerse the item in a tray of rinse solution for one minute.

c. Allow the item to air dry.

4. If the Amido Black ridge detail is too light, repeat the steps above and rinse as needed.

5. Allow the surface to dry prior to visualization and photography.

VI. Methanol based formula

A. Reagent Preparation: The methanol based method is prepared by combining the ingredients for each solution on a stirring device (LPF.20 Amido Black Methanol Base Reagent Log).

1. Developer Working Solution:

a. The working solution is prepared on a stirring device by combining the following ingredients in the order in which they are listed and mixing for about 30 minutes.

i. 1 gram Naphthol blue black (Amido Black)

ii. 50 ml Glacial Acetic acid

iii. 450 ml Methanol

2. Glacial Acetic Acid-Methanol Rinse Solution

a. Combine ingredients and mix with a stirring device.

i. 100 ml Glacial Acetic acid

ii. 900 ml Methanol

3. Glacial Acetic Acid-Distilled Water Rinse Solution (optional)

a. Combine ingredients and mix with a stirring device.

i. 50 ml Glacial Acetic Acid

ii. 950 ml Distilled Water

B. Application Procedure: Same as above.

VII. Ridge Detail Visualization

A. Detail is visualized by a chemical/stain reaction.

B. Development is complete when the maximum contrast of the blue development color is achieved.

C. Preserve developed ridge detail with photography.

VIII. Safety

A. Biological hazards are biological substances that pose a threat to human health. Use extreme caution when working with and being exposed to biological evidence.

1. All biological evidence must be treated as if it is hazardous.

2. Proper protective equipment **must** be worn to protect the employee, including gloves, a lab coat and protective eye wear. A particle mask should be worn when the evidence has flaking blood, or when collecting samples for DNA testing.

3. Bench tops and shared work surfaces are routinely cleaned with a bleach and water solution before and after the examination of blood contaminated evidence and use of known blood controls.

4. Butcher paper is placed on the bench top work area prior to use to capture potential shed biological material. The paper is disposed of after use, into the trash or biohazard container, depending on the amount of soiling.

B. Chemicals may posses health and/or physical hazards.

1. A fume hood or full face respirator is required to prepare and apply the working solution (and rinse for the methanol based application). SAF.08

2. Proper protective equipment (gloves, lab coat, eye wear) should be worn when using Amido Black. Use of proper safety precautions when handling and disposing of chemicals is expected. See SAF.06, SAF.08 & SAF.10.

3. The methanol-based formula is highly flammable, and can damage some surfaces. Therefore, it is suggested that the water-based formula be used whenever possible.

C. Apply a "***Caution: Evidence Chemically Treated, Handle with Gloves***" sticker on the outside of the evidence package after processing.

IX. Reference Materials

A. Chesapeake Bay Division of the International Association for Identification website http://cbdiai.org/Reagents/main.html

B. Marchant, B. & Tague, C. "Developing Fingerprints in Blood: A Comparison of Several Chemical Techniques", *JFI*, Volume 57, Issue 1, Pages 76-93, 2007.

C. Lee, H.C. & Gaensslen, R.E. (1991),"Advances in Fingerprint Technology", Elsevier, pg.86.

D. FBI, "Processing Guide for Developing Latent Prints", U.S. Department of Justice, 2000. http://www.fbi.gov/about-us/lab/forensic-science-communications/fsc/jan2001/lpu.pdf

E. Sears, V.G. & Prizeman, T.M. "Enhancement of Fingerprints in Blood - Part 1: The Optimization of Amido Black", *JFI*, Volume 50, Issue 5, Pages 470-480, 2000.

F. Warrick, P. "Identification of Blood Prints on Fabric Using Amido Black and Digital Enhancement", *JFI*, Volume 50, Issue 1, Pages 20-32, 2000.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 05/01/2019	**NUMBER:** LP.37 - RTX
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** **Ruthenium Tetroxide (RTX)**	

I. Introduction

A. Ruthenium Tetroxide (RTX) solution is a latent print processing technique that can be used on a variety of substrates. RTX works on both porous and non-porous objects, with the exception of some dark or black items due to poor developed print visibility.

B. The RTX fumes react with organic compounds, particularly fatty oils or fats contained in sebaceous contaminants found in latent print residues.

C. The developed latent print is brownish-black in color and can be darkened if necessary by more exposure to the product.

D. RTX developer can be applied in different ways; however, the fuming method with the provided air pump is recommended by the manufacturer, as is directly applying the liquid to porous and semi-porous items.

E. For sequencing purposes, RTX should be applied to an item **before** any other latent print processing techniques, such as Powders, Ninhydrin, and Cyanoacrylate Ester. Most other processing techniques may interfere with the effectiveness of the RTX developer and RTX does not interfere with the effectiveness of other reagents.

1. If sequencing will be done on a case, first conduct a test using a similar substrate prior to starting the latent processing sequence.

F. The developer is a solution of Ruthenium Tetroxide (RuO_4) and an organic solvent and appears as a yellow/transparent liquid.

II. Quality Assurance

A. Intermediate Checks

1. All results from RTX reagent testing must be documented.

2. For the control, obtain a piece of plastic, foil, paper, or similar item to the evidence and create a test print.

3. Proceed to develop the control following the procedure below.

4. If the reagent is not reacting to the test print, re-apply the RTX or start over with a new test print (a new donor may also be required).

5. If the RTX is still not reacting to the test print on the second attempt, a new bottle of reagent will likely be required.

6. RTX does not have a definite shelf-life. Black precipitates may form on the bottom of the reagent bottle; however, its effectiveness should not vary as long as the solution remains a transparent yellow in appearance.

III. Safety

A. RTX must be used in a fume hood with adequate ventilation.

B. Proper protective equipment must be worn. Including safety goggles, chemical resistant gloves, and a lab coat.

C. If skin contact is made, wash thoroughly with soap and water. Staining may be removed with alcohol or diluted bleach (sodium hypochlorite).

1. Clorox brand bleach is 5.25% sodium hypochlorite and should be diluted down to 3% for contact with the skin.

D. Never spray the developer out directly toward the human face.

E. RTX is not poisonous or toxic to humans, but the fumes can irritate the eyes and respiratory tract.

F. RTX developer solvent is not known to be hazardous to the environment, nor is it flammable.

G. Non-hazardous disposal.

H. Refer to SDS for more safety information.

IV. Procedure

A. Fuming Method

1. The fuming device may be used for blowing fumes out of the developer by making bubbles in the solution with an air pump or compressor. The pump is composed of a glass cylinder which has a cap and an air blow nozzle with a pipe for fumes to exit. The air pump is battery operated and may be used with RTX to fume both porous and non-porous objects.

B. Liquid/Dipping Method

1. Dip items, such as paper or tape, directly into the RTX solution which may be poured into a glass or ceramic tray. The reaction time should be immediate and prints would become visible after exposure to RTX (approximately 5 seconds). If the developed prints do not appear dark enough, a second dip into the solution is recommended.

C. Collection of developed ridge detail is done by photography.

V. References

Operation manual prepared by Kenzo Mashiko, research chemist.
www.onin.com/rtx

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION** **DATE:** 05/01/2019	**NUMBER:** LP.38 - Hungarian Red
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Hungarian Red	

I. Introduction

A. Hungarian Red is used to recover nearly invisible ridge detail left in blood deposits.

B. Hungarian Red is supplied in ready-to-use premixed quantities, typically in a sprayer bottle. However, the procedure requires the application of a blood fixative solution (below) prior to applying the reagent.

C. Hungarian Red may be used on most porous and non porous surfaces.

D. Visible ridge detail should be photographed prior to the application of this product.

1. If the ridge detail has potential to be usable, it must be photographed prior to using Hungarian Red.

II. Quality Assurance

A. Precautions

1. Hungarian Red can be detrimental to subsequent forensic examinations.

a. The process of using a blood fixative and Hungarian Red will likely interfere with the potential for DNA analysis; therefore, blood or other physiological collection must occur prior to latent processing.

b. Paper with ink handwriting may run with the use of Hungarian Red; therefore, evidence should be photographed prior to latent processing.

B. Intermediate Checks

1. Hungarian Red will be tested with a control (test strip) and must obtain positive results prior to use in casework. All control testing results will be documented in the test record.

2. Control Procedure:

a. A known blood sample is obtained from the Biology Unit and records for the blood sample are maintained therein.

b. The lot number for the blood swatch is retained in the Latent Unit and will be documented in the test record.

c. Follow the procedures below for application onto the control (test strip).

d. A positive control reaction occurs when the blood swatch turns a red color and fluoresces when using the Coherent TracER Laser or the ALS (at 515-560nm). The control test strip fails if the blood swatch does not react.

e. If a negative result is obtained, re-apply the Hungarian Red. If the reagent fails the control test after reapplication, notify the Technical Lead or Supervisor. The reagent will likely need to be discarded.

III. Procedure

A. Hungarian Red solution is supplied in a ready to use container. However, a sulfosalicylic acid solution used prior to the Hungarian Red is prepared at the laboratory.

B. Sulfosalicylic Acid Solution (LPF.18 Sulfosalicylic Acid Log)

1. Mix in a fume hood using a magnetic stirrer:

a. Weigh 20-23 grams of 2% sulfosalicylic crystals and mix into one liter of distilled water.

C. Apply the sulfosalicylic acid solution to the evidence: spray directly or moisten tissue paper or paper towel and keep over the surface for a minimum of three minutes to fix the blood.

D. Spray Hungarian Red onto the item from a distance of about six to nine inches.

E. Allow one minute for the dye to set and then wash lightly with distilled water.

F. Remove any remaining water droplets with compressed air.

G. Developed ridge detail may be photographed and lifted using a "gel-lifter" (below).

1. The surface must be completely dry before attempting to lift developed prints.

2. Ridge detail that has potential to be usable must be photographed prior to attempting to lift because the print will migrate into the gelatin causing a loss of detail.

H. Lifting technique

1. Do not use normal lifting devices such as hinge lifters or fingerprint tape.

2. The most effective lifting devices are gelatin-type lifters such as Sirchie "GELifters."

I. Forensic Light Source Examination

1. Alternate Light Source (ALS): Use green light (515-560nm) to illuminate the surface with red or orange barrier filter for viewing and photography.

2. Coherent TracER Laser: Use the adjustable laser light intensity with the provided orange barrier filter for optimal viewing and photography.

IV. Safety

A. A lab coat, safety goggles, and gloves should be worn while using this product.

B. Disposal: Hazardous Chemical Waste.

C. Refer to SDS for more safety information.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 05/03/2019	**NUMBER:** LP.39 - Dye Staining of Superglue-Fumed Latents
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Dye Staining of Superglue-Fumed Latents	

I. Ridge detail, stabilized by superglue polymers, may be dye-stained for development, visualization, and collection.

A. **Introduction**

1. Attempting to dye-stain **without** superglue fuming first will generally wash ridge detail away.
2. Best practice is almost always to use a Dye-Stain rather than Powder on non-porous items following superglue fuming.
3. Care must be taken not to over superglue fume the evidence, as this will increase background staining. Fume exposure time, amount of superglue used, and temperature and volume of water (humidity) all have an effect on a latent being properly developed or over-developed. Refer to LP.42 for superglue procedures.
4. Acetonitrile, used in procedures below, will slightly soften polymerized ridge detail and allow the dye stain to penetrate more effectively.
5. Fluorescent dye-stains used at this lab are diluted to a degree that rinsing is not generally necessary. However, in some cases, rinsing may be needed to remove background noise and provide better contrast. Rinsing should be performed using the same ingredient used as a carrier in the dye stain formula (Methanol).
6. The following dye-stains are currently available:
   a. Rhodamine 6G
   b. Ardrox
   c. MBD
   d. RAM (mixture of Rhodamine 6g, Ardrox, and MBD)

B. **Quality Assurance and Intermediate Checks**

1. Fluorescent stains (working and stock) are tested on the date they are made and again with every use.

a. Test results when the reagent is first made will be documented on the corresponding reagent log.

b. Results of controls tested with every use will be documented in the case notes.

2. Obtain a superglue fumed test strip (control).

3. Apply the dye-stain over the visible superglued test print.

4. Allow the strip to dry and view the florescence under various wavelengths using the Alternate Light Source (ALS) or with adjustable laser intensity using the Coherent TracER Laser.

5. If the reagent test is negative (test print does not fluoresce), reapply the dye-stain or obtain a new superglue fumed print and apply (a new donor may be required). If the test fails again, a new batch of dye-stain must be made and tested.

6. Shelf-life and hazard information is located on each reagent log. Most stains expire after one year.

C. **Application**

1. Dye-stains may be applied by dipping, squirting, or by pipette and allowed to air dry prior to viewing.

2. Various wavelength combinations of the Polilight or various laser light intensities should be tried to obtain the best latent contrast with the surface being processed.

3. The wavelength at which fluorescence is optimal may be adjusted in accordance to the personal preference of the examiner for optimal visualization.

4. Developed ridge detail is photographed using the orange barrier filter (with applied forensic light source above 365nm).

D. **Preparation and Procedure Rhodamine 6G**

1. To make Rhodamine 6G Stock Solution (LPF.29 Rhodamine Stock Solution Reagent log), under fume hood:

a. Weigh 0.1 grams Rhodamine 6G and place into a storage bottle

b. Add 100 ml Methanol

c. Use a magnetic stirrer until completely dissolved.

2. To make Rhodamine 6G Working Solution (LPF.28 Rhodamine Working Solution Reagent log), under fume hood:

a. Pour 5 ml Rhodamine 6G stock solution into a storage bottle

b. Add 5 ml Acetonitrile

c. Add 90 ml methanol

d. Cap and shake well before using.

3. Rhodamine 6G Procedure

a. Rhodamine 6G is a fluorescent stain that is applied to prints developed with cyanoacrylate ester.

b. For best visualization using the Polilight, view under range of 495-540nm with an orange or red barrier filter.

c. For best visualization using the Coherent TracER Laser, adjust the laser light intensity (1-8 watts) and use an orange barrier filter.

4. Incompatibilities: Items that inherently fluoresce in the 555nm range.

E. **Preparation and Procedure Ardrox**

1. To make Ardrox Working Solution (LPF.19 Ardrox Working Solution Reagent Log), under fume hood:

a. Pour 1 ml Ardrox into a storage bottle

b. Add 5 ml Acetonitrile

c. Add 94 ml methanol

d. Cap bottle and shake well before using

2. Ardrox Procedure

a. Ardrox is a fluorescent stain that is applied to prints developed with cyanoacrylate ester.

b. For best visualization using the Polilight, view under UV (clear UV-rated goggles are required for protection - no filter is required for photography) or view under range of 435-480nm using an orange or yellow barrier filter.

c. For best visualization using the Coherent TracER Laser, adjust the laser light intensity (1-8 watts) and use an orange barrier filter.

d. Note: If rinsing is desired, try using a tap water rinse and check for background reduction before applying a methanol rinse.

3. Incompatibilities: Items that inherently fluoresce in the 500nm range.

F. **Preparation and Procedure MBD: 7-(p-Methoxybenzylamino) - 4-Nitrobenz-2-Oxa-1-3-Diazole**

1. To make MBD Stock Solution (LPF.23 MBD Stock Solution Reagent Log), under fume hood:

a. Pour 100 ml Acetone into a suitable beaker

b. Add .1 gram of MBD

c. Use a magnetic stirrer until completely dissolved.

2. To make MBD Working Solution (LPF.22 MBD Working Solution Reagent Log), under fume hood:

a. Pour 5 ml MBD stock solution into a storage bottle

b. Add 5 ml Acetonitrile

c. Add 90 ml methanol

d. Cap and shake well before using.

3. MBD Procedure

a. MBD is a fluorescent stain that is applied to prints developed with cyanoacrylate ester.

b. For best visualization using the Polilight, view under range of 415-505nm with an orange barrier filter, or 415-470nm using a yellow barrier filter.

c. For best visualization using the Coherent TracER Laser, adjust the laser light intensity (1-8 watts) and use an orange barrier filter.

4. Incompatibilities: Items that inherently fluoresce in the 515nm range.

G. **Preparation and Procedure RAM (a fluorescent dye stain blend of Rhodamine 6G, Ardrox and MBD)**

1. To make RAM Working Solution (LPF.27 RAM Working Solution Reagent Log), under fume hood:

a. Pour 30 ml Rhodamine 6G stock into the RAM storage container

b. Add 2 ml Ardrox (Sirchie Stock Solution)

c. Add 12 ml MBD Stock solution

d. Add 8 ml Acetonitrile

e. Add 948 ml methanol

f. Cap and shake well before using

2. RAM Procedure

a. RAM is a fluorescent stain that is applied to prints developed with cyanoacrylate ester.

b. For best visualization using the Polilight, view under range of 415-485nm with an orange barrier filter.

i. Note: Fluorescence of prints stained with RAM can occur throughout the range of Polilight settings. Select the setting and viewing filter that provides the best contrast between the ridge detail and the background.

c. For best visualization using the Coherent TracER Laser, adjust the laser light intensity (1-8 watts) and use an orange barrier filter.

3. Incompatibilities: Items that inherently fluoresce in the 555nm range.

H. **Safety**

1. Wear the appropriate personal protective equipment:

a. Rubber or nitrile gloves (latex gloves are not sufficient for methanol formulations)

b. Safety glasses or goggles

c. Laboratory Coat

I. References

1. Ramotowski, R. (2013). *Lee and Gaensslen's Advances in Fingerprint Technology, 3rd edition.* Florida: CRC Press

2. http://www.cbdiai.org/Reagents/ram.html

3. http://www.fbi.gov/about-us/lab/forensic-science-communications/fsc/jan2001/lpu.pdf

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 11/29/2018	**NUMBER:** LP.40 - Ninhydrin
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Ninhydrin	

I. Using Hexane-based Ninhydrin to process porous items for latent prints

A. Introduction

1. Since it was introduced in 1954, Ninhydrin has been the most widely used chemical technique for processing porous evidence (e.g. papers, cardboard). Ninhydrin has been known to develop latent prints known to be over 30 years old.

2. Ninhydrin chemically reacts with amino acids to produce a dark purple product known as Ruhemann's Purple (RP). Amino acid components of latent prints are stable compounds that will attach themselves to the cellulose of a paper product. The amino acids will not migrate (as do fats and lipids - a concern in Iodine fuming) over a period of time or as long as the paper remains dry. Amino acids are water soluble, therefore, Ninhydrin would not be the proper technique if the porous evidence was wet or exposed to excessive moisture over a period of time, such as high humidity or fog. Physical Developer (LP.41) should be used for processing evidence that is or was wet.

B. Quality Assurance

1. A test strip will be used to ensure the Ninhydrin is properly reacting to amino acids by using an Amino Acid Reference Pad. See LP.31 for information on test strips and documentation requirements.

   a. If an Amino Acid Reference Pad is **not** available, donor prints may be used to test this reagent. Also, a donor print may be used in conjunction with the stamp and Amino Acid Reference Pad.

   b. The reference pads contain a mixture of L-amino acids in a concentration of 2%.

   c. The sticker on the bottom of the reference pad lists the work order number and the date of manufacture. The reference pads have a shelf life of 6 months from the opened date.

      a. If multiple pads are being used they should also be labeled numerically (1, 2, 3, etc.) with the initials of the analyst receiving the pads.

      b. The Lot Number for the reference pads is a combination of the work order, the pad being used, the analyst who opened the pad

and the expiration date. **For example**: A pad with a work order # of 2842216 and an opened date of 10/21/14 would have a lot # of: **2842216-1 MC 4/21/15**.

d. Gloves will be worn while pressing a rubber stamp onto the amino acid portion of the reference pad. Press the rubber stamp onto a piece of paper 3-4 times sequentially creating a test strip. The test strip will then be processed with Ninhydrin following the application technique noted below.

i. A positive reaction occurs when a pink/purple color develops in the pattern of the rubber stamp used.

ii. A negative reaction occurs when a pink/purple color develops the background or no color change occurs in the area stamped with amino acid.

iii. Refer to LP.31 for examples of good test strip reactions.

iv. Should a negative or weak reaction occur, run a second test strip using a different amino acid pad and test print. A new batch of Ninhydrin may also be needed. Refer to LP.31 for trouble-shooting and notify the Supervisor or Technical Lead if the control does not improve.

C. **Application**

1. Ninhydrin may be applied by dipping (for no more than 5 seconds), by brushing, by pipette, or by spraying (spraying should be a last resort for safety reasons). Application should be done in the fume hood and with proper safety protection (see Safety below). Evidence should be allowed to thoroughly air dry prior to storage.

a. Apply Ninhydrin to evidence item.

b. Allow item to dry.

c. **The CARON heat and humidity chamber may be used if the evidence item will not be tested for DNA. The heat will affect potential DNA collection downstream. See LP.55 for instructions**.

d. A humidifier may be used to add humidity without heat. Place the humidifier (large or small) with the evidence into the (**turned OFF**) Caron chamber, Superglue chamber, or fume hood for optimal humidity.

e. The processed item should be stored in a darkened area for continued development for at least 72 hours.

f. If prints seem too faint, the steps listed above can be repeated.

g. A clothes iron in the "steam" mode may also be used, but it affords little control over humidity levels and care must be taken to protect the evidence from the heat and accidental water leakage of the iron.

D. **Development Conditions**

1. Subjecting most evidence to heat and/or humidity after applying Ninhydrin is highly recommended, particularly when the relative humidity levels are

naturally very low. The added heat or humidity can intensify the color reaction and may shorten development time; however when practical, the evidence should be left to continue development for at least 72 hours. If photos are taken of developed prints prior to the 72 hour period, the same developed prints do not have to be photographed again after the 72 hours. The CARON chamber, which allows control of both heat and humidity is approved for use with Ninhydrin treated evidence; refer to LP.55 for more information.

2. Although Ninhydrin may be applied in a lighted room, the development should be allowed to occur in the dark, at room temperature over a 72 hour period. Latent prints have been known to take several days to develop.

3. Ninhydrin developed latent prints may fade over a period of time and must be photographed or scanned for preservation. Development should be monitored to not over-develop and to ensure photographs are taken at an optimum point. Secondary treatments with Ninhydrin has, on some occasions, enhanced a weakly visible print.

4. Applying green excitation light from an alternate light source or using a green filter may improve digital images.

E. Ninhydrin with Hexane

1. To make Stock Solution (LPF.25 Ninhydrin Stock Solution Reagent Log):

   a. Under Fume Hood:

      i. Add: 25 gm Ninhydrin crystals to 100 ml ethanol; using magnetic stirring,
      Add: 25 ml acetic acid, continue stirring until completely dissolved

2. To make Working Solution (LPF.24 Ninhydrin Working Solution Reagent Log):

   a. Under Fume Hood:

      i. Add: 30 ml Stock Solution (from above) to 1 liter of Hexanes. (Stir using magnetic stirrer until well blended and a clear light yellow solution is attained).

      ii. Caution: Use of rubber gloves is required due to the Hexanes while mixing the working solution.

      iii. Transfer to a working solution bottle and label appropriately.

3. NOTE:

   a. A dark yellow oily substance may appear at the bottom of the bottle that may cause inks to "feather" or blur. Use the working solution as needed until the oily substance is reached, then pour or pipette this substance out and discard it.

   b. The working solution may also be made using 30 ml of the stock solution from the Ninhydrin hexane formulation.

   c. Hexanes are flammable.

   d. Hexanes will not run most inks.

e. Hexane or n-Hexane must be used in this formulation and is the carrier approved for use at this lab.

F. **Safety**

1. A lab coat, eye protection and nitrile or thick rubber gloves should be used in addition to the fume hood. Lightweight latex and vinyl gloves are not adequate protection for the user. A full-face respirator must be worn if a fume hood is not available.

G. References

1. "Success of Hexane-based Ninhydrin Amino Acid Reagent Processing on Various Inks and Ages of Porous Evidence," Technical Note by Steve Scarborough, Journal of Forensic Identification, Volume 51, Number 6, 2001, pages 581-586.

2. NIJ Sourcebook, Chapter 7 Latent Print Development, Section 7.4 Ninhydrin and Analogues, pages 7-14 through 7-18.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.41 - Physical Developer
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB: 6.4**	
CHAPTER: Equipment	**SUBJECT:** Physical Developer	

I. Physical Developer (PD)

A. Introduction

1. Physical Developer is a silver-based liquid reagent which reacts with lipids, fats, oils and waxes present in fingerprint residue and is a productive means of developing latent prints on porous objects.

B. Procedure

1. Physical Developer has been found to work well on numerous porous items. In particular, PD can be used on wet or previously wet paper materials, on which other chemical processing techniques may not be used. Physical Developer has also worked well on items which have not been touched in years.
    a. Paper with an alkalinity factor above pH 7 is not suitable for processing with the PD solution. It will turn dark and the latent prints can be lost.
        i. Thermal paper is an example of unsuitable paper.
    b. Porous items are to be treated with Ninhydrin (LP.40) and/or 1,2-Indanedione (LP.71) prior to Physical Developer.
2. Any usable latent prints developed during processing should be photographed prior to further processing, as subsequent steps may obliterate prints that developed.

C. Quality Assurance

1. Ensure that the reagent being used has not expired.
    a. The PD kit contains three parts. The expiration of the solution is the date of the first expiring part, even if the other components have not yet reached their expiration date.
2. Use a gold chloride test strip (control) to run through all application steps listed below prior to use on casework. All results must be documented in the case notes.
3. If a negative reagent reaction occurs, run a new test strip through the baths again. If the reagent continues to fail, do not use on casework and notify the Supervisor or Technical Lead. New PD will likely be required.

D. Application

1. Do not poke or dent the paper items while they are submerged in Physical Developer. Handle items carefully even when wearing gloves. Dents made by

tweezers and glove marks may cause deposits of silver which may obliterate usable prints.

2. Additional baths of distilled or deionized water can be used between each step, if needed.

3. **Prior to each use, inspect the trays being used for the baths.** If there are excessive scratches or any cracks in the trays, new glassware or other trays will be needed.

4. The use of a slightly acidic pre-wash (Maleic Acid) is recommended to neutralize alkaline binder, fillers, and whiteners. The Maleic Acid pre-wash is prepared by stirring 25g of Maleic Acid into 1 liter of distilled water until dissolved.

    a. Pour the Maleic Acid pre-wash into a clean glass or plastic tray. Immerse the item being processed into the Maleic Acid pre-wash for at least 5-10 minutes or until no more bubbles rise from the paper item, whichever is LONGER.

5. Pour the Physical Developer working solution into a second clean glass or plastic tray.

    a. Drain the paper item momentarily of the Maleic Acid wash and move the paper item into the tray of Physical Developer solution.

    b. Gently rock the tray. A rotating rocking device may be used.

    c. Generally, latent prints begin to develop in approximately 5 minutes or less; however, do not process the item for longer than 15 minutes. Keep in mind that latent prints can be over-developed and background color may also develop which can obscure the fingerprints.

    d. During this phase the items should be continuously inspected as over processing cannot be reversed.

6. After processing the item, rinse in tap water.

    a. This can be done by placing another clean tray in a sink and allowing a continuous gentle flow of water to run into the tray.

    b. Rinse the item in the running tap water until excess stains are gone.

    c. PD prints may darken too much if the item is not thoroughly rinsed.

    d. The tap water should be clear as it exits the tray.

7. The item must be thoroughly dry before prints can be conclusively evaluated.

    a. If a thoroughly rinsed and dried item exhibits low contrast prints, the item may be reprocessed.

        i. Prior to re-processing, all usable prints that developed should be photographed.

        ii. Wash the item in distilled or deionized water to remove residual chlorine from the tap water.

        iii. Place the item in the PD working solution to attempt to further develop any weak prints.

        iv. Rinse and dry as above and reexamine the prints.

E. **Preparation**

1. Clean, scratch-free glassware must be used for Physical Developer solutions. Prior to each use the glassware should be washed with detergent and thoroughly rinsed with tap water, then re-rinsed with distilled or deionized water to remove any traces of chlorine from the tap water. If the glassware is dirty or scratched, silver may deposit in those areas and not on the evidence as it should.

2. Disposable plastic beakers may be substituted to reduce the possibility of contamination.

3. Metal forceps must not be used as they will react with the silver nitrate. Photographic tongs with rubber tips or plastic non-serrated forceps may be used.

4. The components of the Physical Developer kit should contain an expiration date on the packaging, and consist of the following:

Container A	Redox Soulution	shelf life of 1 year
Container B	Detergent Solution	shelf life of 1 year
Container C	20% Silver Nitrate Solution	shelf life of 1 year

5. Do not mix Physical Developer Solution until ready to process the item(s), as the shelf life of the working solution is about 24 hours. Only mix enough quantity of working solution from the three bottles to complete the items currently being processed.

6. In order for the PD mixture to work properly, the following steps must be followed precisely:

   a. The Physical Developer solution is prepared by adding 10ml from Container B (Detergent Solution) to 85ml from Container A (Redox Solution).

   b. Solutions A and B are thoroughly mixed for approximately 2 minutes using a clean non-metallic instrument or sterile stirring apparatus.

   c. After mixing solutions A and B, add 5ml from Container C (Silver Nitrate) and stir for approximately 30 seconds.

   d. Pour the mixture into a clean glass tray and process as indicated above.

7. Document the Manufacturer and lot# for the Maleic Acid, Solution A, Solution B, and Solution C along with the results for the Control on the Physical Developer Working Solution Reagent Log LPF.26 and in the case notes.

8. Should larger volumes of working solution be required the mixing ratio is 17:2:1:

   a. Examples:

      i. Total Volume 100 ml = 85 ml Solution A, 10 ml Solution B, 5 ml Solution C

      ii. Total Volume 200 ml = 170 ml Solution A, 20 ml Solution B, 10 ml Solution C

      iii. Total Volume 500 ml = 425 ml Solution A, 50 ml Solution B, 25 ml Solution C

F. **Safety**

1. A laboratory coat, nonporous gloves, and protective eye wear should be worn when using PD.

2. If reagents are splashed or spilled, wash affected areas thoroughly under cold running water. If any reagent is splashed into the eyes, thoroughly wash eyes with cold running water. Seek medical attention if soreness or other symptoms persist. If the reagent is repeatedly splashed over the hands or if the hands are immersed in the solution without wearing nonporous gloves, some individuals may develop an allergic skin reaction to nondodecylamine and various detergents used in PD. This will occur most frequently with individuals who also exhibit skin reactions to household detergents.

3. Both the silver nitrate solution and the PD working solution are corrosive and toxic and will cause black staining on skin and clothing.

4. NOTE: Safety Data Sheets advise that contact lenses should not be worn when working with chemicals.

G. **Storage**

1. Sunlight and heat will degrade the chemicals; store in latent processing room chemical storage area.

2. Store reagent at room temperature.

H. **Disposal**

1. The PD and Maleic acid solutions must be disposed of as toxic waste. Place the used solution in a waste container and properly label it for hazardous waste pick-up.

I. **References**

1. Lightning Powder Physical Developer Kit - Technical Notes (August 1, 2009).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.42 - Cyanoacrylate Ester
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Cyanoacrylate Ester (Superglue)	

I. Cyanoacrylate Ester (CAE) is used to process non-porous or semi-porous items for latent prints

A. Introduction

1. In the late 1970's researchers in Japan and the United Kingdom discovered the latent fingerprint development capabilities of the fumes of the liquid adhesive superglue. Fully developed super glued or CAE developed prints are a white three-dimensional matrix, often visible to the unaided eye, and can be further enhanced with a variety of techniques. This development of latent prints is best explained as a three-stage process to produce polymer growth, enabling latent print visualization.

    a. Stage one occurs hen fumes of CAE monomers are introduced to latent fingerprints and quickly bond with initiators in the residue.

    . Stage two, the monomer on the fingerprint residue reacts with another CAE monomer in the vapor phase to form a dimer on the print. This reacts with another monomer, and another, eventually forming a polymer, a long chain of CAE molecules.

    c. The last phase is when the polymer chain reaction is terminated. The polymerization process may be restarted later if the prints prove to be underdeveloped with the first exposure to fumes. *NIJ Sourcebook, Chapter 7, Processing, pages 7-23 and 7-24*).

B. Procedure

1. Methods of CAE fuming available for use in the laboratory:

    a. Atmospheric chambers (Foster Freeman MVC5000 and MVC3000)

    . Fuming wands

2. Latent prints may or may not be visible to the unaided eye after exposure to superglue fumes, but may become visible after the application of fingerprint powders or dye stains. Latent prints developed with these methods are photographed or lifted. Under most circumstances, photography is the preferred method of capturing usable ridge detail.

C. Quality Control

1. Cyanobloom superglue is stored refrigerated.

2. To test the superglue, a test strip (control) of deposited fingerprints onto plastic, foil, or another non to semi-porous substrate will be processed prior to or in conjunction with the evidence. Position the control in such a way as to allow it to be monitored during the procedure.

   a. The test strip in an atmospheric chamber or with the use of a fuming wand can overdevelop and shall be monitored during the process.

   . The test print will turn white in color displaying the latent print detail. This is a positive result that the process (equipment) worked.

   c. **Troubleshooting**: A test strip that does not develop may indicate the CAE fumes did not react with the deposited print and the following factors should be considered:

      i. **Humidity levels:** Eighty percent relative humidity is ideal for developing latent prints. Low humidity levels may result in the prints not re-hydrating enough to become visible using standard development techniques. To adjust humidity levels in the chambers, change the menu settings to increase relative humidity (see INSLP.12). To adjust humidity levels for the fuming wand, add warm water to a container and place near the items to be processed or turn on a humidifier in the processing room for about 10-15 minutes.

      ii. **Temperature of the heating element**: The heating element in the chambers is preset to the optimal temperature depending on the type of glue used. White fumes will be visible if the fuming wands are heating the glue properly. If white fumes are not seen with the fuming wand, use a new glue cartridge. Also, ensure there is enough butane in the wand and that the butane is ignited. If there is no flame, the wand may need to be serviced; use a different wand.

      iii. **Ability of the test strip donor to leave adequate ridge detail:** Not all donors are able to leave sufficient detail either due to low eccrine secretions or lack of robust friction ridge skin. A different control print donor may be needed.

      iv. After all factors have been checked and considered, process a new test strip.

   d. Superglue that is heated and allowed to develop for too long can cause over-development. This is indicated by a very thick white residue with unclear ridge detail. It is important to monitor the control print during CAE processing to avoid this from happening to the evidence.

      i. When processing with the fuming wand, monitor the test strip and stop, remove, or turn off the heat source as soon as the proper level of processing has been obtained.

3. Any required troubleshooting or development problems must be documented in the test record and appropriate fuming chamber or wand maintenance log.

D. **Application with Atmospheric Chambers**

1. Foster Freeman VC5000 and MVC3000 Atmospheric Super Glue Fuming Chambers operating procedures:

   a. The chambers are capable of processing two types of superglue, Cyanobloom and Polycyano; however, only Cyanobloom is approved for use at the laboratory.

   . Position evidence on shelf making sure the most surface area of the item to be processed will be exposed to the fumes.

   c. Ensure a test strip is in a location to allow for monitoring during the processing.

   d. Secure a disposable metal fuming tray with a small amount (approximately the size of a dime) of superglue on the warmer plate with the metal ring. Ensure the metal tray is seated flat on the warmer.

   e. Fill the water reservoir with distilled water to the marked indicator.

   f. Secure the chamber door.

   . Press the Menu button and select the following settings:

      i. Glue time: **15 minutes**

      ii. Temperature for Cyanobloom: **120 degrees**

      iii. UV time minutes): **Zero** for glue processing; this is only used for decontamination

      iv. Hold time: **Zero**

      v. Humidity: **80% RH**

      vi. Exit arrow down) and the system returns to "Ready"

   h. Press the Auto button and the system will begin processing and will perform a programmed and required purge cycle at the end.

   i. Upon completion of the purge cycle, the door light will activate. Press the door button and the door will unlock.

   . Evidence may be retrieved from the chamber.

   . The water reservoir should be cleaned out following each use.

2. **Cleaning and Maintenance** is documented on the Foster Freeman MVC5000 and MVC3000 logs: LPF.04 MVC 3000 Maintenance Log LPF.05 MVC5000 Maintenance Log).

   a. Humidity sensors are located in the windows of the chamber and should be checked every 24-36 cycles to ensure they are clean or during the monthly intermediate checks.

   . indows may become cloudy with build up of superglue and should be cleaned with approved cleaner (for example, the Mr. Clean Magic Eraser) to maintain clear windows for easy viewing of evidence.

c. Decontamination is performed by the following procedure:

i. Secure the UV lights in the chamber: one per shelf

ii. Press the Menu button and change the UV time to 30-40 minutes

iii. Note: the system ill automatically undergo a mini purge for approximately 10 minutes after the UV decontamination cycle

iv. The door button light will turn on hen the purge cycle is complete allowing access to the chamber

v. Remove the UV lights without pulling on the cables

d. Filters are good for 75-80 purge cycles.

e. For further instructions and more information on maintenance and scheduled intermediate checks see LP.18.

E. **Application with Atmospheric Wand**

1. Fuming Wand operating procedures:

a. Ensure the wand has butane for fuel prior to use.

. Turn the wand on turning on the gas button and pressing the lighting button.

c. A brass cylinder with superglue embedded in it may then be added to the tip of the wand.

d. Once the brass cylinder is heated, visible fumes will be emitted from the end of the cylinder.

e. The fumes should be directed to pass over the prints on a test strip. When a positive control is achieved, the surface of the evidence may be fumed.

f. Care must be taken not to damage the evidence with the heat from the wand. Note: heat from the fuming wand may easily damage soft plastic such as plastic bags.

. When fuming is complete, turn off the gas button on the wand and replace the cap.

2. Fuming wand maintenance is documented on the log: LPF.17.

F. Safety

1. The fumes from super glue are extremely irritating to the respiratory system and to the eyes, and the adhesive factors can be problematic if the glue gets on the skin or clothing. Laboratory coats, gloves and protective eye-wear should be used.

2. Be cautious when using the fuming wand. Though a flame may not be visible, the and is extremely hot. The brass cylinder will become very hot and must not e touched; use a tool to add and remove from the wand. Allow the wand and used cartridges to cool prior to returning the wand to its container and discarding the cylinders.

G. References

1. NIJ Sourcebook, Chapter 7, Processing, pages 7-23 and 7-24

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/10/2019	**NUMBER:** LP.43 - Forensic Light Sources
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Forensic Light Sources	

I. **Forensic light source** equipment are used to enhance observation, development, and collection abilities on evidence which may produce ridge detail by inherent or chemical fluorescence. The Latent Unit uses Alternate Light Source (ALS) and Laser technology to assist in developing friction ridge evidence.

A. **Intermediate checks**

1. To avoid unintended adjustments, this equipment should not be moved around excessively and done so only when necessary. Caution will be used when transitioning equipment from one processing room to another.

2. To ensure the equipment is working as expected, a control is used prior to or in conjunction with every case. See LP.31 for an example of a good control (test strip) with the use of a forensic light source.

3. Should the control indicate equipment is not working as expected, a service call may be required and equipment will be taken out of service and labeled as such.

   a. Additional troubleshooting may be found in LP.31.

4. All maintenance done on the forensic light sources will be documented on the appropriate corresponding equipment form and maintained in the Latent Unit.

II. **Rofin Polilight PL500**

A. The Rofin Polilight PL500 is a 500 Watt forensic light source with twelve selectable and tunable filters. These filters represent output light bands used to view fluorescence, UV, or allow the ability to view blood (at 350nm) on a surface providing contrast. The purpose of the Polilight in latent processing is to view prints that fluoresce (inherently or in conjunction with a dye stain).

B. **Procedure**

1. Place the Alternate Light Source (ALS) on a solid surface, plug in the power cord, and turn the power switch on the back panel to the up (ON) position. The microprocessor conducts an initialization process that ensures all filter wheels and internal motors are in the correct position before the lamp is turned on. This warm-up process takes approximately ten seconds.

2. The control panel, located on the front of the unit, is used to select the desired wavelength. Push the button corresponding to the desired wavelength and the

selected output (e.g., 505nm) will illuminate in the filter selection display window.

3. To adjust the focus or intensity, use the filter and power tuning buttons located below the display window. To return to filter tuning, hold down the filter select button for a few seconds.

4. Use the focusing optic located at the end of the liquid light guide to enable the optical beam to be sharply focused. The focusing optic lens can slide in and out of the light guide.

5. Refer to LP.39 for further information on specific output applications with dye-stains.

6. Refer to the Rofin Polilight PL500 user manual for more general information INSLP.03.

C. **Warning**

1. Quickly turning on and off the Rofin Polilight PL500 can cause internal electrical damage to the unit. It is recommended to wait at least 30 seconds before turning the unit back *ON* after it has been turned *OFF*.

2. It is essential that cooling air be able to enter the Rofin Polilight PL500. Ensure that air flow around the unit is not obstructed. Air intakes are at the lower section of the front panel.

3. The Polilight is an optical instrument and the light guide is liquid.

4. The unit should not be subject to freezing conditions or water.

D. **Safety**

1. Care must be taken to avoid exposure to the beams from the Rofin Polilight PL500. To minimize unnecessary exposure, gloves, eye protection, and a Lab coat must be worn while operating the ALS.

   a. Exposure can be from the direct beam and from reflected beams. Eye protection is important not only for the operator but also for people within a 15 meter radius.

   b. UV protective goggles must be worn while viewing UV light.

   c. Orange, yellow, or red goggles must be worn while viewing the ALS light above the UV range.

E. **Maintenance**

1. As needed, the bulb may be changed on the Polilight.

2. See LP.18 Equipment Maintenance and LPF.16

III. Rofin Polilight-Flare

A. The Rofin Polilight-Flare is a cordless, battery powdered, lightweight forensic light source that uses LED output with center wavelengths of 380, 470, 505 and 530nm. These different light bands are used to view fluoresce.

B. **Procedure**

1. Hold the head of the unit with one hand and rotate the battery clockwise until a beep is heard signifying contact.

2. Turn the unit on by depressing the on/off button.

3. To replace the battery or filter head, rotate the battery counter-clockwise until it is released.

4. Disposable barrier sleeves located in the kit may be used. The sleeves slide over the filter head end of the unit.

5. Refer to LP.39 for further information on specific output applications with dye-stains.

6. Refer to the Rofin Polilight-Flare user manual for more general information INSLP.02.

C. **Charging the Unit**

1. Plug in the power adapter. The blue indicators on the charger will light momentarily indicating that the charger has gone through its microprocessor controlled test routine.

2. Insert the Polilight-Flare ensuring that the white arrow at the base of the unit lines up with the arrow on the charger. When the Polilight-FLARE is correctly inserted a continuous green light will illuminate. A red indicator light or a flashing green light indicates the battery is very low. If no indicator light appears reposition the Polilight-FLARE to correctly line up with the arrows.

D. **Safety**

1. Care must be taken to avoid exposure to the beams from the Rofin Polilight-Flare. To minimize unnecessary exposure, gloves, eye protection, and a Lab coat must be worn while operating the ALS.

a. Exposure can be from the direct beam and from reflected beams. Appropriate eye protection is important not only for the operator but also for people within a one meter radius.

E. **Maintenance**

1. See LP.18 Equipment Maintenance and LPF.15

IV. Coherent TracER Laser

A. The Coherent TracER Laser is a compact, fully hand-portable, modular color, laser-based system designed to excite fluorescence. The laser produces one fixed output wavelength of 532nm.

B. **Procedure**

1. Place the laser on a sturdy surface and plug in the power cord to maintain operation.

2. Press the orange button and turn the key clockwise to the *ON* position to begin use.

3. The intensity can be controlled by the front panel of the laser or by the panel on the hand-held device. To switch between the two, press the *Laser Control* button on the hand-held device.

4. The laser power button on the hand-held device can be used to switch between high power (5 watts) and low power (1 watt).

5. To control the intensity on the front panel of the laser, turn the *Power Adjust* knob.

6. The wattage output is displayed in the *Output Power* window on the front panel of the laser.

7. Be sure to turn both the key and the laser to the *OFF* position when finished.

8. The operator must be cognizant of how close the laser is to the evidence to ensure that the evidence does not burn or melt as the laser does produce heat.

C. **Safety**

1. **Eye protection**: Orange barrier filter (Argon) goggles **must** be worn to prevent eye injuries. These goggles must be worn by anyone in the room while the laser is in use.

   a. Whenever possible, the laser will be used in a room or area that can be closed off to avoid accidental exposure to other people without eye protection.

2. In addition to eye protection, the operator will also have on a Lab coat and gloves to prevent unnecessary exposure.

D. **Maintenance**

a. The laser offers a long-life battery and requires little to no maintenance.

b. The fan filter in the rear of the laser box should be monitored and occasionally wiped for dust so that it does not become clogged.

   a. If the filter does become clogged and causes overheating, the built in thermal interlock will prevent damage to the laser.

c. As needed, the hand piece may need to be carefully and gently wiped with a non-scratch cloth.

d. See LP.18 Equipment Maintenance and LPF.48

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/29/2019	**NUMBER:** LP.45 - Digital Photography Procedure
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Case Documentation	**SUBJECT:** Digital Photography Procedure	

I. Policy: Images taken for the purpose of friction ridge examination must be treated as evidence. Images taken for the purposes of documentation may be treated as notes.

A. **Packaging and Retention of Digital Image Evidence**

1. The Latent Unit adheres to division policy regarding the rejection of observations, data, and results with the following clarification.

   a. An analyst may reject their own observation or data (photographs) during the course of performing casework and not retain the photograph if the rejection is documented in the test record with their initials, date, and reason for rejection.

   b. Reasons to not retain a digital image may include blurriness, duplication that does not add quality or clarity to an existing photo, or under/over exposure etc.

2. Images of ridge detail will be saved onto electronic media, properly packaged, and treated as evidence.

   a. See FSD.35 and LP.09 for information about evidence handling and chain of custody requirements and FSD.42.01 for information about treating an image as evidence.

3. Images will be uploaded into the VeriPic Digital Image Manager system. For information about VeriPic see QA.21.

B. **White Light Photography**

1. Place the item to be photographed with a scale on butcher paper in the view of the mounted camera.

   a. Open window: ***EOS Utility***

   b. Select option: ***Remote Shooting***

   c. Open window: ***Live View Shoot***

   d. Arrange the item to be photographed so that the latent print appears in the live view window on the computer screen.

      i. In the remote live view window task bar (on the right side), make sure the ***Focus*** drop down menu has "Live 1-point AF" selected

2. Saving the image(s):

   a. Select the *folder* or *preferences* button

   b. **Destination Folder Tab**: Click on the *browse* button and select the location to save the image(s) (e.g., U: drive).

   c. **Remote Shooting Tab**: *Rotate Image* selection will save the orientation of the photo (portrait or landscape), however may affect the images when printing 1:1.

d. **File Type**: Set to ***RAW***

3. General ***Canon 6D Mark II*** settings:

a. **Focus**: The image can be focused by using the focus ring on the camera or by selecting the focus button on the live view screen.

b. **White Balance**: Adjust as needed.

c. **Aperature/F-stop setting**: Adjust as needed by right clicking on the F-stop display.

d. **Brightness**: Adjust as needed using the brightness display and selecting the right (brighter) or left (darker) arrows.

e. **Picture Rotation**: Rotate as needed using the curved arrow shaped buttons in the lower right hand corner of the screen. The image will rotate in 90° increments.

f. **Capture Image:** Click on the large round button in the upper right hand corner of the screen (or use the mounted camera).

i. The ***Digital Photo Professional*** screen will open displaying the captured RAW image.

ii. If captured image does not appear, check location of saved image (e.g., U: drive).

C. **Fluorescent Photography With Forensic Light Source**

1. Set the ***Mode Dial*** on the camera to ***B*** (bulb).

2. Add the appropriate filter to the lens of the camera.

a. Using the live-view feature, test available filters to determine which filter, or combination of filters, yields the best quality, detail, and background contrast.

3. Click on the shutter button on the ***EOS Utility 3*** screen. A timer will appear on the screen next to the shutter button. This allows for tracking of the exposure time. To stop the timer, press the shutter button again.

4. The ***Digital Photo Professional*** screen will open displaying the captured RAW image.

D. **Digital Photo Professional Screen**

1. View the image(s) captured for sufficiency.

2. If necessary, make adjustments to settings, item, or lighting and re-take the photo until image is suitable for examination.

3. Images determined to be suitable for examination must be converted to TIFF.

a. Highlight the image

b. Select ***File/Convert and Save***

c. Select ***TIFF***

d. In the File name section: type the ***item #, lab #, description of item, and type of processing technique used*** *(e.g. CAE-RAM).*

i. Note: item # is labeled the same as a latent lift card following the LIMS itemization.

e. Select ***OK***. There is now a RAW image and a TIFF working copy of the image.

f. Save image(s).

4. Rename the original RAW image(s) to match the TIFF file name(s), or keep the camera designated image number in both titles so that the two files (RAW and TIFF) can be separate and identifiable.

5. Note: Suitability or print value determinations are not typically made during processing, but rather after the photography has been completed.

E. **Photoshop**

1. Photoshop edits are made to the working copy image.

2. Photoshop will be used to annotate any latent prints of value, following LIMS itemization.

   a. Include an asterisk for ABIS quality prints.

3. Select the ***Text*** icon and set the font color to red.

4. The annotation should be in line with the orientation of the print.

   a. Select ***Control T*** or ***Free Transform*** from the tool bar and move as needed.

5. Save by adding "with annotation" to the image file name. No layers need to be saved.

6. Refer to LP.65 for additional Photoshop processing procedures**.**

F. **Printing Out Images** (optional):

1. ***Digital Photo Professional*** software can be used to print individual images or contact sheets on the ***HP Officejet Pro x451dn*** photo printer.

G. **Quality Assurance**

1. **Purpose**

   a. Digital imaging workflow is not based on the physical size of the capture device (as was the case with film cameras photographing at 1:1), rather, it is based on the resolution required to capture the necessary detail in the digital image file. SWGFAST and NIST guidelines specify friction ridge impressions to be used for comparison purposes will be captured (color or grayscale) at a minimum resolution of 1000 pixels per inch (ppi) when the image is sized 1x or 1:1. While the 1000 ppi resolution standard permits the capture of level three detail in latent prints, it does not mean that any image recorded at a lower resolution would necessarily be of no value for comparison purposes.

   b. The relationship between nominal resolution and achievable resolution (resolving power) can vary greatly from different manufacturers. To determine that a camera is capable of capturing an image at a given resolution, it is necessary to use a resolution test target. The purpose of this procedure is to test the ability of the camera system to capture the necessary level of detail when viewed on a monitor.

   c. The 18-55mm f/3.5-5.6 zoom lenses, individual crime scene cameras, and Surface Pros may be used to capture overall images taken for documentation purposes only. However, these cameras and camera lenses **may not** be used to capture friction ridge impressions at the laboratory, and will not be used to conduct the resolution test.

2. **Frequency**

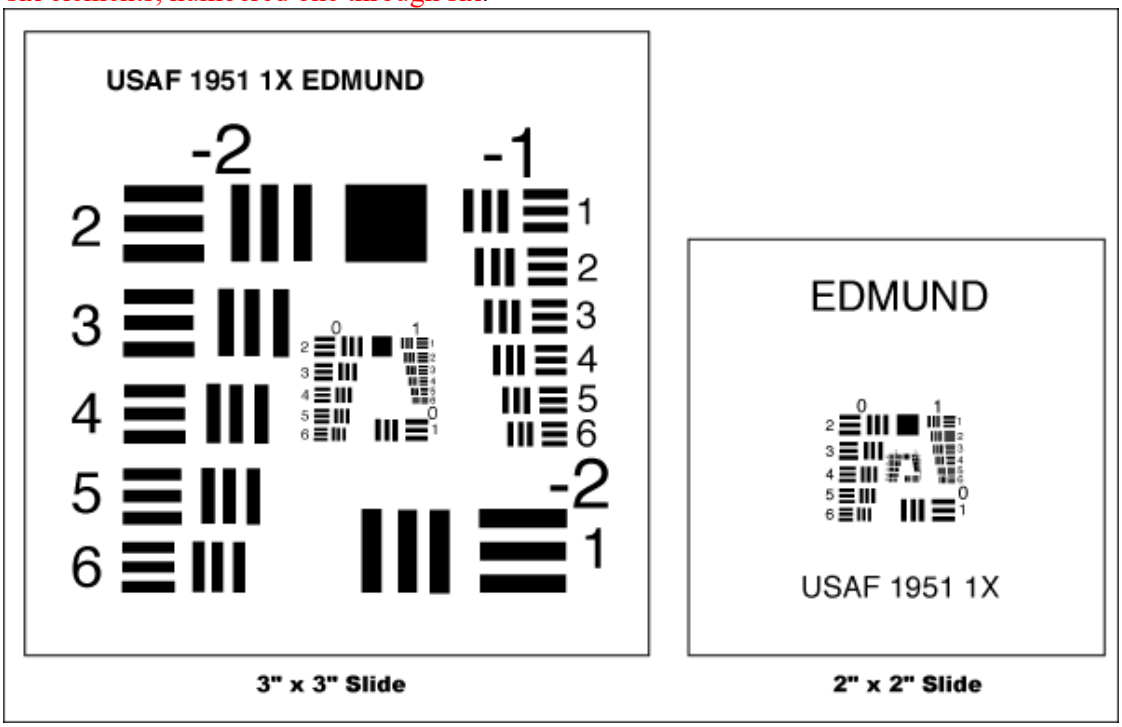
   a. In order to consistently and reliably capture images at the required resolution (1000 ppi), the digital cameras shall be tested annually in at least one configuration commonly used with the macro lenses.

   b. If the camera has been repaired, the camera will be re-tested prior to use.

3. **USAF 1951 Resolution Test Target**

a. The test target used in the Latent Print unit is a 2" x 2" piece of glass from Edmund Industrial Optics with a positive (chrome on clear background) resolution test pattern. The pattern tests the resolving power of the camera to capture latent prints for on screen analysis and comparison purposes.

b. The format consists of six "groups" in three layers of patterns. The largest groups, forming the first layer, are located on the outer sides. The smaller layers repeat the same pattern but are progressively smaller towards the center. Each group consists of six elements, numbered one through six.



c. Resolution for the test target is stated as line pair per millimeter (lp)/mm. The patterns repeat at a given frequency and may be referred to as cycles per unit of distance. A line pair means a black and white line.

d. Because nominal resolution of 1000 ppi corresponds to an achievable resolution of approximately ***9.8 - 13 cycles per millimeter***, any target within this range would be sufficient. The highlighted sections of the table below correspond to an acceptable performance check (at least Group 3, Element 3 or higher). A performance check resulting in a resolution higher than 1000 ppi is also considered acceptable.

e. **Reference Table** (from Edmund Optics Website)

	Group	Group	Group	Group	Group	Group	Group	Group	Group	Group
Element	-2	-1	0	1	2	3	4	5	6	7
1	0.250	0.500	1.00	2.00	4.00	8.00	16.00	32.0	64.0	128.0
2	0.280	0.561	1.12	2.24	4.49	8.89	17.95	36.0	71.8	144.0
3	0.315	0.630	1.26	2.52	5.04	10.10	20.16	40.3	80.6	161.0
4	0.353	0.707	1.41	2.83	5.66	11.30	22.62	45.3	90.5	181.0
5	0.397	0.793	1.59	3.17	6.35	12.70	25.39	50.8	102.0	203.0
6	0.445	0.891	1.78	3.56	7.13	14.30	28.50	57.0	114.0	228.0

f. A resolution lower than the ***9.8-13 cycles per millimeter*** (approximately1000 ppi) is considered unsatisfactory. If there is an unsatisfactory performance check, the check will be repeated. If negative results continue, a Supervisor must be notified

immediately and steps taken to correct the problem which may include, servicing or replacing the camera(s).

4. **Procedure-Field of View Determination to achieve a minimum of 1000 ppi**

   a. Specifications for the Canon 6D Mark II are 26.2-megapixel camera with 6240 x 4160 effective pixels (in RAW format).

   b. Dividing the pixel resolution by 1000 pixels per inch yields 6.240 x 4.160 inches (approximately 6 x 4 inches). This represents the area of coverage in which the camera should be capable of capturing at 1000 ppi.

   c. The height at which the camera can stay in focus while filling the view with the area noted above is the maximum camera-to-subject distance to provide 1000 ppi resolution.

   d. The height for using a zoom lens is designated on the copy stand with a white line. The lower portion of the arm of the copy stand holding the camera (once secured to the copy stand) should be aligned with the designated height.

   e. Using the test target

      i. Place the resolution test target face up on the copy stand.

      ii. Follow the normal procedures for capturing an image of an item using the digital camera and scale, using manual focus and manual exposure controls.

      iii. Open the image in the Windows Picture and Fax Viewer (if in TIFF format) and/or in Photoshop (RAW or TIFF format) and crop image to approximately 1 inch by 1 inch.

      iv. Do not manipulate or rotate the image.

      v. Cameras may have different resolutions in vertical and horizontal directions. To measure those independently, the resolution target has horizontal and vertical oriented bars.

         1. With the view set at 100% (original view), look **on the computer screen** for the element in which you can just differentiate with your eyes, two adjacent bars and still recognize the white gaps.

         2. Read the element's number and group affiliation then determine the resolution of the camera using the reference table in the policy.

5. **Documentation**

   a. A ***Printscreen*** of the test target in the viewer will be printed out the element number and group affiliation from the test will be recorded. The date, staff member performing the check, and letter of the camera tested will be documented on the printout which will be retained in the maintenance binder with the completed maintenance log (LP.08 Camera Maintenance log) for the appropriate camera.

H. **References**

1. 1951 USAF Glass Slide Resolution Targets at www.edmundoptics.com/testing-targets

2. USAF 1951 SilverFast Resolution Target at www.silverfast.com

3. SWGFAST, "Standard for Friction Ridge Detail Imaging", version 1.1, 09/14/09.

4. SWGIT, Section 22: "Procedure for Testing Digital Camera System Resolution for Latent Print Photography. version 1.0 2012.01.13

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/28/2019	**NUMBER:** LP.46 - Technical Review
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Technical Review	

I. Policy: Technical review is an in-depth examination of analysis records and test reports to ensure that the reported conclusions and interpretations are reasonable, and supported by sufficient documentation and data. The Latent Unit technically reviews all casework examinations.

A. A technical review is independent of a verification.

B. A technical review may be independent of or combined with administrative review.

C. The administrative review milestone in LIMS reflects the technical and administrative review of the case.

D. A technical review will be conducted by individuals that have been found competent in the latent print discipline, and have been authorized by the laboratory to perform technical reviews.

E. Technical reviews will not be conducted by the author or co-authors of the test records under review.

F. The technical review process does not shift responsibility for ensuring the accuracy of results and conclusions from the analyst to the reviewer. Both individuals share a responsibility to ensure the quality of the reported results.

G. For more information about technical review see **FSD.17.**

II. Procedure

A. A technical review will consist of ensuring technical record components are correct. The components include:

1. Approved technical procedures were used and documented.
2. Any deviations from policy were documented, and approved by the Unit Supervisor or Technical Lead.
3. Results are properly transferred from the technical record(s) to the report.
4. Technical record(s) support the results and conclusions made in the test report.
5. All Identifications and Exclusions are verified.
6. All Inconclusive results are properly qualified.
7. All latent prints meet quality standards as outlined in LP.19.

8. Prints determined to be of "no value" are reasonable based on criteria outlined in LP.19, requiring that prints lack sufficient and clear first and/or second level detail. This includes latent evidence submitted to the lab on lift cards or photos, as well as evidence generated at the lab from items processed.

9. Evidence description and inventory are properly and appropriately stated.

10. Work requested was completed, or a reasonable explanation is reported as to why work could not be done.

11. All latent lift cards and photographs are properly numbered and itemized, dated and initialed; and digital images are properly named, annotated, and in proper format. For example, TIF or RAW format.

12. All the exemplars used are included in the technical records, and are properly labeled. For example, the dates of comparisons and initials of the analyst and verifier.

13. Instrumental documentation are included in the technical records to demonstrate all ABIS quality prints were searched in appropriate databases, and minutiae appropriately marked. When applicable, documentation of a second search must also be included.

    a. Correct latent ID number, lab number, database searched, and any other pertinent identifying information are on all ABIS printouts.

14. Appropriate comparison documentation is included and supported. For example, GYRO mark-ups and analysis documentation from analyst and verifier.

15. Documentation of the appropriate use of the following:

    a. positive and negative reagent controls.

    b. processing techniques and in the correct sequence.

    c. lot numbers and expiration dates.

    d. equipment and instruments.

16. Ensure that all evidence was properly itemized and transferred in LIMS, including "split via" when applicable.

17. When applicable, proper collection of biological and trace material.

    a. As applicable, a recommendation for potential further work.

B. Any inconsistencies found by the technical reviewer regarding results, supporting data, or other documentation reviewed, will be noted and tracked on the **Technical Review Checklist**. See LPF.50

1. The technical review checklist will be maintained with the case file.

2. Any differences in results or supporting data must be resolved prior to issuing a final result and report.

3. If the technical reviewer and case analyst are unable to reach an agreement after consultation, the conflict resolution process will be initiated and the Unit Supervisor will be notified.

a. Conflict resolution is a process that occurs after all communication between the original analyst and the technical reviewer has been exhausted, and the discrepancy can not be resolved. The Unit Supervisor will promptly schedule a meeting with both analysts to discuss the discrepancy and determine the most suitable resolution.

b. If the case analyst does not agree with the final decision, the case will be reassigned. All original documentation of consultations and conflict resolutions will be retained in the case record.

4. Serious or repeated technical issues will be reported to the Unit Supervisor.

C. Releasing Results Prior to Completing the Report

1. The review that is conducted on a select item is a comprehensive technical review, no different from that which is done at the completion of a case. A comprehensive technical review must be conducted prior to verbally releasing results. The technical reviewer will document the review in the notes which will include the date, initials of reviewer, and what elements were reviewed. See FSD.43 Test Report.

III. Criteria for becoming a Technical Reviewer

A. For an analyst to be authorized to conduct Technical Reviews, certain goals must be met to the satisfaction of the Unit Supervisor and/or Technical Lead. The following outlines these requirements:

1. The analyst must have conducted casework in the component of Friction Ridge Examination that is under review for **at least one year.**

2. The analyst must complete a **minimum of 20** "supervised" Technical Reviews to the satisfaction of the Unit Supervisor and/or Technical Lead.

a. The "supervised" Technical Reviews must include all components of casework (Processing, Comparison and ABIS cases) to be authorized to perform reviews of all casework.

b. Feedback will be provided to the analyst by the Unit Supervisor and/or Technical Lead.

3. Once the above requirements are met, and the analyst has demonstrated competence in the Technical Review Process, authorization will be granted.

IV. Technical Review of Testimony

A. At least annually, analyst's court testimony will be technically reviewed by a competent individual in each discipline in which they have testified.

B. Testimony that is technically reviewed, should occur on Comparison casework; however, any casework testimony will meet this requirement.

C. Testimony technical review is typically documented on the Internal Court Critique Form FSDF.02 according to the procedure outlined in QA.13.

D. See FSD.26 for more information of courtroom testimony requirements.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	REVISION DATE: 07/24/13	NUMBER: LP.47
	RELATED ORDERS:	
APPROVED BY: Cindy Hull & Debbie McKillop	ASCLD-LAB:	
CHAPTER: Quality Assurance	SUBJECT: Human and Environmental Factors Affecting Examinations	

I. POLICY The Supervisor will be notified and take action to limit or remove any factors that may negatively impact safety of personnel, evidence or test results.

A. **Introduction**

1. The effects of human factors on latent print analysis was addressed when the National Institute of Standards and Technology (NIST) convened "The Expert Working Group on Human Factors in Latent Print Analysis" to conduct a scientific assessment of the effects of human factors on forensic latent print analysis and to develop recommendations to reduce the risk of error. Their report documents their findings and recommendations, addressing issues ranging from the acquisition of impressions of friction ridge skin to courtroom testimony, from laboratory design and equipment to research into emerging methods for associating latent prints with exemplars (see LAT.308). It provides a comprehensive discussion of how human factors relate to all aspects of latent print examinations including communicating conclusions to all relevant parties through reports and testimony.

2. Factors affecting latent print examination originating with issues related to the quantity and quality of the friction ridge impression and/or the methodology are addressed in LP.19.

B. **Human and Environmental Factors Affecting Examinations**

1. **General**

a. A thorough analysis of workstations, job demands, mental workload, organizational characteristics, training needs, and supervisory systems is necessary to facilitate and enhance performance.

b. The analyst has a responsibility to ensure they are mentally and physiologically capable of performing their job duties, and are not to perform latent print casework if they are aware of factors that may negatively affect their work product and/or test results.

2. **Physical Environment**

a. The following are a list of some factors that may affect an analysts performance:

i. **Lighting**: Various types of desk lamps are available to the analysts. Each analyst will inform their Supervisor if they believe their lighting is insufficient or inappropriate so that the problem may be remedied.

ii. **Noise**: Laboratories have increased levels of noise and movement due to multiple processes occurring over multiple work areas. While it is understood that there will be some level of noise in the workplace, if an analyst believes there is too much noise and it is having a negative impact on the work product, they will inform their Supervisor.

iii. **Temperature**: The temperature is set by General Services Division (GSD) employees; however, if the temperature becomes uncomfortable and affects work product and/or health, GSD can be contacted by a Supervisor or Manager to have the temperature changed.

iv. **Workspace Layout**: Analyst's may request to have an ergonomic evaluation. Analyst's may work with the evaluator to determine the best workspace set-up for the job duties they perform.

v. **Distractions/Interruptions**: Due to the nature of the work performed in the Laboratory, there will be distractions and interruptions, but they should be kept to a minimum and any routine distractions will be brought to the Supervisor's attention.

vi. **Ventilation**: Proper ventilation should be maintained in the Laboratory. Due to the nature of the work in the lab, there are times in which the air quality may decrease (i.e. odors). The Supervisor or Manager should be notified so that any air quality deficiencies can be remedied.

3. **Human-System Interface**

a. Analysts in the Latent Print Unit will be utilizing computers with software applications, scanners, copiers, printers, digital photography equipment, alternate light sources, and other forms of informational technology and laboratory equipment. Based on the resources available, options and preferences should be selected that optimize the displays and controls.

i. Some of the software programs offer alternate screen color options that may be utilized by the analyst based on their preference.

ii. The ABIS system has been installed on each analyst's desktop to increase efficiency and limiting the need to carry case files and evidence to various locations. This set-up also allows for each analyst to customize the color scheme and settings that work best for them.

4. **Human Factors**

a. The following are a list of factors that analysts need to be aware of before performing latent print examinations:

i. **Knowledge, skills, and experience**: The Laboratory has a training program for latent print analysts and also provides continuing education and professional advancement through conferences, classes, study groups, providing books and journals, and routine staff meetings.

ii. **Sensory and physical capabilities (including alertness and fatigue)**: If the analyst is aware of sensory and physical limitations that will affect their job performance, they will follow department policies in notifying management of their inability to perform their job duties.

1. In situations in which the analyst may have some limited capabilities, the Supervisor may assign acceptable tasks that are within the analyst's capabilities that would not negatively impact casework.

iii. **Biases**: If the analyst is aware of potential bias in their casework, the analyst will notify their Supervisor who will reassign the case. The Supervisor and the analyst will also take precautions to ensure that contextual bias is limited to only necessary information (i.e., not reading police reports).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/10/2019	**NUMBER:** LP.48 - Balance: Digital Scale Procedures
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Balance: Digital Scale Procedures	

I. Introduction

A. The balance is a tool used for measuring ingredients when making working and stock solutions.

B. The Latent Print Unit does not have critical measurements with regard to weights.

C. **To prevent unintended adjustments after annual calibrations, the balance will be left in place and not moved from it's location in the Latent Unit.**

II. Procedures

A. For detailed instructions see INSLP.22.

1. Ensure the balance is ON
    a. If the balance was off, wait 30 minutes prior to use.
2. Remove the draft cover.
3. If using a weighing media (e.g. weigh boat or paper) place the weighing media near the center of the scale and tare or "zero" the balance.
4. If not using a weighing media, tare or "zero" the balance before use.
5. Place item to be weighed (in weighing media if applicable) on the scale, near the center.
6. Close the draft cover.
7. Weigh item. Allow enough time for balance to settle.
8. It is important to keep the scale as clean and free of chemicals as possible.
9. Be sure to wipe down the scale before and after each use.

B. **Calibration**

1. For maintenance and calibration information see LP.18.
2. No scheduled internal calibrations or adjustments will be performed by laboratory staff. Only optional intermediate checks may be done when necessary.

C. **Intermediate Checks**

1. If there is an indication of a technical issue, the balance should be checked. The procedure for checking the performance of the scale is as follows:

   a. Make sure the balance is on. Use the laboratory supply of standard weights.

   b. **Do not handle the weights with bare hands as oils and contaminants may affect them. Use the tweezers to pick up each weight and place them on the scale. Also use this method to return the weights to the box.**

   c. Record the displayed weight next to the corresponding reference standard weight (e.g. 1g: 1.000 g) on the Latent Digital Scale Log (LPF.03) which will be maintained in the Latent Unit.

   d. Follow the same procedure for checking the weights listed on the Log and complete the form.

   e. Return the reference standard weights to their location.

2. **Satisfactory**

   a. See table below to determine satisfactory performance.

Weights equal to or less than 10 grams	Weights greater than 10 grams
+/- 0.005 grams of target	+/- 0.020 grams of target

3. **Unsatisfactory**

   a. If the displayed weight of the reference standard is outside the limits of the above table, the intermediate check is determined to be unsatisfactory.

   b. An unsatisfactory result requires the check be repeated.

   c. If the check fails again, the scale will labeled ***Out of Service*** and all users notified.

   d. The equipment will be repaired or replaced before being put back into operation.

   e. Actions taken to repair or correct the problem will be documented on the ***Latent Digital Scale Log***.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 07/02/2019	**NUMBER:** LP.53 - Latent Examiner Training Manual
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Training	**SUBJECT:** Latent Examiner Training Manual	

I. The goal of the training program is to provide uniform quality training in each component of friction ridge examination to laboratory personnel. The training program is intended to equip the trainee with the knowledge, skills, and abilities required to conduct casework. The aspects of training will be addressed through training modules, as listed below.

A. **Introduction**

1. This training program is based on the training standards for friction ridge examiners as outlined by SWGFAST and OSAC.

2. The trainee must demonstrate knowledge of the required objectives in each module by successfully completing written tests, practical exercises, and examining case-like materials (as applicable) throughout the training program.

3. Training will consist of hands-on practice, literature review, lectures, presentations, and demonstrations. The demonstrations will include shadowing experienced staff with casework, observing courtroom procedures and testimony, and other routine duties. The trainee must demonstrate an understanding of the objectives and underlying principles via modular quizzes or tests and court-related questions or mock trial.

4. Training is multi-faceted and ever changing. Should a new processing technique or other change occur within the field of friction ridge examination during the examiner's training period, the program may be modified as needed.

5. The modules do not need to be completed in sequential order. Training will be tailored to the trainee's job duties and to the extent the trainee will conduct casework.

6. When feasible to do so, trainees without prior experience in friction ridge analysis should begin the training program by attending the Sheriff's Department Central Identification Services Fingerprint Academy, to gain foundational knowledge.

7. All trainees should attend external training courses recommended by the unit Supervisor, Training Coordinator, or Technical Lead.

B. **Coordination and Overview of the Program**

1. The Training Program will be coordinated by a designated Training Coordinator (TC). The TC may be the Latent Unit Technical Lead, a designee, or the unit Supervisor.

a. The Training Coordinator will be responsible for the overall training, but may choose to delegate certain duties or blocks of instruction to other qualified staff.

2. Analysts assigned as trainers must have acquired and maintained proficiency for a minimum of two years in the topic areas that they instruct.

3. Trainers must maintain accurate and complete documentation of subject areas covered.

4. The length of the training period will vary depending on the extent to which the trainee will conduct casework. Also taken into consideration is prior coursework or experience as well as the trainee's aptitude for the material. The unit Supervisor or TL and TC will set the expected timelines for training based on these factors.

5. Training is estimated to take approximately one year (full-time) for those individuals becoming competent in all aspects of the latent print discipline (Processing, Comparison, ABIS). The majority of the time in training will focus on Analysis, Comparison, and Evaluation of latent impressions.

   a. SWGFAST standard (Document #18) requires one year minimum, but recommends two or more years of full-time latent print work with the majority of the time spent on Analysis, Comparison, and Evaluation of impressions.

   b. The modules pertaining to processing should require approximately 3 months. The modules pertaining to Comparisons and ABIS training should require approximately 9 months.

6. The various quizzes and activities throughout each module will be graded on a Satisfactory/Unsatisfactory basis.

7. The practical exercises and test samples serve as a means to monitor the trainee's ability to apply the tools they have been given during the training program.

8. The written exams and quizzes may have multiple choice, true/false, fill-in-the-blank, and/or essay type questions.

   a. A Satisfactory score on a quiz or written test requires at least 80% accuracy.

   b. A Satisfactory score on a practical comparison tests (latent comparisons) requires 100% accuracy.

   c. A rating of Unsatisfactory in any module will result in re-testing.

      i. Failure of the retest would result in remedial training of that module.

      ii. Failure of three or more modules or exams may result in the elimination from the training program.

9. Should a trainee demonstrate a limitation or deficiency which may impact successful completion of the training program, the TC will notify the unit Supervisor to evaluate the best course of action.

10. The trainer is expected to provide feedback and guidance to the trainee throughout the training program.

11. The training program has a total of three Competency Tests. See below for Competency Test details.

12. A final examination consisting of a mock trial will be given to individuals who have completed all three competency tests representing the three components of friction ridge examination. See Mock Trial below.

13. Upon completion of the training program, the trainee is expected to provide written or verbal feedback to the TC and unit Supervisor regarding the training program. This documentation will be maintained in LIMS.

C. **Orientation**

1. Before beginning the training program, a new employee will receive orientation to the operating facilities and personnel, and a work/study area will be assigned. An orientation checklist (see FSDF.01) will be used to ensure applicable topics are covered. The checklist will be retained per FSD policy (see FSD.47).

2. The trainee will be introduced to PowerDMS and will be assigned the following mandatory reading of policies and procedures:

   a. FSD Manual

   b. Quality Manual

   c. Latent Section Technical Manual

   d. Latent Section Training Manual

   e. FSD Safety manual

3. The outline of the training program and an explanation of the expectations of both the trainer and the trainee will be discussed.

4. A time line for the training program will be provided to the trainee and completion of each training module will act as milestones of achievement.

5. There will be an introduction to the technical capabilities of the laboratory, to include the agencies served.

6. An explanation of the operation of local, state and federal law enforcement agencies and court systems will be provided.

7. The trainee will be expected to learn the laboratory's LIMS.

D. **Expectations of Trainee**

1. The trainee is expected to keep a notebook or binder of information compiled during the training program. Copies of written examinations, practical exercises, presentations, or other items prepared during training should be maintained by the trainee and reviewed by the trainer.

2. Documentation of completed reading assignments and checklists for each module should be maintained.

3. Reading assignments throughout the program modules are not exhaustive lists. Additional reading is encouraged.

4. At the discretion of the unit Supervisor or TL and TC, and as the trainee becomes capable and authorized, the trainee may collaborate on casework under the

supervision of a qualified examiner to gain hands-on experience. The following are examples of ways in which the trainee may assist an examiner:

a. Assist with the screening duties of lift cards.

b. Data entry only of latent prints into the ABIS database.

5. Study time for the trainee is not restricted to on-duty hours. Trainees may wish to devote some off-duty time to their studies to complete the training program in a timely manner.

6. Trainees are expected to communicate any concerns about their training to their TC, or if needed to the TL and Unit Supervisor.

E. **Guidelines for Competency**

1. The latent unit has three components of competency testing (Processing, ABIS, and Comparisons) which mirror the three main testing services provided by the latent unit. The competencies include practical and written exams, testimony-like questions (verbal test), as well as issuing a report in LIMS.

a. Whenever feasible, the samples used for the practical portion of the Comparison competency are provided by an external vendor.

i. Successful completion of the Comparison practical exam requires a score of 100%. Erroneous conclusions will result in an unsatisfactory rating for this section.

b. The samples used for the practical portion of the ABIS and Processing competencies may be created internally.

i. Successful completion of the ABIS practical exam requires a score of a 100% hit rate when searching the database(s).

ii. Successful completion of the Processing practical exam requires applying the proper development techniques in their appropriate sequence to recover latent prints.

c. Successful completion of the written ACE-V/ABIS and Processing exams require a score of at least 80%.

i. It is recommended that the written test be given to the trainee before the practical exam.

d. Successful completion of the verbal test will be determined by the TC, TL, or Supervisor to ensure materials learned were well understood and communicated by the trainee. For a trainee to obtain a Satisfactory rating on the verbal test he/she must be able to clearly articulate the following:

i. A summary of the training and courses taken as applied to the subject area(s) learned - Statement of Qualifications.

ii. Technical correctness to the answers presented.

iii. Ability to accurately and understandably convey answers.

e. If the Competency is deemed Unsuccessful, remedial training and/or an additional Competency test may be necessary. For technical errors in a Competency, see FSD.15

2. For the practical portion of the competency tests, the trainee is expected to apply all applicable policy and procedures in accordance with the FSD and Latent Technical Unit manual.

3. The analyst will be provided feedback after the completion of each competency test.

F. **Modules**

1. The following is a list of modules for the training program:

   a. LPT.02 Introduction to and the History of the Science of Fingerprints

   b. LPT.03 Biology and Physiology of Friction Ridge Skin

   c. LPT.04 Pattern Interpretation

   d. LPT.05 Classification of Record Prints

   e. LPT.06 Recording Friction Ridge Skin

   f. LPT.07 Latent Print Development

   g. LPT.08 ACE-V Method

   h. LPT.09 Automated Database Searching

   i. LPT.10 Forms, Records, and Reports

   j. LPT.11 Evidence Handling

   k. LPT.13 Resources and Certification

   l. LPT.14 Ethics, Legal Aspects and Forensic Science

   m. LPT.15 Final Examination

G. **Mock Trial**

1. A final exam consisting of a mock trial will follow the successful completion of the modules and the three competency examinations. The Supervisor and/or Technical Lead will assess the individual's performance. The performance of the individual will be determined to be either Satisfactory or Unsatisfactory (see LPT.15). If the performance is deemed to be Unsatisfactory, remedial training will be provided.

2. Documentation of the mock trial will be on a court critique form.

H. **Training Documentation**

1. After successful completion of the modules, the Supervisor, TC, and TL will complete the appropriate module checklists.

2. The TC is responsible for ensuring that the Latent Print Training Records are completed in a timely fashion as training progresses. The appropriate spaces on the training checklist will be initialed and dated as each area is completed.

3. After successful completion of each competency examination, the Unit Supervisor and Technical Lead will complete the appropriate authorizations.

   a. LPF.40 - Authorization to Perform Latent Print Automated Database Search Casework

   b. LPF.41 - Authorization to Perform Latent Print Comparison Casework

c. LPF.42 - Authorization to Perform Latent Print Screening and Processing Casework

I. **Transition from Trainee to Examiner**

1. Upon completion of the training, and having been granted authorization, the trainee will have attained the necessary knowledge, skills and abilities to independently perform casework. The Unit Supervisor and/or Technical Lead will monitor the new examiner's casework for a period of time following authorization (supervised casework). Documentation of the supervised casework will be in the examination record. In addition, the Supervisor and/or Technical Lead should accompany the newly qualified examiner to court for the first few court appearances.

2. It is anticipated that the new examiner will require approximately one year of full-time latent casework (primarily in comparisons) to solidify their abilities and to lay foundation for becoming an accomplished latent examiner. This should be considered when assigning the new examiner to cross training in other disciplines.

J. **Assessment/Abbreviated Training of Experienced Personnel**

1. The Unit Supervisor and/or Technical Lead is responsible for assessing the new hire's prior training and experience.

2. Some content or sections of this training program may be skipped for examiners with prior training and who can demonstrate to the Supervisor and/or Technical Lead a comprehensive knowledge of the subject matter.

   a. A person with prior experience may not be required to complete all or parts of the training program if the following are met:

      i. the prior training program covered all aspects of Friction Ridge Examination.

      ii. the prior training program was administered by a reputable organization and/or trainer.

      iii. the prior training program was about one year (full-time).

3. The new hire's training records, transcripts, statement of qualifications, etc. will be reviewed.

4. Prior to administering their competency test, the new hire will be given hands-on practicals to acclimate to their new work environment (e.g. case-like materials or exams).

5. Prior to authorization to perform casework, the new hire must successfully complete a competency test and mock trial or court related questioning.

6. Prior to conducting casework, appropriate authorization form(s) must be completed. See above for authorization forms.

7. The employee's casework will be monitored for a period of time (supervised casework) following authorization. The supervision will be documented in the examination record. In addition, the Supervisor and/or Technical Lead will, at minimum, accompany the employee to their first court appearance.

K. **Remedial Training and Re-training**

1. Remedial training is designed to remedy issues that arise after an analyst is deemed competent. Remedial training may be a course of action taken after the realization of non-conforming work (e.g. a failed proficiency, a repeated level 2 non-conformity, a corrective action etc.). The remedial training will include one or more of the following:

    a. repeating relevant training modules

    b. literature review

    c. review of policies

    d. practical exercises

2. The analyst will be given a predetermined timeline for completion of the remedial training.

3. The Supervisor will be responsible for overseeing and documenting the remedial training.

4. A competency test will be issued to evaluate the effectiveness of the remedial training.

5. Feedback on the remedial training process as well as a review of the training program will be conducted.

6. Retraining (Refresher training) may occur for a number of reasons, such as an absence from the latent unit for one year, at the request of the analyst for any reason, procedural modifications during their absence, or as deemed necessary by the Unit Supervisor and/or Technical Lead. A competency test will be required if new methodologies, techniques or equipment have been introduced during their absence.

    a. A newly competent analyst may require more retraining prior to resuming casework than an analyst with years of latent experience following an absence in the unit.

    b. After a 12 month absence, the analyst will be expected to pass a proficiency test prior to resuming casework.

L. **Continuing Education**

1. All analysts should participate in continuing education to broaden and maintain their skills and expertise in the latent print discipline. Training received will be documented as outlined in QA.12.

    External training courses or programs including, but not limited to, Webinars and classes offered by *Forensic Technology Center of Excellence, DOJ California Friction Ridge Study Group, Ron Smith & Associates, California Criminalistics Institute, Evolve Forensics, Elite Forensic Services, Stapleton and Associates,* as well as *CSDIAI* and *IAI* conferences should be attended to complement training assignments and exercises contained in this manual.

    The effectiveness of on-going training will be monitored and evaluated by the Latent Unit Supervisor and/or Technical Lead in one or more of the following ways:

    a. Requiring a teach back from the analyst attending the training (or feedback regarding the training) during a unit meeting.

b. Evaluating yearly proficiency test results.

c. 100% Tech and Admin review of casework.

d. Court testimony monitoring.

e. Rotational presentations of various topics to the unit by staff.

M. **References used throughout the training program include, but are not limited to the following:**

1. Fingerprints and the Law, Moenssens
2. Fingerprint Techniques, Moenssens
3. Qualitative-Quantitative Friction Ridge Analyis, Ashbaugh
4. "The critical Stage of Friction Ridge Skin and Pattern Formation", Wertheim and Maceo
5. "The GYRO System - A Recommended Approach to More Transparent Documentation", Langenburg and Champod
6. Accuracy and Reliability of Forensic Latent Fingerprint Decisions, Ulery, et al.
7. Repeatability and Reproducibility of Decisions by Latent Fingerprint Examiners, Ulery, et al.
8. Quantifying the Weight of Evidence from a Forensic Fingerprint Comparison: a new paradigm, Neumann, et al.
9. Advances in Fingerprint Technology: 2nd Edition, Lee and Gaensslen
10. Friction Ridge Skin, Cowger
11. Modern Criminal Investigation: 5th Edition, Soderman and O'Connell
12. Techniques of Crime Scene Investigation, Fisher and Fisher
13. Scott's Fingerprint Mechanics, Olsen
14. Fundamentals of Fingerprint Analysis, Moses-Daluz
15. Scientific Police Investigation, Inbau, et al.
16. Practical Fingerprinting, Bridges
17. The Science of Fingerprints, FBI
18. Forensic Science: An Introduction to Criminalistics, DeForest and Lee
19. Fundamentals of Criminal Investigation , O'Hara and O'Hara
20. Fingerprint Detection With Lasers, Menzel
21. Fingerprint Detection Techniques, Margot and Lennard
22. Criminalistics: An Introduction to Forensic Science, Saferstein
23. The Fingerprint Sourcebook, NIJ
24. Criminalistics: Theory and Practice, O'Brien and Sullivan

25. Handbook of Forensic Science, FBI

26. Fingerprint Handbook, Field

27. Fingerprints, Palms and Soles, Cummins and Midlo

28. Identification Technologies, Warfel

29. Crime Investigation, Kirk

30. Crime Scene Search and Physical Evidence Handbook, Fox and Cunningham

31. Classifying Palm Prints, Alexander

32. Cogent User's Manual

33. An Introduction to Criminalistics, O'Hara and Osterberg

34. The Expert Witness, FBI

35. Footwear Evidence, Abbott

36. Footwear Identification, Cassidy

37. The California Association of Criminalists: Code of Ethics

38. The International Association for Identification: Code of Ethics

39. ASCLD-LAB Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Scientists

40. Strengthening Forensic Science in the United States: A Path Forward, National Academy of Sciences (NAS) Report

41. A Review of the FBI's Handling of the Brandon Mayfield Case, U.S. Department of Justice

42. Latent Print Examination and Human Factors: Improving the Practice Through a Systems Approach, NIST

43. UCLA Law Review: Implicit Bias in the Courtroom, Kang et al.

44. Forensic Science Handbook, Volume II, Second Edition, Richard Saferstein

45. Journal of Forensic Identification, various articles

46. Journal of Forensic Sciences, various articles

47. The Home Office Centre For Applied Science And Technology (CAST): The Fingermark Visualization Manual, Gov UK

48. Fingerprints and Other Skin Ridge Impressions, (2nd Edition), C. Champod et al.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 06/12/2019	**NUMBER:** LP.54 - Ordering Supplies and Services
	RELATED ORDERS: CLER.CRIM.12 FSD. 30 LP.18 LP.32	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB: 6.6**	
CHAPTER: Quality Assurance	**SUBJECT:** Ordering Supplies and Services	

I. Selection

A. Supplies and services are designated into two broad categories:

1. General supplies and services that do not affect the quality of tests, including office supplies. Requirements in this policy do not apply to these items.
2. Supplies and services that affect testing and have an impact on the quality of results.

B. Most reagents and supplies in the Latent Unit are purchased solely for use by the Unit. These reagents and supplies are selected for their specific use in testing.

C. The Unit Supervisor or Technical Lead will evaluate vendors of externally provided products to ensure their suitability for use in testing. Reagents and supplies are selected based on one or more of the following criteria:

1. The vendor's product is specified by the technical procedure.
2. The vendor supplies a certificate of analysis specifying the grade.
3. The vendor providing consumables is the manufacturer of the instrumentation for which they are used.
4. The laboratory has a prior history of satisfactory service with the vendor product.

D. Once a product is evaluated and approved for use, for example through validation or as supplied for use with an instrument, it will be ready for use in casework and may be ordered as needed.

1. Evaluations of reagents and supplies are done by testing their performance during validation.
2. Reagents and supplies will be re-evaluated on an on-going basis through the use of controls and intermediate checks. Further information can be found in LP.32 and LP.18.
3. As needed to monitor a particular product, an initial control may be run when a new order is received. For example, a new Wetwop may be tested once opened in addition to the control required with every use.

II. Ordering

A. The requirements for externally provided supplies will be communicated to the vendor through purchasing documents. This may include the item description, catalog #, and any specifications the Unit requires of the product.

B. An individual with budget authority, typically the Chief or a Forensic Manager, will authorize the purchase of supplies and services.

C. Personnel within the Latent Unit may order supplies according to FSD.30 & CLER.CRIM.12.

III. Receiving

A. When supplies are received, the shipping documents must be reviewed and the items inspected to verify that all supplies ordered were received and conform to the Unit's requirements. This is typically done by the analyst who placed the order.

B. Any staff member in the Latent Unit may review the order.

C. If the order does not conform to the Unit's requirements or the correct product was not received, the Unit will not accept the order. The Unit Supervisor or Technical Lead will be notified, and action will be taken.

D. Once the order is reviewed and accepted, the packaging slip should be signed/dated and forwarded to the Clerical Unit. For labeling requirements refer to LP.32 and LP.18.

E. Supplies that may affect the quality of a test include the chemicals and equipment indicated below, as well as the equipment listed in LP.18.

IV. Quality Assurance

A. All commercial kits and in-house reagents are quality control tested prior to use in casework.

B. All records are maintained in the Latent Unit (Maintenance or Reagent binders). Including calibrations, reagent preparations, and other supply information or certificates.

V. Vendors

A. The Latent Unit approved vendors for supplies and reagents that affect the quality of tests include the following:

1. **Sigma-Aldrich, Sirchie, Lynn Peavey, The Safariland Group (Forensics Source/Lightning Powder), CSI Forensic Supply, Foster Freeman, CARON Forensics, Arrowhead Forensics, Rofin Forensic, and Rice-Lake.**

B. A complete list of chemicals may be found within the SDS binder in the Latent Unit.

C. Proprietary preparations by the same name containing the same or similar chemicals are typically suitable.

D. Chemicals of any grade are typically suitable and may include the following commonly used supplies:

1. Acetonitrile
   Ardrox
   Cyanoacrylate
   Ethanol
   Formic Acid

Glacial Acetic Acid
Hexane
1,2-Indanedione
Maleic Acid
Methanol
7-(p-Methoxybenzylamino)-4-Nitrobenz-2-oxa-1,3-Diazole (MBD)
Naphthol Blue Black (Amido Black)
Ninhydrin
Physical Developer
Rhodamine 6G
RTX
Sodium Carbonate
Wet Print Re-Fill (black/white)
Wetwop (black/white)
Hungarian Red

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 01/20/2015	**NUMBER:** LP.55 - CARON Heat and Humidifying Chamber
	RELATED ORDERS: INSLP.21	
APPROVED BY: Kathryn Novaes & Nivan Gill	**ASCLD-LAB:**	
CHAPTER: Equipment	**SUBJECT:** CARON Heat and Humidifying Chamber	

I. The addition of heat and humidity may accelerate or enhance the development process of porous items. The CARON Heat and Humidity Chamber may be utilized to process chemically treated items for latent prints.

A. **Instructions**

1. The instructions should be read prior to use to ensure the equipment is utilized properly; refer to the instruction manual INSLP.21 Heat and Humidity Chamber.
2. Turn on the chamber using the on/off switch.
3. Set the chamber temperature and humidity controls to appropriate set points; see Chemical Techniques below for the set points for the technique being used.
4. Once set points are reached, open the chamber and put the evidence inside using clips to hang or place items on the shelf.
    a. **Note**: The chamber may not reach set points again once door is closed in the allotted development time.
5. Start timer
    a. **Note**: The timer does not shut off the heat or humidity in the chamber automatically; the analyst turn the chamber off.
6. Remove items
    a. **SAFETY**: The chamber can become extremely hot and caution should be used when opening the door after use. Heat resistant gloves should be worn when handling any internal components after use.
7. If applicable, wipe down any excess water that may have accumulated from using humidity.
    a. **Note**: It is suggested to leave the door open after use to allow water to evaporate.

B. **Maintenance**

1. The maintenance policy dictates periodic and annual maintenance to ensure the equipment is functioning properly; refer to (LP.18) and log (LPF.13).

2. The chamber has a water light indicator for low water in the reservoir; see INSLP.21 Heat and Humidity Chamber for instructions on refilling the water reservoir.

C. **Quality Assurance**

1. A test strip must be used for performance checking any reagent being used in conjunction with the chamber, and placed in the chamber along with the items of evidence.

D. **Chemical Techniques**

1. **Ninhydrin** is a chemical technique that can be used in conjunction with the CARON Heat and Humidity Chamber.

   a. The set points for Ninhydrin are: **85ºC and 65%RH.**

   b. The appropriate time for items treated with Ninhydrin is **3 minutes** inside the chamber.

   c. When practical, items treated with Ninhydrin will be allowed to continue to develop outside of the chamber for at least 3 days. See (LP.40) for more information on using Ninhydrin.

2. **1,2-Indanedione** is a chemical technique that can be used in conjunction with the CARON Heat and Humidity Chamber.

   a. The set points for 1,2-Indanedione are: **100ºC and 0%RH.**

   b. The appropriate time for items treated with 1,2-Indanedione is **10 minutes** inside the chamber.

   c. See LP.71 for more information.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.56 - Magnification Tools
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB: 6.4**	
CHAPTER: Equipment	**SUBJECT:** Magnification Tools	

I. A variety of magnification tools are available to analysts in the Latent Unit for enhanced visualization of latent prints.

A. The magnification tools are located within the Latent Unit.

B. Unless otherwise stated, calibrations and intermediate checks are not required for this equipment.

II. Microscope: A stereo (comparison) microscope is used for comparing two side-by-side prints.

A. Set-up and Use

1. Always set the microscope on a stable surface.
2. When moving the microscope always keep one hand under the base for support and one hand on the neck for balance and stability.
3. Place microscope in a comfortable position and turn on the reflected light illuminator.
4. Put a latent print onto the stage plate.
5. Turn the zoom dial to low power and bring the image into focus.
6. Adjust the eyepieces for the correct interpupillary distance. Do this by bringing the eyepieces closer together or farther apart until a single field of view is observed.
7. Set the diopter adjustment rings on both eyepieces to the zero position.
8. Use the zoom control to set the highest magnification.
9. Bring the image into focus with the focus control. It is best to center the image on some clear point of detail.
10. Zoom the microscope down to the lowest magnification (this may cause the image to be slightly out of focus).
11. Adjust the focus for each eye separately using the eyepiece diopter adjustment rings. Do not adjust the focus with the focus knob.
12. The microscope is now "parfocal." This means that as the microscope is zoomed from high to low magnification and the image will stay in focus throughout the entire range.

13. Place the known and latent prints to be examined onto the stage. Focus as needed.

B. Cleaning and Maintenance

1. Use canned air to blow dust off the eyepieces, the stage, and the objectives.
2. Wiping while these parts are still dusty can scratch the surfaces, especially on the lenses of the objectives and the eyepieces.
3. Use a Kimwipe (or other non-abrasive wipe) to clean the objectives and eyepieces.
4. If parts are particularly dirty, cleanse with a small amount of mild cleaner and a soft cloth.
5. When not in use, the microscope should be covered with a dust cover.

C. Maintenance

1. See LP.18 for maintenance information. Use the Microscope Maintenance Log (LPF.06) located at the workstation near each microscope for maintenance records.

III. Magnifying Glass

A. A variety of magnifying glasses are available to analysts for latent visualization use.

B. Most glasses, palm and finger size, have at least 4X magnification.

1. The fiber optic taper has 6X magnification.

C. Cleaning and Maintenance

1. Use a Kimwipe (or other non-abrasive wipe) to clean the eyepiece *if needed*.
2. If parts of the glass are particularly dirty, cleanse with a small amount of mild cleaner and a soft cloth.

IV. Comparator

A. Side-by-side optical projection, up to 10X magnification, used to assist in comparisons. The comparator works best in a darkened room.

B. Cleaning and Maintenance

1. Use a Kimwipe (or other non-abrasive wipe) to clean the comparator screens *if needed.*
2. Use the Comparator log if needed to document maintenance LPF.09

V. Ridge Pro Plus Digital Magnifier

A. Ridge Pro Plus is a battery operated digital magnifier offering up to 12X magnification.

B. Cleaning and Maintenance

1. See LP.18 for maintenance information.
2. Use a Kimwipe (or other non-abrasive wipe) to clean the magnifier *if needed.*
3. Use the Ridge Pro Plus Digital Magnifier log if needed to document maintenance LPF.46

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/10/2019	**NUMBER:** LP.57 - Casting Materials
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** Casting Materials	

I. Introduction

A. Casting material available in the Latent Unit: **Mikrosil and AccuTrans.**

1. Casting materials are available for lifting latent prints from smooth, textured, or rough surfaces. However, are most commonly used to collect ridge detail developed with powder on surfaces that are difficult to lift with traditional lifting tapes.
2. Castings may be particularly useful to collect friction ridge detail from deceased hands or feet submitted to the laboratory. Such as, hardened, mummified, or burned skin.
3. Casting materials are not reagents, but rather are a method of collection.
4. AccuTrans and Mikrosil are available in a variety of colors, but white and black are most commonly used.
    a. Use Black when dusting with light colored powders such as white, gray, and most fluorescent powders.
    b. Use White when dusting with dark or black colored powders.
5. Casting materials may be useful in the collection of plastic prints.
6. Once dried, castings may be photographed, powdered then photographed, or scanned for examination and retention.
    a. **Note**: the print may need to be reversed (mirror image) for comparison purposes.
7. Expiration dates are typically found on the cartridges, tubes, or somewhere within the product kits.
    a. If the casting material is hardening or not working properly, it will be discarded even if the expiration date has not yet been reached.
    b. Unopened casting materials typically have a shelf-life of about 2-3 years.

II. Safety

A. While casting materials are generally safe to handle, avoid eye contact and ingestion.

1. If eye contact occurs, flush with water for at least 15 minutes.

B. Wear appropriate protective equipment when using (gloves, lab coat, safety goggles).

C. Refer to SDS for more safety information.

III. Mikrosil Procedure

A. The traditional product kit consists of a larger tube of Mikrosil (typically brown, grey, black, white, or transparent) and a smaller tube of the catalyst. Kits typically also contain cards and wooden spatulas.

B. Take the following steps:

1. If powder is being used to develop prints on a surface, do that first.
2. Squeeze out a 1.5" to 2" length of base material (Mikrosil) and a slightly shorter strip of catalyst side by side on a card. The base material will be wider than the catalyst.
3. Using one of the wooden mixing spatulas, mix the two components together **thoroughly** on the card for about 20-30 seconds or until the base material absorbs the catalyst color and there are no spots or streaks.
    a. Note: Longer mixing times may result in the material setting too quickly.
4. Apply the casting material to the surface one of two ways:
    a. With the casting material still on the mixing surface (card), press the material against the area with developed prints.
    b. Use the wooden spatula to scrape off the material from the card and apply it to the area being collected.
5. After allowing sufficient set time (10 minutes or until hardened), carefully peel the casting away.

IV. AccuTrans Procedure

A. All necessary components should be provided in the kit.

B. Load the Dispenser:

1. Push the release lever upward and at the same time pull back the slide-bar.
2. Insert the cartridge downward into the dispenser's guiding grooves with the notch and close the locking flap.
3. Push the slide-bar to the front until there is resistance.
4. Remove the cover cap from the cartridge.
5. Place the mixing tip onto the cartridge opening (following the guide) and fasten with a quarter clock-wise rotation.

C. Take the following steps:

1. If powder is being used to develop prints on a surface, do that first.
2. Steadily press the dispenser's trigger and casting material will come out (already mixed together). Continue applying the mixture until the area to be collected is fully covered.
3. Once the material has been dispensed, use a spatula to spread the material in one direction to smooth the surface.

a. Tip: The spatula will stick and harden to the curing material and may provide a handle to assist in cast removal.

4. Allow material to harden (3-6 minutes) before removal.

5. Leave the mixing tip in place until next use (like a cap) or replace the cap onto the cartridge for storage.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/27/2019	**NUMBER:** LP.62 - Non-Conforming Work and QA Actions
	RELATED ORDERS: FSD.15 - QA Actions	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Non-Conforming Work and QA Actions	

I. POLICY: QA actions are the central components for maintenance and improvements of the quality management system, and are used to track quality related issues. The level of action taken for any non-conformity is dependent on the type and severity of the incident or problem, and whether the non-conformity is isolated or repetitive.

A. **General Information: QA Action-Correction (QAC)** is action taken to correct non-conforming work that has already occurred. The action taken to correct the non-conformity is based on the severity of the problem or occurrence. Non-conforming work refers to any aspect of the latent unit's work, both technical or administrative, that does not conform to unit policies, procedures, or agreed upon expectations of customers. Examples of non-conforming work and their corresponding level of QA action-correction are described below. For more information on non-conforming work and other forms of QA Actions, see FSD.15.

1. **QAC-1** (Most Significant): Action taken to address a ***significant*** technical or quality issue. Discrepancies or incidents that raise concern regarding the overall quality of the unit's work product, or the competency of an examiner. These non-conformities rise to the level of significant concern for the quality system, or a systemic problem within the unit. Documentation of the corrective action is described in Division Policy. See FSD.15, QA.18, FSDF.06, FSD.44 for more information about the evaluation of significance, required elements, documentation, and retention of corrective action records.

   a. Examples include:

      i. Reported erroneous tests, results, or conclusions.

      ii. Unreported test (work).

      iii. Erroneous testimony.

      iv. Unsuccessful proficiency or competency test.

      v. Misuse of reagents, methods, and equipment that had a deleterious impact on the evidence.

      vi. Audit findings.

      vii. Repeated QAC-2 non-conformities.

      viii. Use of erroneous exemplars resulting in reported erroneous conclusion(s).

ix. Erroneous identification: An *Identification* deemed to be an *Exclusion* during the Verification process.

2. **QAC-2:** Action taken to correct a non-conformity when the non-conforming work is of ***some significance*** and the investigation demonstrates that the validity and accuracy of the test result was not affected. Discrepancies or incidents not serious enough to cause immediate concern for the quality system or the unit's overall work, but do have an isolated affect on the work product. These non-conformities are typically detected during technical review and corrected prior to the release of results. QAC-2 incidents are documented on a ***Division Level-2 Correction Form*** and maintained in LIMS (FSDF.23). A copy or related documentation may also be maintained in the unit. Examples of QAC-2 (Level-2) incidents may include:

   a. Improper use of controls, reagents, methods, or equipment; **however, the validity of the result and quality of the work is demonstrated to not be impacted**:

      i. Use of expired reagents.

      ii. Misuse of a control; use of the wrong reagent control.

      iii. Not following proper processing methods or processing sequences.

      iv. Use of equipment that was not properly checked or calibrated.

   b. Not following unit procedures for instrument, equipment, or computer software (policy drift).

   c. Not handling evidence or packaging properly.

   d. Non-consensus decisions and conclusions upon review (verification or technical review):

      i. Erroneous exclusion: An *Exclusion* is deemed to be an *Identification* during the verification or other review process.

      ii. An *Identification* or *Exclusion* is deemed to be *Inconclusive* during the verification process.

      iii. Conflict resolution: blind verification used for conflict resolution regarding a conclusion.

   e. ABIS quality: non-consensus determination of suitability.

      i. Following a "full-screening," if analysts are unable to reach a consensus regarding the ABIS quality of a print.

   f. Equipment malfunction.

   g. Repeated QAC-3 errors.

3. **QAC-3** (Least Significant): Action taken to correct a non-conformity when the significance of the non-conforming work is ***minimal***. The correction is readily apparent and can be made quickly with little to no documentation required. These errors are typically found during the review process. Examples include:

   a. Transcription errors.

      i. Quality log indicates the LEFT thumb, but the RIGHT thumb of a subject was identified.

ii. Switching the month and day when documenting the lot # of a reagent.

b. Grammatical or typographical errors.

c. Spelling or grammar mistakes.

d. Wrong agency case number or requester in LIMS.

e. Omission errors.

i. Issuing a report without stating that exemplars were not located for an elimination subject.

ii. Leaving out of the notes which camera was used to document developed latent prints.

f. This type of non-conformity is typically corrected by the analyst. See Division Policy FSD.42 and FSD.43.

B. Documentation of all QAC-1 and QAC-2 non-conformities are evaluated by the Unit Supervisor.

C. Documentation of QAC-2 non-conformities are maintained within the Latent Unit and are available for review.

D. QA Actions do not address personnel issues and are not considered personnel actions.

II. References:

A. **SWGFAST Document #7**- Standard for a Quality Assurance Program in Friction Ridge Examinations (Latent/Tenprint)

1. **https://www.nist.gov/sites/default/files/documents/2016/10/26/swgfast_quality-assurance-latent-tenprint_5.0_121124.pdf**

B. **SWGFAST Document #15** -Standard for the Definition and Measurement of Rates of Errors and Non-Consensus Decisions in Friction Ridge Examination (Latent/Tenprint)

1. **https://www.nist.gov/sites/default/files/documents/2016/10/26/swgfast_rates-of-error_2.0_121124.pdf**

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 11/22/2017	**NUMBER:** LP.63 - Competency and Proficiency Tests
	RELATED ORDERS: FSD.23- Proficiency Testing	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Competency and Proficiency Testing	

I. Competency Tests: regardless of prior training and experience, all analysts will complete a competency test prior to doing casework in an area of testing (Comparisons, Processing, and ABIS).

A. **Purpose**

1. The purpose of a competency test is to asses an analyst's specialized knowledge, skills and abilities.

2. Competency tests are intended to challenge individual performance.

B. **Scope of Testing**

1. The scope of the competency test will be tailored to the analyst's job duties and to the extent they will do casework.

2. The analyst's competency test will include:

   a. Examination of samples (practical exam).

   b. Completion of a written examination to assess the analyst's knowledge of the particular area of testing and testing procedures (written exam).

   c. A LIMS generated report to demonstrate the analyst's ability to properly convey results and/or conclusions following unit policy guidelines. See LP.16

   d. Court-like questions and/or Mock trial (oral exam).

   e. See LP.53 for more information on latent competency tests.

3. A competency test may be required for existing Forensic Services Division staff if **new** methodologies and/or equipment have been introduced.

C. **Authorizations**

1. Upon authorization, the analyst is deemed to be authorized to use all equipment, instrumentation and procedures to the extent they received training and were competency tested.

2. The analyst is additionally considered to be authorized to issue reports and give opinions and interpretations in the area(s) for which training and competency has been documented.

3. Documentation of the analyst's competency test will be maintained in LIMS according to procedures detailed in QA.10. Staff authorizations will be maintained

by the Latent Unit Supervisor.

4. See LP.53 for a list of latent authorizations.

D. For more information about competency testing and authorizations, see FSD.21.

II. Proficiency Tests: All case-working analysts will complete at least one proficiency test per calendar year commencing the year following their competency test.

A. **Purpose**

1. Proficiency testing is an element of the Latent Print Unit's quality assurance program to ensure analysts maintain their skill set in the areas they perform work.

2. Where available and appropriate, **external** tests used by the Latent Unit will be from a proficiency test provider that is accredited to ISO/IEC 17043. If such a test provider is no longer available for external tests, the laboratory will gain approval from ANAB for alternative means by which the unit's performance can be assessed.

B. **Schedule of Testing**

1. The Unit Supervisor will maintain a schedule of proficiency testing for all Latent Print Unit staff who conduct casework. The schedule (plan) will take into account past, current and future unit casework assignments for the calendar year, as well as ensure the inclusion of a representative sample of tests within Friction Ridge Examination on the scope of accreditation.

   a. The **manufacturer's Due Date** is routinely used to track and schedule external proficiency tests.

      i. Tests created internally will also be given a **Due Date** for completion.

2. The Unit Supervisor is responsible for taking steps (as needed) to ensure that the analyst is not aware of the expected answers when a proficiency test is shared or reused.

3. **Every analyst performing comparison casework (or verifications/technical review) will take a *comparison* proficiency test each calendar year, preferably provided by an external source.**

   a. At least one external comparison proficiency test **per unit** will be reported to the accrediting body each year, however all external tests should be reported.

4. Every analyst performing ABIS casework will take an ABIS proficiency test at least once every 4 calendar years. This test will likely be created internally.

5. Every analyst performing processing casework will take a processing proficiency test at least once every 4 calendar years. This test may be created internally or externally.

6. Proficiency testing is required prior to returning to casework after an absence of greater than 12 months.

7. The Section Manager or Latent Unit Supervisor may initiate proficiency tests for any analyst in their section at any time. The Chief may initiate proficiency tests for any analyst in the Division at any time.

8. See FSD.23 for more information about the responsibilities of scheduling and assigning proficiency tests.

C. **Scope of Testing**

1. The proficiency tests are intended to monitor work as normally performed in the laboratory and are conducted using the currently approved procedures.

2. Work is done independently by the analyst, supported by notes and other documentation and released in a written report.

3. Prior to reporting the proficiency test results, work is to receive the same level of verification, technical review and administrative review as required for casework.

4. For external tests, results must be submitted to the proficiency test provider in order to be included in the provider's published external summary report prior to the manufacturer's due date.

D. **Documenting and Retaining Proficiency Test Records**

1. See FSD.23 for information regarding documentation specifications and retention of test records.

III. Determining Satisfactory or Unsatisfactory Competency/Proficiency Tests

A. For a test to be deemed **Satisfactory**:

1. Latent Comparison Test

a. All conclusions (Identifications and Exclusions) will be reported correctly.

b. While comparison tests are not designed to result in ***inconclusive or insufficient***, if an analyst reports this decision, the result must be qualified and supported according to the unit policy guidelines. This conclusion may result in not passing the test if it lacks support/documentation and may not be reported more than once per test. For conclusion guidelines, see LP.19.

2. Latent Processing Test

a. All test items are processed using the correct chemical and/or physical techniques and sequencing procedures, and prints develop in appropriate areas/quadrants as intended by the test maker.

b. Developed latent prints are appropriately captured (photographed or lifted).

3. Latent ABIS Test

a. Latent samples known to correspond with individuals registered to the database will ***Hit*** when searched in CAFIS and/or ULW by the analyst.

B. Administrative error discrepancies (clerical, sample confusion, improper storage or transfer, insufficient documentation etc.) may be addressed by counseling, remedial training, or other as deemed necessary by the Unit Supervisor and/or Technical Lead, but do not alone lead to an unsatisfactory test.

C. The quality (how test was created & expected results) of an internal test will be ensured prior to issuing the test. The quality of an external test will be established by the test provider/vendor.

D. The examiner will be informed of the criteria for successful completion of a test (as specified above in this policy) via review of this policy or by other means of communication prior to issuing the test.

E. If a test is deemed **Unsatisfactory**, steps will be taken to address the issue(s). See FSD.15

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.64 - Cross Contamination Prevention
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Cross Contamination Prevention	

I. Policy: All evidence will be handled, processed, and stored in a way that will minimize the possibility of loss, degradation, contamination and deleterious change.

A. The following are measures that will be taken in the Laboratory to ensure good housekeeping and evidence handling while processing evidence for latent prints.

1. The processing rooms will have limited access.

   a. When evidence is out, the access will be further limited to staff directly working or consulting on the exposed evidence.

2. **Staff processing items for latent prints will treat items as if DNA analysis may be needed at a later time.**

3. A mask will be worn by everyone upon entering the processing room(s) when evidence is out or in progress.

4. Re-hydrating latent residues by "huffing" with the mouth will **not be practiced,** therefore, if necessary another form of re-hydration must be used (e.g. use of steam from an iron with sterile water).

5. Prior to removing evidence from it's packaging for latent processing, staff processing the evidence will:

   a. Bleach/disinfect the work space

   b. Bleach/disinfect the equipment and tools to be used (pens, keyboard, trays, shelving, beakers, magnifying glass, or any other items with potential to make contact with the evidence or the examiner's gloves).

   c. Cover the work space with clean butcher paper. The surface area/work space **must** have a new clean butcher paper prior to swabbing for potential DNA.

   d. Apply new gloves

   e. Use a mask

   f. Use a hairnet

6. Once evidence has been removed from the packaging, the evidence and packaging will be on separate work areas to avoid contamination from the packaging.

   a. Staff will use designated "dirty" counter space areas for packaging to ensure it is separated from "clean" butcher paper covered counter top work areas for

evidence processing.

b. Staff will not touch the materials needed for swabbing with ungloved hands. Materials include: soil envelopes, swab packages, water ampules, pens, etc.

c. Gloves will be changed or bleached/disinfected **regularly and often** to prevent contamination and cross-contamination of evidence.

d. Items will remain in their packaging until needed for processing, preferably stored in the Evidence Storage Area.

e. The number of evidence items/cases out and open at one time should be minimized whenever possible. It is understood that some cases may be processed at the same time for efficiency (batching).

B. All "IN Progress" evidence should be kept closed or covered with butcher paper when not in use (if not sealed) to prevent loss of contents and/or contamination.

1. Refer to LP.09 for additional Evidence Handling procedures.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/05/2019	**NUMBER:** LP.65 - Photoshop
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB: 6.4**	
CHAPTER: Equipment	**SUBJECT:** Photoshop	

I. Photoshop is primarily used to document observations during ACE-V, to annotate digital images, and for the preparation of displays (court etc.). Image enhancements include any process that changes the brightness or color of any area of an image for the purpose of increasing visibility. Enhancements do not include changes to images that do not alter the content or do not increase visibility (for example, cropping, rotating, labeling, and converting file types). Other more advanced applications and uses of Photoshop must be approved by the Supervisor or Technical Lead prior to being used in casework. The Latent Unit will maintain a list of approved equipment, including Photoshop software, which will also include the current version in use.

A. The following examples are common uses of Photoshop and do not require step-by-step documentation.

1. Cropping or rotating
2. Marking 1st, 2nd, 3rd levels of detail, and documenting the presence of distortion, overlays, or other analysis observations
3. Labeling

B. Detailed notes including screen shots (when applicable) of the enhancement changes, or a copy of the metadata, will be included in the technical record when enhancements are made in Photoshop. Enhancements will be made to a working copy only. The following Photoshop enhancements will be documented in the technical record:

1. Levels and Curves, or other contrast/brightness adjustments
2. Inverting or changing the color appearance of an image
3. Scaling images to 1000 dpi, as needed for ULW search (See LP.28)

C. The following are examples of more advanced uses of Photoshop and require Supervisor or Technical Lead approval prior to use in casework:

1. Dropping out background colors or patterns (for example, red and blue on a Pepsi can or the background pattern on a check to visualize a print more clearly).
2. Putting multiple images together for better visualization of a single print (for example, different processing techniques to develop the same print or multiple photos on a round surface).

D. Photoshop software is available to all personnel in the Latent Unit.

E. Planned maintenance and intermediate checks are not necessary to ensure the performance of this equipment; however, major software updates will require a performance

verification.

II. History Log

A. The history log must be turned **on** prior to processing digital images. This will allow for the tracking of all processing performed on the image. If processing of the image requires applications of Photoshop beyond what is commonly used in casework (above), the history log (metadata) will be maintained and detailed notes must be included.

B. To ensure the History Log is on, select ***Ctrl K*** (Preferences, History Log) and the metadata box will be selected (Detailed in drop down).

III. Images acquired from digital cameras and scanners must be calibrated ***when 1:1 life size output is necessary for printing*.**

A. **Instructions for calibrating an image 1:1**

1. Filter>Distort>Lens Correction
2. Click on Straighten Tool in the upper left
3. Click and drag a straight line in the photo (using the scale in photo)
4. Click on "Show Grid" to check if scale is straight
5. Crop the image (latent) to a **known** distance (using ruler)
6. Image>Image Size
7. Uncheck "Resample Image"
8. Change the dimension to the proper system (imperial or metric)
9. Enter the known distance
10. Copy the number resolution box and click Cancel
11. Undo the crop (Edit>undo crop) and photo should return to original state
12. Image>Image Size
13. Make sure the Resample Image box is Unchecked
14. Highlight the number in the Resolution box and paste in the resolution value from step 10 above
15. The image won't look different, but when printed the scaled size will be 1:1

IV. Court Displays (Note: The final display will be reviewed by the Unit Supervisor or Technical Lead prior to its use in court)

A. Images may need to be calibrated or rescaled. Instructions may be found in the User Guide.

B. In order to obtain the best image quality when printing the final exhibit, ensure images are acquired at the highest resolution (1000 or 1200 dpi).

V. References: the following are available for further instructions on Photoshop:

A. ***Adobe Photoshop CC Classroom in a Book (*2017 edition and any updated releases as needed)**.

B. **https://helpx.adobe.com/photoshop/tutorials.html**

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/28/2019	**NUMBER:** LP.66 - Major Case Prints
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Major Case Prints	

I. General Information

A. Major case prints are exemplars of all the friction ridge detail on the hands or feet.

B. Major case prints may also include special exemplars of friction ridge detail not typically obtained through traditional collection techniques.

C. If special exemplars are requested by an agency, or needed by an analyst to complete an examination, arrangements should be made with the Records & Identification Unit to have them collected.

D. Collection of major case prints typically will occur at the jail or at the morgue.

1. If an analyst is required to collect the exemplars outside of the lab, the task must fall under crime scene services. Refer to crime scene manual for further information.

2. Tips for collection:

a. For a live person, instruct the individual to look away during the collection so not to assist in the process and to relax.

b. At times an individual may have thin or worn ridges. For the collection to be more successful, apply light pressure and use very little ink or powder.

c. A technique known as "milking the finger" can be used to raise the fingerprint ridges prior to collection. This technique involves applying pressure or rubbing the fingers in a downward motion from palm to fingertip.

d. It may also be helpful to apply lotion.

II. Methods of Collection: Deceased

A. Photography

1. In most cases, photography will be the first method of collection attempted as subsequent collection methods may cause damage to the friction ridge skin.

2. Images of friction ridge skin are treated as evidence submissions in LIMS.

3. **Ensure camera is set to RAW and include a scale prior to capturing images.**

B. Mummified Friction Ridges

1. Hands and feet in a mummified state are extremely hard due to lack of moisture in the body.

2. Photography may be the best option of collection.

3. **Mikrosil or Accutrans** are also available. This method will record ridge detail in areas that may not be smooth and flat (e.g., wrinkled fingers). The casting material is minimally invasive and should not destroy the friction ridge skin as long as the skin is still securely attached to the hands or feet. For more information see LP.57.

4. **Downy Softener Method**: If the above methods did not provide usable friction ridge detail, the Downy Softener method may be utilized. This will require having the fingers removed from the hand and submitted as evidence from the Coroner's Office. Individual fingers are easier to rehydrate than when attached to the rest of the hand; however, if there is lack of clear ridge detail on the fingers, or major case prints are needed, this method may also be used on the palms and feet. Caution must be taken as some areas of skin may become overly hydrated and can tear.

    a. Mix 20g of Salt (approximately 1 tablespoon) with 25ml of Downy Softener and 25ml of tap water in a bottle or beaker. Shake all contents until mixed together well.

    b. Pour mixture into a container large enough to hold the friction ridge surface (finger, hand, foot).

    c. Use caution to keep each body part separate and properly labeled; multiple fingers should be kept in separate tubes.

    d. Soak the friction ridge area(s) in the solution while monitoring the hydration progress to determine when the skin becomes sufficient for analysis.

    e. Remove from solution when ridges appear sufficiently hydrated and allow to dry.

    f. Photograph the friction ridge surface area first, or brush with powder and lift with handiprint to collect exemplar prints.

5. **Boiling Method:** This should be attempted only when nothing else has softened the skin sufficiently.

    a. Using a hot plate, boil a beaker full of water.

    b. Once the water is boiling, remove the source of heat (unplug the hot plate) and deposit the friction ridge skin into the water.

    c. Allow the skin to boil for 5-10 seconds, then observe the friction ridge detail for softening. If the skin is not sufficiently soft, the boiling method may be repeated twice more. It is recommended that this method be attempted no more than three times because prolonged exposure to high heat can damage the skin.

C. Soaked Friction Ridges

1. A deceased person found in a body of water or having been exposed to elements such as rain for an extended period of time, may have extremely wet or damaged friction ridge detail making the skin susceptible to tearing or "degloving." Degloving refers to the skin separating from the rest of the hand and sometimes will have the appearance of a glove. Extreme caution should be used to not further damage any detail available on the detached skin. The following are recommended techniques for obtaining a recording of this type of friction ridge detail.

a. **Dry the skin:** Attempting to dry the area of friction ridge skin that will need to be recorded will make the processing methods more successful. Using towels, gently dry the skin being cautious not to cause damage or tearing.

b. **Photography:** May be the best option for capturing delicate ridge detail.

c. **Powder and Handiprint:** Apply black powder to the friction ridge skin area and carefully lift the detail using Handiprint. The skin may need to continually be dried during this process.

d. **Rolling the Skin with Ink or Powder:** If the skin has been "degloved," slip the dried skin over your gloved hand. Apply a small amount of ink or powder and print as if it were your own hand.

e. **Photographing the Internal Skin Layers:** If there is no usable friction ridge detail visible on the epidermal layer, obtaining the detail from the dermal layer of skin may be appropriate.

i. Note: when analyzing the detail, the print would be vertically flipped; a mirror image.

D. Burned Friction Ridges The methods for obtaining a recording of the friction ridge detail from a burned victim are very similar to the method from wet friction ridges. See procedures listed above.

1. Extreme caution should be used as to not further damage any detail available. Prior to collection, attempt to clean off any soot and debris present on the skin.

E. Severe Decomposition A deceased person may have undergone severe decomposition in which the tissue has decomposed enough that there is little skin left on the hands and feet. Additionally, the tissue may be very soft. Extreme caution should be used to not damage any detail available. **Photography** may be the best option for capturing this delicate ridge detail.

III. Methods of Collection: Live

A. Photography (See above)

B. Handiprint with Powder

1. Handiprint is a flexible plastic with an exceptionally smooth adhesive coating. It has distinct advantages for friction ridge skin collection over other methods because it conforms to the curves of the hands and feet.

2. Lightly dust the entire surface of the palm or foot with black fingerprint powder.

3. Separate the release paper from the Handiprint lift sheet and press the adhesive side onto the hand or foot in one continuous motion.

4. Firmly press in the voided areas (typically in the center) using caution not to lift up the hand or foot then place back down onto the sheet (causing overlapping impressions).

5. Cover the hands and fingers or feet and toes including around the sides with the Handiprint, collecting as much of a complete sample as possible.

6. Gently pull the Handiprint off of the skin and apply a piece of clear plastic (acetate sheet) over the adhesive side.

7. Additional attempts may be necessary to ensure all areas of friction ridge skin have been clearly collected.

8. Handiprint comes in different sizes and may require being cut into smaller pieces, particularly for printing individual fingers or toes.

C. Ink on Fingerprint Card

1. Ink printing is typically used if it is the only available resource at the time of collection.

2. The hands or feet should be cleaned prior to printing.

3. Roll the finger on the inking plate or pad so the entire fingerprint pattern area is evenly covered with ink.

4. The ink should cover from one edge of the nail to the other and from the crease of the first joint to the tip of the finger.

   a. Using the correct amount of ink is vital.

5. When taking the rolled impression, the side of the finger bulb is placed upon the card. The finger is then rolled to the other side until it faces the opposite direction.

6. Care should be exercised so the bulb of each finger, from tip to below the first joint, is rolled evenly. Generally, the weight of the finger is the maximum pressure needed to clearly record a fingerprint.

7. In order to take advantage of the natural movement of the forearm, the hand should be rotated from the more difficult position to the easiest position.

8. This requires the thumbs be rolled toward and the fingers, away from the center of the individual's body.

9. Take care to lift each finger up after rolling to avoid smudging.

10. Palms and feet are captured similarly to fingers. Apply ink to all areas of the friction ridge skin and press down on the card. Be sure to include pressure in the center areas to ensure contact of the skin with the card.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 03/12/2018	**NUMBER:** LP.69 - Validation and Method Selection
	RELATED ORDERS: FSD.27 - Method Selection & Validation, FSD.15 - Non-Conforming Work and QA Actions, FSDF.12 - QA Action Request - Validation and Performance Verification, FSDF.20 Performance Verification and Validation Plan, FSD.34 Control of Software and Data	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ISO/IEC 17025:**	
CHAPTER: Latent Unit Technical Manual/ Quality Assurance	**SUBJECT:** Validation and Method Selection	

I. Policy: All new methods, procedures, software, or equipment must be validated or performance checked before use in casework.

A. **Introduction**

1. New methods, procedures, software, or equipment, including most adjustments or changes to current procedures, must be tested to ensure that the change or improvement is fit-for-purpose. Approval of the method for use in casework is documentation that the method is fit for the intended use. The validation or performance verification will be as extensive as necessary to meet the needs of the given application.

2. **See FSD.27 for the necessary components, information, and requirements of Method Development, Method Validation, Performance Verification, and Deviation from Approved Methods.**

B. **Plan**: Prior to starting the validation, a plan will be documented and approved. **The plan will be documented using FSDF.20 and includes:**

1. Description of the method
2. Scope of Validation
3. Type of samples to be tested and intended use in casework
4. Time frame for validation
5. Personnel involved in and responsible for the validation
6. Performance characteristics to be evaluated and the criteria for acceptance

7. Limitations of the method and the impact on reported results, opinions, and interpretations
8. Under what conditions additional validation is required
9. Safety considerations
10. Data required to report a test result, opinion, or interpretation and the process for data interpretation
11. Assessment of training, competency, authorization and policy updates

C. **Roles and Responsibilities**

1. The Manager or Latent Unit Supervisor is responsible for submitting the validation plan to the QA coordinator and completing the QA Action documentation (See FSD.15).
2. The latent unit technical lead is responsible for reviewing and approving all latent validations.
3. The QA coordinator is responsible for reviewing validation plans prior to start, and reviewing validation documentation prior to implementation of new methods.
4. **See FSD.27 and LP.72 for more details on roles and responsibilities.**

D. **Performance Verification**

1. A performance verification is a check of the reliability of a previously validated method, procedure, software, or equipment by demonstrating through ***objective evidence*** that the performance characteristics of the item have been met.
2. A performance verification is ***less*** extensive than a validation.
3. A performance verification may be performed when minor modifications to an existing method, procedure, or software are made.
4. The Latent Unit Supervisor and Technical Lead are responsible for determining when the change is significant enough to require a full validation.
5. A performance verification may be as extensive as necessary to document fitness for purpose and may include, but is not limited to:
    a. Comparison to other methods currently in use.
    b. Demonstration that the method or equipment yields the expected result.
    c. Assessment of factors influencing the result.

E. **Method Validation**

1. A validation is a documented process of performing a set of experiments which establish the efficacy and reliability of a technique or procedure, or modification thereof. A validation must have a set of particular requirements specific for the intended use of the method and demonstrate through ***objective evidence*** that those requirements are fulfilled.
2. Scientific Working Group (SWGFAST) and OSAC (Friction Ridge Subcommittee) documents are resources the latent unit may choose to rely on to determine the scope and extent of a validation.

3. Validation studies may be as extensive as necessary to demonstrate fitness for purpose.

4. **For further details on writing method procedures and validation study recommendations, see FSD.27.**

F. **Software**

1. When computers or automated equipment are used for the acquisition, processing, recording, reporting, storage or retrieval of test data, the laboratory will ensure that **laboratory configured** software is suitably validated and documented as being adequate for use.

2. Commercial off-the shelf software used within its designed application range will be considered to be sufficiently validated.

3. Records will be maintained of software significant to the result and shall, when possible, be uniquely identified.

4. See FSD.34 for more information on control of software and data.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 01/20/2015	**NUMBER:** LP.70 - Discoveries
	RELATED ORDERS: FSD.45 - Discovery Requests for Records,	
APPROVED BY: Kathryn Novaes & Nivan Gill	**ASCLD-LAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Discoveries	

I. The Latent Unit Staff shall comply with all reasonable and legitimate Discovery Requests. See FSD.45 for more information on discoveries.

A. Discovery requests are routed to the Forensic Services Division via the District Attorney's Office.

1. These requests typically pertain to documents related to analysis or records kept in the normal course of Laboratory business.

2. The District Attorney's office should review the discoveries for relevance, before sending the request to the laboratory.

3. If the discovery information sought appears to be unreasonable or irrelevant, a Supervisor or staff member assigned the discovery may contact the District Attorney's office for assistance in clarifying or modifying the request, obtaining a new request or quashing the discovery.

4. Any "RUSH" discoveries may need to be provided as paper or faxed copy. The "RUSH" discoveries need to be approved by the Supervisor to assess the exigency of the circumstances (FSD.45).

B. Discovery Procedures

1. The Clerical staff will create a discovery request in LIMS and should image the request, report with notes, and chain of custody.

a. The "Latent Discovery" service under the Latent Unit should be used.

b. The analyst who completed the analysis will typically be assigned the discovery.

2. The assigned analyst will review the discovery request and determine what information is needed.

3. **The discovery requests may be completed electronically and distributed via ARIES**.

a. The electronic files of the records requested will be gathered and uploaded into LIMS.

i. Save images to the C-drive or desktop as opposed to a networked drive prior to uploading to LIMS.

ii. If concatenation is desired, detailed procedures on how to concatenate .pdf documents can be found in "Electronic Batch Documents" (TOX.10).

b. In the LIMS imaging module, right-click each image to be released as part of the discovery, and select "Send to iResults". A check mark will appear next to the "Send to iResults" menu.

c. The electronic discovery records will be accessible via ARIES for the District Attorney's office to retrieve. There is a 24 hour lag from the time the case has been Admin Reviewed before the records will be accessible to the DA's office.

4. **Records not able to be uploaded into LIMS will be provided to the District Attorney's Office outside of ARIES**.

   a. Discovery records may be compiled on CD, DVD or other electronic media. Multiple copies of the electronic media may be provided. These may include records not amenable to be uploaded as images e.g. pictures, raw data, very large documents etc.

5. The discovery request will be marked as "Draft Complete" by the analyst completing the discovery.

6. The completed discovery will be checked and marked "Admin Reviewed" by a Supervisor or a member of the latent unit.

7. A copy of the discovery record(s) released, will be retained (FSD.45).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 05/03/2019	**NUMBER:** LP.71 - 1,2-Indanedione
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Equipment	**SUBJECT:** 1,2-Indanedione	

I. Development Technique: 1,2-Indanedione on porous items

A. Introduction

1. 1,2-Indanedione is an amino acid sensitive latent print processing reagent for porous items. This chemical reacts with the amino acids in friction ridge skin residues left behind and produces fluorescent products that render latent prints visible. Ridge detail that develops initially is a visible pale pink color, but with the use of the Coherent TracER Laser, or a blue-green light (505-570nm) from an Alternate Light Source (ALS) it will fluoresce yellow. Optimum viewing and photography is done with an orange or red filter.

2. 1,2-Indanedione treated porous surfaces can subsequently be treated with Ninhydrin. **See LP.40 for more information on Ninhydrin**

B. Procedure

1. 1,2-Indanedione works best on light colored porous surfaces and is **not** recommended for use on red, black, or dark colored items.

2. 1,2-Indanedione is **not** a recommended processing method for Newspaper.

   a. Use Ninhydrin when processing newspaper.

3. When thermal paper is being processed with 1,2-Indanedione, it was established during testing that the CARON chamber should **not** be used due to the addition of heat having undesirable effects on the thermal paper. However, using 1,2-Indanedione provided better results than using Ninhydrin to process thermal paper for latent prints.

C. Quality Assurance and Intermediate Checks

1. Reagent will be tested when it is made and again with every use. Documentation will be on the reagent log or in the case notes.

2. A test strip will be used to ensure the 1,2-Indanedione is properly reacting to amino acids by using the Amino Acid Reference Pad, and the results will be documented in the case notes. A donor print may be used to test this reagent if an Amino Acid Reference Pad is **not** available. **See LP.40 for more information on the Amino Acid Reference Pad**

a. Pressing the rubber stamp onto the amino acid portion of the reference pad. Press the rubber stamp onto a piece of paper 3-5 times sequentially creating a test strip. The test strip will then be processed with 1,2-Indanedione following the application technique noted below.

i. A positive reaction occurs when a visual light pink color develops (yellow color with the Laser or ALS) in the pattern of the rubber stamp used.

ii. A negative reaction occurs when no color change appears in the area stamped with amino acid.

iii. Should a negative reaction occur, run a second test strip using a different amino acid pad or donor.

1. If a second negative reaction occurs, do not use the 1,2-Indanedione on evidence and notify the Supervisor or TL.

D. **Application**

1. Reagent is applied to porous item(s) by using a spray, wash or dip (preferred) method inside a fume hood.

a. Ridge detail is usually clearest and most detailed when dipped in 1,2-Indanedione allowing the chemical to thoroughly and evenly disperse on the porous item.

2. Processed item(s) are air dried, permitting the carrier solvent to evaporate completely.

3. Item(s) are placed in the CARON fingerprint chamber (with the exception of thermal paper) using the following settings:

a. 100ºC for 10 minutes. **See LP.55 for the CARON chamber instructions**

4. Item(s) are examined for ridge detail using the TracER Laser or ALS.

5. Developed prints that are potentially usable must be digitally captured for preservation.

6. Due to the excessive heat applied to items while using this reagent, DNA collection is not likely to be successful following this technique.

E. **Sequencing**

1. Application of multiple techniques targeting porous development may only occur in the following order:

a. 1,2-Indanedione.

b. Ninhydrin **See LP.40 for more information on Ninhydrin.**

c. Physical Developer **See LP.41 for more information on Physical Developer.**

F. **Preparation - Two options: reagent preparation in laboratory and pre-measured mixture**

1. For reagent preparation at laboratory, mix (in order, using magnetic stirring device) the following together:
    a. 2 grams 1,2-Indanedione powder.
    b. 70 milliliters Ethyl Acetate.
        i. mix well before adding next step.
    c. 930 milliliters HFE-7100 (3M Novec developed substitute for Freon).
    d. Mix well then transfer to a properly labelled working solution bottle. Store solution protected from light.
    e. Record the making of the reagent on the reagent log. **(See LPF.49 for more information)**
    f. Reagent expires after 1 year.
2. A pre-measured mixture supplied by Tri-Tech Forensics may be used. The components are added together before use as follows:
    a. Add Part A liquid to Part B powder.
    b. Shake (in Part B container) thoroughly to mix.
    c. Pour mixed Parts A and B into Part C bottle.
    d. Shake to mix for working solution.
    e. Due to its quick expiration after mixing the components together, this working solution will be discarded immediately after use.

G. **Lot Number**

1. The following will be considered the lot number: **Date the reagent was made** plus **analyst initials**. (Example: 01012015 KN).
2. The lot # of the 1,2-Indanedione reagent will be recorded in the case notes.

H. **Safety**

1. 1,2-Indanedione may be harmful if inhaled, ingested, or absorbed by the skin. If contact is made with the eyes, there is risk of serious eye damage.
2. Where ventilation is insufficient, it is recommended to use an approved vapor respirator.
3. Gloves, goggles and lab coat must be worn while using this product.
4. Immediately wash hands after use.
5. A fume hood or full face respirator is necessary for processing items with 1,2-Indanedione.

I. **References**

1. http://www.cbdiai.org/Reagents/indane.html
2. Soilovic, M.; Lennard, C.; Wallace-Kunkel, C.; Roux, C. “Evaluation of a 1,2-Indanedione Formulation Containing Zinc Chloride for Improved Fingermark Detection on Paper”, Journal of Forensic Identification, 4/57 (1), 2007

3. 1,2 Indanedione Reagent, www.tritechforensics.com (paper that comes in the box with the chemical from Tri-Tech Forensics)
4. Sigma-Aldrich Safety Data Sheet

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 02/21/2019	**NUMBER:** LP.72 - Qualifications and Duties
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Latent Unit Technical Manual	**SUBJECT:** Qualifications and Duties	

I. Policy: Personnel in the Latent Unit will possess the education, training, and experience requisite to perform their job duties.

A. Job Descriptions

1. Job titles held within the Forensic Services Division are listed within (FSD.03).
2. County Human Resources Department maintains written job descriptions for each job title.
3. Personnel within the Latent Unit may perform specific job duties based on their job title. Their qualifications, responsibility, and/or authority in each position is described below.

B. Job Duties

1. Latent Processing

a. Role: To identify and apply the proper latent processing techniques for the purpose of developing and/or enhancing latent prints on various types of evidence. To photograph and/or lift latent prints for further evaluation and comparison. To identify and swab areas appropriate for potential DNA testing. To prepare notes, case reports, and provide expert testimony. Additional duties may include preparation of reagents, calibration of equipment and other quality control checks, and ordering supplies.

b. Qualifications: Staff conducting latent processing will be employees of the Sheriff's Office and have, at a minimum, the following education, experience, and training:

i. Education: 15 semester or 20 quarter units from an accredited college/university that must include a course in each of the following: (1) English Composition; (2) Mathematics or Statistics; (3) Chemistry, Biology, or other Physical Science (with a laboratory section).

ii. Training/Experience: Prior experience or training (in-house or external) in latent processing techniques to include; hands-on testing in the types of procedures performed in the Latent Unit. (See LP.31). The category(s) of tests the examiner has been trained to perform will be documented on the Latent training log. (See LPTF.07)

iii. Authorization: A competency test in the category(s) of testing/processing must be successfully completed prior to authorization to conduct casework. An examiner's authorization and their scope of authorization to conduct casework will be documented on a completed authorization form (see LPF.42) and will be maintained by the Unit Supervisor.

2. Latent Comparison

a. Role: To recognize and classify latent prints suitable for comparison, and if determined to be suitable, compare the friction ridge detail to exemplar prints from known individuals.

b. Qualifications: Staff conducting latent comparisons will be employees of the Laboratory and have, at a minimum, the following education, experience, and training:

i. Meet the education requirements for a Fingerprint Examiner or the degree requirements for a Criminalist.

ii. Meet the experience requirements of a Fingerprint Examiner or have equivalent prior experience or training (in-house or external) with the ACE-V methodology for conducting print comparisons. See LPT.08 for the scope of training required using the ACE-V methodology. The elements of comparison training will be documented on the Latent training log. (See LPTF.08)

c. Authorization: A competency test must be successfully completed prior to authorization to conduct casework. An examiner's authorization and their scope of authorization to conduct casework will be documented on a completed authorization form (see LPF.41) and will be maintained by the Unit Supervisor.

3. ABIS (Automated Biometric Identification System)

a. Role: To recognize the various levels of quality and detail of latent prints and assess it's potential for ABIS entry. To properly enter and operate the friction ridge automation technology and to draw proper conclusions regarding potential candidate hits.

b. Qualifications: Staff utilizing ABIS will be employees of the Laboratory and have, at a minimum, the following education, experience, and training:

i. Meet the education requirements of a Fingerprint Examiner or degree requirements of a Criminalist.

ii. Meet the experience requirements of a Fingerprint Examiner or have equivalent prior experience or training (in-house or external) with the use of ABIS. See LPT.09 for the scope of training associated with ABIS. The elements of ABIS training will be documented on the Latent training log. (See LPTF.09)

c. Authorization: A competency test must be successfully completed prior to authorization to conduct casework. An examiner's authorization and their scope of authorization to conduct casework will be documented on a completed authorization form (see LPF.40) and will be maintained by the Unit Supervisor.

4. Latent Screening

    a. Role: To evaluate latent prints to determine if sufficient friction ridge detail exists for a comparison or an ABIS search.

    b. Qualifications: Staff performing latent screening will be employees of the Laboratory and have, at a minimum, the following education, experience, and training:

        i. Meet the education requirements of a Fingerprint Examiner or degree requirements of a Criminalist.

        ii. Meet the experience requirements of a Fingerprint Examiner or have equivalent prior experience or training (in-house or external) with Latent Print Comparisons. See LPT.08 for the scope of training associated with the suitability of latent prints for comparison. The elements of training for screening prints will be documented on the Latent training log. (See LPTF.08).

    c. Authorization: A successfully completed competency test in latent comparison must be successfully completed prior to authorization to conduct casework. An examiner's authorization and their scope of authorization to conduct casework will be documented on a completed authorization form (see LPF.42) and will be maintained by the Unit Supervisor.

5. Ten-Print/Latent Inquiry (T/LI) and Palm print/Latent Inquiry (P/LI)

    a. Role: To screen potential ABIS hits resulting from continuous searches of the unsolved latent database. The screening entails evaluating overall ridge detail similarities exhibited between the registered latent print and the queue of candidates.

    b. Qualifications: Staff evaluating T/LI and P/LI queues will be employees of the Contra Costa Sheriff's Office. They will have at a minimum the following education, experience, and training:

        i. Meet the education requirements of a Fingerprint Technician, Fingerprint Examiner, or degree requirements of a Criminalist.

        ii. Meet the experience requirements of a Fingerprint Technician or Fingerprint Examiner or have equivalent prior experience or training (in-house or external) with the use of ABIS. See LPT.09 for the scope of training associated with ABIS. The elements of ABIS training will be documented on the Latent training log. (See LPTF.09)

        iii. Fingerprint Technicians will not: perform a complete comparison of the candidate match, draw conclusions of a match, serve as a reviewer, prepare reports, release results to any outside agency, or testify in court regarding the screening.

    c. Authorization: A competency test must be successfully completed prior to authorization to perform ABIS screening. Staff's authorization and their scope of authorization to conduct T/LI and P/LI screening will be documented on a completed authorization form (see LPF.40) and will be maintained by the Unit Supervisor.

6. Technical Leader

a. Roles and Responsibilities: The Technical Leader will work closely with the Unit Supervisor on quality issues and be responsible for the following duties:

i. Oversee the technical operations of the Unit.

ii. Oversee Quality Assurance of the Latent Unit.

iii. Evaluate and document the approval of all validations and methods, and approve new or modified procedures.

iv. Review the training records for new hires and approve their qualifications prior to casework.

v. Review latent unit procedures as needed.

vi. Review and approve training, quality assurance measures, and proficiency testing program.

vii. A newly appointed Technical Leader will be responsible for reviewing relevant validation studies and methodologies currently used by the unit.

viii. Conduct verifications and assist with technical and administrative review of casework.

ix. Assist in assigning and administering proficiency and competency tests.

x. Assist in technical problem solving.

xi. May recommend suspension of casework for an individual or for the Unit.

b. Qualifications: The Technical Leader must be a full time employee of the Laboratory and have, at a minimum, the following education, experience, and training:

i. Meet the education requirements of a Fingerprint Examiner or degree requirements of a Criminalist.

ii. A minimum of four years of full-time laboratory experience as a qualified Latent Print Examiner. The four years of experience must be in the Latent Print Unit (full-time) conducting **Comparison Casework.** This experience must have been obtained at a laboratory where the Latent Print work was conducted for the examination of prints in criminal matters.

iii. Be a certified Latent Print Examiner by the International Association for Identification.

c. Authorization: The Technical Leader will meet the same requirements for authorization to conduct casework as other latent print examiners.

7. Technical and Administrative Reviews

a. Role: Technical reviews are independent of a verification. A technical review may be independent of or combined with an administrative review as one process.

i. See LP.46 for a list of technical review specifications.

ii. See FSD.18 for a list of administrative review duties.

b. Qualifications: The technical reviewer will be an employee of the laboratory who is a current or a previously qualified latent print examiner in the methods used at the laboratory, as well as, meets the experience and training requirements as specified in LP.46.

i. For best practice, the administrative reviewer typically will also be a qualified technical reviewer, however it is not required.

c. Authorization: Technical reviews will be conducted by individuals that have been found competent in the latent print discipline and who have been authorized to perform technical reviews.

i. Once an examiner has demonstrated competence in the technical review process (see LP.46 for criteria to demonstrate competence), authorization will be granted. Authorizations will be documented on completed authorization forms (see LPF.40 , LPF.41 , LPF.42) and will be maintained by the Unit Supervisor.

ii. Administrative reviewers are authorized by supervisors or managers, per FSD.18 . The authorization will be documented on a completed authorization form (see LPF.41).

8. Validations and Performance Verifications

a. Authorization: Latent Unit staff found competent in the latent discipline may perform development, modification, verification and validation of methods.

b. See LP.69 for more information on validation and method selection.

9. Verifications

a. Role: A verifier conducts an independent analysis, comparison, evaluation (ACE) of a latent print comparison to either support or refute the conclusions of another examiner. See LP.23 for a list of the verifier's responsibilities.

b. Qualifications: The verifier will be an employee of the laboratory who is a current qualified latent print examiner in the methods used at the laboratory, as well as, meets the experience and training requirements as specified in LP.23.

c. Authorization: Verifications will be conducted by individuals that have been found competent in the latent print discipline and who have been authorized to perform verifications.

i. Once an examiner has demonstrated competence in the verification process (see LP.23 for criteria to demonstrate competence), authorization will be granted. Authorizations will be documented on a completed authorization form (see LPF.41) and will be maintained by the Unit Supervisor.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 04/10/2019	**NUMBER:** LP.73 - Assuring the Quality of Tests
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:** 7.7	
CHAPTER: Quality Assurance	**SUBJECT:** Assuring the Quality of Tests	

I. POLICY The latent unit is committed to assuring the accuracy and reliability of the tests performed. The latent unit assures the quality of test results in a variety of ways.

A. Methods to Monitor the Validity of Results

1. Use of reference and quality control materials

   a. See LP.40 and LP.71 for more information on use of the amino acid reference pad.

   b. See LP.36 for more information on use of a blood reference standard.

   c. See LP.31 and individual processing procedures for more information on quality control and test strip requirements.

   d. See LP.28 and LP.18 for more information on use of a reference print to check ABIS.

2. Functional and intermediate checks of testing equipment

   a. See FSD.33 for more information on the requirement of a functional test of any equipment before being placed into service.

   b. See LP.18 for more information on periodic checks of equipment to ensure on-going proper function.

   c. See LP.28 for more information on periodically checking ABIS.

3. Review of reported results

   a. See FSD.17 for more information regarding analyst responsibilities for checking reported results and conclusions.

4. Verification of results

   a. See LP.23 for more information on the verification process. Interpretation decisions reached by an analyst of Identification and Exclusion will be verified by at least one qualified examiner. An inconclusive decision is verified at the discretion of the analyst.

b. The verification is not only the verification of the result, but the verification of the process and method used by the analyst to obtain the result.

c. See LP.23 for more information on the conflict resolution process for Verification.

5. Technical and administrative review

a. See LP.46 for more information on technical review.

b. See LP.31 for more information on the photo-documentation review requirements for test strips used for quality control purposes.

c. See LP.28 for more information on the documentation requirements for ABIS that includes a review of the minutiae selection used to launch a print through CAFIS.

d. See LP.31 for more information of the review requirements for evidence with ridge detail present that has no value.

6. Intralaboratory comparisons

a. See FSD.23 for more information.

B. Documentation and Recording

1. The data derived from monitoring activities above are documented the following ways:

a. Equipment Logs.

b. Reagent Logs.

c. Level 2 Corrective Actions.

d. Division Level Corrective Actions.

C. Monitoring

1. The outcome of monitoring is reviewed, at minimum, annually during an internal audit.

D. Methods Not Used to Monitor Tests

1. At this time, the latent unit does not use calibrated alternative instrumentation, control charting, replicate testing, nor correlating results from different characteristics of an item as those methods are not applicable to latent testing.

2. At this time, the unit does not retest retained items as all evidence items are returned to submitting agencies.

3. At this time, the unit does have procedures for blind verification but the process is not routinely used.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.02 - History of the Science of Fingerprints
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** History of the Science of Friction Ridge Skin Analysis	

I. THE HISTORY OF THE SCIENCE OF FRICTION RIDGE SKIN ANALYSIS (LPTF.02 History Training Checklist)

A. Purpose

1. To acquaint the trainee with the historical background of the science of friction ridge skin analysis.
    a. From early recordings and teachings to modern methodologies and filing systems used today.

B. Objectives

1. The trainee will gain an understanding of the history of friction ridge skin examination dating back to prehistoric times, and will be exposed to other means of personal identification once used.
2. Upon completing this training module the trainee will possess the ability to recall notable historical events and early pioneers in friction ridge skin analysis.

C. Discussion

1. The technical basis for latent print individualization is based on the premises that friction ridge skin is persistent and unique, resulting in its use as a reliable form of personal identification for hundreds of years.
2. Readings for this training module focus on Sir Edward R. Henry, Sir William James Herschel, Dr. Henry Faulds, Alphonse Bertillon, Sir Francis Galton, Juan Vucetich, and others, as well as the early FBI Identification Division.

D. Examination

1. Successful completion of this module of training will be determined by a written test.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.03 - Biology and Physiology of Friction Ridge Skin
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Biology and Physiology of Friction Ridge Skin	

I. BIOLOGY AND PHYSIOLOGY OF FRICTION RIDGE SKIN (LPTF.03 Biology and Physiology Training Checklist)

A. Purpose

1. To acquaint the trainee with the biological nature of friction ridge skin and its development, ridge characteristics, and the anatomy of the hands and feet.
2. To familiarize the trainee with general chemical composition of sweat and latent fingerprint residue.
3. To demonstrate the concept of uniqueness and persistence, the premises behind friction ridge skin examination.
4. To provide the trainee with sufficient practical knowledge in these subjects which will aid the trainee in understanding future lessons in the training program.

B. Objectives

1. The trainee will attain:
    a. The ability to define key terms.
    b. An understanding of the biological significance of friction ridge skin patterns and the epigenetic factors that influence their formation.
    c. Familiarity with cell differentiation and how friction ridges and minutiae form in utero, including the time frame in which they develop.
    d. Knowledge of the concept of biological uniqueness and persistence.
    e. An understanding of the general chemical composition of human sweat as a means of understanding the composition of latent print residue.

C. Goal

1. Upon completing this training segment, the trainee will possess an understanding of fundamental biological, embryological, and physiological principles for essential knowledge, as well as complement other phases of subsequent training.

D. Discussion

1. The minutiae on friction ridge skin can be grouped into three basic individual characteristics or combination of these characteristics:

    a. Dot (an isolated friction ridge unit whose length approximates its width in size)

    b. Ending Ridge (a single friction ridge that terminates within the friction ridge structure)

    c. Bifurcation (the point at which one friction ridge divides into two friction ridges)

2. The composition of latent print residue is such that chemical techniques can effectively be used to process impressions on many surfaces. The eccrine or sweat glands on the human body are most concentrated on the palmar surfaces of the hands and the soles of the feet. Secretions from the eccrine glands consist of 99.0% to 99.5% water and 0.5% to 1.0% solids. The solids consist of about one-half organic substances (alpha-amino acids being one of them), and one-half inorganic salts (sodium chloride being the most prevalent salt).

    a. The oils and fats which are present in latent print residue are primarily the results of sebum secreted by the sebaceous glands. Sebaceous glands are not present on the palmar surfaces of the hands nor the plantar surface of the feet. The oily and fatty deposits present in latent print residue are generally the results of contaminants present on the hands from contact with other areas of the body, or from other items such as lotion or food.

E. **Examination**

1. Successful completion of this segment of training will be determined by a written test.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.04 - Pattern Interpretation
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Pattern Interpretation	

I. PATTERN INTERPRETATION (LPTF.04 Pattern Interpretation Training Checklist)

A. Purpose

1. To aid the trainee in having a working knowledge of pattern interpretation. Information presented in this module will aid the trainee in understanding subsequent lessons.

B. Objective/Goal

1. The trainee will attain a working knowledge of the three pattern interpretations (Loop, Arch, and Whorl) and their definitions and differentiation according to the Henry system of classification.

C. Discussion

1. Pattern terminology refers to a classification system that facilitates the interpretation of the fingerprint patterns into one of the 3 categories.
2. The Henry classification system as devised by Sir Edward Richard Henry (with modifications) was used by the overwhelming majority of law enforcement agencies in the English speaking world.
3. This segment of training provides initial competency in the use of the Henry system. Emphasis is placed on actual interpretation of various fingerprint patterns.
4. Since no two areas of friction ridge skin are ever exactly identical, ideally trainees will spend time studying known "close non-matches" or areas of skin that are similar so that differences may be seen and understood.

D. Examination

1. Successful completion of this segment of training will be determined by a written test.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.05 - Classification of Record Prints
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Classification of Record Prints	

I. CLASSIFICATION OF RECORD PRINTS (LPTF.05 Classification of Record Prints Training Checklist)

A. Purpose

1. To provide the trainee with an understanding of methods and procedures by which record fingerprints can be sorted so they may be found easily as the situation requires. The trainee will be required to become knowledgeable in the Henry and NCIC classification systems.
2. This block of instruction will demonstrate the importance of accurately interpreting fingerprint patterns in order to correctly classify or group fingerprint records.
3. Introduction to the extensions and modifications of the pure Henry System which were used at one time by most identification bureaus and are still used by few agencies throughout the world.

B. Objectives

1. The trainee will attain:
   a. Knowledge of the Henry and NCIC classification systems.
   b. The ability to classify "approximating" patterns and combinations of missing, bandaged, or scarred fingers.
   c. Familiarization with the fingerprint/palm print records process (civil and criminal), including attaining, searching, and filing methods currently utilized by law enforcement agencies.

C. Discussion

1. While the Latent Print Unit does not maintain fingerprint/palm print records, it is important to have knowledge of historical filing systems, and to have the ability to classify record prints using the Henry or NCIC classification systems should there be inquiries from other agencies.

D. Examination

1. Successful completion of this segment of training will be determined by a practical exercise in classification using the Henry and/or NCIC classification system.

a. Practical exercise may be substituted by the successful completion of an equivalent quiz (e.g., Contra Costa County Central Identification Services Fingerprint Academy).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.06 - Recording Friction Ridge Skin
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Recording Friction Ridge Skin	

I. RECORDING FRICTION RIDGE SKIN (LPTF.06 Recording Friction Ridge Skin Training Checklist)

A. Purpose

1. To familiarize the trainee with the materials, procedures, methods, and techniques of recording all areas of friction ridge skin, including decomposing skin.
2. The trainee will gain sufficient practical working knowledge and skill to demonstrate acceptable proficiency in recording friction ridge skin.
3. In this training module, emphasis will be placed on practical hands-on exercises using various available mediums.

B. Objectives

1. The trainee will attain:
    a. A working knowledge of various friction ridge skin recording equipment and methods necessary for proper collection of exemplar prints (e.g., ink, powder, livescan,).
    b. The ability to completely and legibly record all pertinent detail of the hands and feet.
    c. Familiarity with obtaining complete and legible post-mortem record impressions and a working knowledge of various procedures and techniques for obtaining friction ridge skin exemplars under differing states of decomposition (to include burned, soaked, and mummified skin).
        i. Experience in collecting post-mortem exemplars will be accomplished over time as the opportunity arises.

C. Goal

1. Upon completion of this training module the trainee will possess the knowledge and ability to recover legible recordings of friction ridge skin. The trainee will also be prepared to assist and/or instruct personnel from other departments on the best method of friction ridge skin collection under varying circumstances.

D. Examination

1. Successful completion of this segment of training will be determined by a practical exercise (exemplar collection).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 05/03/2019	**NUMBER:** LPT.07 - Latent Print Processing and Collection
	RELATED ORDERS: Processing: LP.31	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Friction Ridge Training Manual	**SUBJECT:** Latent Print Processing and Collection	

I. Friction Ridge Processing, Development, and Collection (LPTF.07 Processing Training Checklist)

A. Background/Theory

1. Latent print visualization may be achieved using various visual, physical, or chemical processes. Deciding what techniques(s) to use to develop friction ridge evidence depends on several factors including:
    a. The type of latent print residue.
    b. The type of substrate.
    c. The texture of substrate.
    d. The condition of substrate (clean, dirty, bloody, sticky, etc.).
    e. Any known environmental conditions during or following friction ridge deposition.
    f. If known, the length of time since deposition.
    g. Possible consequences of destructive processing methods.
    h. Any subsequent forensic examinations.
    i. All sequential ordering of reagents.
2. The trainee will be required to become knowledgeable and competent in their decision-making skills regarding all of the above commonly encountered factors in latent print processing.

B. Training Objectives

1. For successful completion of this module, trainees will understand and demonstrate the following:
    a. Evidence Handling
        i. Proper handling, storage, and contamination prevention.
        ii. Correct opening and sealing procedures of a variety of evidence containers encountered during processing.

iii. The importance of chain of custody and how to properly document including transfers made in LIMS.

b. DNA Collection and Preservation

i. Proper DNA collection and preservation techniques.

ii. Proper contamination prevention techniques including proper swabbing or other biological collection procedures.

iii. Consultation process and issuing reports that include testing done by other units.

c. Use of Reagents and Controls (Test Strips)

i. How controls (positive and negative) are utilized to test the efficacy of chemicals or chemical solutions.

ii. How to properly prepare chemicals and solutions (reagents) relevant to the methods utilized.

d. Use of Equipment

i. Basic concepts relating to laser and alternate light source (ALS) theories as applied to friction ridge visualization.

ii. Knowledge of photography, lenses, and filters and when/how to capture as evidential images.

iii. How to use various equipment (as listed on **LPTF.07.**).

e. Processing

i. Knowledge of the approved procedures, including "best practices" for processing evidentiary items for the recovery of latent prints.

ii. Knowledge and competence in the choice of technique(s) for latent development, including the use of all equipment.

iii. Understanding of the physical, chemical, and lighting techniques used in friction ridge development and the foundation of their scientific principles.

iv. Understanding of different types of matrix, substrate, and development medium variations for latent print processing.

v. The optimum environmental conditions for each method. For example, temperature and humidity considerations.

vi. Awareness of some other development techniques **not** currently being used in this laboratory.

vii. Familiarization with developing new processing techniques, methods, and equipment; to include acquaintance with the laboratory's validation process.

viii. Understanding of processing multi-substrate items.

1. Trainees must be exposed to complex items that require atypical decision-making during hands-on processing exercises. For

example, items with a combination of porous, semi-porous, non-porous, and adhesive components.

f. Sequencing

i. Understanding of the importance of following the proper sequencing of latent print development techniques.

ii. How to properly apply all processing and collection methods using appropriate procedures with respect to other methods.

iii. Understanding of the impact of each method (and combination thereof) on the appearance or stability of the impression.

iv. Understanding of the impact of choosing reagents out of proper sequence and inability to correct the mistake.

g. General Collecting and Preserving

i. Ability to lift and photograph ridge detail on varying surfaces.

ii. Ridge detail suitable for comparison should be photographed before the application of a technique or subsequent technique.

h. Suitability Determinations

i. Ability to appropriately determine if ridge detail present on evidence is of value or not and when a technical review is needed from another qualified analyst.

ii. Ability to decide when collection of ridge detail is appropriate.

iii. Ability to determine if no ridge detail developed.

iv. There may be analysts trained in processing and not suitability determinations.

i. Notes and Reports

i. How to take clear, detailed, contemporaneous notes during processing.

ii. How to correctly enter information into LIMS including appropriate boxes or drop-down selections.

j. Health and Safety

i. Proper utilization of ventilation (fume hoods).

ii. Proper use of eye wash stations and personal safety showers.

iii. Proper use of personal protective equipment (PPE).

iv. Awareness and review of relevant health and safety considerations with respect to proper interpretation of Safety Data Sheets (SDS).

k. Testimony

i. Ability to competently testify on results for all reported conclusions.

C. **Reading**

1. For the list of required reading materials, refer to **LPTF.07.**

2. The readings must be completed prior to taking the competency test. It is recommended that the trainee do the readings in conjunction with the "hands-on" training portion to fully grasp the materials learned.

3. A reading list and abstract are encouraged.

D. **Practical Exercises**

1. Prior to starting hands-on training, it is highly recommended that the trainee complete about 8 hours of "shadowing" other trained staff doing processing.

2. Hands-on exercises will be implemented following the introduction to development techniques, collection methods, and equipment.

   a. Ideally, the trainee will demonstrate their understanding of new processes learned a minimum of five times using case-like materials. Feedback will be provided by the trainer.

3. Once the trainee has learned all processing methods, they will be expected to process a **minimum of two mock cases** to include the following elements:

   a. Transferring "evidence" in LIMS.

   b. Opening and sealing packaging.

   c. Documentation of all notes and report elements in LIMS.

   d. Processing "evidence" with appropriate methods and in the correct sequence.

   e. Collection of biological evidence.

      i. a mock consultation with a DNA analyst is recommended.

   f. The mock cases will be successful through an Admin Review of the test case in LIMS by the trainer prior to moving on towards competency testing.

4. **The above hands-on exercises and mock cases must be observed and documented by the trainer.**

   a. Documentation may take place on the Observation Based Worksheet: LPF.47 or by other forms of written feedback.

5. The trainer is encouraged to use other forms of practical exercises as well. For example:

   a. Study questions.

   b. Creating a presentation.

   c. Quizzes.

E. **Suggested Training Courses**

1. The following classes are highly recommended; however, the trainee is not required to take external classes prior to competency testing:

   a. Ron Smith & Associates: "Finding Latent Evidence with Chemistry & Light" http://www.ronsmithandassociates.com/training/index.html

   b. California Criminalistics Institute (CCI): "Latent Print Techniques" (E151) https://oag.ca.gov/cci/classes

F. **Assessment**

1. During training, the trainer must assess the readiness of the trainee to take and successfully complete the competency test. The following areas must be reviewed:

   a. **Mock casework**: items processed, notes taken, test case completed in LIMS, etc.

   b. **Photos** (digital images) generated.

2. In addition to the above, reading abstracts, journals, practical exercises and assignments, training binder, or other materials created during training should also be reviewed as an assessment of the trainee's readiness.

G. **Examination**

1. Successful completion of this segment of training will be determined by passing a competency test. The performance expectations for each item in the competency test are:

   a. Proper selection of development techniques.

   b. Proper sequence of development techniques.

   c. Proper selection of suitable latent prints for collection (requires training in suitability).

      i. if the trainee is not trained in suitability, this does not apply.

      ii. if the trainee is trained in suitability, it is expected that all suitable latent prints are selected and that no more than 2 unsuitable latent prints are selected.

   d. Proper forensic photography.

   e. Proper digital imaging.

   f. Adherence to policies and procedures.

   g. Accurate completion of notes.

   h. Accurate completion of LIMS worksheet(s) or documents and report.

2. The competency test will consist of the following components:

   a. A written test of knowledge to demonstrate the individual's understanding and comprehension of processing and collection.

      i. when possible, the written test will be completed successfully prior to the analyst being assigned the unknowns (practical test).

   b. Examination of sufficient unknown samples to cover the anticipated spectrum of assigned duties.

      i. analyst will process a variety of porous and non-porous case-like materials.

   c. A written report to demonstrate the individual's ability to properly convey results in LIMS.

d. A verbal practical examination of the individual's ability to provide testimony with regard to processing and collection.

3. See LPF.42 for Authorization form.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 3/17/2017	**NUMBER:** LPT.08 - ACE-V Methodology
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Tony Nguyen & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** ACE-V Methodology	

I. ACE-V METHODOLOGY (LPTF.08 ACE-V Methodology Training Checklist)

A. Purpose

1. To provide the trainee with an understanding of the ACE-V (Analysis, Comparison, Evaluation, Verification) process from determining the suitability of latent prints for subsequent comparisons, to reaching conclusions and obtaining verifications. ACE-V methodology is a process by which latent print examiners arrive at conclusions which are then verified as a quality assurance measure. Latent orientation and all areas of friction ridge skin (anatomical regions) typically seen in casework are to be thoroughly studied and practiced in this module. The trainee is expected to become capable of providing a reasonable explanation for apparent differences within tolerance of an identification, and understand issues of distortion. Throughout this training module, the trainee will be exposed to a variety of comparison exercises, varying in difficulty, as well as learn to document the ACE process.

B. Objectives

1. The trainee will attain:
    a. The ability to correctly describe and apply the ACE-V methodology to latent print examinations.
    b. A working knowledge of ACE-V policies followed by the latent unit.
    c. Accuracy in identifying and excluding latent prints, including ability to provide reasonable explanations for inconclusive decisions.
    d. The ability to demonstrate the ACE process by documenting examinations.
    e. A better understanding of information learned in previous modules and how it can be applied to ACE-V.
    f. Familiarity with causes and signs of the many forms of distortion found in latent prints.
    g. The ability to acurately discern the probable orientation and anatomical region of a latent print.

C. Goal

1. At the successful completion of this training module and accompanied latent comparison competency test, the trainee will have attained sufficient experience and displayed competency in the ACE process of latent print examinations. This will enable the trainee to begin a period of supervised casework.

D. **Discussion**

1. ACE-V is the most important phase of the training program and requires the most time and attention from the trainee. It is expected that the trainee will successfully complete several comparisons (with varying levels of difficulty), as well as analysis documentation exercises (to include orientation practice, selecting target data, "search smart" clues, quality assessing, distortion evaluation, etc.) prior to finishing this segment of training. The ability to grasp this subject matter together with accurate practical application is essential to the successful completion of the latent training program, and to becoming a competent latent examiner.

2. Accuracy in comparison results of latent print examinations may not only reflect upon the individual analyst, but also on the entire department. The importance in accuracy of latent print individualization is no where more evident than in the potential of this evidence in judicial proceedings. It is imperative that accuracy be uppermost in the mind of the analyst during latent print examinations.

E. **Examination**

1. Successful completion of this segment of training will be determined by passing the Latent Comparison Competency Test. The test will consist of a practical examination section with several latent comparisons (preferably provided by an external vendor), a written test, and issuing a report in LIMS.

2. Throughout training in this module, trainees can expect increasingly difficult analysis and comparison exercises. The trainee will practice using all facets of ACE during this training. These exercises should also consist of latent prints from various areas of friction ridge skin.

END OF DOCUMENT



Leveraging Cores/Deltas and Resizing Prints for an AFIS Search

06/20/2019

THALES

gemalto
a Thales company



Agenda

- Resizing Latent Prints
  - Ruler
  - Ridge Count
  - Given Scale
  - By Half

- Understanding Cores and Deltas for AFIS Search

Reminder: This webinar will be recorded.
Kindly silence your phones.

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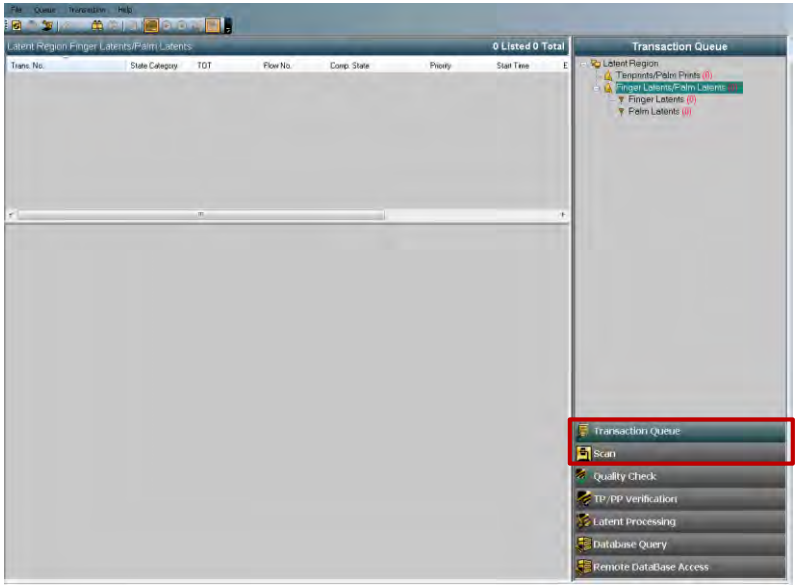
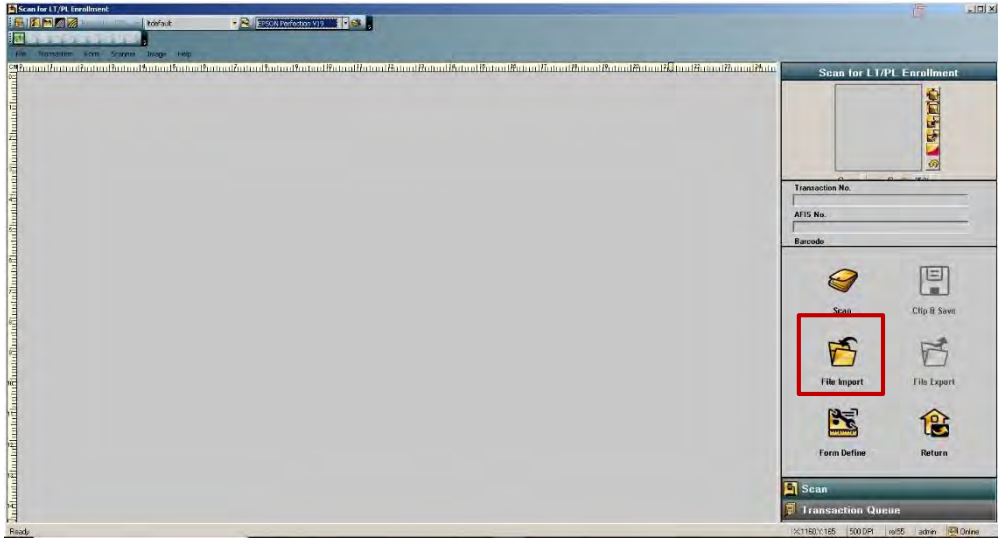
Next Training Webinar to be held late September, 2019

Resizing Latent Prints

- There are four methods for resizing latent prints if it was not captured at a 1:1 ratio
  - Resizing by a **Given Scale** – Use if you know the ratio at which the print was captured
  - Resize to **Half** – Use this to reduce the print image to half its size
  - Resizing by **Ruler** – Use this method when a ruler is visible in the image
  - Resizing by **Ridge Count** – Use this as a last resort if the other options are not available

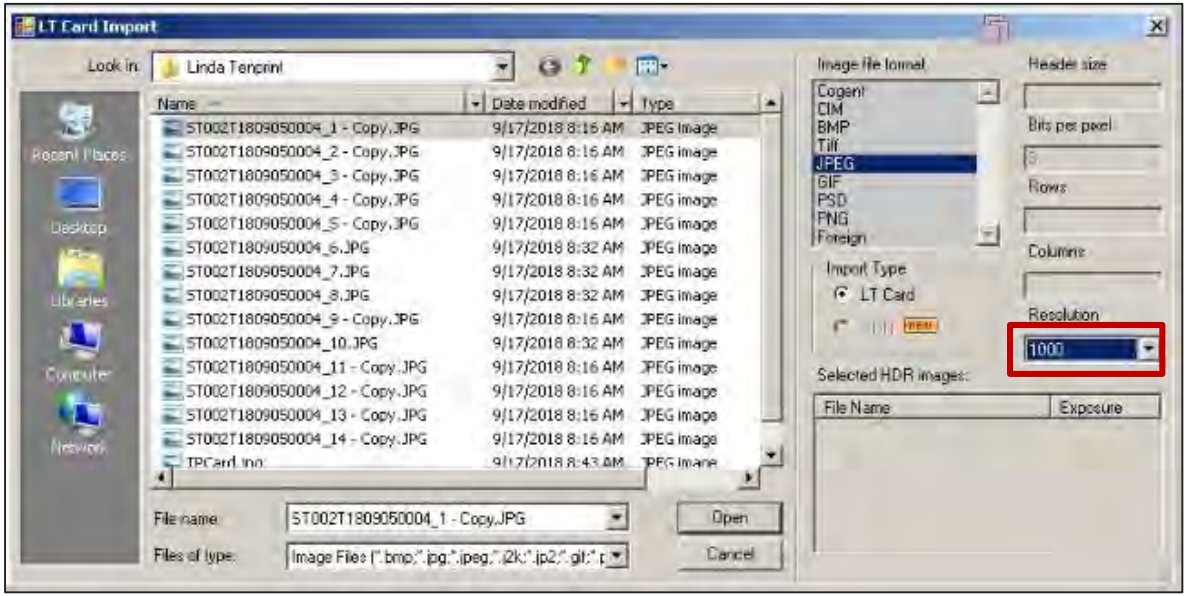
Resizing Latent Prints





Resizing Latent Prints

File Import Option

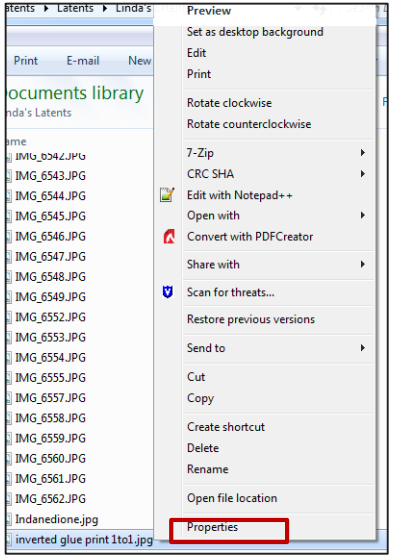


You have an option to select the resolution

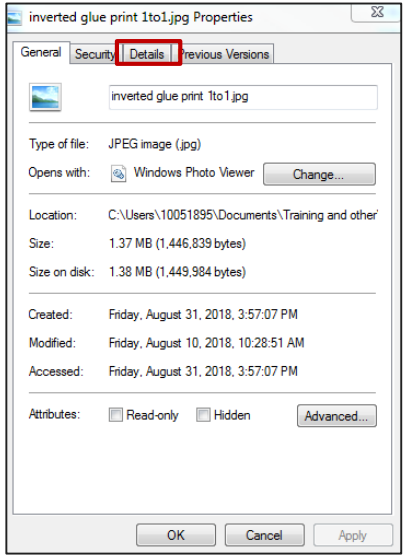
Resizing Latent Prints – Image Resolution

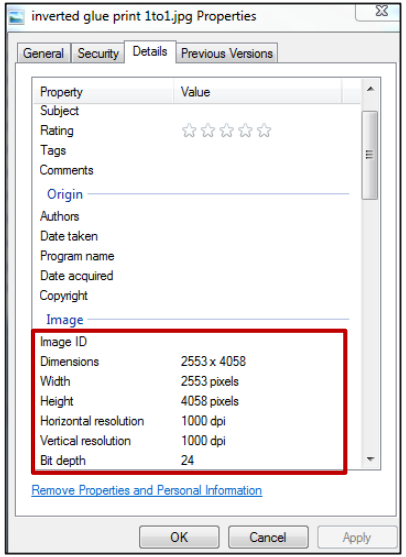
Where can you get image resolution information?

Right-click on image file – select Properties



Click on Details tab

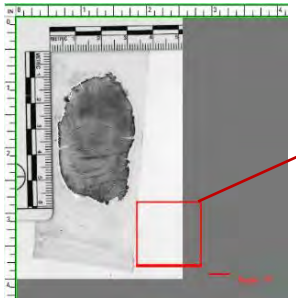


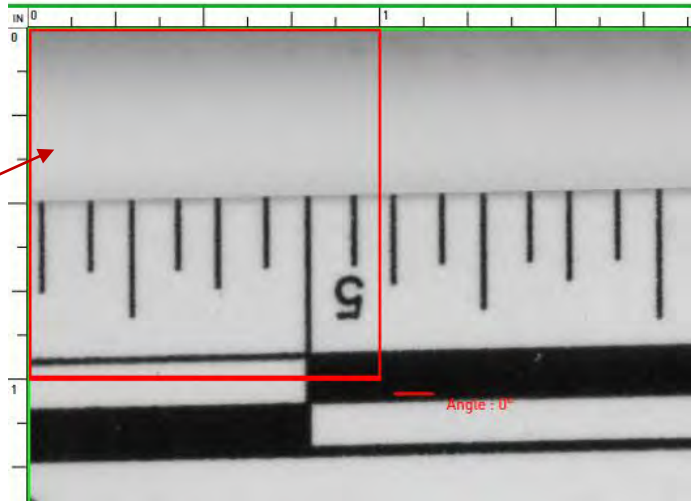


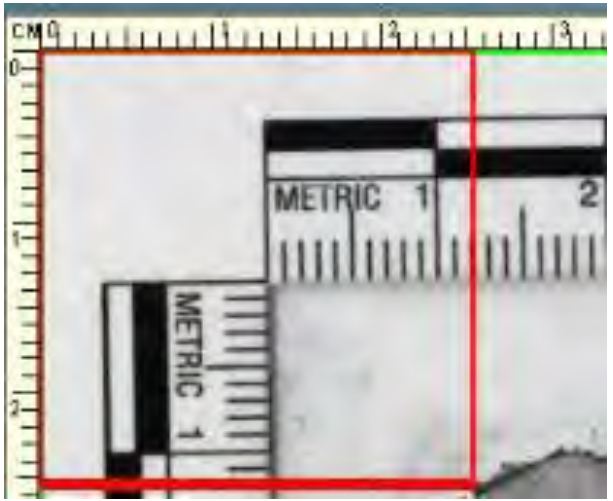
Resize by Ruler – Clip Box

1 inch box = 2.54 cm

Imported Image



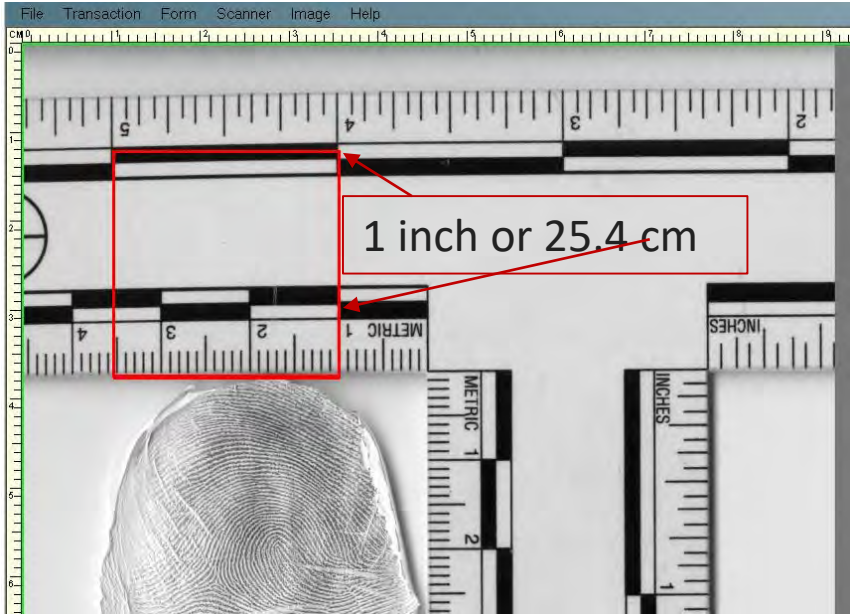




Resize by Ruler – Clip Box

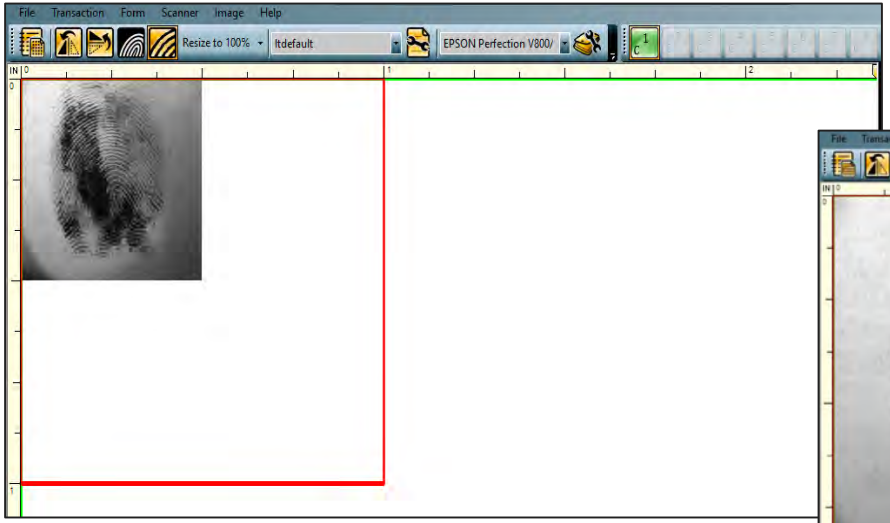
Before and after resizing



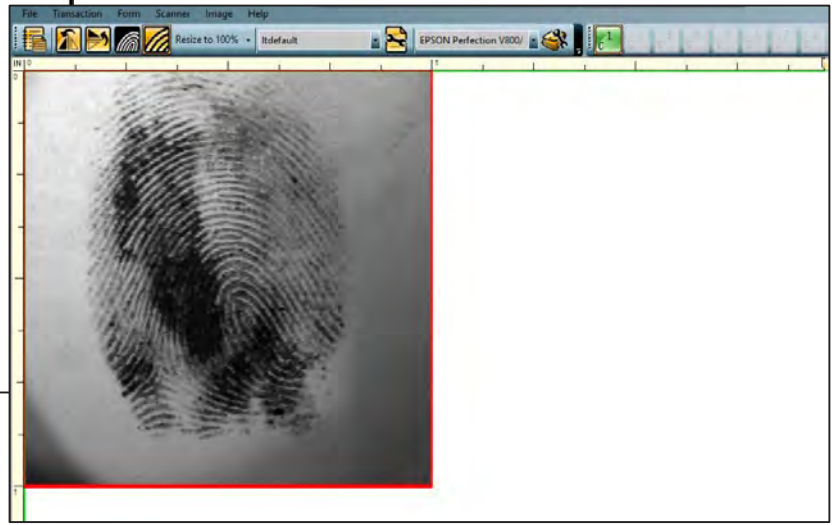


Resize by Ruler – Clip Box

Opened image at 1000 resolution



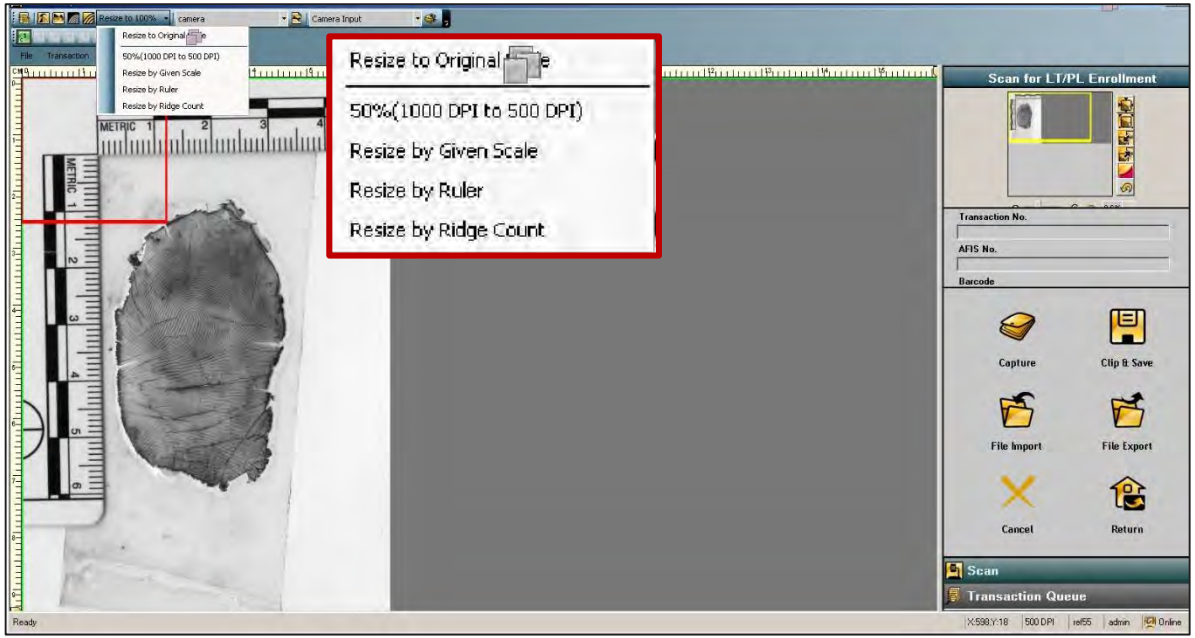
Re-opened the image at 500 resolution



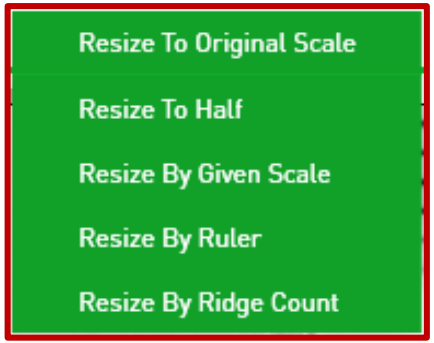
Resizing Latent Prints

Once the image is displayed at the scan window, click the resize drop-down arrow

CABIS 6



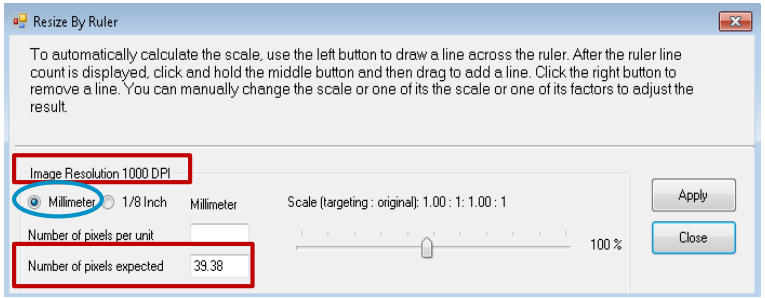
CABIS 7

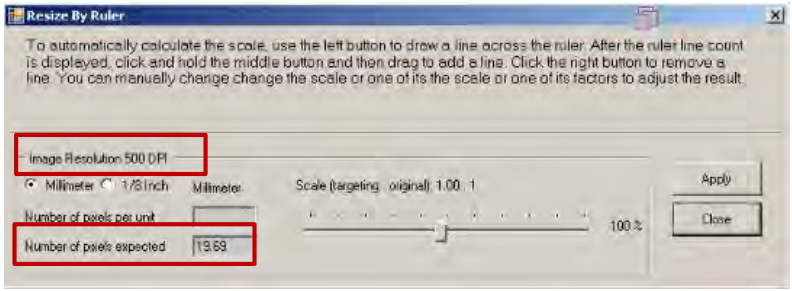


Resize by Ruler - Metric

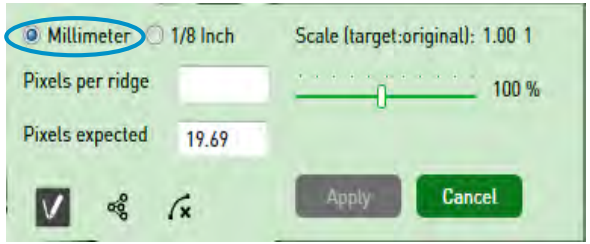
Resize by Ruler - Metric

CABIS 6 – Image Resolution of 500 or 1000 will depend on the selection made in the Resolution field at the File Import window

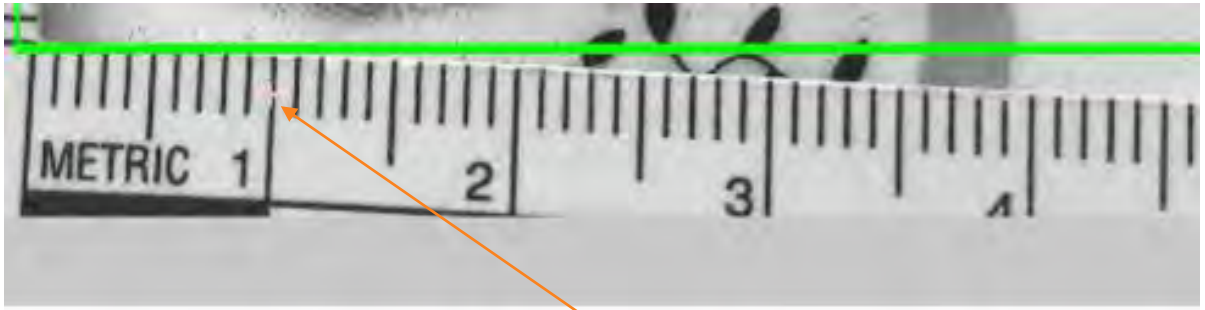




CABIS 7 – Select the template/form at the Scan window for the resolution



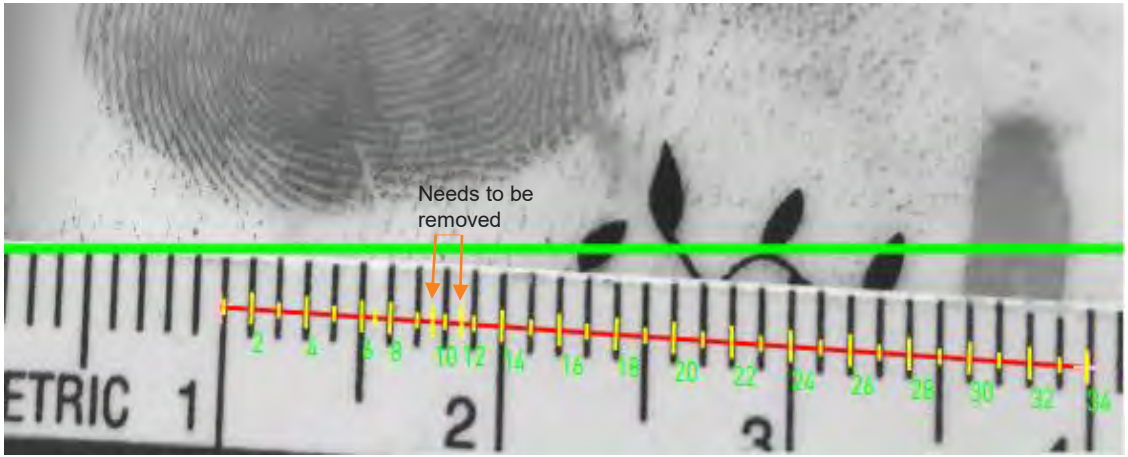
Resize by Ruler - Metric



Click and hold the mouse and a + will display on the ruler. Draw a line across two known points on the ruler and release the mouse button.

Resize by Ruler - Metric

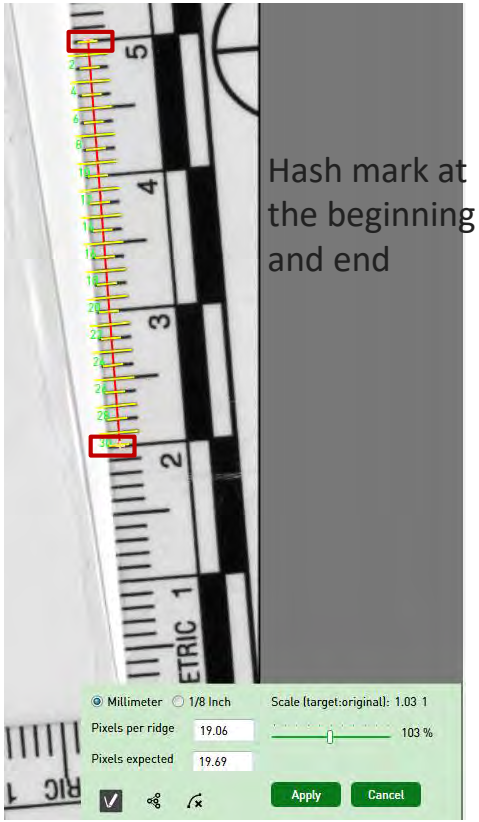
Note the yellow tick marks on the ruler. The tick marks represent the ruler lines.



- To add a marker that may have been missed, click and hold the middle mouse button and drag to add a marker.
- To delete a marker, place the cursor on the marker and right click with the mouse. The marker will be deleted and the other markers will automatically be renumbered.

Note: Above steps is for CABIS 6

Resize by Ruler - Metric



Hash mark at the beginning and end

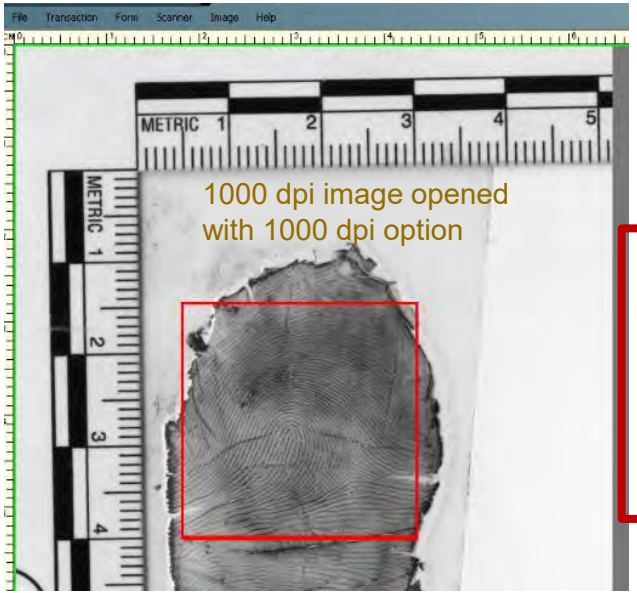


Hash mark at the beginning and not the end

Both options had a hit in AFIS with candidate rank #1

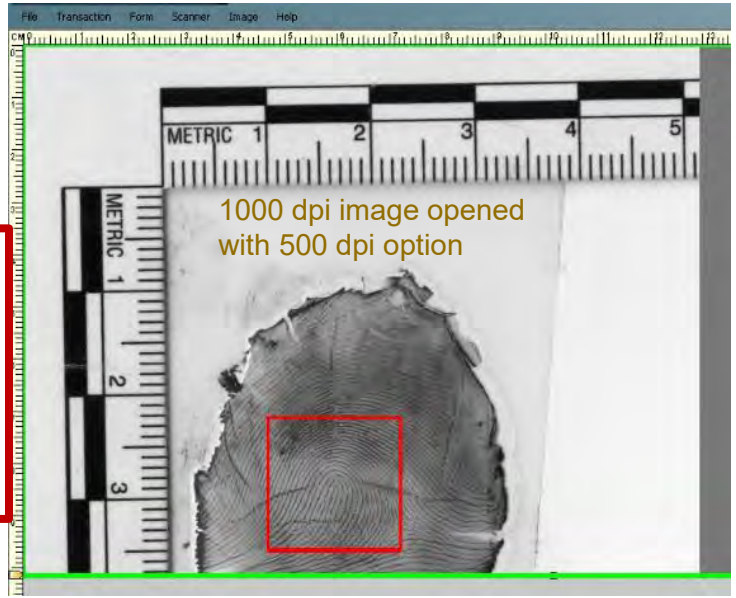
Resize by Ruler - Metric

The print below is black powder on a thumb and a “rollerball” glue stick placed on top. After the glue dried, it was lifted and taped to a lift card. Lift card was scanned at 1000 dpi



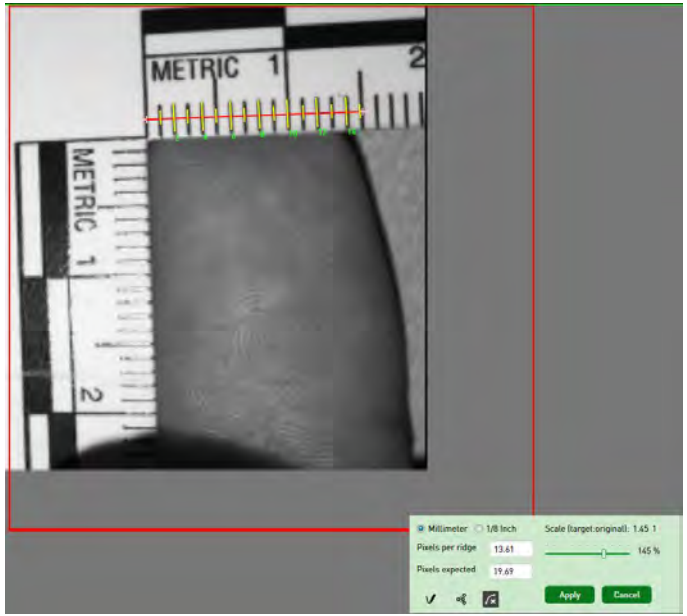
Notice how much of the latent print fits inside the clip box

Also note the area displayed in the image

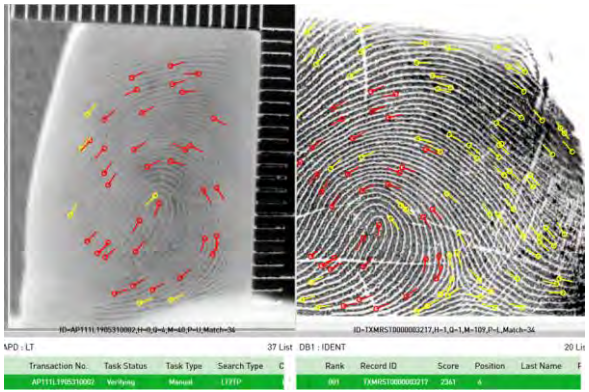


Resize by Ruler - Metric

What happens if an image is not 500 or 1000 dpi? E.g. 96 or 72 dpi
Below image is 96 dpi (print taken using iPhone).



Resized using 500 dpi option

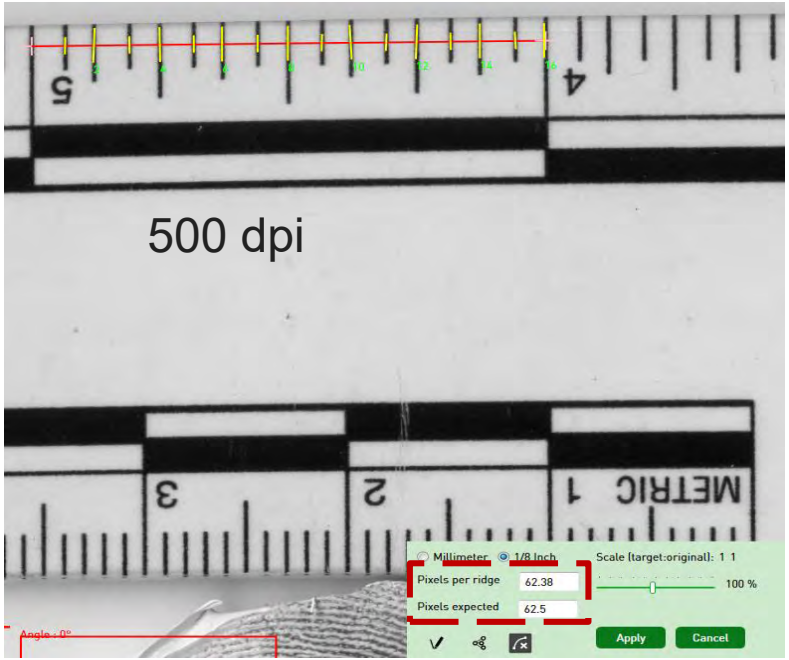


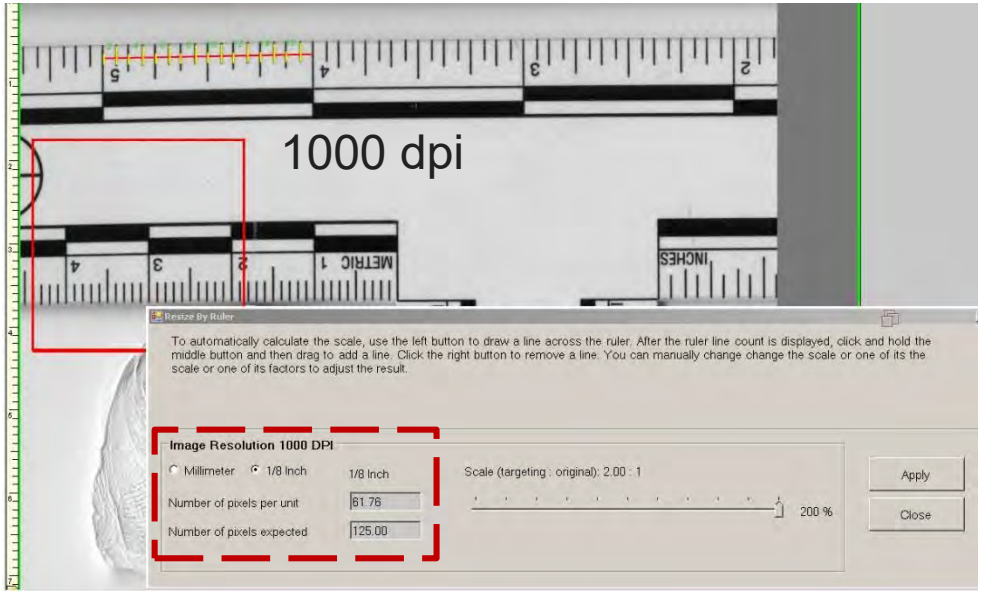
Hit in AFIS – Candidate #1

Resize by Ruler - Inches

Resize by Ruler - Inches

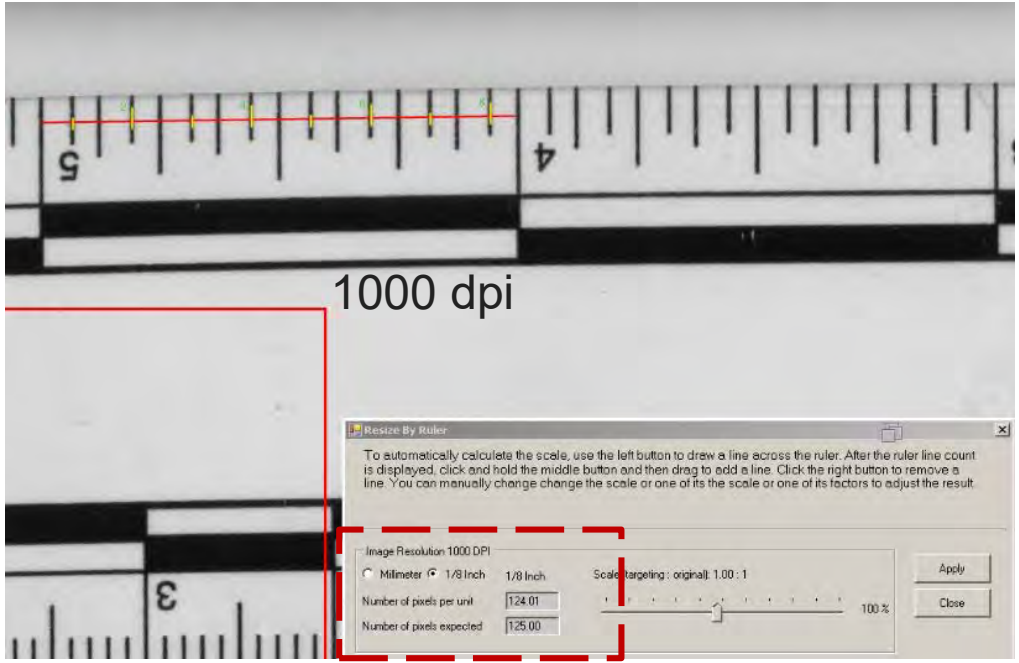
Note the marker lines on the ruler for 1000 dpi





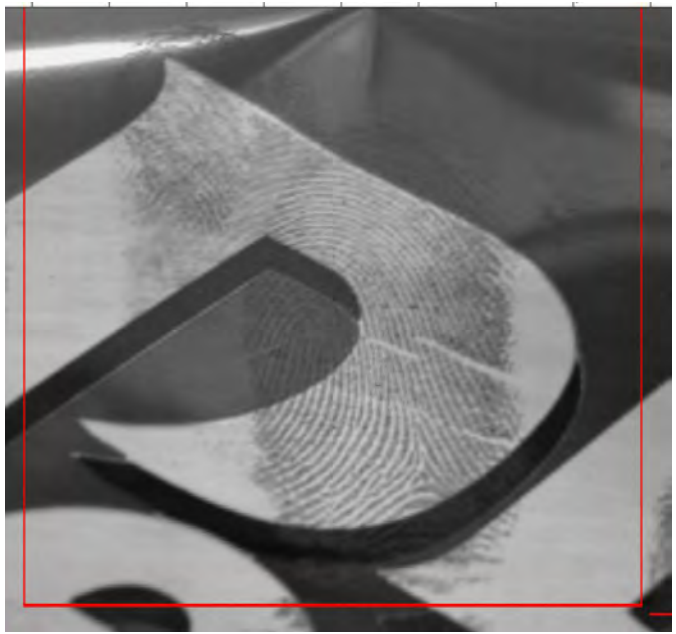
Resize by Ruler - Inches

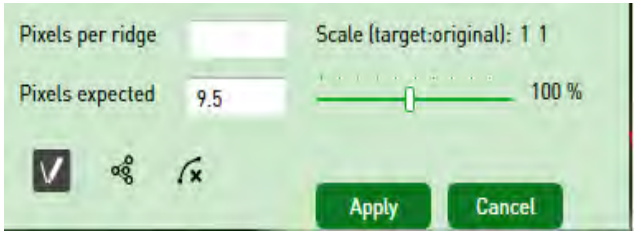
Marker lines need to be every other one



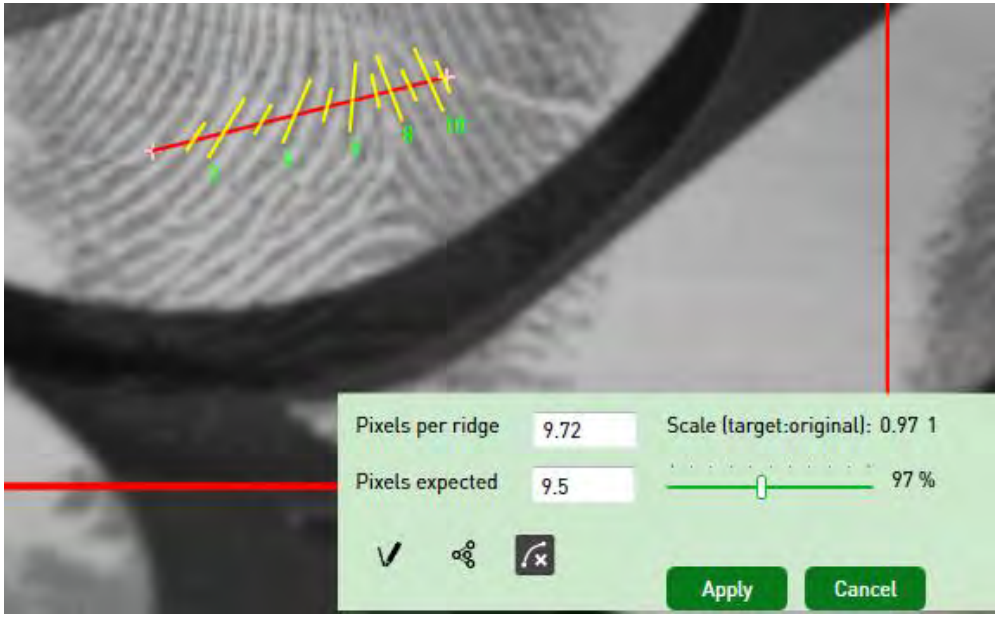
Resize by Ridge Count

Resize by Ridge Count

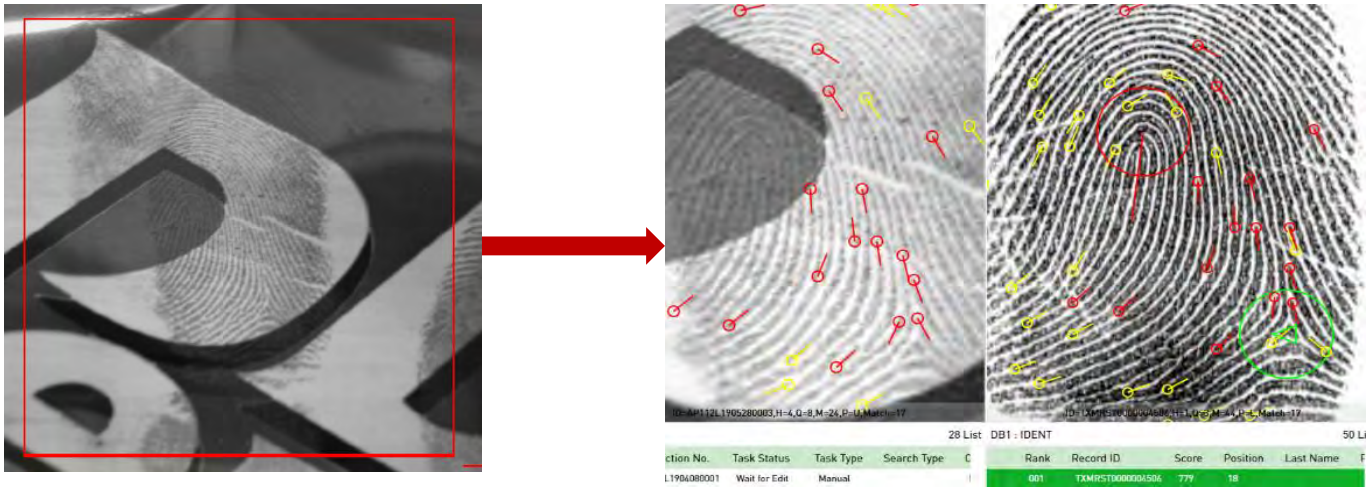




Resize by Ridge Count



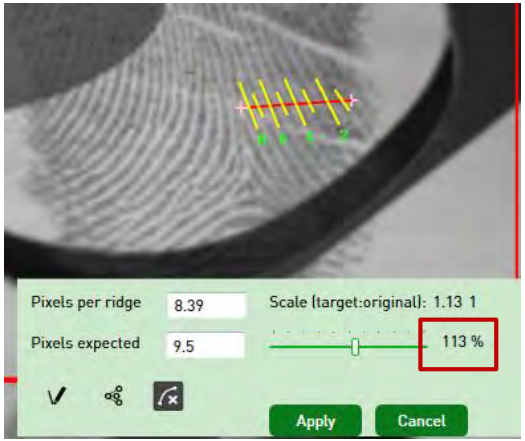
Resize by Ridge Count

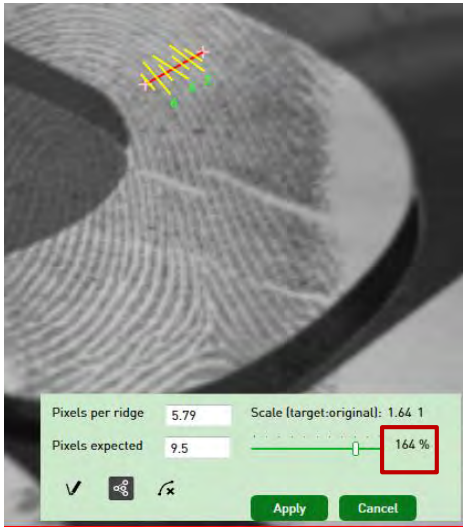


Resize by Ridge Count



Select random areas of the print – some areas may be compressed and other areas have ridges spread out





Resize by Given Scale

Resize by Given Scale

If you know the ratio the print was captured, you can enter the information below.

For example, if you know the print was captured at half its original size then the print needs to be twice its size and the number in the field is changed to 2.0

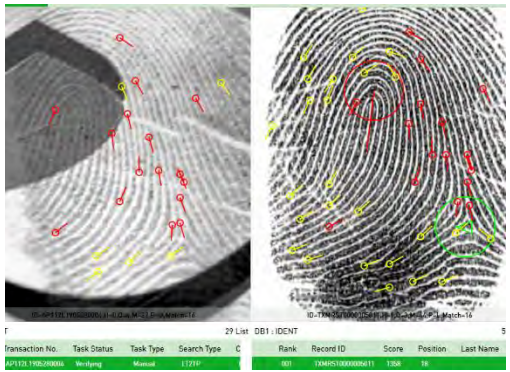


Resize by Given Scale

Numbers from previous ridge count options
105 + 113 + 164 = 382 / 3 = 127.3333

Changed below to 1.2



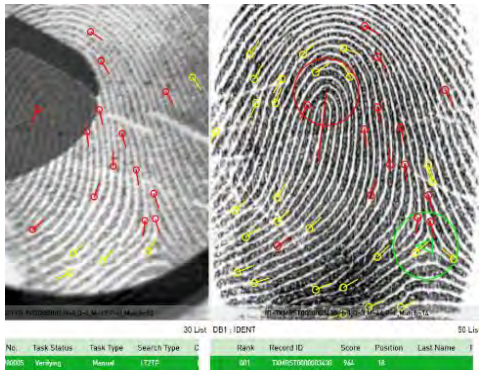


Both hit in AFIS

Numbers from previous ridge count options
105 + 113 + 164 = 382 / 3 = 127.3333

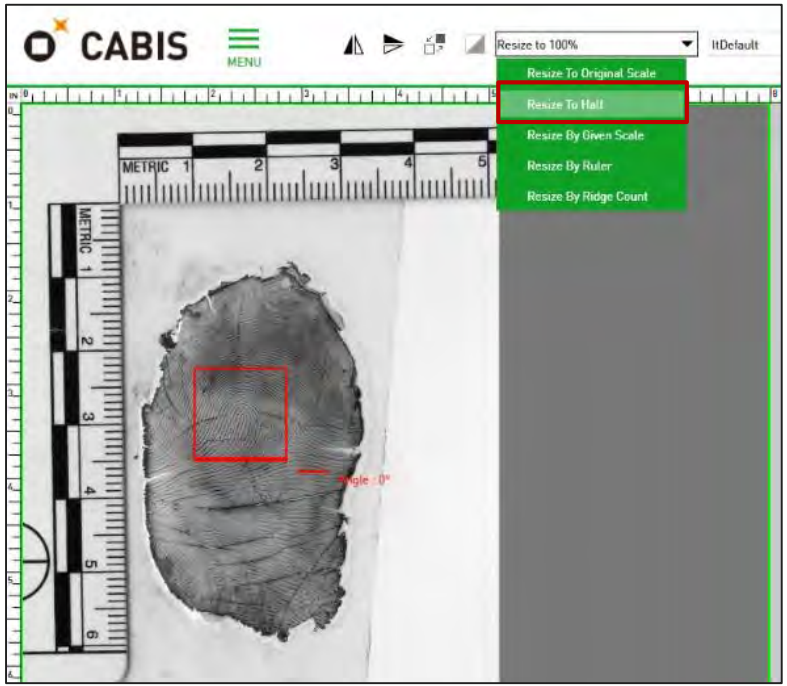
Changed below to 1.3

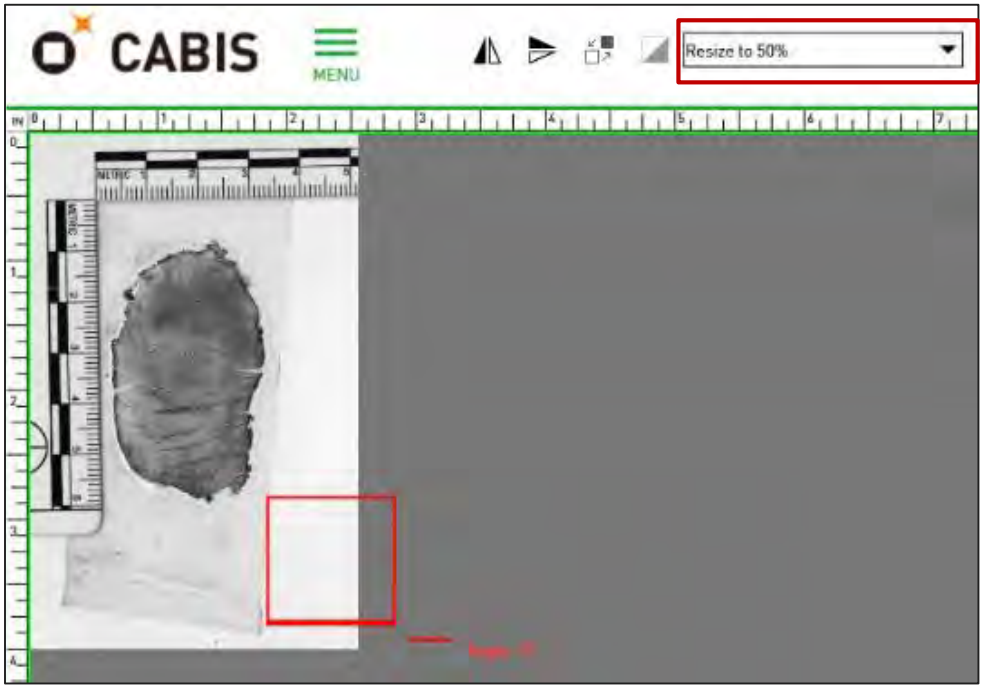




Resize by Half

Resize to Half



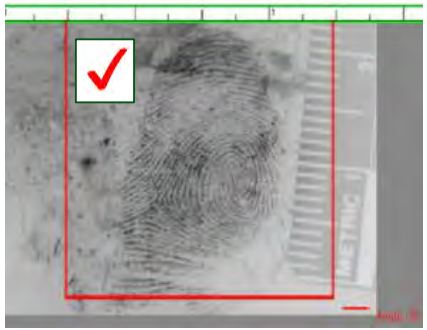


Resize to Half



Resizing Latent Prints

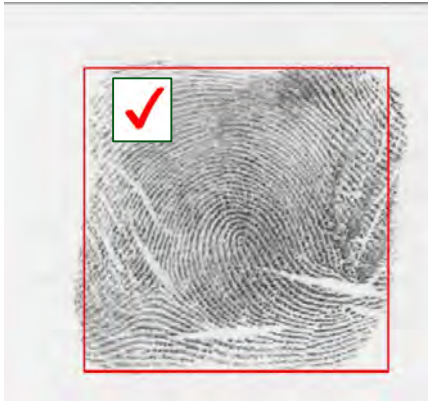
The red clip box could be used as a reference for the sizing if no other option is available











Cores and Deltas

Understanding Cores and Deltas for an AFIS Search

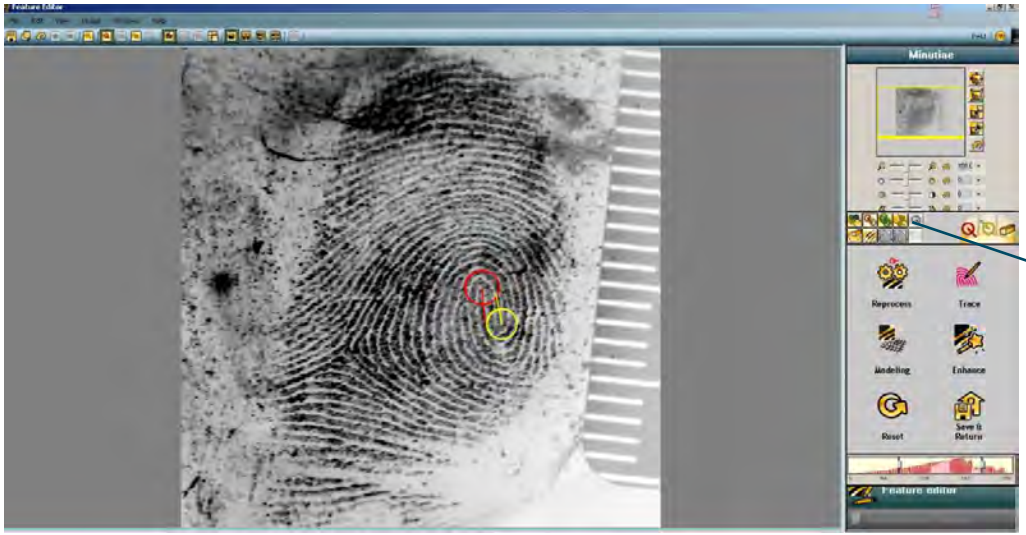
THALES

gemalto
a Thales company

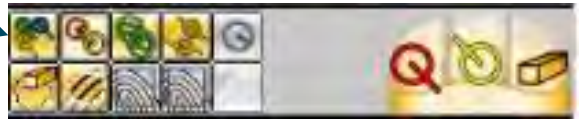
Cores and Deltas

Cores are the approximate center of the print

Deltas are where the ridges flow in approximately three different directions



Editing Window



Cores and Deltas

“Do I need to add cores and deltas to my latent print?”

“Do the cores and deltas help with getting a hit?”

Answer:
“It depends on the quality of your print”

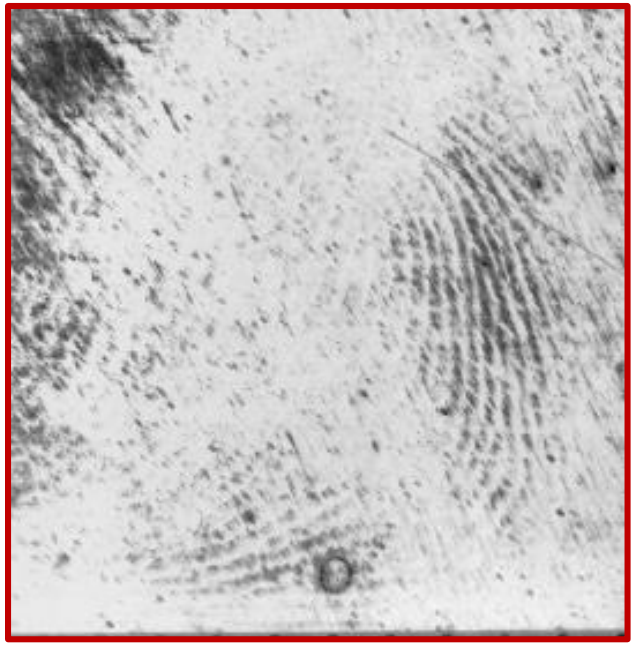


Cores and Deltas

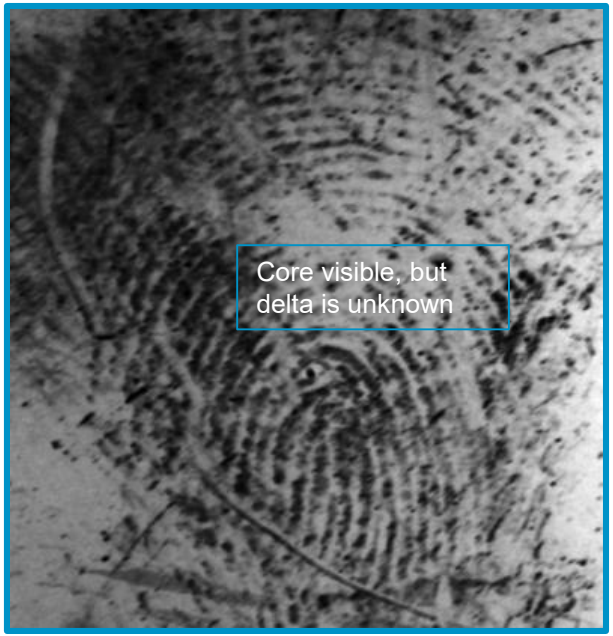
- CABIS is analyzing and matching minutiae and their angles.
- If core(s) and delta(s) are added, the system may use those as references for the minutiae and could narrow the searching for a match.
- A distorted latent print with minimal minutiae may benefit with adding additional features like core(s), delta(s), and pattern.
- In addition, adding cores and deltas may assist with the ridge flow and ridge count which can also be beneficial for the searching/ matching.

Cores and Deltas

Could possibly help by adding core and delta



Does not help with searching and matching without a delta



Core and delta not needed

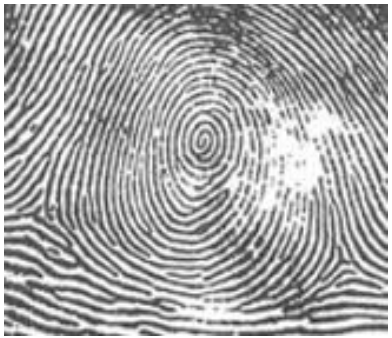


Cores and Deltas

An examiner puts whorl as the pattern

CABIS looks at all these different types of ridge flow for a whorl

Plain Whorl



Central Pocket



Double Loop



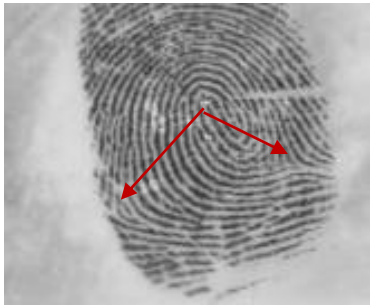
Accidental



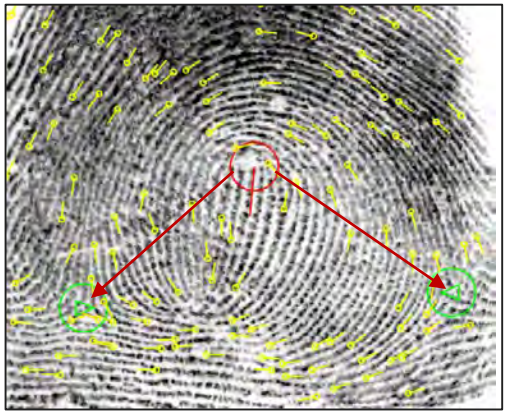
Cores and Deltas

The distance from core to the left delta and/or core to the right delta could narrow down the possibilities of *all* whorls in the system.

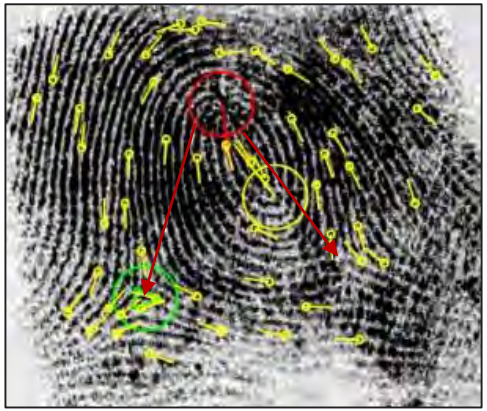
Latent



System may exclude

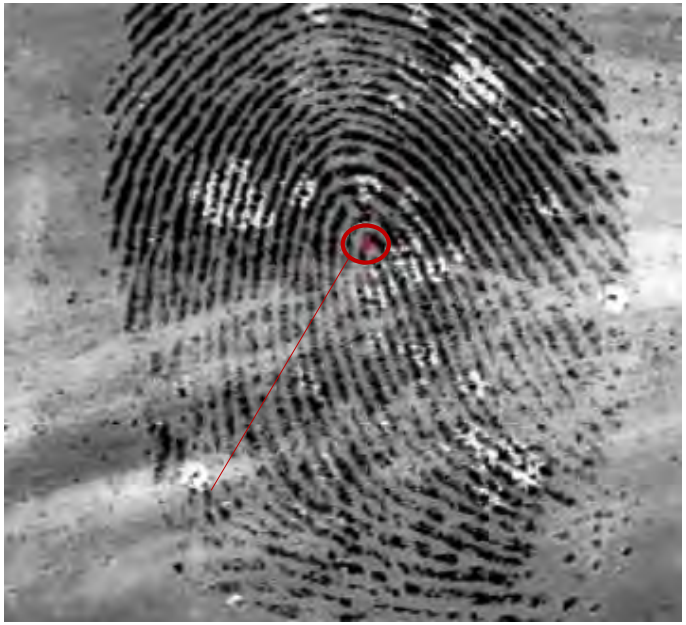


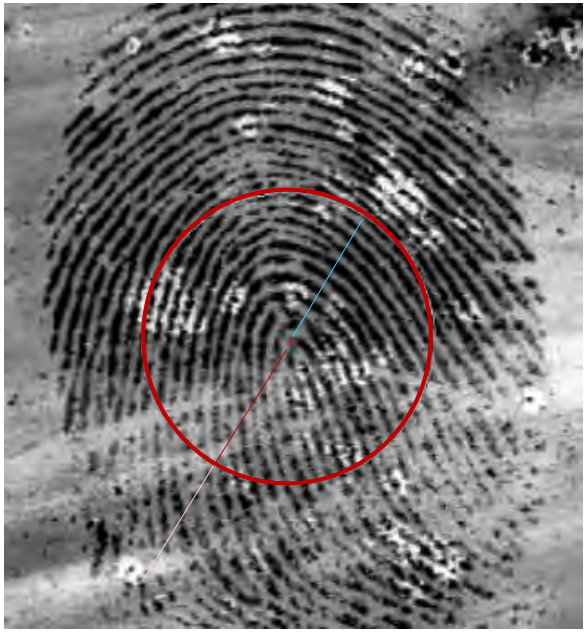
System may include



Cores and Deltas

Core size can be expanded if necessary

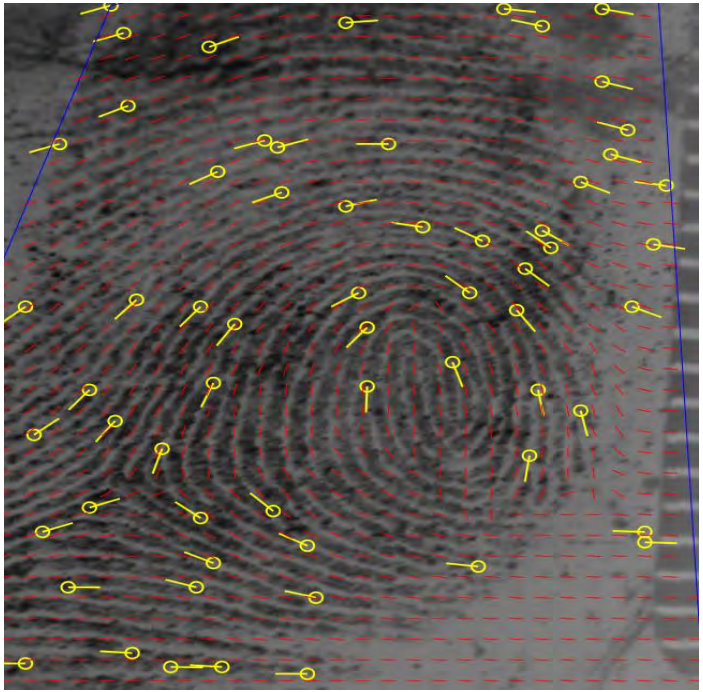


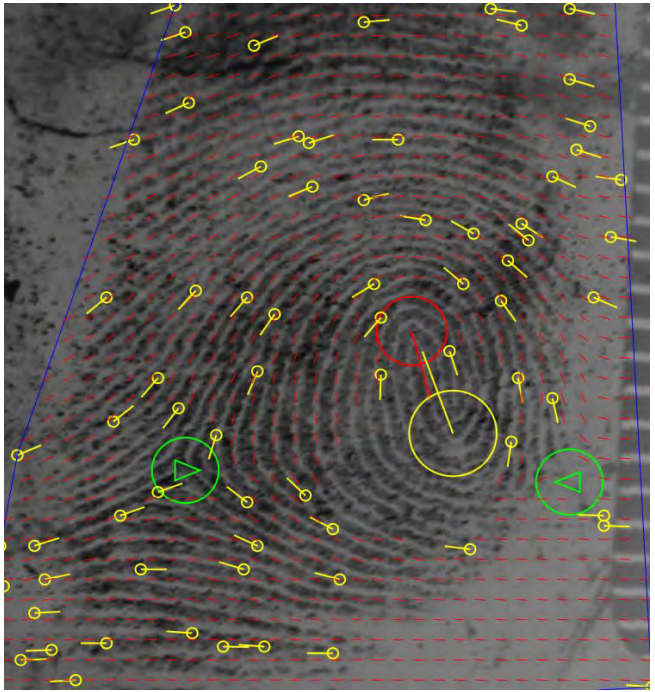


Imagine the distance from core
to delta using the images above

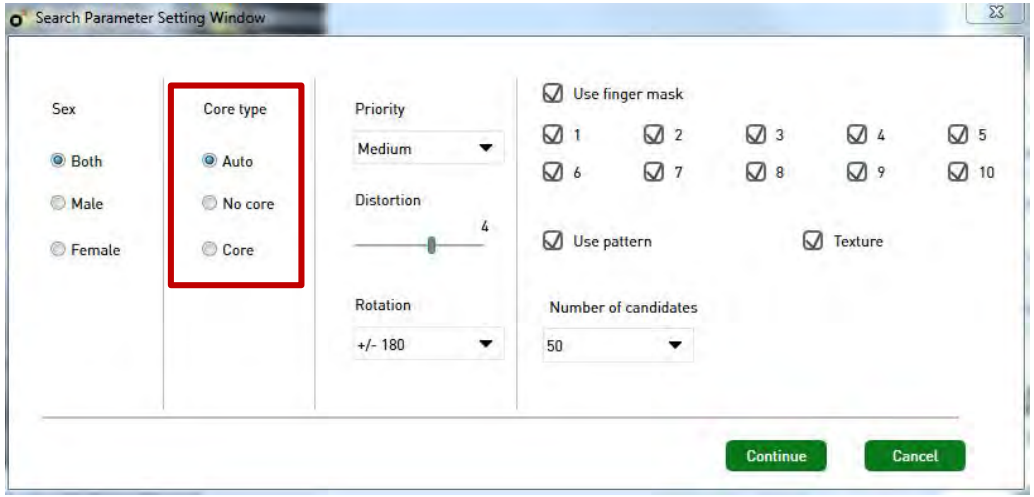
Cores and Deltas

Can assist with ridge flow





Cores and Deltas



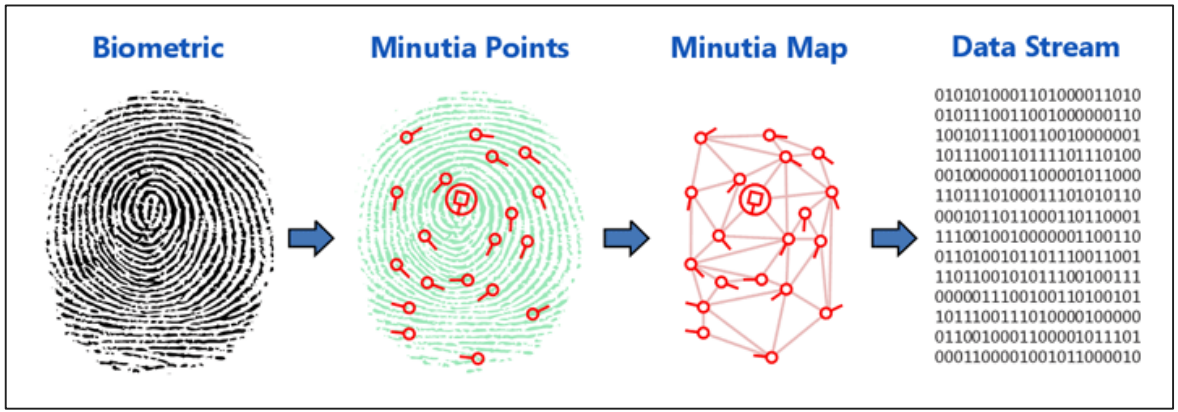
Auto is the best and preferred option. System will check/compare the distances between cores and deltas

No core has no effect on the search and will not do anything related to core(s) or delta(s)

Core means ONLY prints with cores will be searched. Not Recommended!

Summary

The minutia map is one step in the searching and matching of latent prints. Depending on the quality of your latent print, adding other features like core, delta, patterns and checking ridge flow and ridge tracing/ridge count will increase your chance of getting a match for poor quality / distorted latent prints.



Summary

- CABIS offers various options for the latent print examiner to search latent prints that have been digitally captured:
  - Ruler – metric and inches
  - Given Scale – known size
  - By Half – reduce 50%
  - Ridge Count – last resort and no scale in image
- Adding core(s) and delta(s) can help with the matching , especially for poor quality prints.
- Ridge flow, ridge count and adding a pattern to the latent print can also help with the matching.
- At the Search Parameter window, keep the options as the default. Rotation may be the only option to change (if orientation is unknown).
- Try searching your latent print more than once using different options stated above if there was no hit the first time.

Thank you!

Any Questions?

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.09 - Automated Database Searching
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Automated Database Searching	

I. AUTOMATED DATABASE SEARCHING (LPTF.09 Automated Database Searching Training Checklist)

A. Purpose

1. This training module is designed to equip the trainee with the necessary skills and ability to operate friction ridge automation technology.
    a. Prior to beginning this section of training, the trainee should possess the knowledge, skill, and ability to recognize various levels of quality in latent prints.
2. Upon completion of this training, and prior to completing latent ABIS cases, the trainee must demonstrate knowledge and proper use of an Automated Biometric Identification System (ABIS) by passing a competency test.

B. Authorization

1. As determined necessary for assisting with cases, the unit Supervisor or Manager can authorize trainees to perform **entry only** latent searches into the ABIS database(s) prior to the completion of this module and competency test, under the direction of the TC/Technical Lead, or designated latent examiner. The trainee will **not** be authorized to determine the result of latent searches or issue reports prior to the successful completion of this module and competency test.

C. Objectives

1. The trainee will attain:
    a. History perspective of automation technology and theory of operation.
    b. Knowledge of various available automated databases and their limitations.
    c. The ability to properly input (scan or import) images into each available system, retrieve the results, and complete the searching process.
    d. Familiarity with determining suitability for entry into ABIS.
    e. An understanding that ABIS is only a tool and that an individualization is made by an examiner.
    f. Instruction for maintaining the database(s).

D. **Goal**

1. The trainee will possess the knowledge and ability to successfully search latent prints through ABIS.

2. The trainee will be familiar with ABIS procedures and documentation requirements as instructed by the Latent Unit Technical Policies. See LP.28

E. **Examination**

1. Successful completion of this segment of training will be determined by passing a competency test. The test will consist of a practical examination (searching prints through ABIS), a written test, and issuing a report in LIMS.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/12/2016	**NUMBER:** LPT.10 - Forms, Records and Reports
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Forms, Records and Reports	

I. FORMS, RECORDS AND REPORTS (LPTF.10 Forms, Records, and Reports Training Checklist)

A. Purpose

To acquaint the trainee with forms, note taking practices, and reports internal to the Forensic Services Division and the records maintained at the Laboratory, as well as the manner in which the results of examinations are reported.

B. Objectives

The student will attain:

1. A working knowledge of the various forms, records and reports related to daily operations in the Latent Print Unit.

2. The ability to properly complete the forms necessary to accomplish and document the examination of physical evidence, including documentation in LIMS.

3. The ability to properly report the results of latent examinations.

C. Goal

Upon completion of this segment of training, the trainee will possess knowledge and understanding of the requirements for maintaining accountability of evidence, including the importance of taking contemporaneous notes. The notes need to be clear so that steps taken during the examination are understood by another examiner and the analyst to render a clear and accurate written report.

D. Discussion

The written report is often the initial information available to the submitting agency, and to the servicing legal office upon which a determination is made

as to the prosecution of a criminal case. It is therefore essential that accurate, clearly written and informative reports be returned to the submitting agency. During this segment of training, the trainee will ultimately be required to practice properly completing appropriate forms, records, notes, and render written draft reports pertaining to the test "evidence" which he or she examined. Emphasis will be on test "evidence" accountability, contemporaneous note taking and the completed laboratory report.

E. **Examination**

Successful completion of this segment of the training program will be determined by evaluation of the practical application and knowledge of the above items of documentation.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 07/30/2018	**NUMBER:** LPT.11 - Evidence Handling: Preserving, Marking and Packaging Evidence
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Debbie McKillop	**ANAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Preserving, Marking and Packaging of Evidence	

I. PRESERVING, MARKING AND PACKAGING EVIDENCE (LPTF.11 Evidence Handling Training Checklist)

A. Purpose

1. To present the trainee with the procedures and laboratory practices of evidence handling.

B. Objective

1. The trainee will attain:
    a. A sound working knowledge of proper procedures for handling evidence to include:
        i. appropriate methods of opening packages
        ii. marking items of evidence upon completion of testing
        iii. packaging and re-packaging evidence
    b. Familiarity with properly maintaining evidentiary value of evidence being processed through multiple units.

C. Goal

1. Upon completion of this segment of the training program, the trainee will possess knowledge and understanding enabling him or her to properly maintain the integrity and evidentiary value of evidence.
    a. The trainee will be able to demonstrate correct procedures for opening, marking, packaging, and handling evidence items.
    b. The trainee will be able to demonstrate the ability to advise and instruct personnel from other agencies, or other units within the laboratory, regarding the protection and transmittal of evidence being tested for latent prints.

D. Discussion

1. Proper packaging procedures will be practiced under the direct supervision of the Training Coordinator.
2. Training will include discussion of shared evidence between the latent unit and other units within the laboratory.

3. Demonstrating proper preservation, packaging (opening, sealing, re-packaging), and marking of evidence will constitute successful completion of this segment of training.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 1/21/2016	**NUMBER:** LPT.13 - Technical Training Courses, Resources, and Certification
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes & Danielle Roberts	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Technical Training Courses, Resources, and Certification	

I. TECHNICAL TRAINING COURSES (LPTF.13 Training Courses, Resources, and Certification Training Checklist)

A. Purpose

1. To provide the trainee with training resources which can be gained from outside the Forensic Services Division. Exposure to a variety of specialists and professionals will afford the trainee the opportunity to exchange methods and techniques, as well as provide the trainee with necessary tools to enhance his or her knowledge and abilities in the latent discipline.

2. While membership in any professional association is not required, it is recommended for the value of continual information available through workshops and seminars as well as professional publications.

3. Latent Print Certification through the International Association for Identification is not required, but is desireable and benefits not only the employee and employer, but also the courts.

B. Goal

1. Upon completion of this segment of training, the trainee will have attained an understanding of available avenues to complement the studies and experience gained in the latent unit training program. Some areas of specialized external training are listed below. In the process of receiving valuable external training, the trainee will also have attained better foundation for acceptance in judicial proceedings as an expert witness.

C. Examination

1. There is no exam for this module.

2. Trainees may receive external training as availability of funds/managerial approval and individual courses, seminars or workshops are available. A copy of the course completion diploma or certificate will become part of the trainee's training binder.

D. Organizations offering training include (but are not limited to) the following:

1. The California Department of Justice: California Criminalistics Institute, www.ag.ca.gov/cci/courses

a. Sampling of courses offered that may be used as supplemental training:

i. Latent Print Techniques

ii. Latent Print Comparisons

iii. Firearms Safety

2. Ron Smith and Associates, www.ronsmithandassociates.com

a. Sampling of courses offered that may be used as supplemental training:

i. Introduction to the Science of Friction Ridge Examination

ii. Essential Ridgeology Concepts

iii. Scientific Analysis (ACE-V): From the Laboratory to the Witness Stand

iv. Courtroom Testimony Techniques - Success Instead of Survival

v. Palm Print Comparison Techniques

vi. IAI Latent Print Certification Test Preparation Training

vii. Understanding Sufficiency and Exclusion Decisions

3. Mike Stapleton and Associates, www.stapletonandassociates.com

a. Sampling of courses offered that may be used as supplemental training:

i. Fingerprint Identification & Classification

ii. Advanced Latent Print Comparison and Identification Training Course

iii. Latent Print Development and Recovery

iv. Crime Scene & Forensic Photography

4. West Virginia University, www.fsi.research.wvu.edu

5. The California State Division of the International Association for Identification, www.csdiai.net

6. The International Association for Identification, www.theiai.org

7. California Association of Criminalists, www.cacnews.org

8. Southern California Association of Fingerprint Officers, www.scafo.org

9. National Institute of Justice, www.nij.gov/training

10. Forensic Pieces, www.forensicpieces.com

11. Eric Ray, www.rayforensics.com

12. Alice Maceo, www.evolveforensics.com

13. Glenn Langenburg, www.eliteforensicservices.com

14. Sirchie Training, www.sirchie.com/training

15. Forensic Technology Center of Excelence / RTI International, www.forensicCOE@rti.org

E. **Resources**

1. Kasey Wertheim website, www.clpex.com
2. Ed German website, www.onin.com
3. Dusty Clark website, www.latent-prints.com
4. Michele Triplett website, www.fprints.nwlean.net
5. Scientific Working Group of Friction Ridge Analysis, Study and Technology, www.swgfast.org
6. American Society of Crime Lab Directors/Laboratory Accrediting Body website, www.ascld-lab.org
7. American Academy of Forensic Science, www.aafs.org
8. Organization of Scientific Area Committees, www.nist.gov/forensics

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/23/2017	**NUMBER:** LPT.14 - Ethics, Legal Aspects and Forensic Science
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Ethics, Legal Aspects, and Forensic Science overview	

I. Ethics, Legal Aspects and Forensic Science (LPTF.14 Ethics, Legal Aspects and Forensic Science Training Checklist)

A. Purpose

1. To familiarize the trainee with criminal and civil law proceedings, including what to expect and how to prepare for various courtroom hearings.
2. To gain an understanding of legal aspects as they pertain to latent print examination.
3. To understand significant court cases involving latent prints and how these outcomes have affected the field of friction ridge analysis.
4. To bring awareness to the trainee of reports concerning falsified latent print evidence and ways to detect attempts to produce forged or fabricated evidence.
5. To acquaint the trainee with ethical aspects of forensic science. For Division policy on ethics requirements and information see FSD.21
6. To assess the trainee's experience and/or training in other forensic disciplines and provide exposure (e.g. shadowing examiners in other disciplines within the laboratory) as needed.

B. Objectives

1. The trainee will attain:
   a. Knowledge of the legal aspects for recording and collecting friction ridge skin exemplars from an individual.
   b. Perspective for the lack of specific number requirements or standards of matching ridge characteristics ("points") necessary to effect and individualization within the discipline, and the implementation of a quality assurance administrative standard addressed in the Latent Print Unit Technical Manual. See LP.19
   c. Familiarization with precedent setting legal cases involving friction ridge examinations.

d. The tools necessary to construct a chart to be used in court to demonstrate a latent print comparison.

e. The ability to demonstrate proper courtroom demeanor, present a case/report, use displays during testimony, and minimize stress while on the witness stand.

f. An understanding of the ethical requirements in conducting latent print examinations.

g. The ability to create and maintain a Statement of Qualifications and a Curriculum Vitae.

h. Ability to demonstrate a general understanding of other forensic science disciplines.

i. The trainee's exposure to other disciplines and/or completion of the reading materials will be documented on the training checklist.

C. **Goal**

1. Upon completion of this training module the trainee will possess the knowledge and ability to effectively present expert testimony in court. The trainee will also gain a clear understanding of the ethical responsibilities bestowed upon the friction ridge analyst, as well as display a general understanding of the various forensic science disciplines.

D. **Examination**

1. Successful completion of this training module will be determined by a written test.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Latent Print Technical Unit Manual	**REVISION DATE:** 08/24/2017	**NUMBER:** LPT.15 - Final Examination
	RELATED ORDERS:	
APPROVED BY: Kathryn Novaes, Kim Willey & Debbie McKillop	**ASCLD-LAB:**	
CHAPTER: Latent Examiner Training Manual	**SUBJECT:** Final Examination	

I. FINAL EXAMINATION (LPTF.15 Final Examination Training Checklist)

A. The Final Examination for the Latent Print Examiner Course of Instruction will consist of a **Mock Trial**. The purpose of a mock trial is to demonstrate the analyst's professional demeanor, knowledge, and skills to effectively communicate to attorneys, judges, and juries.

1. Each person participating in the mock trial will complete an Internal Court Testimony Critique Form FSDF.02

   a. The court critiques will be stored in the analyst's training binder and may also be imaged into LIMS.

   b. Feedback will be provided to the analyst upon completion of the mock trial.

2. The mock trial can be videotaped and should not last more than two hours.

3. The trial may be stopped at any time upon the request of any involved parties.

4. The three competency tests should be successfully completed prior to the final exam. LPT.07, LPT.08, and LPT.09.

5. For a successful Mock Trial, the analyst must be able to effectively communicate and answer technical questions correctly.

6. A failed Mock Trial will result in remedial training. See LP.53 for information on remedial training.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 2/6/2017	**NUMBER:** PROP.01 - Introduction to Property and Evidence Services
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Introduction to Property and Evidence Services	**SUBJECT:** Introduction to Property and Evidence Services	

Mission Statement

Property and Evidence Services exists in order to receive, catalog, safely store, and maintain the integrity of evidence, found property, and property for safekeeping. The function allows for the effective prosecution of criminal offenders while confirming innocence; and victims may find truth and closure as justice is served. Lastly, law enforcement agencies have the legal obligation to restore evidence/property to rightful owners or facilitate the legal disposition of evidence/property in agency's possession.

Goals

The goals of Property and Evidence Services are:

1. Maintain the security, control and integrity of evidence and property placed in the custody of Property and Evidence Services within reasonable bounds and in accordance with local, state and federal laws.
2. Provide quality service to Property and Evidence Services clients.

Objectives

The objectives of Property and Evidence Services are:

1. Provide a safe and healthy working environment for Property and Evidence Services employees.
2. Maintain the accuracy of documentation for evidence or property placed in the custody of Property and Evidence Services.
3. Facilitate the movement of evidence between the department and outside agencies as needed for lawful purposes.
4. Dispose of property in accordance with all applicable local, state and federal laws.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 11/27/2018	**NUMBER:** PROP.02 - Security Procedures
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ANAB:**	
CHAPTER: Security	**SUBJECT:** Security Procedures	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 10/23/2018	**NUMBER:** PROP.03 - Data Entry Procedures
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ANAB:**	
CHAPTER: Data Entry	**SUBJECT:** Data Entry Procedures	

[redacted]

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Property Services Manual**	**REVISION DATE:** 06/22/2018	**NUMBER:** PROP.04 - Property Inspections and Audits
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCEND-LAB:**	
CHAPTER: Property Inspections	**SUBJECT:** Property Audit and Inventory	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 04/18/2019	**NUMBER:**PROP.05 - Intake Procedures
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ANAB:**	
CHAPTER: Intake of Evidence and Property	**SUBJECT:** Intake Procedures	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 6/19/2018	**NUMBER:** PROP.06 - Storage Locations
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Storage Locations	**SUBJECT:** Storage Locations	

[redacted]

[redacted]

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 10/04/2018	**NUMBER:** PROP.07 - Inmate Property
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pam Hofsass	**ASCLD-LAB:**	
CHAPTER: Inmate Property	**SUBJECT:** Inmate Property	

I. POLICY: Property and Evidence Services employeees will dispose of unclaimed inmate property transferred from the Office of the Sheriff Custody Services Bureau (CSB).

A. REFERENCE

1. Custody Services Bureau Policy and Procedures-Detention-Chapter Eleven: Intake, Transfer, and Release-Policy # 2.11.24 Unclaimed Inmate Property Purging
2. Government Code Sections 26640, 26641 & 26642

B. GENERAL INFORMATION

1. The Custody Services Bureau is responsible for processing unclaimed inmate property in accordance with applicable laws and policies.
2. Inmate property submitted into Property and Evidence Services does not require the following:
   a. Entry on a Station House Log
   b. An Office of the Sheriff case file number
   c. A tape sealed container
3. Inmate property may be disposed of immediately. Property and Evidence Services employees will determine the correct method of disposal. See PROP.09.

C. PROCEDURE

1. Inmate property will be segregated according to the following types disposition:
   a. Sale at auction
      i. Inmate property will be assigned an auction company bar code for tracking purposes.
      ii. Any revenue generated from the sale of inmate property will be deposited into the general fund account of Office of the Sheriff.
   b. Donation to charity
   c. Recycle / Reuse
      i. Books from the Detention library and inmate uniforms will be returned to the Custody Services Bureau.
   d. Destruction
2. No further documentation is needed after disposition.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 3/14/2019	**NUMBER:** PROP.08 - Property and Evidence Release
	RELATED ORDERS: QA.23 - EvidenceOnQ	
APPROVED BY: Rich Wara & Pamela Hofsass	**ANAB:**	
CHAPTER: Property and Evidence Release	**SUBJECT:** Property and Evidence Release/Return	

[redacted]

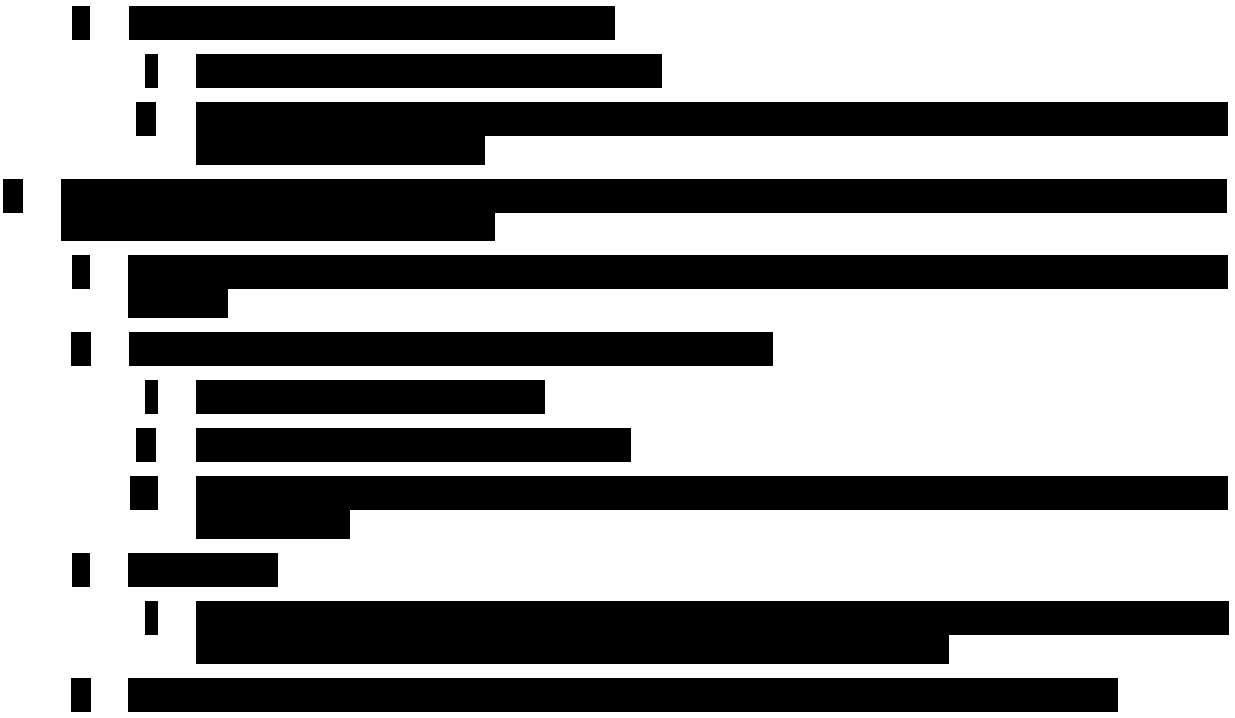
Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 04/08/2019	**NUMBER:** PROP.09 - Property and Evidence Disposition
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ANAB:**	
CHAPTER: Property and Evidence Disposition	**SUBJECT:** Property and Evidence Disposition	

I. POLICY: Property must be properly and securely maintained to insure its integrity as evidence and its value to the legal owner. Additionally, when property is released the disposition must be proper and legal.

A. **REFERENCES**

1. 1411-1413 P.C. - Stolen/Embezzled Property
2. 2080 - 2080.10 Civil Code, Div. 3, Pt. 4, Title 6, Ch.4, Article 1 - Lost Money and Goods
3. 1.07.13 - Office of the Sheriff Policies and Procedure Manual - Department Use of Unclaimed Property, Confiscated Property and Evidence
4. Title II, Div. 1108-4 Contra Costa County Ordinance -Unclaimed Property
5. 2080.10 C.C. - Safekeeping Property
6. 2080.7 C.C. - Abandoned Property
7. 11488 H&S - Release of Seized Property
8. 1536 P.C. - Return of Property Seized by Search Warrant
9. 11495 H&S - Disposal of Seized Property Proceeds
10. 217 W&I, Div. 2, Pt. 1, Ch. 2, - Article 1 General Provisions (of Juvenile Court Law)
11. 1108.1.14 - Contra Costa County Ordinance - Disposition of Toys and Bicycles
12. 1108-4.010 - Contra Costa County Ordinance - Disposition of Unsold, Perishable or Dangerous Property
13. 418-10 - Contra Costa County Ordinance - Recycling Requirements for Landfill Disposal
14. 11357-11362.9 H&S, Div. 10, Ch. 6., Article 2 - Marijuana

[redacted]



C. **FOUND PROPERTY**

1. Found property will be retained for 100 days then destroyed, disposed, or auctioned.
2. Found property will be examined to determine ownership.
   a. If an owner is located, the item(s), with the exception of drugs and firearms, will be returned to the owner immediately. Refer to PROPERTY TO BE RETURNED TO OWNER.
   b. If an owner is **not** located or the property remains unclaimed after 90 days, the finder may claim it. For found property to be released to a finder:
      i. The finder must have signed a Declaration of Found Property or name listed in the case report as the finder.
      ii. The finder must call Property and Evidence Services within 10 days after the expiration of the 90 day storage period.
      iii. If the property value is $250 or more the finder must:
         1. Publish a notice of found property once in a newspaper of general circulation published in Contra Costa County.
         2. After 7 days from the date of publication of the notice, the finder may call Property and Evidence Services to determine if the owner of the property has been located. If the owner has not been located, the property should be released to the finder upon furnishing proof of publication.
      iv. If the property is valued at less than $250, no publication is required and should be released to the finder.
      v. The property will be disposed if the finder fails to furnish either proof of publication or fails to claim the item(s) within 100 days from the date the Declaration of Found Property was signed.

D. **SAFEKEEPING PROPERTY**

1. Safekeeping property will be retained for 60 days (or one year if arrangements are made by the owner) per Penal Code Section 2080.10 CCP.
2. If the owner claims the property, return the item(s) to the owner.
3. If the person, from whom property was taken, does not claim it or make other arrangements within 60 days, the property shall be disposed.
4. If within 60 days the person from whom the property was taken makes arrangements with Property and Evidence Services, the item(s) shall be held for an additional 10 months or a total period of 12 months. The property shall be disposed if the owner does not claim the safekeeping property after the 12 month period.

E. **PROPERTY TO BE RETURNED TO OWNER**

1. Property, other than stolen or embezzled property, shall be released to the owner upon receiving a release authorization. Upon receiving authorization to return property, a notification will be made to the owner.
    a. Generate a letter with the date the property will be disposed
    b. Mail to the owner at the last known address
    c. Calendar the disposal date indicated on the letter
2. If the property is not claimed by the date set for disposal, the property becomes unclaimed. Refer to PROCESSING OF DISPOSABLE PROPERTY.
3. If the property is claimed, the owner will visually inspect the property to ensure ownership. To return the property:
    a. Verify ID by asking to see proof of identification (example: CDL or Passport). For person(s) who were incarcerated in any Contra Costa County Detention facility, a booking photo can be used as verification.
    b. Document in EvidOnQ the ID information that was verified.
    c. Update EvidOnQ
    d. Remove property with a CLETS FCN from the RMS system
4. Release of marijuana may be permitted if the possession meets the following criteria:
    a. The marijuana being requested must be stored in Property and Evidence Services for safekeeping.
    b. Possessor was over the age of 21 when the confiscation occurred, did not possess more than 28.5 grams (1 ounce) of marijuana or more than 8 grams of concentrated cannabis.
    c. Marijuana sent to Property and Evidence Services as evidence requires the approval of an investigator prior to release.
    d. In all cases, marijuana will only be returned to the owner pursuant to a court order.

F. **STOLEN OR EMBEZZLED PROPERTY RETURNED**

1. Stolen or embezzled property may be returned to the owner pursuant to 1411 P.C. The property will be returned to the owner by:
    a. Court order or
    b. Approval from the Investigations Division
2. To return property to the owner refer to PROPERTY TO BE RETURNED TO OWNER.

G. **PROCESSING OF DISPOSABLE PROPERTY**

1. Review the authorization for authenticity and completion.
2. Query EvidOnQ to obtain the current location of the property.
3. Specialized destructions are handled as follows:
    1. Drugs/narcotics will be processed when the volume justifies destruction - Refer to PROP. 17 - Destruction/Disposal Controlled Substances and Paraphernalia
    2. Hazardous materials will be processed when the volume justifies destruction. - Refer to PROP. 16 - Hazardous Material Disposal
    3. Monies for deposit will be processed quarterly. Refer to PROP. 18 - Disposition of Unclaimed Money/Revenue Deposit Permit
    4. Firearms and ammunition are given to the armorer for handling. Refer to PROP. 13 -Release of Firearms and PROP. 14 - Firearms/Ammunition Destruction
4. General property will be located and pulled from the active storage.
5. Verify the bar code on the container and the property pull list are the same.
6. Open the property containers and match to the property pull list, then determine the following:
    a. Property of value - Place in an auction box - see PROPERTY FOR AUCTION.
    b. Property of no value - Place in a destruction box section - see DESTRUCTION OF PROPERTY WITH NO VALUE.

c. Property that is recyclable - Place in a recycle box section - see RECYCLE / REUSE OF PROPERTY.

d. Property appropriate for charity. - Place in the charity/box section - see PROPERTY RELEASED TO CHARITABLE ORGANIZATIONS.

e. Approved requests for property that may be converted to department use. If requested, set aside for department use - see PROPERTY CONVERTED TO DEPARTMENT USE.

f. Property with a commercial container that can be identified shall be returned to the business - see PROPERTY TO BE RETURNED TO OWNER.

H. **PROPERTY FOR AUCTION**

1. With the exception of firearms, unclaimed or abandoned property which is of value will be sold at a public auction.

2. Classify property.

   a. Write on a blank auction manifest form the category, make, model, type of item and serial number.

   b. Utilize bar codes from the auction company and assign the property a bar code.

3. Separate property into categories for sale at auction (example: cell phones, electronic devices, tools, bicycles, computers and laptops, etc.).

4. Generate an auction manifest report and match the bar codes on the report to the bar coded property in the segregated box.

5. Make two photocopies of the auction manifest report.

   a. The original report is given to the auction company driver on the scheduled pick up date. The auction manifest report will be signed by the Property and Evidence Services employee releasing the property **and** the driver for the auction company picking up the property.

   b. The first photocopy is attached to the outside of each assigned box where it can be clearly seen once all the property in the segregated box is tagged and confirmed.

   c. The second photocopy, obtained after the auction company driver signs the original, is retained in Property and Evidence Services.

6. Set the sealed boxes aside for pickup by the auction company.

7. Access EvidOnQ and enter the disposition of property:

   a. For example any items to be auctioned will be listed in the comments section of EvidOnQ.

8. Run serial numbers in the Automated Property System in RMS/CLETS.

   a. If any property is determined to be stolen, verify it was deemed as unclaimed before proceeding to sending the property to auction.

9. Notify the auction company for a scheduled pick up of property for auction.

10. Complete the EvidOnQ data entry after auction company picks up the property for auction by:

    a. Scanning the location bar code PROP.COM (which indicates the property went to auction).

    b. Scanning the bar code on the property pull list.

    c. Printing the downloaded information and verifying the printout and the auction manifest report labels match.

11. Place the auction manifest report into a file folder and place in a file pending receipt of the auction revenue.

I. **AUCTION REVENUES**

1. Upon receiving the auction revenue check, the following will be completed:

   a. Download and print a copy of the Summary Activity Report on PropertyRoom.com website.

   b. Verify the bar code on the Summary Activity Report matches the auction manifest report bar code. NOTE: Property items with one bar code may be separated by the auction company, but will retain the original bar code.

2. Make two copies of the auction revenue check.

a. The auction manifest report , Summary Activity Report, and a copy of the auction revenue check, are placed in the auction file and filed by date.

b. The second copy of the check is attached to the original auction revenue check.

3. The auction revenue check will be deposited according to the procedure found in Prop. 18 - Disposition of Unclaimed Money / Revenue Deposit Permits at the next deposit.

J. **DESTRUCTION OF PROPERTY WITH NO VALUE**

1. Property of little or no value should be rendered useless and can be disposed in the appropriate county dumpster or recycle bin.

a. Paper should be shredded to prevent anyone from obtaining personal information for a fraudulent or illegal use.

2. Alcoholic beverages will be emptied and the containers will be disposed or recycled.

3. Knives unsuitable for auction or for department use, will be disposed with the firearms destruction.

4. Fireworks will be turned over to: Consolidated Fire, 2010 Geary Rd., Pleasant Hill, CA 94523 - Phone (925) 941-3330. Ask to speak to the Duty Investigator to arrange a pick up.

5. Counterfeit bills are sent to: U.S. Secret Service, Attn: Counterfeit Squad, 1700 Montgomery St., Suite 300, San Francisco, CA 94111-1024.

6. License plates / DMV placards are delivered to the local California DMV office.

7. Unclaimed U.S. Passports are sent to: U.S. Department of State, Consular Lost and Stolen Passport Unit (CLASP), CA/PPT/S/L/LE/CP, 44132 Mercure Circle, P.O. Box 1227, Sterling, VA 20166-1227.

8. Unclaimed FasTrak transponders are sent to: FasTrak Customer Service Center, P.O. Box 26927, San Francisco, CA 94126.

9. Mutilated Currency is sent to: Department of Treasury, Bureau of Engraving and Printing, MCD/OFM Room 344 A, P.O. Box 37048, Washington, DC 20013.

10. Unclaimed Social Security cards are sent to: Social Security Administration, P.O. Box 33008, Baltimore, MD 21290-3008.

11. Unclaimed U.S. Savings Bonds are sent to: Treasury Retail Securities Site, P.O. Box 214, Minneapolis, MN 55480-0214.

12. Unclaimed foreign passports or foreign ID cards are sent to the appropriate Consulates General or Embassy for the issuing country. Check the Internet for the updated contact information for either the Consulate General or the Embassy of the issuing country.

13. U.S. Flag in worn condition will be turned over to the local American Legion.

14. A transaction in EvidOnQ will be performed to indicate items destroyed by Property and Evidence Services employees. If another agency is handling the disposal, notate the name of the agency and the date the property was released for disposal.

K. **RECYCLE / REUSE OF PROPERTY**

1. Property, including but not limited to the following, may be recycled/re-used:

a. Electronics (E-Waste) - currently the county uses Rapid Recycle, 110 Second, Ave South, Suite B-1, Pacheco, CA 94553 (925) 671-8008.

b. Clothing / shoes - The (Juvenile) Hall Closet - 202 Glacier Dr., Martinez, CA 94553 (925) 957-2718.

c. Metals (non-lethal) / Aluminum / Steel / Brass / Copper / Glass / Plastics for monetary compensation - Concord / Pleasant Hill Recycle Center - 1320 Galaxy Way, Concord, CA 94520.

d. Paper / Cardboard - picked up by county Public Works.

i. Cross shred papers are to be thrown in the trash due to restriction by County Public Works.

ii. Strip shred papers can be given to County Public Works.

e. Reading Glasses - Lions Club (check phone book for closest drop off center).

f. Books - local Public Library.

g. Triple Balance Beam Scales (clean) - donated to local schools at the discretion of the Director.

h. Plastics / Glass and other recyclable materials not for monetary compensation - local waste / recycle hauler contracted by Contra Costa County (currently Concord Disposal).

i. Refer to Contra Costa County Waste Reduction and Recycling website for further recycle programs: http://www.co.contra-costa.ca.us/depart/cd/recycle

i. Recycling metal, aluminum, glass, plastic or other recyclable materials for revenue shall be collected until the volume justifies a delivery to the recycling facility.

i. Any revenues earned must be properly receipted and deposited in the County General Fund.

ii. Any recyclable property has to be property which, if not recycled, would be destroyed by placing in the trash.

iii. Enter into EvidOnQ as destroyed.

L. PROPERTY RELEASED TO CHARITABLE ORGANIZATIONS

1. Property of value should be auctioned. However, 217 of the Welfare and Institutions Code allows property with a value of not more than $500 to be turned over to the County Probation Office, the Welfare Department, or any charitable or non-profit organization which is authorized to participate in a program or activity designed to prevent juvenile delinquency.
2. Property of value will be auctioned unless the Director authorizes specific items to be donated pursuant to 217 W&I.
3. Obtain a signature of the representative of the charity or organization.
   a. If the property is released to the Sheriff 's Charity, obtain a signature from the person receiving the property via EvidOnQ. Refer to Prop. 08 - Property and Evidence Release/Return.
   b. If the property is released to an agency or organization outside of the Office of the Sheriff:
      i. Obtain a signature from the representatives of the agency or organization on a document that lists the property in general (bikes, clothes, etc.).
4. The Property and Evidence Services employee handling the release should also sign and date the document.
5. File the document in the charity file folder.
6. Update EvidOnQ as charity.

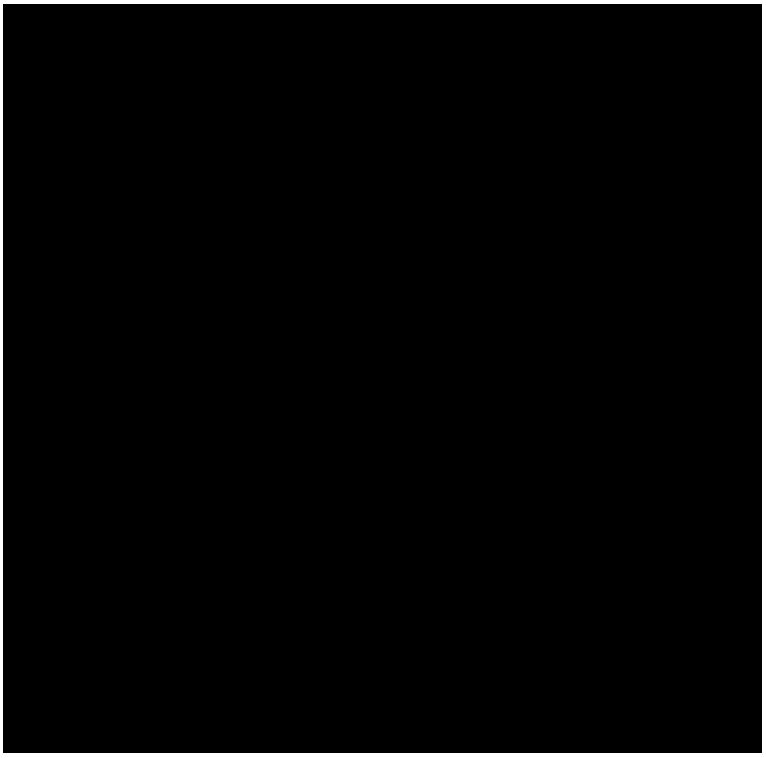
M. PROPERTY CONVERTED TO DEPARTMENT USE

1. Property which is unclaimed, abandoned or declared a nuisance, may be retained by the Office of the Sheriff for official use. Sheriff's Policy 1.07.13 allows and controls conversion of property for official department use.
2. General Property for Department Use



a. The Property and Evidence Services employees will fill in the portions of the Property for Department Use form that asks for:
    i. Item Number
    ii. Description
    iii. Case Number
    iv. EvidOnQ Barcode
b. The requester will be given the Property for Department Use form to complete the following information:
    i. Division and unit
    ii. Location within the unit where the item(s) will be stored
    iii. Reason for use
    iv. Name of the person requesting the item(s)
    v. Requesting Division Captain signature and the date signed
c. Forward the signed Property for Department Use form to the Chief of Forensic Services for approval
d. Once approval from the Chief of Forensic Services is received, release of the property is as follows:
    i. Verify items to the list of property on the Property for Department Use form.
    ii. Obtain the signature of the person receiving the property and the date the property was released on the Property for Department Use form.
    iii. The Property and Evidence Services employee will sign and date the Property for Department Use form (under "person transferring property").
    iv. Update EvidOnQ with a transfer action of Dept Use and then list the date and location of the property in the comments area.
    v. File the Property for Department Use form in the filing cabinet according to unit location where the item is stored (example: Crime Lab, MCDF, Danville PD, etc.).

3. Firearms for Department Use
    a. If a firearm is classified as a nuisance (18275 P.C.) and with the approval of the court, the firearm may be used in carrying out the official duties of the law enforcement agency in lieu of destruction (34005(b) P.C.).
    b. Firearms for Department Use will be processed as follows:



i. Property and Evidence Services employee will fill out a Certification of Retention form with the following information:

1. Make of firearm
2. Model of firearm
3. Caliber of firearm
4. Serial number of firearm -if a serial number is not on the firearm, one must be assigned for tracking purposes (usually "CCCSO", the case number, and the Property and Evidence Services bar code number. Example: CCCSO 14-12345-30072041)
5. Case number the firearm was stored under in the Property and Evidence Services facility.

ii. The requester must fill in:

1. Date of the request
2. Title/Rank and name of the requester
3. Reason for use (must meet one of the pre-selected categories listed on the Certification of Retention form)

c. The Certificate of Retention must be authorized by:

i. Division Captain of the requester **AND**

ii. Chief of Forensic Services.

d. Final approval must be given by the Superior Court of California via:

i. Superior Court Judge's signature and date

ii. Superior Court Judge's printed name and department number of the Superior Court

e. The firearm will be entered into AFS as retained for official use.

f. EvidOnQ will follow Prop.08 - Property and Evidence Release/Return procedure with the location entered as Dept. Use. The comments field will be updated to show that the firearm is retained for department use.

N. **PROPERTY FOR DISPOSAL FROM CONTRA COSTA COUNTY SUPERIOR COURT**

1. Contra Costa Superior Court releases property that is no longer held as evidence to the Office of the Sheriff for disposal.
2. The property must have signed court orders authorizing the disposal.

3. Superior Court will notify Property and Evidence Services when property is ready for pick up.
4. Property from Superior Court will be handled as follows:
    a. The Property and Evidence Services employee assigned to pick up the property will meet with the court liaison (usually the Exhibit Clerk). A station house log is filled in by the court clerk submitting the property. It will include:
        i. Date the property was placed on the log for transport to Property and Evidence Services
        ii. Court location (Martinez, Walnut Creek, etc)
        iii. Docket number (in place of the case number)
        iv. Brief description of property
        v. Signature of the court liaison transferring the property
    b. Check the station house log to ensure all property is accounted for.
    c. The chain of custody on the packaging will be signed by court representative and Property Services employee..
    d. Any deficiency must be noted in the remarks column and the property rejected. Property and Evidence Services employees will not pursue the cause of a deficiency.
    e. Copies of court orders authorizing the disposal of the items will be submitted with property.
5. The Property and Evidence Services employee transporting the property will sign and date the bottom of the station house log in the box entitled "Property Received By" once all the property is received or rejected and notations made.
    a. The pink copy of the station house log is retained at the court.
    b. The white and the yellow copies are submitted with the property.
    c. The white copy is placed on the master station house log binder along with the copy of the court order and filed according to the date received in property.
6. Upon return to the Property and Evidence Services facility:
    a. The Property and Evidence Services employee will enter any new items into EvidOnQ. The court docket numbers will be used in lieu of case numbers when entering new property into EvidOnQ database. If the originating agency and originating agency case number is known, then it may be entered in the associated agency and cross reference # fields of EvidOnQ.
    b. The location assigned for these items will be "Dispo Area" as it is to be processed for disposal.
    c. Any returning items will be updated into EvidOnQ as a transfer without signature.
    d. Comments are notated in the NotesLog stating which court location, the court representative listed on the chain of custody and any other pertinent information regarding the item.
    e. No notifications will be sent to local law enforcement agencies due to the Superior Court already giving the proper notifications prior to pick up.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 3/16/2017	**NUMBER:** PROP.11 - Automated Property System
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: RMS	**SUBJECT:** Automated Property System	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 6/19/2018	**NUMBER:** PROP.12 - Persons Prohibited to Own/Posses Firearms
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Persons Prohibited to Own/Posses Firearms	**SUBJECT:** Persons Prohibited to Own/Posses Firearms	

I. POLICY: Property and Evidence Services employees will abide by state and federal laws when returning firearms to individuals. Individuals prohibited from owning a firearm include persons convicted of felonies, certain misdemeanors, or persons prohibited due to court orders or restraining orders from owning, possessing or having control of firearms.

A. **REFERENCES**

1. Federal Law 18 U.S.C. 922 (g) - Prohibited person from possession of firearms and ammunition for conviction of crime of Domestic Violence
2. California Firearms Laws Summary 2016

B. **GENERAL INFORMATION**

1. A firearm will not be returned to any person prohibited by law or court order from possessing or owning a firearm.
2. If a person is eligible to possess a firearm see PROP. 13 - RELEASE OF FIREARMS for instructions regarding the return of firearms.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 6/20/2018	**NUMBER:** PROP.13 - Release of Firearms
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Release of Firearms	**SUBJECT:** Release of Firearms	

I. POLICY: Property and Evidence Services employees will release firearms in accordance with the law and proper authorization or by court order. Found firearms may be released to a *finder* in accordance with the law.

A. **REFERENCES**

1. 18250 P.C. - Peace Officer to Take Temporary Custody of Firearm at Domestic Violence
2. 33850 P.C. - Return or Transfer of Firearm in Custody or Control of Court or of Law Enforcement
3. 1413 P.C. - Duties of Police Property Clerk
4. 16990 P.C. - Person Taking Possession of Firearm by Operation of Law
5. 18000-18010 P.C. - Control of Deadly Weapons / Surrender, Disposal, and Enjoining of Weapons Constituting a Nuisance
6. 29610-30165 P.C. - Special Firearms Rules Relating to Particular Persons (Firearms Prohibitions)
7. 25525 P.C. - Transportation Between Special Places
8. 33850-34000 P.C. - Obtaining Possession of Firearms in Control of Court or Law Enforcement Agency
9. 2080-2082 C.C. - Lost and Unclaimed Property
10. 6300-6389 F.C. - Protective Orders and other Domestic Violence Prevention Orders
11. 8102 W&I - Persons Held for Mental Examination / Law Enforcement Shall Retain Firearm

B. **GENERAL INFORMATION**

1. Domestic Violence /Mental Health Protective Orders on Firearm Returns

   a. Misdemeanor Complaints Unit compiles a firearms' packet in the case of domestic violence or mental health protective orders to be presented to the Sheriff's Administration Officer (SAO). The SAO along with County Counsel is responsible for filing declarations with the court for the destruction of firearms seized pursuant to:

      i. 18250 P.C. (Domestic Violence).

      ii. 8102 W&I Code (Persons held for mental examination).

   b. After filing a declaration, a court order should be received within sixty (60) days directing the destruction and/or return of the firearm(s).

   c. Property and Evidence Services employees will receive court orders in a domestic violence or mental health examination(s) from the Professional Standards Unit.

   d. Family Code Section 6389 prohibits the possession or control of firearm(s) while subject to a protective order of the court.

      i. Family Code 6389 is a law independent from 18250 P.C. (Domestic Violence).

   e. A person that is subject to a protective order may not possess or own a firearm while under a protective order.

      i. The respondent must file a receipt showing the firearm(s) were surrendered to a local law enforcement agency or sold to a FFL (Federal Firearms Licensee) within 72 hours of the order.

      ii. Pursuant to P.C. 33850 Property and Evidence Services employees are not required to hold any firearms for a restraining order more than one year, unless the firearms are held as evidence, and then only until the case is adjudicated.

iii. When a case is adjudicated, then the process for return or destruction will commence.

f. If the owner is legally unable to retain a firearm, the owner has 180 days to become eligible or:

i. Transfer the firearm to a family member who does not reside with the owner.

ii. Transfer the firearm to a friend who does not reside with the owner.

iii. Sell the firearm to a FFL.

g. Upon expiration of the protective order, any unclaimed firearm may be disposed of pursuant to 1413 (b) P.C.

i. Property and Evidence Services employees may store the firearm(s) for one year. After the one year has passed, the firearm(s) can be declared a nuisance.

h. Any cases falling under the 18250 P.C. section will be stored for one year.

i. The SAO is responsible for notifying Property and Evidence Services employees of any new court proceedings.

2. Nuisance Firearms

a. Penal Code Section 18005 P.C. states that a firearm that has been stolen and later recovered from a thief or transferee or used in such a manner to constitute a nuisance, without knowledge of the owner, shall be returned to the lawful owner as soon as it is no longer required as evidence and the owner shows proof of ownership.

b. A firearm may be destroyed after giving notice to the lawful owner. If there is no response from the lawful owner, then firearm becomes unclaimed.

c. If a firearm is deemed illegal, then the Director, may make special arrangements for return of the firearm(s).

C. **PROCEDURE**

1. Law enforcement agency or military institution firearms that are lost or stolen and are not considered evidence will be returned to the agency.

2. For firearms that are not from a law enforcement agency or military institution, then:

a. Review the authorization for completeness and accuracy from one of the following resources:

i. Field Operations or assignee

ii. Court Order

1. A firearm with a court order cannot be returned until a DOJ authorization is received.

iii. Teletype from another agency

iv. SAO

b. Query the Automated Firearms System (AFS) utilizing the California Law Enforcement Telecommunications System (CLETS) to ensure the firearm is not reported as lost or stolen.

i. If the firearm is reported as stolen:

1. Send a *locate* message (LG) or a *cancel* message (XG) in CLETS.

2. Forward the firearm to the original reporting agency unless the stolen was out of Contra Costa County or a contract city, then notify the assigned detective.

ii. If the firearm is not reported stolen then continue process.

c. Send a letter to the owner stating the firearm may be claimed and include paperwork for the Law Enforcement Gun Release application (LEGR) as required by the State of California Department of Justice.

i. The letter must state that the owner has 180 days to respond or the firearm will be destroyed.

ii. For owners who reside outside of the State of California and are not prohibited from possessing a firearm, the firearm may be mailed to the local law enforcement agency where the owner resides or a FFL who is contracted to obtain the firearm on the owner's behalf. The owner must submit a LEGR application and be approved by the State of California Department of Justice before the firearm is returned. PROP.15 - Mailing of Firearms.

iii. Found firearms may be released to a "finder" according to 16990 P.C. and 2080 Civil Code PROP.09 -PROPERTY AND EVIDENCE DISPOSITION if a Firearms Ownership Request is submitted and the conditions listed below are met.

d. After the LEGR application and the Firearm Ownership Request form have been submitted to and approved by the California Department of Justice and upon presentation of a valid Certificate of Eligibility (COE), Property and Evidence Services employees will:

i. Return the firearm to the owner listed on the letter upon verification of:

1. A valid and current identification presented by the owner/claimant.

2. The name of the person to whom the firearm is to be returned.

3. The person is not prohibited from possessing a firearm.

4. NOTE: The letter from DOJ is only good for 30 days from the date listed at the top of the letter. Anytime after the 30 days, the owner must resubmit a LEGR application and wait for the approval from DOJ in order to obtain the firearm.

ii. Copy the LEGR letter and give the copy to the owner while Property and Evidence Services employees retain the original with the gold seal.

iii. Return the firearm without ammunition.

1. At the option of the owner, the ammunition may be picked up within fourteen (14) business days after the date of pick up of the firearm or destroyed.

2. Active law enforcement officers are exempt and the ammunition may be returned along with the firearm(s).

iv. The owner will sign for the receipt of the firearm on the electronic signature pad for EvidenceOnQ database under *Transfer with signature*.

v. Advise the owner that a concealable firearm must be carried in a lockable container per PC 25610.

1. Offer the owner a "Project Child Safe" gun lock available at no cost.

e. Any documents presented to Property and Evidence Services employees in which the authenticity is questionable will be given to the Director and the firearm and/or ammunition will be held pending a review.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 6/19/2018	**NUMBER:** PROP.14 - Firearms/Ammunition Destruction
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Firearms/Ammunition Destruction	**SUBJECT:** Firearms/Ammunition Destruction	

I. POLICY: Upon receiving either a court order, approval from CCCSO Investigations detectives or the Director of Property and Evidence Services, firearms and ammunition will be disposed of in accordance with the law.

A. **REFERENCES**

1. Penal Code
   a. 537(e) P.C. and 29300 P.C. - Altered Identification Marks
   b. 16170 P.C. - Antique Firearm Definition
   c. 16180 P.C. - Antique Rifle Definition
   d. 16520 P.C. Firearm Definition
   e. 16990 P.C. , 26700 P.C. and 26500-26515 P.C. - Firearms License Requirements to Sell, Transfer or Lease
   f. 1536 P.C. - Return of Property Seized by Search Warrant
   g. 18000 - 18010 P.C. and 30800(c) P.C. - Disposal of Nuisance Weapons
   h. 18005(b)&(d) P.C., 18270 P.C. and 33855 (c) P.C. - Recovered Stolen Weapons to Rightful Owner
   i. 18275 P.C. - Nuisance Firearms
   j. 29800 P.C. - Felony Firearms Prohibition
   k. 29805 P.C. - Misdemeanor Firearms Prohibition
   l. 29815 P.C. - Probation Firearms Prohibition
   m. 29820 P.C. - Juvenile Offender Firearms Prohibition
   n. 29825 P.C. - Temporary Restraining Order (TRO) Firearms Prohibition
   o. 29830 P.C. - Prohibited Person: transfer of Firearms via Firearms Dealer
   p. 33850-33875 P.C. - Obtaining Possession of Firearms in Control of Court or Law Enforcement Agency
   q. 34000 P.C. - Sale or Destruction of Unclaimed Firearms
   r. 34005 P.C. - Alternatives to Destruction of Firearms
2. Civil Code
   a. 2080.2 C.C. - Restore Property to Rightful Owner
   b. 2080.3 C.C - Unclaimed Property
   c. 2080.6 C.C. - Disposal of Found Property
   d. 2080.10 C.C. - Safekeeping Property
3. Welfare and Institutions Code
   a. 8100-8103 W&I - Mental Health Firearms Prohibition

B. **GENERAL INFORMATION**

1. Nuisance Firearms

    a. Firearms deemed to be a public nuisance are defined as:

        i. Firearms possessed or owned in violation of 29800, 29900(a) or 29610 P.C.

        ii. Firearms used in the commission or attempted commission of any crime or offense by adults or juveniles 29300 (a) P.C.

        iii. Domestic Violence (nuisance firearms):

            1. Firearms in evidence "for longer than 12 months and has not been recovered by the owner or person who had lawful possession at the time it was taken into custody, shall be considered a nuisance and destroyed as provided in subdivisions (a) and (b) of Section 18000 and subdivisions (a) and (b) of Section 18005."

            2. "If a firearm or other deadly weapon is not recovered within 12 months due to an extended hearing process as provided in Section 18420, it is not subject to destruction until the court issues a decision, and then only if the court does not order the return of the firearm or other deadly weapon to the owner.".

        iv. A firearm owned by a person who committed the crime, which caused the weapon to become a nuisance, may be disposed of without notice being given to that owner.

        v. Nuisance firearms which are unclaimed or abandoned property and have been held for at least one year will be destroyed or retained for department use. For department use procedure refer to Property Manual Prop. 09: Property and Evidence Disposition, Section I.M.3 - Firearms for Department Use

2. Ammunition

    a. Unclaimed ammunition accumulated in Property and Evidence Services will be:

        i. Released to Sheriff's personnel for test purposes, training or department use.

        ii. Disposed of in accordance with the law.

3. Firearms may be sold only at the discretion of the Sheriff.

4. Firearms shall be destroyed or converted to department use (specific firearms or non-serialized parts).

    a. Refer to Sheriff's Policy and Procedure Section 1.06.37 Property and Evidence Retention, Release and Disposition.

5. A historical firearm may be transferred to a government owned/operated museum at the discretion of the Director.

C. **PROCEDURE**

1. Firearms Destruction

    a. Obtain a Firearms Pre-Destruction report.

    b. Check the location of the firearm in EvidenceOnQ.

    c. Run each firearm through CLETS. Check for stolen status.

        i. If insufficient information is available in EvidenceOnQ to run the firearm in CLETS then:

            1. Retrieve the firearm to obtain needed information.

            2. Record the necessary data in EvidenceOnQ.

            3. Re-check CLETS to determine if the firearm is stolen.

        ii. Attach a copy of the CLETS printout to the Firearms Pre-Destruction Report only if there is a "hit".

        iii. If the firearm is stolen refer the case to the original reporting agency, or the detective within the Investigations Division.

            1. A *Locate* (LG) or *Cancel* (XG) entry must be made in CLETS.

        iv. If the firearm is deemed stolen, eliminate the firearm from the firearms destruction.

        v. After determining the firearm is not stolen, continue with the process.

vi. If the owner of a stolen firearm authorizes the destruction of the firearm, add it to the firearms destruction and continue processing.

d. Retrieve the remaining firearms from their locations.

i. Verify the model, serial number and other information against the Firearms Pre-Destruction Report.

ii. Remove stocks and grips and place them in a box for auction.

iii. Firearms are disassembled so they are inoperable and shall be placed in the assigned location (which currently is "Gun Store").

e. On the day of the firearms destruction:

i. Remove the firearms from the Gun Storage Room and place them in the transport vehicle.

ii. Transport firearms for destruction to the vendor with at least two witnesses from the Office of the Sheriff.

iii. Witness the destruction of firearms.

f. After the firearms destruction:

i. Transfer all firearms from the Firearms Pre Destruction report and generate a WEAPONS DESTRUCTION REPORT in EvidenceOnQ.

ii. Witnesses to the firearms destruction will sign and date the WEAPONS DESTRUCTION REPORT.

iii. The firearms destroyed shall be entered in CLETS.

1. Make notes on the WEAPONS DESTRUCTION LIST indicating CLETS entries were made (FCN assigned to indicate the destruction).

iv. File away the signed WEAPONS DESTRUCTION REPORT.

2. Ammunition Destruction

a. Ammunition is pulled when proper authorization is received to destroy ammunition.

b. The ammunition shall be placed in the Ammo Box location of the HAZMAT storage room.

i. Ammunition, not retained for department use, will remain in the HAZMAT room until disposal.

c. No ammunition for destruction will be given to outside law enforcement agencies unless authorized by the Director.

d. Once the ammunition is destroyed, EvidenceOnQ will be updated with the date of disposal and transfer location to "Ammo DSY".

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:**6/19/2018	**NUMBER:** PROP.15 - Mailing of Firearms
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Mailing of Firearms	**SUBJECT:** Mailing of Firearms	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 6/15/2017	**NUMBER:** PROP.16 - Hazardous Material Disposal
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Hazardous Material Disposal	**SUBJECT:** Hazardous Material Disposal	

I. POLICY: The disposal of hazardous materials will be performed in compliance with local, state and federal regulations.

A. REFERENCES:

1. Environmental Protection Agency (EPA) Code of Federal Regulations 261.5- Special requirements for hazardous waste generated by conditionally exempt small quantity generators.
2. California Code of Regulation (CCR), Title 22, Division 4.5, Chapter 12, Article 3, Section 66262.34 - Accumulation Time.
3. 11479.5 (e) H& S Code - Disposal of Hazardous Chemicals by Law Enforcement Agency.
4. Forensic Services Division Policies:
   a. SAF. 11 - Hazardous Communication Program.
   b. SAF. 06 - Protective Clothing.
   c. SAF. 21 - Hazardous Chemical Spill.

B. GENERAL INFORMATION:

1. Hazardous materials must be handled with extreme care due to the potential of multiple hazards.
2. Hazardous materials include, but are not limited to:
   a. automotive fluids (such as motor oil, antifreeze, transmission fluids, etc.)
   b. pesticides
   c. fertilizers
   d. paints
   e. household cleaning items (bleach, ammonia, chemical solvents, etc.)
   f. pool chemicals
3. When disposing of hazardous materials, employees must wear lab coats, disposable gloves and if applicable, safety glasses.
4. When hazardous materials are classified as waste and no longer required as evidence, then the waste must be disposed of within 90 days.
5. Hazardous materials received from the Criminalistics Laboratory may have a Chemical Evidence Inventory (CEI) attached to the container.
   a. The Chemical Evidence Inventory lists the description of each item within the container and identifies the flammability and pH number of each enclosed item.
6. Do not pull one item for destruction from a container housing many other items. Wait for the authority to destroy all the contents of the same container.
7. Containers that have controlled substances without any hazardous material commingled within will not be disposed of with hazardous waste, but transferred to the narcotics/drug disposal.

C. PROCEDURE:

1. The disposal of hazardous materials will be as follows:
    a. Review the authorization for completeness and accuracy.
    b. Compare the property card with the authorization.
    c. Retrieve the hazardous materials from their storage location.
        i. Employees will wear appropriate PPE when handling the container of the hazardous materials.
    d. Verify the bar code and information on the container against the property card.
        i. If the information matches, the bar code is removed from the container, if possible and attached to the property card.
    e. The Chemical Evidence Inventory sheets will be:
        i. Removed from the container and the case number and bar code written on the CEI sheet.
        ii. The listed item(s) are checked off of the CEI sheet (per the information on the outside of the container).
            1. DO NOT OPEN THE CONTAINER to obtain information regarding the contents.
    f. Place the containers in a designated area inside the HAZMAT room until the hazardous waste hauler arrives.
    g. Return the CEI sheets and property cards to the office area.
    h. Call the hazardous waste hauler to schedule a date and time for pick up.
2. Transfer to Hazardous Waste Hauler:
    a. Escort and monitor the hazardous waste hauler as the items inside the containers are categorized in order to be transported to the disposal site.
        i. The hazardous waste hauler will use the facility loading dock to classify the hazardous waste.
        ii. The Property and Evidence Services facility EPA number is given to the hazardous waste hauler in order to provide the Uniform Hazardous Waste manifest.
            1. A copy of the signed EPA Form 8700-22 Uniform Hazardous Waste manifest is sent to: DTSC, P.O. Box 400, Sacramento, CA 95812.
    b. Copy and retain the documents generated by the hazardous waste hauler.
    c. Enter transactions into FileOnQ as "DSY".
    d. Mark the property cards "DSY" and the date of transfer to the hazardous waste hauler.
        i. File the property cards in the card file according to case number.
    e. Generate a chemical destruction report and file with the CEI sheets and documents from the hazardous waste hauler.
    f. Retain the manifest as a permanent record.

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Property Services Manual**	**REVISION DATE:** 6/27/2019	**NUMBER:** PROP.17 - Destruction/Disposal Controlled Subs & Paraphernailia
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Destruction/Disposal of Controlled Substances/Paraphernalia	**SUBJECT:** Destruction/Disposal Controlled Subs & Paraphernalia	

[redacted]

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Property Services Manual**	**REVISION DATE:** 6/18/2018	**NUMBER:** PROP.18 - Disposition of Unclaimed Money/Revenue Deposit Permits
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Disposition of Unclaimed Money/Revenue Deposit Permits	**SUBJECT:** Disposition of Unclaimed Money/Revenue Deposit Permits	

[redacted]

Contra Costa County **Office of the Sheriff** **FORENSIC SERVICES DIVISION** **Property Services Manual**	**REVISION DATE:** 6/20/2018	**NUMBER:** PROP.19 - Marijuana Drying Procedure
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Marijuana Drying	**SUBJECT:** Marijuana Drying Procedure	

[redacted]

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 12/16/2016	**NUMBER:** PROP.20 - Non-Conforming Work
	RELATED ORDERS:	
APPROVED BY: Danielle Roberts Adams & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Non-Conforming Work	

I. **Policy: Non-conforming work includes any aspect of testing or work product that does not conform to laboratory policies, procedures or the agreed requirements of the customer. When non-conforming work is encountered in Property and Evidence Services, action is taken to address the non-conformity or quality issue.**

A. The appropriate corrective action taken is based on the type of non-conformity, the magnitude/scope of the problem, and whether the non-conformity was isolated or repetitive. When property staff become aware of non-conforming work they should notify their Director. See FSD.15 for more information about the evaluation of non-conforming work.

1. **Corrective Action (Most Significant)**: Action taken to address a significant technical or quality issue. The non-conformity requires documentation of the corrective action per Division policy and procedure. See FSD.15 for more information.

2. **Level 2 Non-Conformity**: These incidents do not cause immediate concern for the quality system but may have an isolated effect, tend to be individual events, and are addressed on a case-by-case basis. These non-conformities have the potential to be re-mediated.

   a. Level 2 non-conformities may include but are not limited to:

      i. Not following current published Property Services or Division policies and procedures.

      ii. Repeated Level 1 errors.

   b. Documentation of a Level 2 non-conformity will be maintained within the unit and will be evaluated by the Director. The documentation should include, as applicable:

      i. Describe the quality issue. What is the problem (error or non-conformity)?

      ii. An explanation of how the quality issue occurred. Why did it happen?

      iii. An explanation of the action taken to correct or improve the quality issue. What was done to correct the problem?

      iv. An evaluation of the impact (if any) on casework, equipment, etc. How significant is the problem?

      v. Notes for any monitoring or follow-up. Was the correction effective?

3. **Level 1 (Least Significant):** These incidents are unlikely to reoccur, are not systemic, and do not affect the fundamental reliability of the work product.

   a. Level 1 non-conformities may include, but are not limited to:

      i. Grammatical or Typographical Errors

      ii. Correction of Chain of Custody

      iii. Missing initials/date on evidence.

   b. When brought to the staff's attention, this type of non-conformity is typically corrected immediately by the staff. A record of the correction should be captured by the staff's initials/date as outlined in Division Policy FSD.42.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 6/15/2017	**NUMBER:** PROP.21 - Abbreviations
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Quality	**SUBJECT:** Abbreviations	

I. Policy: The following is a list of abbreviations approved for use in the Property and Evidence Services unit.

A. AGENCIES / DEPARTMENTS

1. CSB - Custody Services Bureau
2. DA - Office of the Distict Attorney, Contra Costa County
3. DOJ - Department of Justice
4. DTSC - Department of Toxic Substances Control
5. EPA - Environmental Protection Agency
6. FOB - Field Operations Bureau (Office of the Sheriff, Contra Costa County)

B. CODES

1. C.C. - California Civil Code
2. C.C.P. - Code of Civil Procedure
3. C.C.R. - California Code of Regulation
4. F.C. - California Family Code
5. Gov. Code - California Government Code
6. H&S - California Health and Safety Code
7. P.C. - California Penal Code
8. W&I - California Welfare and Institutions Code
9. U.S.C. - United States Code

C. DATA SYSTEMS / TERMINOLOGY

1. AFS - Automated Firearms System
    a. BBL- Barrel Length
    b. CAL - Caliber
    c. DOC - Document Code
    d. DOT - Date of Transaction
    e. MAK - Make (brand name)
    f. TYP - Type (of firearm)
2. APS - Automated Property System
    a. BRA - Brand
3. ARS - Automated Reporting System
4. CLETS - California Law Enforcement Telecommunications System
5. DOB - Date of Birth
6. DOI - Date of Incident

7. FCN - File Control Number
8. MOD - Model
9. MIS - Miscellaneous
10. NCIC - National Crime Information Center
11. OAN - Owner Applied Number
12. OCA - Originating Case Agency (case file number or reference number)
13. ORI - Originating Agency Identifier
14. RMS - Records Management System
15. SER - Serial Number
16. XFR - Cross Reference Case Number

D. PACKAGING

1. BPB - Brown Paper Bag
2. CASE - Gun Case (hard or soft type)
3. CSE - Controlled Substance Envelope
4. LBEK - Liquid Blood Evidence Kit
5. ME - Manilla Envelope
6. PAP - Paper wrapping (butcher type paper)
7. PB or PBAG - Plastic Bag
8. SAEK - Sexual Assault Evidence Kit
9. TSCSE - Tape Sealed Controlled Substance Envelope
10. WB - White Box (cardboard)
11. WE - White Envelope
12. ZL - Ziplock
13. ZLPB - Ziplock Plastic Bag

E. MISCELLANEOUS

1. CEI - Chemical Evidence Inventory
2. COE - Certificate of Eligibility (for Firearms)
3. DROS - Dealer's Record of Sale
4. E Room - Explosives Room / Hazmat Room
5. E Waste - Electronic Waste
6. FFL - Federal Firearms License (or Licensee)
7. LEGRA - Law Enforcement Gun Release Application
8. O Room - Outside Container
9. PPE - Personal Protective Equipment
10. SAO - Sheriff's Administrative Officer (Contra Costa County)
11. SAVES - Sheriff's All Volunteer Extended Services (Contra Costa County)
12. TBF - To Be Fixed
13. TRO - Temporary Restraining Order
14. UTL - Unable To Locate

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Property Services Manual	**REVISION DATE:** 3/14/2019	**NUMBER:**PROP.22 - Evidence Viewing and Inspection
	RELATED ORDERS:	
APPROVED BY: Rich Wara & Pamela Hofsass	**ANAB:**	
CHAPTER:	**SUBJECT:** Evidence Viewing and Inspection	

I. POLICY: Evidence leaving the custody of Property and Evidence Services for viewing or inspection purposes must be properly documented to protect the integrity and chain of custody of the evidence.

A. **Definitions**

1. **Viewing** - When a piece of evidence is checked-out for the purpose of being opened such that the contents can be taken out to be viewed or photographed.
2. **Inspection**- When a piece of evidence is checked-out for the purpose of inspecting the outside packaging/container (eg. checking the chain of evidence, tape seal, etc.).

B. **General Information**

1. Evidence leaving the custody of Property and Evidence Services must be documented and signed for in EvidenceOnQ using the signature pad to capture signatures in the electronic chain of custody.
2. For viewing and inspections, the evidence is to be handled as a release (refer to PROP.08 - Property and Evidence Release/Return).
3. The DA, SO Investigations, or Crime Lab may check-out evidence.
    a. Other agencies (eg. the Public Defender or private attorney) may only check-out evidence **with a court order and an agreement with the DA's Office.**

C. **Responsibilities**

1. Property will not be responsible for any viewings or inspections.

D. **Process**

1. Property Services staff will determine if the evidence being checked-out for a viewing or an inspection of the package.
2. Property Services staff will ask the recipient if the viewing will take place at an offsite location or at the Property Services facility.
    a. Property Services may facilitate the viewing process at the Property Services facility by supplying butcher paper, packaging tape, scissors, pens, gloves, or other requested material
3. Property Services staff will instruct the person signing for evidence to make sure all viewed evidence is tape sealed, dated and initialed before return.
4. Upon return, Property Services staff will inspect and confirm that all packages are properly tape sealed.
5. Any discrepancies will be brought to the attention of the director.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.01 - Introduction
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Chemical Hygiene Plan**	
CHAPTER: Safety	**SUBJECT:** Introduction	

I. All laboratory employees will work with and around chemicals in a safe and conscientious manner to minimize potential hazards to themselves and their fellow employees.

A. Those who are unsure of the proper safety measures to employ will consult with their supervisor and/or the appropriate safety literature, including Safety Data Sheets before using the chemicals in question.

II. All employees share the responsibility for safety by complying with these regulations and by bringing any situations which appear to be unsafe to the attention of their supervisors.

A. Employees can bring their concerns to their immediate supervisors by notifying them verbally or in writing.

III. Separate policies have been written to address the unique safety problems and solutions for each of these types of hazards.

A. Explosive and Reactive Chemicals

B. Flammable Chemicals

C. Toxic Chemicals

D. Corrosive Chemicals

IV. Certain safety precautions are common to all types of hazardous chemicals. These precautions must be extended to all chemicals, not just those designated as hazardous by state or federal regulations.

A. For many chemicals, the degree of hazard is still unknown, and they must be treated as hazardous until proven otherwise.

B. State and Federal regulations have placed the burden on the manufacturers of chemicals to inform users of the safe handling practices for their products. This information is contained in Safety Data Sheets or CHRIS Manuals.

C. The chemicals used by the Forensic Services Division generally constitute four types of hazards:

1. Fire hazard from chemicals, which are especially flammable.

2. Reactive hazard from chemicals, which are capable of explosive reactions or uncontrolled reactions with other chemicals.

3. Physical destruction of tissue from chemicals which are corrosive when in contact with the body.

4. Toxicity from chemicals, which repair or destroy normal body functions through chemical interaction with tissues. Toxic chemicals include carcinogens, poisons, mutagens and teratogens.

V. The following personal precautions should be followed by all personnel:

A. No eating, drinking, or smoking is allowed in any area of the laboratory or crime scene where chemicals are stored or used. This will reduce the chance of accidental ingestion of chemicals and eliminate one source of ignition.

B. Food and beverages for personal consumption must never be stored in any refrigerator designated for evidence and/or chemical storage.

C. Employees should make every effort to wash their hands frequently, especially whenever they leave the laboratory area, whenever they complete a task associated with chemicals, or before they eat, drink or smoke.

D. Employees should be cautious of and attempt to curb habits, such as placing pens or pencils in their mouths or touching their faces, which will inadvertently expose them to hazardous materials.

VI. Employees should follow these guidelines for the isolation of hazards:

A. Employees must use caution in order to avoid exposing fellow workers to chemical hazards. Any employee using hazardous chemicals where another employee may be exposed must advise him or her of such use.

B. Whenever possible, separate tasks to avoid contaminating another employee, his/her work area, or equipment.

C. Cover containers when practical to avoid release of a harmful agent into the air.

1. Always use caps on tubes when centrifuging or vortexing.

2. Replace rubber bulbs on dropper bottles whenever they show signs of deterioration to minimize escape of vapors.

3. Dropper bottles, which are used infrequently, should be checked periodically.

D. When hazardous evidence or chemicals are taken to non-laboratory areas, proper precautions must be observed to prevent the exposure of others. In non-laboratory areas, the following safety precautions must be observed:

1. Place paper or plastic over the surface on which evidence or chemicals are to be laid out, even though chemicals are in closed containers.

2. Never open volatile, hazardous material in non-laboratory areas. This should be done in a fume hood. Closed containers may be examined, but still require precautions because of residues which may be on the outside.

3. Advise others in the area of the presence of hazardous materials.

4. Provide gloves and laboratory coats to those potentially exposed by handling the hazardous material or container

a. Protective respiratory equipment cannot be provided to non-laboratory individuals. Therefore, any evidence or chemical, which poses a hazard through inhalation, cannot be opened for examination outside of a fume hood.

5. Clean the surface after the evidence, chemical, paper, or plastic has been removed.

6. Hazardous items brought into non-laboratory areas which will not be examined, such as when they are to be signed out, must be in clean packaging as well as closed containers.

7. If hazardous chemicals must be left unattended, such as when a sample is being evaporated in a fume hood, it must always be labeled to alert others to the presence of a hazard.

8. Papers treated with chemicals must never be stored with case notes in report files.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 6/25/2013	**NUMBER:** SAF.02 - Roles And Responsibilities
	RELATED ORDERS: FSD.08	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Injury, Illness Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** Roles And Responsibilities	

I. The following defines the roles and responsibilities of the staff involved in the health and safety program.

A. The Chief of Forensic Services is responsible for:

1. Developing and updating the policies and procedures for the Forensic Services Division Safety Program.
2. Ensuring that all employees in the Division adhere to all State and Federal safety Regulations.
3. Ensuring that the employees have the necessary resources for meeting the goals of the Division Safety Manual.

B. Each Section Manager is the Safety Coordinator for their respective Section. See FSD.08, and is responsible for:

1. Ensuring the health and safety procedures are being followed by all staff.
2. Implementing the Safety Manual.
3. Providing personal protective equipment that is in working order
4. Ensuring that no employee is assigned a task without proper safety training.
5. Preventing exposure by controlling workplace hazards using a number of different methods such as through work practices, administrative controls, engineering controls, and personal protective equipment.
6. Monitoring of the Division's health and safety program.
7. Overseeing the annual review of the health and safety program.
8. Review the physical plant and operational safety requirements throughout their Section.
9. Suggesting changes to the Safety Manual based on suggestions from staff, review of the safety program and safety audits.
10. Ensuring compliance with applicable regulatory programs external to the Laboratory under the direction of the Office of the Sheriff, if applicable.

C. Supervisors are responsible for:

1. Ensuring the health and safety procedures are being followed by all staff.

2. Implementing the Safety Manual
3. Providing personal protective equipment that is in working order
4. Ensuring that no employee is assigned a task without proper safety training.
5. Preventing exposure by controlling workplace hazards using a number or different methods such as through work practices, administrative controls, engineering controls, and personal protective equipment

D. All Division Employees are responsible for:

1. Considering their own safety and that of his/her colleagues at all times.
2. Being familiar with the safety practices and potential hazards associated with equipment.
3. Being familiar with Safety Data Sheets.
4. Recognizing that all chemicals should be considered hazardous and should be handled with care.
5. Reporting any potentially hazardous situations to their Safety Coordinator and Supervisor
6. Asking their Safety Coordinator or their Supervisor if they are unsure of a hazard or safety procedure.

E. Employees of the Division working with or around chemical and biological materials are responsible for exercising caution and handling hazardous materials in a safe manner.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 03/05/2014	**NUMBER:** SAF.04 - Safety Inspections
	RELATED ORDERS: SAFF.04.01 - Criminalistics Laboratory Safety Inspection Checklist, SAFF.04.02 - Drugs, Alcohol & Toxicology Safety Inspection Checklist, SAFF.04.03 - Criminalistics Laboratory Monthly/Weekly Safety Checks, SAFF.04.04 - Drugs, Alcohol & Toxicology Monthly Safety Checks form	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Injury, Illness Protection Plan	
CHAPTER: Safety	**SUBJECT:** Safety Inspections	

I. Each Division Facility will be inspected at least bi-annually by the Safety Coordinator or designee to ensure compliance with state and local fire and safety codes.

A. The purpose of conducting inspections is to determine whether or not the safety practices set forth in the Division Safety Manual are being followed.

B. For the bi-annual safety inspection check of each facility, refer to appropriate checklist:

1. For the Criminalistics Laboratory, see SAFF.04.01.
2. For the Drugs, Alcohol and Toxicology Laboratory see, SAFF.04.02.

C. For the monthly/weekly safety inspection checks of each facility, refer to appropriate checklist:

1. For the Criminalistics Laboratory, see SAFF.04.03.
2. For the Drugs, Alcohol and Toxicology Laboratory, see SAFF.04.04.

D. Any conflicts with safety policies or procedures and safety concerns will be communicated to the Supervisor or Safety Coordinator in writing.

E. These inspections may not reveal all safety problems. Therefore, employees are responsible for informing their supervisors of any safety problems which they encounter. Staff can notify their Supervisor or Safety Coordinator of any safety concerns they may have.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.05 - Fume Hoods
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Blood Borne Plan, Chemical Hygiene Plan & Respiratory Protection Plan**	
CHAPTER: Safety	**SUBJECT:** Fume Hoods	

I. To prevent unnecessary exposure to hazardous materials, laboratory fume hoods have been installed or placed in the laboratory.

A. Fume hoods containing chemicals or evidence are to be left on at all times except when necessary to shutdown for servicing

B. Fume hoods must generate a minimum average face velocity of 100 linear feet per minute for use with hazardous chemicals. If the sash must be partially down to generate the minimum face velocity, this position is marked on the outside of the fume hood. The sash must be no higher than this level whenever chemicals are used or placed in the hood.

C. Hoods, which are equipped with velocimeters, must be checked before each use to ensure proper ventilation rates. All laboratory fume hoods are to be checked annually by an ISO/IEC 17025:2005 Accredited Vendor or equivalent to ensure that proper face velocities are maintained.

D. The movement of people past a fume hood can create eddy currents, which reduce the effectiveness of the hood. All employees are asked to avoid unnecessary movement past fume hoods when someone is working in one.

E. The most effective area of the fume hood for drawing away vapors is at the back. This is where chemicals or evidence should be placed, whenever possible.

F. The minimum amount of chemicals should be stored in the fume hoods. Only those, which are used in a fume hood regularly, should be kept there.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 09/15/2016	**NUMBER:** SAF.06 - Protective Clothing
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Injury, Illness Protection Plan**	
CHAPTER: Safety	**SUBJECT:** Protective Clothing	

I. All laboratory employees will wear the protective clothing appropriate for the potential hazard involved in a task in order to minimize the exposure or risk for the employee and others. This policy describes the appropriate use of protective clothing to enhance employee safety. For information on other protective equipment, refer SAF.07 Eye and Face Protection, SAF.08 Respiratory Protection, and SAF.09 Noise Protection.

A. In any forensic laboratory, the variety of the evidence encountered and the analytical procedures utilized pose potential safety hazards of many types. Hazards encountered include:

1. Infectious agents from liquid and dried biological samples
2. Chemicals, either as evidence or reagents, which may be carcinogenic, mutagenic, corrosive, flammable, poisonous, or otherwise toxic or harmful.

B. The routes by which a laboratory employee may be placed at risk vary. Exposure may occur through:

1. **Inhalation**. Infectious agents, chemicals, and radioactive materials can become airborne and subsequently inhaled or absorbed into the system.
2. **Direct contact**. Many chemicals in particular may be absorbed directly through the skin. Any open wounds or cuts may also provide a route of entry for infectious agents or chemicals which otherwise may not be absorbed. In addition, if direct contact is made with some mucous membranes or the eyes, harmful agents which would otherwise not be absorbed or absorbed in lesser amounts may pass into the body.
3. **Indirect contact**. Infectious or other harmful agents may also be introduced into the body through secondary routes, usually involving the hands. Anything which comes into contact with evidence or reagents, such as work surfaces, hands, apparel, pens, paperwork, and packaging, may be contaminated with a harmful agent. The employee may then be exposed by inhalation or absorption resulting from these secondary sources. Of particular concern is the transfer of harmful agents by the hands through ingestion when the employee eats or drinks or touches his/her face without first washing his/her hands.

C. The proper clothing can be an effective barrier in preventing direct or indirect contact with harmful agents when used properly. The laboratory provides several types of garments for use by employees: laboratory coats, aprons and gloves. The use of each is discussed below.

1. **Laboratory coats** are the most common form of protection. They will provide a physical barrier which prevents harmful agents from collecting on the employee's

clothing. Laboratory coats must be isolated from non-contaminated areas.

a. Employees working in the and Drug, Alcohol and Toxicology Section must wear laboratory coats in the laboratory at all times.

b. Employees in the Criminalistics Section must wear laboratory coats when performing work in the laboratory.

c. Staff members briefly entering the laboratory, are not required to wear laboratory coats as long as they are not using chemicals or dealing with biohazard substances. Example: Clerical Staff.

d. The following applies to all Division staff employees:

i. When leaving the laboratory area, the employee shall leave his/her laboratory coat in the examination area on the wardrobe hooks.

ii. Drug, Alcohol and Toxicology Section staff accepting evidence in the front office area may choose to wear "office designated" coats, such as the blue lab coats. Criminalistics Section staff accepting evidence in the front office/reception may choose to wear assigned white laboratory coats.

iii. Laboratory coats, which have been worn in the evidence examination areas, must not be worn in the vehicles other than the scene vehicles.

iv. Used laboratory coats are laundered by a commercial laundry service.

1. Laboratory coats awaiting laundry pick-up are placed in the laundry bag/hamper in the laboratory area.

2. Laboratory coats soiled with potential bio-hazards (e.g. blood) will be placed into a red dissolvable bag supplied by the laundry service provider prior to being placed into the laundry bag/hamper.

2. **Neoprene aprons** are impermeable to most chemicals during short exposures. They will provide the employee protection against the splashing or spilling of harmful chemicals which laboratory coats will not provide.

a. Aprons must be worn by employees whenever the task involved exposes the employee to a reasonable potential for spilling or splashing harmful chemicals on himself or herself.

i. Examples would include the cleaning of glassware with a chromic acid mixture or mixing batches of harmful chemicals. The mixing or pouring of small quantities (less than 100 milliliters) ordinarily does not pose a great risk and a laboratory coat may provide sufficient protection as long as care is taken.

3. **Protective gloves** in combination with frequent hand washing can greatly reduce exposure to infectious agents and harmful chemicals. The hands often are the greatest source of exposure for many laboratory employees especially of infectious agents

a. Gloves for infectious agents:

i. Very thin and flexible latex or nitrile gloves will provide adequate protection against infectious agents with minimal loss of dexterity.

However, they will not protect the employee against punctures from needles.

ii. Latex or nitrile gloves must be worn whenever either dried or liquid physiological fluids are handled or during the collection of evidence from or handling of dead bodies. Double gloving is recommended.

iii. The gloves must be removed and discarded before answering the telephone or leaving the laboratory examination areas.

iv. A fresh pair of gloves should be used each time they are donned to minimize the potential transfer of infectious agents to the hands.

b. Gloves for chemical protection:

i. As with protective clothing, the extent of protection against chemicals is related to the nature of the chemical, the thickness, structure, and composition of the glove, and the intensity and duration of the exposure. The proper glove must be selected for the chemical involved. Consult Safety Data Sheets for the chemicals in question to determine the appropriate type of glove. For most organic and corrosive chemicals, Neoprene or Nitrile gloves are sufficient if they are heavy enough. A notable exception is that PVA gloves should be worn with benzene.

ii. The appropriate protective gloves must be worn whenever hazardous chemicals are handled. Hazardous chemicals are those which are toxic, carcinogenic, mutagenic, corrosive, or for which the hazards are unknown. Situations requiring the use of gloves include:

1. Analyzing drug evidence

2. Making reagents

3. Sampling chemicals from a container or transferring chemicals to another container (with the exception of non-hazardous chemicals).

iii. Gloves used in the laboratory for chemical protection should be discarded if chemicals are spilled on them.

4. **Foot Protection** minimize the hazard to feet from chemicals, infectious agents, and falling objects while maintaining comfort, the following guidelines have been developed for protective foot wear.

a. Protection in the Laboratory:

i. Woven, cloth, and porous leather shoes can absorb chemicals and increase the exposure to the employee especially after a spillage. This includes canvas tennis shoes, most athletic shoes, and suede shoes. Consequently, these as well as sandals or open-toed/open-strapped shoes, which provide no protection, are NOT permitted to be worn by employees working at tasks involving chemical or physical hazards (such as the use of sharp scalpels) in the examination areas of laboratory.

ii. The ideal shoe is a closed one which is made of an impervious, synthetic material. Also acceptable are leather shoes which have been polished or treated to minimize the susceptibility to chemicals.

iii. Employees who do not care for the look of the safer shoes may wish to wear dress shoes to work and change into another pair for working in the laboratory.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 09/03/2013	**NUMBER:** SAF.07 - Eye and Face Protection
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Injury, Illness Protection Plan**	
CHAPTER: Safety	**SUBJECT:** Eye and Face Protection	

I. Laboratory employees will use the appropriate eye or face protection whenever there is a reasonable expectation that an injury to the eyes or face could result from the task being performed.

A. Injuries or hazards to the face and/or eyes consist of four general types:

1. Infectious hazards - the membranes of the eyes provide a potential route of entry for infectious agents into the body. The splashing of liquid blood into the eyes, in particular, can cause an infection in the individual.

2. Chemical hazards - splashing a corrosive chemical on the face or in the eyes, can cause blindness or disfiguring injuries. In addition, toxic vapors can enter the body more readily through the eyes than through the skin.

3. Physical injuries - activities such as test firing a weapon may increase the possibility that an object will be propelled into the face or eyes.

4. Radiation injuries - exposure to ultraviolet light can cause cumulative, irreversible injury to the eyes. Even reflected light can cause eye damage.

B. Employees must protect themselves whenever performing tasks where there is reason to believe such injuries may occur (whether in the laboratory, at a scene, or attending a training class) by using the proper eye and face protection. This policy applies even if the employee is performing a task for which eye or face protection has not specifically been required. A list of when eye and face protection requirements and guidelines are listed below:

1. When performing tasks where corrosive or very toxic chemicals may splash, a full face shield or goggles must be worn. Glasses will not prevent chemicals from reaching the eyes.

2. When test firing weapons or when practicing or qualifying with a firearm as required by the Department, safety glasses or goggles must be worn.

3. Glasses or goggles must be worn when handling more than a few drops of liquid blood. Regular prescription lenses will suffice for this purpose. As an alternative, blood samples may be handled in a fume hood with the sash lowered to protect the face. If the blood is being splashed to create blood spatter, goggles must be worn.

4. Employees wearing contact lenses shall observe the same eye protection as noted above.

5. Approved light filtering glasses must be worn by any employee who may be exposed to ultraviolet light or when burning magnesium ribbon.

6. Distillation apparatus, which is in use, must be placed behind a safety shield or in a fume hood with the sash lowered.

7. Safety glasses or goggles are required when working with glassware which is under vacuum or under a fume hood with the sash lowered.

8. If prescription glasses worn in the laboratory examination area by employees are not safety glasses, the employee must use safety goggles over his/her glasses or change to safety glasses whenever they are required by this policy.

9. The proper eye or face protection will also be made available to any authorized laboratory visitor who is exposed to the above conditions.

C. Employees can obtain eye and face protection in the following ways:

1. All necessary, non-prescription eye and face protection devices are provided by the County at no cost to the employee.

2. The County will reimburse an employee for all or part of the cost to obtain prescription safety glasses if he or she works with any of the eye hazards described above.

3. If the proper eye or face protection is not available, the employee must bring it to the immediate attention of his or her supervisor.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 09/26/2019	**NUMBER:** SAF.08 - Respiratory Protection Plan
	RELATED ORDERS: California Code of Regulations Title 8, Section 5144	
APPROVED BY: Debbie McKillop & Danielle Adams	**ANAB: RPP**	
CHAPTER: Safety	**SUBJECT:** Respiratory Protection Plan	

I. Purpose:

A. Respiratory protection is required whenever an employee is likely to be exposed to air contaminants such as hazardous chemicals, dusts, mists, fumes, vapors, or aerosols in concentrations which exceed statutory or recommended limits and when current administrative or engineering controls are not effective. Respiratory protection is also required to prevent exposures to aerosol-transmissible diseases and zoonotic diseases.

B. The intent of this policy is to ensure compliance with the California statutes and California Occupational Safety and Health Administration (CAL/OSHA) regulations. CAL/OSHA regulates:

1. When respiratory protection shall be used by employees on the job
2. The types of respiratory protection equipment which may be used
3. Medical evaluations for employees required to use respirators
4. Training and fit testing of employees on respiratory protection

C. Respiratory protection devices are intended to be used only when engineering controls or other administrative procedures cannot provide sufficient protection to the employee. Whenever possible, it is preferable to limit or reduce the exposure to the employee than rely on respirators. Engineering controls include the use of proper ventilation, or the use of fume hoods. Administrative controls include elimination of exposure to toxic chemicals, substitution with less hazardous materials, or reducing the amount of time an employee is exposed.

D. Forensic Services Division provides two types of respirators for use when respiratory protection is required to limit employee exposures to harmful gases, mists, dusts, aerosols, aerosol-transmittable diseases, and zoonotic diseases:

1. Full face, air-purifying respirators using disposable cartridges. The department provides 3M 7800 full face respirators unless a different make or model is issued on a case by case basis.
2. Disposable dust/mist single use air purifying respirators. The department provides 3M N95 9210+/37192* and 9211/37193 respirators unless a different make or model

is issued on a case by case basis.

II. Medical Evaluations

A. Only persons who have been medically evaluated, trained in the use of the devices and fit tested may use respirators.

B. Any Forensic Services Division employee using an approved respiratory device must first have received medical evaluation, training, and fit testing specifically for the type of device being used.

1. All employees must complete a medical evaluation through a health questionnaire and/or medical examination before fit testing and wearing a respirator.

   a. The Medical Evaluation Questionnaire is SAFF.08 or electronic equivalent.

   b. The extent of the medical screen is decided by a physician in the County Health Department based on the type of respirator which is to be used. It may be as simple as a questionnaire or it may include a physical examination, laboratory tests, and respiratory capacity tests.

   c. An employee may receive medical approval for one type of respirator but not another.

III. Respirator Selection and Use

A. Only respiratory devices which have been approved by the National Institute for Occupational Safety and Health (NIOSH) or the Mine Safety and Health Administration (MSHA) may be used by staff for protection from toxic substances or biological hazards. Approved devices are marked by the manufacturer to indicate their approval status.

B. Employees must use respiratory devices provided for them by the County. No employee may provide his or her own device.

C. Respiratory protection may not be provided to laboratory visitors or maintenance personnel.

D. Employees will use the Respirator/Cartridge Selection and Change Out Schedule to determine the appropriate selection of respiratory protection based on the chemical/material exposure, the duration of use, and environmental factors.

1. The Respirator and Cartridge Selection and Change out Schedule is based on data gathered from chemical Safety Data Sheets (SDS), air monitoring data, and industry standards/best practices.

2. The respirators covered in this program and in the selection and change out schedule are not designed for responding to large scale spills (exceeding 5 Liters), emergency cleanup, and fire response. County HazMat and/or Fire should be contacted for these situations.

3. The respirator selection and change out schedule is designed to cover exposures where employees are using limited quantities of materials in areas indoor and

outdoors that have reasonable ventilation available. Where large amounts of chemicals are used over a large surface area and there is little ventilation available, employees should stop the work and evaluate appropriate respiratory protection.

E. Disposable Dust/Mist Single Use Air Purifying Respirators

1. Must be used to control exposures to bloodborne pathogens, aerosol-transmittable diseases, and zoonotic diseases. For example:

   a. Whenever an employee handles open containers of liquid blood or when evidence is handled in such a way that liquid or dried blood is likely to become airborne.

   b. When an employee enters or conducts work in an abandoned or little-used rural facility that may harbor zoonotic diseases.

   c. When an employee enters or conducts work in an animal operations facility.

   d. When an employee enters a crime scene where the occupant has an aerosol-transmittable disease such as Tuberculosis or H1N1 flu virus.

2. Must be used to limit exposure to particulate material such as fingerprint powder and chemical component dusts.

3. These masks must never be used to control exposure to toxic fumes or vapors.

4. Dust/mist single use air purifying respirators shall be discarded or replaced after each day that they are used or if the employee notices increased breathing resistance while using them.

F. Full Face, Air-Purifying Respirators

1. Are intended to reduce exposure to dusts, gases, mists, vapors, fumes and aerosols.

2. Must not be used in immediately dangerous to life and health (IDLH) atmospheres that contain high or unknown concentrations of chemicals and/or oxygen deficient environments.

3. Contact lenses may be worn with a full face respirator.

4. Respirator and Cartridge Selection and Change-out Schedule

   a. For all users of full-face air purifying respirators, a filter cartridge replacement (change-out) schedule was implemented to prevent employee exposures.

   b. Full-face respirator cartridge filters shall be changed after each use, or sooner if there is breakthrough or resistance in breathing detected.

   c. Full-face respirator cartridges should only be replaced with a new cartridge removed from a sealed container.

d. Used cartridges should be disposed of properly as laboratory waste at the completion of work activity.

G. Inspection and Maintenance of Respirators

1. Inspection

a. The employee shall inspect their respirator before and after each use.

b. Respirator inspection shall include a check of the tightness of connections and the condition of the face piece, headbands, valves, connecting tube, and appurtenances. Rubber or elastomer parts shall be inspected for pliability and signs of deterioration.

2. Cleaning and Sanitizing and Disposal

a. Routinely used respirators shall be cleaned and disinfected after each use to ensure that proper protection is provided for the wearer.

b. Dedicated cleaning materials shall be kept in each area where respirators are used. Supervisors/Managers will ensure that cleaning materials are available.

c. The following procedure shall be used for thorough cleaning and disinfection of full-face respirators:

i. Remove and dispose of any used cartridges.

ii. Wash face-piece with provided cleaning solution and/or disinfectant pads. Use a soft bristle brush to facilitate removal of dirt, if necessary.

iii. Rinse completely in clean, warm (not hot) water.

iv. Air dry the respirator in an area away from contaminants.

v. Clean other respirator parts as recommended by the manufacturer.

vi. Inspect valves, head-straps, and other parts; if needed, replace with new parts obtained from the Supervisor/Manager.

vii. Place in a sealable plastic bag or container for storage.

d. N-95 respirators are to be disposed of in an appropriate manner and will not be cleaned.

3. Repair:

a. Respirator problems, repairs or replacements should be discussed with the employee's Supervisor/Manager.

b. Only manufacturer NIOSH-approved parts will be used for replacement.

c. Depending on the type of repair, a technician trained by the manufacturer may be required to perform the repairs. Refer to the manufacturer's specifications.

4. Storage:

    a. After inspection, cleaning, and necessary repair, respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals. Normally, storage in "zip-lock" plastic bags is adequate.

    b. Respirators should be packed or stored so that the face-piece and exhalation valve will rest in a normal position and function will not be impaired by the elastic belt settings in an abnormal position.

    c. Respirators should not be stored in vehicle trunks, or any other environment subject to high temperature fluctuations, as this will rapidly degrade the effectiveness of the equipment.

IV. Respiratory Protection Training:

A. Once a medical evaluation is conducted and clearance to use a respirator is provided, fit testing can be conducted. Respiratory Protection training and fit testing must be preceded by a medical evaluation.

B. Only employees who have passed the medical evaluation for a particular respirator may be fit tested and approved to use that respirator.

C. Respiratory Protection Training is conducted annually and includes:

1. Instruction on the nature, extent and effects of respiratory hazards to which the employee may be exposed.

2. Explanation of engineering and/or administrative controls and the specific procedures developed for the operations being conducted.

3. Discussion of the proper circumstances for use of the respirator and its limitations

4. How to put on the respirator

5. How to verify the proper fit

6. How to care for the respirator after use, and precautions to observe with the respirator.

7. General requirements of the Respiratory Protection Standard (CCR Title 8).

V. Fit Testing of the Respirator Mask to Face Seal

A. Qualitative or Quantitative Fit Testing for employees who are required to use a respirator shall be conducted annually.

B. Employees with an inability to detect chemicals by odor or taste will be quantitatively fit tested.

C. Face Piece Seal Protection is required to ensure that the respirator is properly sealed to prevent exposures. Facial hair that interferes with the respirator sealing surface or proper valve function is not allowed. Employees should be clean shaven in the areas where the respirator seals to the skin.

D. Positive and Negative User Seal Checks are used to ensure the proper fit in the field and during fit testing, employees should perform the following positive and negative user seal checks each time they don the respirator:

1. To assure proper protection, the employee shall perform the following checks each time before using the full-face respirator:

2. Negative Pressure Test - Cover both cartridges with the palms of your hands. Inhale gently so that a vacuum occurs within the facepiece. Hold your breath for 10 seconds. If the vacuum remains, and no inward leakage is detected, the respirator is properly fit.

3. Positive Pressure Test - Block exhalation valve with your hand. Breathe out gently into the mask and check for leakage. Air will escape if there are face seal gaps or malfunctioning valves.

4. If leakage is detected during either the positive or negative pressure test, the respirator straps should be readjusted and the pressure tests repeated.

VI. Workplace Exposure Monitoring

A. Workplace exposure assessments shall be performed, as needed, to identify harmful airborne contaminants, their extent and magnitude, and suitable control measures to eliminate them.

B. Additional assessments shall be conducted whenever potential exposures change due to new materials, process or equipment changes, or other conditions that might increase employee exposures are present. Exposure assessments may be conducted by Forensic Services, the Office of the Sheriff, Risk Management and/or the County Hazardous Materials Unit.

C. Results of work area/employee exposure monitoring may be summarized and kept in the Division Safety File. Alternately, the County Risk Management Department may maintain records associated with the workplace exposure monitoring.

D. In areas where respirators are required to be worn routinely, workplace exposure assessments and/or monitoring shall be performed when significant changes in processes or operations occur.

E. Results of all exposure monitoring of employees shall be maintained for as long as the employee remains with the Office of the Sheriff plus a minimum of 30 years after the employee terminates employment.

VII. Program Assessment

A. This program will be assessed and updated, if needed, on an annual basis.

VIII. Record Keeping

A. The Safety Coordinator of the Criminalistics Section may maintain records associated with the Respiratory Protection Program, to evaluate the performance of the Program and to satisfy regulatory requirements. Alternately, the County Risk Management Department may maintain records associated with the Respiratory Protection Program.

B. Records include the following:

1. Written Respiratory Protection Program
2. Workplace Exposure Assessments
3. Medical Evaluation
4. Fit Testing and Training
5. Program Assessment

Respirator/Cartridge Selection and Change Out Schedule

Chemical Name	Manufacturer	Hazardous Ingredients	User Group	Job Task	Recom. Respir.	Recom. Min.Cartridge	Cartridge Provided	Change-out	Basis
Luminol	Bluestar Forensic Kit (tablet + solution)	Sodium Carbonate, 3-aminophthalhydrazide. In Kit -sodium hydroxide	Crime Scene Unit	Spray to detect blood	Full Face	Particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Luminol	Make at Lab	In lab - Sodium Carbonate, 3-aminophthalhydrazide. In Kit -sodium hydroxide	Crime Scene Unit	Spray to detect blood	Full Face	Particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Leuco Crystal Violet	Kit	3% Hydrogen Peroxide solution (drug store brand), 5-sulfosalicylic acid powder, Leucocrystal violet powder, Sodium acetate powder	Crime Scene Unit	Spray to detect blood	Full Face	Combo acid, organic vapor, particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Leuco Crystal Violet	Make at Lab	3% Hydrogen Peroxide solution (drug store brand), 5-sulfosalicylic acid powder, Leucocrystal violet powder, Sodium acetate powder	Crime Scene Unit	Spray to detect blood	Full Face	Organic vapor, particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Leucoman-lanchite Green	Make at Lab	Leucomalachite Green powder, Sodium Perborate powder, Glacial Acetic Acid, Ethanol	Crime Scene Unit	Spray to detect blood-contaminated latent fingerprints	Full Face	Combo acid, organic vapor, particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Phenophthalein	Purchase		Crime Scene Unit	Applied by dropper (not sprayed). Presump-tive blood test	N95	N/A	N/A	Each Use	SDS
Amido Black	Make at Lab	5-Sulfosalicylic acid, formic acid, glacial acetic acid, acetic acid; Kodak Photo Flow; Napthol Blue Black	Crime Scene Unit, Examiners	Spray to detect blood-contaminated latent fingerprints	Full Face	Combo acid, organic vapor, particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Black Fingerprint Powder	Purchase		Crime Scene Unit	Powder applied to develop prints.	N95	N/A	N/A	Each Use	SDS
Wetprint Kit	Kit	Molybdenum Disulfide, water	Crime	Used like liquid	Full	Organic vapor,	Organic	Each	SDS

5682			Scene Unit	finger-print powder to detect prints.	Face	particulate	vapor, particulate	Use	
Superglue Fuming (cyanoacrylate esther)	Purchase		Crime Scene Unit, Examiners	Fume area by boiling superglue	Full Face	Organic vapor	Organic vapor, particulate	Each Use	Best Pract.
Ninhydrin	Make at Lab	Hexane, ninhydrin crystals	Examiners	Spray or dip to detect fingerprints	Full Face	Organic vapor, Particulate	Combo acid, organic vapor, particulate	Each Use	SDS
RAM / Dye-Staining Methanol	Make at Lab	methanol, methyl alcohol, 7-(p-Methoxybenzylamio) 4-Nitrobenz-2Oxa-1,3-diazole, RAM solution (ardrox, acetonitrile,)	Examiners	Spray or dip to detect fingerprints	Full Face	Organic vapor, Particulate	Combo acid, organic vapor, particulate	Each Use	SDS
Color Powders	Purchase	Various materials and powders		Powder applied to develop prints.	N95	N/A	N/A	Each Use	SDS
Magnetic Powders	Purchase	Iron powder and carbon black		Powder applied to develop prints.	N95	N/A	N/A	Each Use	SDS

Respirator Models:
Full Face = 3M 7800
N95 = 3M 9211+/37193
N95 = 3M 9210+/37192
Alternate respirator models may be assigned to individuals on a case-by-case basis, such as the Honeywell N95 #14110451 (Grainger # 2EMT9).
Note: Use of Leuco Crystal Violet indoors without a ventilation hood will require an air-supplied respirator.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/20/2013	**NUMBER:** SAF.09 - Noise Protection
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	Injury, Illness Protection Plan
CHAPTER: Safety	**SUBJECT:** Noise Protection	

I. All laboratory employees will use the appropriate noise protection equipment when exposed to harmful noise levels and minimize noise levels which are irritating and distracting to others.

A. The extent to which hearing is impaired by sound is related to the volume and duration of the exposure. OSHA prohibits exposures of 90 decibels for more than 8 hours per day. Noise at 120 decibels is usually painful and can cause immediate damage. OSHA prohibits any exposure to noises at or above 120 decibels without hearing protection. As a reference, normal conversation is about 60 decibels, loud music is about 80 decibels, a rock concert is about 100 decibels, and a jackhammer 3 feet away is about 120 decibels.

B. Even at safe noise levels (below 90 decibels), noise can be irritating and distracting to individuals. Excessive noise can contribute to stress levels and can cause aggressive or abnormal behavior. It is to everyone's advantage to reduce unnecessary noise levels in the Division in order to create a more productive and peaceful work place.

C. Fortunately, very few activities in the Forensic Services Division produce hazardous noise levels. The exceptions are:

1. **Test firing of firearms** which can produce levels which cause immediate damage, depending on the weapon involved and the distance of the shooter.
2. The use of **power tools** may also produce hearing damage after prolonged exposure.
3. Employees must wear noise protection anytime there is reason to believe that harmful noise levels will occur.

D. In most cases, common sense and a consideration for others should guide employees in helping to reduce noise levels. Employees are expected to adhere to the following guidelines:

1. Conversations should be kept at a low volume.
2. Idle conversations should be kept to a minimum.
3. Personal radios, tape players, etc. may be used only if the volume and music does not bother others. The person playing the music or other program must take the initiative to ask others if the volume and content is acceptable and not wait for a complaint.
4. Loud music or other programs are not permitted.
5. Noisy equipment should be isolated to the extent possible.
6. Doors should be closed to confine noise when possible.

7. Limit the number of noise producing sources at any given time to avoid noise escalation as people try to talk over the equipment.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 04/12/2018	**NUMBER:** SAF.10 - Physiological Specimens
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB:** Blood Bourne Pathogens	
CHAPTER: Safety	**SUBJECT:** Physiological Specimens	

I. Division staff members will adhere to reasonable precautions in the handling of physiological specimens or items contaminated with physiological fluids, even when dried, to avoid contaminating themselves or others with infectious agents.

A. Employees may be exposed to infectious agents through one or more of the following routes:

1. **Inhalation** - Droplets of liquid may be dispersed into the air, especially when opening vacuum tubes or dried physiological samples may become airborne in the manipulation of evidence such as bedding or clothing. The inhalation of infectious physiological samples can cause an infection to those exposed.

2. **Direct contact** - Infection through direct contact occurs most frequently when an employee handles a contaminated item, and then touches his or her face area thus transferring the infectious agent to the most susceptible areas of the body.

3. **Indirect contact** - Infection may occur in a person who does not handle the evidence or specimen but contracts the infectious agent through contact with other surfaces. This may occur in instances such as when a telephone has been handled by a person analyzing evidence who does not first wash his or her hands or when evidence is placed on office counters. As with direct contact, the infectious agent is usually contracted by the employee touching his or her facial area with contaminated hands.

4. **Inoculation** - An infectious agent may enter the body by piercing the skin, the body's primary barrier against infection, with contaminated needles or broken glassware.

B. The likelihood of an illness developing from an exposure to an infectious agent will depend on a number of circumstances:

1. The most important being the virulence of the infectious agent.

2. The susceptibility of the individual.

3. The concentration of the infectious agent.

C. The higher the concentration of the microorganism, the more likely it will be able to overcome the barriers of the body and cause infection. Thus it is less likely, but still possible, that an infection will result from secondary contact with such things as evidence counters or telephones where the concentration of the microorganism has been significantly reduced.

D. Drying a physiological sample will destroy most microorganisms, reducing the likelihood of infection.

1. However, viruses have capsules which may protect them from adverse conditions (hepatitis is one of the most resistant) and some bacteria can produce spores capable of withstanding even the worst conditions for long periods of time. Thus even dried samples must be treated as potentially infectious.

E. By adhering to the following safety guidelines, employees can significantly reduce the likelihood that they or another staff member will contract an infectious disease from the handling of physiological specimens:

1. When working with any physiological sample, liquid or dried, always wear disposable gloves and a laboratory coat.

2. Always remove gloves or laboratory coat before contacting laboratory surfaces not normally used in the examination of evidence (e.g., telephones, front office copy machines and front counter).

3. When working outside of a fume hood with any liquid physiological samples or dried samples which may become airborne, the examiner must wear approved particle filtering masks and safety glasses or face shield.

4. Examine physiological samples in a fume hood when practical.

5. Wash hands often, especially after handling physiological samples and before eating or answering the telephone, using the disinfectant solution provided.

6. Disinfect laboratory tools frequently with at least a 1:10 dilution of bleach. If a centrifuge is contaminated by a broken tube containing a physiological sample, it must be cleaned immediately with the bleach solution.

7. Cover work surfaces with paper or plastic before placing evidence with physiological debris on the surface. Place the paper or plastic in a plastic bag, seal, and discard after the examination in the trash receptacle. (The use of paper does not apply to biological evidence contained in vials in the Alcohol and Toxicology Units).

8. Clean work surfaces after each case, or batch of cases, with a 1:10 solution of bleach.

9. Dry liquid or wet samples in a fume hood or in the ventilated closet designated for that purpose.

10. Dispose of **liquid** samples by a biohazard waste hauler, never by pouring down the sink or throwing in the garbage.

11. Whenever a physiological sample or evidence is known to be contaminated with an infectious agent, make sure that packaging and work areas are clearly labeled to alert others to the hazard.

12. Immediately repackage physiological specimens that are in broken or leaking containers or place in plastic bags to confine any infectious agent.

13. Evidence, which is stained, should be placed into a transparent container when needed as a court exhibit to eliminate the need to remove the item from its packaging in the court room. Evidence, which has dried physiological stains, may

otherwise be placed in paper packaging for storage. (Scotch Tape over small stains is appropriate.)

14. Always use extreme care with sharp objects and glassware to avoid accidental inoculation with contaminated objects. Remember that staples can puncture the skin, too.

15. Dispose of contaminated sharps in a sharps container box to avoid accidental punctures. Any accidental inoculation involving a physiological specimen must be reported on the County Accident Report form (AK30), Sharps Injury Log and the Bloodborne Pathogen Exposure Packet will be completed.

16. Report to your Supervisor for any injury involving a contaminated sharp and complete a Sharps Injury Log form within 14 days of the date of injury.

17. To reduce susceptibility to hepatitis, employees should give consideration to obtaining the vaccination available to them. (Policy reference SAF.24 Employee Vaccinations, for more information.)

18. Leave writing implements used during the handling of physiological specimens in that work area. They should not be taken to the office area.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 08/01/2018	**NUMBER:** SAF.11 - Hazard Communication Program
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Hazard Communication Program	

I. To ensure employee health and safety and to comply with state and federal regulations, a hazard communication program has been developed. This program includes information regarding workplace hazards, labeling of hazardous material containers, employee's rights under the hazard communication legislation and employee training requirements.

A. Both state and federal regulations have been enacted to protect employees against hazardous materials on the job. The regulations in California incorporate all of the federal requirements and have been followed in the development of this policy. The state regulations have been called Hazard Communication Regulations and consist of the following elements:

1. An inventory of the hazardous chemicals used at the various worksites
2. A collection of Safety Data Sheets for each of the hazardous chemicals
3. Proper labeling of all hazardous material containers
4. A written hazardous communication program (this policy) and a Chemical Hygiene Plan.
5. An employee training program covering the hazardous substances with which they work and the Hazard Communication Regulations.

II. The supervisors and managers at each work location bear the primary responsibility for ensuring compliance with the Hazard Communication Regulations. However, all employees will share responsibility by complying with this policy and by pointing out any deficiencies to his/her supervisor.

A. A hazardous material is anything listed in:

1. The Director's List of Hazardous Substances (Section 339 of Title 8, Calif. Code of Regulations)
2. 20 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration
3. Threshold Limit Values for Chemical Substances in the Work Environment, American Conference of Governmental Industrial Hygienists, 1984
4. National Toxicology Program, Third Annual Report on Carcinogens, 1983
5. International Agency for Research on Cancer, Monographs, Vols 1-34

B. A hazardous substance may also be any other substance, which presents a physical or health hazard as determined by scientific evidence.

C. An inventory of the Forensic Services Division has been prepared listing, by worksite, any hazardous substances which fall into any of the above categories.

1. Any employee who is aware of a substance not on the inventory, which he/she believes is hazardous, must bring it to the attention of his/her supervisor.

D. Whenever an employee wishes to use a hazardous substance at a new worksite, he/she must inform his/her supervisor, who will ensure that the inventory is updated.

E. When new hazardous substances are ordered for use by the laboratory, the supervisor responsible will ensure that they are added to the inventory.

F. Certain types of materials are exempt from the regulations and will not be included in the inventory. Exempt materials are:

1. Hazardous wastes (regulated by EPA)
2. Tobacco products
3. Wood and wood products
4. Manufactured items
5. Food, drugs and cosmetics used by employees
6. Retail consumer products, unless the employee's exposure is greater than the exposure of an ordinary consumer

III. All employees should review the Safety Data Sheets for the chemicals that they are using.

A. A Safety Data Sheet (SDS) is prepared by the manufacturer of a product containing 1% or more of a hazardous substance (or 0.1% if it is a carcinogen). The SDS is a document containing, in layman's terms, the hazards and precautions associated with a product. A product may contain more than one hazardous substance, but will require only one SDS. Each SDS must contain the following information:

1. Trade name (product name).
2. Chemical and common name and Chemical Abstract Service numbers of each hazardous ingredient.
3. The physical and chemical properties such as vapor pressure, flashpoint and solubility of the chemicals.
4. The physical hazards such as fire, explosion and dangerous chemical reactions.
5. The specific acute (short term) and chronic (long term) health hazards, including the signs and symptoms of illness and medical conditions which may be aggravated by exposure.
6. The potential routes of entry of the hazardous substance(s) into the body.
7. The permissible exposure limits published and/or recommended limits for the hazardous substance(s) (OSHA Permissible Exposure Limit) and the American Conference of Governmental Industrial Hygienists Threshold Limit Value and any other limit recommended by the manufacturer.
8. If the hazardous substance(s) is listed as a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration.

9. The precautions necessary for the safe handling, use, and storage, including protective measures for repair and maintenance of equipment.

10. The known control measures, including engineering, work practices and personal protective equipment necessary to protect against the hazards.

11. Emergency and spill clean-up procedures.

12. First aid procedures.

13. The date of preparation of the SDS or the date of the last change in contents.

14. The name, address, and phone number of the party responsible for preparing the SDS.

B. Manufacturers, distributors and importers are required to provide an SDS to any purchaser of a hazardous product. If an SDS is not received with a hazardous material, the purchaser is required to ask the vendor for one and notify Cal/OSHA of any difficulty in obtaining an SDS from a vendor.

C. Binders are located in the various work sites of the laboratory areas of each Division facility, which contain the SDS for hazardous materials used at that location. There are separate binders for Biology, Firearms, Fingerprints, Crime Scenes, Drug, Alcohol, Toxicology, and Miscellaneous. The Supervisor or Manager at each location will ensure that the binders are kept current. In addition, a total list of SDS is in the facility is located in red binders in the reception area of the Summit and Muir facilities for the emergency personnel.

D. Any laboratory employee receiving an order will check to see that the appropriate SDS is included with any hazardous material and contains the necessary information described above. If not, the appropriate supervisor must be informed. It will be the responsibility of that supervisor to ensure that a request, in writing, is made to the vendor for the SDS and/or Cal/OSHA is notified, in writing, of the inability to obtain the SDS or that the SDS is incomplete within 25 working days of the request for the SDS. Complete SDS will be added to the binder in the laboratory areas as well as the red binders at the front of the lab.

E. Chemicals and drugs should have the following labeling requirements:

1. All manufacturers, importers, and distributors are required to label products containing hazardous substances with the following information:

   a. identity of the hazardous substance(s)

   b. hazard warning statements

   c. name and address of the manufacturer or importer

2. The following types of materials, which are labeled in accordance with various federal agencies, do not need additional labeling:

   a. pesticides

   b. food, drug, and additive products

   c. alcoholic beverages

   d. consumer products

IV. Any laboratory employee checking on an order containing a hazardous substance will verify that the container has the information required as listed below.

A. A number of different systems exist for labeling hazard warnings.

1. The NFPA 704 or Haz Com 2012 label format shall be used.

a. NFPA 704 Label requirements (NFPA Fire Protection Guide to Hazardous Materials)

- A color code will be utilized to indicate the category of the hazard (i.e. red for flammable).
  - Red for Flammability
  - Blue for Health Hazard
  - Yellow for Instability
  - White for Special Hazards (letters may be used)
- A number will be used to indicate the severity of the hazard (0 means no significant hazard and 4 means extremely hazardous),

b. Haz Comm 2012 Label requirements (OSHA Hazard Communication Standard 29 CFR 1910.1200 (2012)).

- Product Identifier
- Signal Word
- Hazard Statements
- Pictograms
- Precautionary Statements
- Name, address and phone number of responsible party
- A number may be used to indicate the severity of the hazard (4 means least severe hazard and 1 means most severe hazard)
  - PLEASE NOTE: This number indicator is **not** the same as for NPFA labeling.

2. More information regarding hazard labels is provided in the hazard communication training through Target Solutions.

B. **E**mployee may date and initial the container or electronically record the information in a database.

C. No employee is to remove or alter the required labeling on hazardous materials. Any label, which is damaged, must have the appropriate information replaced.

D. Each employee is charged with the responsibility of transferring hazardous substance and hazard warning information to secondary containers which he/she prepares.

E. Reagents which are prepared from several hazardous chemicals must be labeled with all of the relevant hazard warnings.

1. In some situations the preparation of a reagent will neutralize the hazard, thereby reducing the hazard warning.

F. Supervisors will monitor work areas to ensure compliance.

V. The initial training and an overview of the Hazard Communication Regulations (including employee rights under the regulations) will be provided to currently employed and new employees by a laboratory supervisor(s) in person or through online training on Target Solutions.

A. A Hazard Communication Program Training Protocol has been developed to cover the nine topics listed below and used as a reference for laboratory staff.

1. An overview of the requirements in the Hazard Communication Regulations.
2. Designation of which hazardous chemicals are in which work areas.
3. A review of the safety policies in PowerDMS associated with hazard communication.
4. Physical and health effects of the hazardous substances used in this laboratory.
    a. flammables
    b. poisons
    c. corrosives
    d. toxics
    e. explosives
    f. teratogens
    g. mutagens
    h. oxidizers
    i. pressure hazards
    j. biohazards
5. Methods and observation techniques used to determine the presence or release of hazardous substances in the work area.
6. How to lessen or prevent exposure to these hazardous substances through usage of control, work practices and personal protective equipment.
7. Emergency and first aid procedures to follow if employees are exposed to hazardous substances.
8. Distribution of a sample SDS and an explanation of the information it contains.
9. How to read labels and review SDS to obtain appropriate hazard information.

B. A refresher training will be offered on an annual basis.

C. Each employee must review the SDS for the chemicals in his/her work area.

1. Each time an employee transfers to a new work site or unit, he/she must review the SDS for the hazardous chemicals in the new work area.
2. Employees will be required to sign a form (See SAFF.11) indicating that they have read the relevant SDS each time they transfer to a different (new) work assignment or Unit if they have not already reviewed the SDS's for that section. Alternately,

documentation of SDS acknowledgement may be recorded in the employee's training program.

3. Whenever a new hazardous material is used in a work area or updated SDS is obtained, the appropriate supervisor will ensure that the affected employees are made aware of the addition and the relevant information described above.

D. Anytime a temporary employee or a worker or contractor, from outside the laboratory division, must work in an area in which hazardous materials are in use or where the possibility exists that the person may be exposed to a hazardous material, that person is entitled to know the identity of the hazardous substance to which he/she may be exposed as well as precautions which would lessen any exposure or possibility of exposure.

1. When any appropriate protective equipment is available (e.g., gloves, ear plugs, safety goggles, etc.), it will be provided to the worker.

2. The supervisor of the appropriate laboratory location will ensure that the relevant information is provided.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 05/02/2018	**NUMBER:** SAF.12 - Storage of Chemicals
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB: Chemical Hygiene Plan/Injury, Illness Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** Storage of Chemicals	

I. Chemicals must be segregated by hazard for safe storage. Separate storage areas have been designated for flammables, acids, bases and or other chemicals. In addition, great care must be taken to ensure that incompatible chemicals do not come into contact with one another.

A. Those chemicals, which do not have labeling indicating the proper hazard category for storage, must have the appropriate NFPA 704 label or HazComm 2012 attached.

B. Chemicals must not be stored on open shelves.

C. Storage shelves must have restraint barriers or doors.

D. Separate storage areas should be provided for "incompatible chemicals": chemicals, which may react together and create a hazardous condition because of this reaction. Some examples of these incompatible chemicals are listed in the following table:

Chemical	**Keep Out of Contact With:**
Acetaldeyde	Strong oxidizers, acids, bases, alcohol, ammonia, amines, phenols, ketones, hydrogen cyanide, hydrogen sulfide
Acetates	Nitrates, strong oxidizers, strong alkalines, strong acids
Acetic acid	Chromic acid, nitric acid, hydroxyl compounds, ethylene glycol, perchloric acid, peroxides, permanganates
Acetic anhydride	Water, alcohols, strong oxidizers, chromic acid, amines, strong caustics
Acrylates	Nitrates, oxidizers, peroxides, polymerizers, strong alkalines, moisture
Alkaline metals, such as powdered aluminum or magnesium, sodium, potassium	Water, carbon tetrachloride or other chlorinated hydrocarbons, carbon dioxide, the halogens
Amines	Strong oxidizers, acids
Ammonia, anhydrous	Mercury (in manometers, for instance), chlorine, calcium hypochlorite, iodine, bromine, hydrofluoric acid (anhydrous)
Ammonium nitrate	Acids, metal powders, flammable liquids, chlorates, nitrites, sulfur, finely divided organic or combustible materials
Aniline	Nitric acid, hydrogen peroxide
Benzyl chloride	Active metals: copper, aluminum magnesium, iron, zinc, tin;

	strong oxidizers
Bromine	Same as for chlorine
Carbon, activated	Calcium hypochlorite, all oxidizing agents
Carbon disulfide	Strong oxidizers, azides, organic amines, chemically active metals such as sodium, potassium, zinc
Chlorates	Ammonium salts, acids, metal powders, sulfur, finely divided organic or combustible materials
Chlorine	Ammonia, acetylene, butadiene, butane, methane, propane (or other petroleum gases), hydrogen, sodium carbide, turpentine, benzene, finely divided metals
Chlorides	Strong oxidizers, strong caustics, chemically active metals such as aluminum or magnesium powder, sodium, potassium
Chlorine dioxide	Ammonia, methane, phosphine, hydrogen sulfide
Chloroacetophenone	Water, steam
Chromic acid	Acid, naphthaline, camphor, glycerin, turpentine, alcohol, flammable liquids in general
Copper	Acetylene, hydrogen peroxide
Cumene hydroperoxide	Acids, organic or inorganic
Cyanides	Strong oxidizers, such as nitrates, chlorates, acids, and acid salts
Dimethyl formamide	Carbon tetrachloride, other halogenated compounds when in contact with iron, strong oxidizers, alkyl aluminums
Dimethylsulfate	Strong oxidizers, ammonia solutions
Ethylenediamine	Strong acids, strong oxidizers, chlorinated organic compounds
Flammable liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, the halogens
Fluorides	Strong acids
Fluorine	Isolate from everything
Formaldehyde	Strong oxidizers, strong alkalies, strong acids, phenols, urea
Formic acid	Strong oxidizers, strong caustics, concentrated sulfuric acid
Hydrocarbons (butane, propane, benzene, gasoline, turpentine, etc.)	Fluorine, chlorine, bromine, chromic acid, sodium peroxide
Hydrochloric acid	Most metals, alkali, or active metals
Hydrocyanic acid	Nitric acid, alkali
Hydrofluoric acid, anhydrous	Ammonia, aqueous or anhydrous
Hydrogen peroxide	Copper, chromium, iron, most metals or their salts, alcohols, acetone, organic materials, aniline, nitromethane, flammable liquids, combustible materials
Hydrogen sulfide	Fuming nitric acid, oxidizing gases
Iodine	Acetylene, ammonia (aqueous or anhydrous), hydrogen
Mercury	Acetylene, fulminic acid, ammonia
Nitric acid (concentrated)	Acetic acid, aniline, chromic acid, hydrocyanic acid, hydrogen sulfide, flammable liquids, and flammable gases
Oxalic acid	Silver, mercury
Perchloric acid	Acetic anhydride, bismuth and its alloys, alcohol, paper, wood
Phenol	Strong oxidizers, calcium hypochlorite

Phosphoric acid	Strong caustics, most metals
Potassium	Carbon tetrachloride, carbon dioxide, water
Potassium chlorate	Sulfuric and other acids
Potassium perchlorate (see also Chlorates)	Sulfuric and other acids
Potassium permanganate	Glycerin, ethylene glycol, benzaldehyde, sulfuric acid
Silver	Acetylene, oxalic acid, tartaric acid, ammonium compounds
Sodium	Carbon tetrachloride, carbon dioxide, water
Sodium peroxide	Ethyl or methyl alcohol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerin, ethylene glycol, ethyl acetate, methyl acetate, furfural
Sulfuric acid	Potassium chlorate, potassium perchlorate, potassium permanganate (or compounds with similar light metals, such as sodium, lithium)

The NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, 2005 , may be used as a source of a more comprehensive list of incompatible substances.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.13 - Explosive And Reactive Substances
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Injury, Illness Prevention Plan/Chemical Hygiene Plan**	
CHAPTER: Safety	**SUBJECT:** Explosive And Reactive Substances	

I. Highly explosive and reactive substances, whether evidence or reagents, will be limited in amount to quantities essential for examination. Under no circumstances will "live" explosive devices be allowed in the laboratory. Explosive and reactive substances will be handled in a way to ensure the safety of all personnel.

A. Explosive and reactive substances may be safely handled as long as the conditions, which cause the reaction, are avoided.

B. It is imperative that laboratory staff knows which chemicals are reactive and avoid initiating an undesired reaction by consulting the Safety Data Sheets, the CHRIS Manuals or the NIOSH Pocket Guide to Chemical hazards. A list of common incompatible chemicals is located in FSD Safety Manual Policy SAF.12 Storage of Chemicals.

C. The laboratory will limit the use of air and water reactive chemicals to those, which are essential.

1. Sodium hydroxide is a commonly used chemical, which is water reactive, but can be used safely by controlling the mixing of small quantities of the chemical with water.

D. There are a far greater number of chemicals in use in the laboratory which are not reactive alone, but which can initiate a violent reaction when mixed with another chemical.

1. Such undesirable reactions can be avoided by knowing which chemicals are incompatible and by segregating storage and disposal of such chemicals.

2. As a general guideline, flammables, organics, reducing agents and oxidizing agents should be separated.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 12/12/2013	**NUMBER:** SAF.14 - Flammable Chemicals
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Flammable Chemicals	

I. Flammable chemicals will be stored and used in a way to ensure the safety of laboratory staff and facilities.

A. Many flammable chemicals are used in the Forensic Services Division. Nearly all are liquids. The primary hazard of flammable chemicals is fire. With the use of proper safety measures, the hazard of fire can be greatly reduced or eliminated and the chemicals can be used safely in the laboratory.

B. Following are several guidelines, which must be observed to ensure employee safety when handling flammable chemicals:

1. Eliminate all sources of ignition around flammable chemicals. This includes the use of matches, Bunsen burners, or alcohol lamps.
2. Flammable chemicals should not be heated in the oven.
3. When flammable vapors are present, any equipment in use must be explosion-proof (non-arcing.) This includes stirrers, hotplates, fume hoods and refrigerators.
4. Only small quantities of solvent evaporation may be performed in a fume hood. Containers must always be labeled with the contents.
5. Flammable liquids, up to 1 liter per chemical, that are used regularly may be stored in fume hoods.
6. Quantities of flammables, up to 5 gallons, may be stored in the flammable storage cabinets at the Summit and Muir laboratories.
7. If the total amount of flammable liquid(s) stored exceeds 5 gallons, it must be stored in an approved flammable storage cabinet or storage room. The exception is small quantities stored for immediate use in fume hoods.
8. Flammable chemicals must always be stored away from fuel sources, strong acids, and oxidizing agents such as sulfuric acid or permanganates.
9. Preparation of reagents using flammable chemicals should always be performed in a fume hood.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.15 - Toxic Chemicals
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Toxic Chemicals	

I. All laboratory staff members will exercise reasonable caution in the use of toxic materials to minimize or eliminate exposure and harm to themselves and others. Whenever possible, the use of highly toxic substances will be eliminated or less toxic agents will be substituted for them. Chemicals designated as known carcinogens in the California Code of Regulations will not be used in the laboratory.

A. Toxic chemicals are those which pose a health hazard by damaging the body or interfering with normal biological function at relatively low doses. The severity of the effect can vary from quite mild to lethal and is dependent upon the particular chemical, the sensitivity of the individual, and the size and length of the exposure. The type of toxic effect the substance has on the body may include one or more of the following categories:

1. **Poison** - an agent which hinders or destroys the ability of cells to carry out their function.
2. **Mutagen** - an agent which causes changes in the genetic composition of cells.
3. **Teratogen** - an agent which causes abnormalities in a developing fetus (birth defects).
4. **Carcinogen** - an agent which causes cancer.

B. The effects from a toxic substance may occur immediately or may be delayed for years. Repeated exposure to some toxic materials may also cause cumulative damage. In addition, many toxic chemicals may exhibit other types of hazards, such as flammability or reactivity.

II. Laboratory staff must be alert to the potential for chemical exposure from one or more of the following routes, depending on the chemical (refer to Safety Data Sheets for routes for specific chemicals):

A. **Absorption** - Many chemicals may be absorbed directly through skin or cuts in the skin or mucous membranes. Absorptivity may also be enhanced when a chemical is in a particular solvent. Use appropriate gloves to prevent absorption through the hands.

B. **Ingestion** - Most ingestion is the result of poor hygiene, carelessness or habit. Staff members must be conscientious to avoid inadvertent ingestion.

C. **Inhalation** - Most solids are not volatile enough to pose a hazard through inhalation. Units should identify the volatile solids used in their CHP. The most likely routes of exposure to toxic materials is through inhalation of toxic, volatile liquids.

D. **Inoculation** - Toxic materials may be introduced into the body through accidental puncture from contaminated sharps or broken glassware.

E. **Indirect contact** - This is merely a variation of exposure through absorption or ingestion, but results from contact with a surface or item previously in contact with a toxic material.

III. Additional guidelines for Toxic Chemical Safety:

A. All volatile toxic chemicals must be used in a fume hood.

B. Small quantities of these chemicals, in sealed vials, may be used as injection standards for the gas chromatographs.

C. Spraying of toxic chemicals in the laboratory must be done in a properly ventilated hood.

D. Contaminated materials must not be taken into non-laboratory areas. This includes the wearing of gloves or lab coats in office areas.

E. Evidence which is toxic or which has been treated with toxic chemicals must be sealed to avoid the release or transfer of toxic residue or fumes. Those items, which present a hazard through contact only, may be packaged in plastic. Volatile hazardous materials must be packaged in glass, metal, or other impermeable containers.

F. Equipment and tools used with toxic materials should be cleaned frequently to minimize transfer of toxic residues.

G. Chemicals listed as known carcinogens in the California Code of Regulations will not be used by laboratory staff.

H. Whenever possible, less toxic materials should be substituted for those, which are particularly hazardous.

I. The effluent from gas chromatographs used to analyze toxic materials must be directed into charcoal traps.

J. Any evidence contaminated with a radioactive chemical will not be examined by the laboratory.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/13/2013	**NUMBER:** SAF.16 - Carcinogens
	RELATED ORDERS: Section 5209, Title 8, California Code of Regulations	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan/Injury, Illness Prevention Plan	
CHAPTER: Safety	**SUBJECT:** Carcinogens	

I. CARCINOGENS (Section 5209, Title 8, California Code of Regulations)

Chemical	CAS Number
2-Acetylaminofluorene	53963
4-Aminodiphenyl	92671
Benzidine and its salts	92875
3,3'-Dichlorobenzidine and its salts	91941
4-Dimethylaminoazobenzene	60117
alpha-Naphthylamine	134327
beta-Naphthylamine	91598
4-Nitrobiphenyl	92933
N-Nitrosodimethylamine	62759
beta-Propiolactone	57578
bis-Chloromethyl ether	542881
Methyl chloromethyl ether	107302
Ethyleneimine	151564

II. Additional known or suspected carcinogens, that are no longer used in the Forensic Services Division:

Chemical	CAS Number
Benzene	71432
Carbon Tetrachloride**	56235
Dioxane**	123911

NOTE - ** - EPA has classified Dioxane and Carbon Tetrachloride as Group B2, a probable human carcinogen.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.17 - Corrosive Chemicals
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Corrosive Chemicals	

I. Corrosive chemicals are acids and bases which, through their caustic properties, cause direct physical destruction of tissue. Clearly, direct physical contact with strong acids or bases can cause burns which are even more severe than thermal burns. Damage can occur from corrosive fumes when present in sufficient concentrations in the air.

A. Corrosive chemicals can be used safely in the laboratory by adhering to the safety recommendations in the Safety Data Sheets for the chemicals in question and by following the safety rules here:

1. Wear safety glasses or a face shield when pouring corrosive chemicals or mixing reagents which contain corrosive chemicals.
2. Wear a laboratory coat and a rubber apron when there is the potential for splashing a corrosive chemical.
3. Wear the proper gloves when working with any corrosive chemicals.
4. When diluting acids or bases, always add the corrosive material to water, and not vice versa.
5. Liquid acids and bases are always stored separately from one another. They are never stored with the organic solvents or the solid chemicals.
6. Normally, like chemicals can be stored together. However, acetic acid must be kept separate from perchloric acid and nitric acid
7. Preparation of reagents must be done in a fume hood.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.18 - Compressed Gases
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Compressed Gases	

I. Compressed gases are hazardous primarily because they are under such great pressure. If a gas cylinder is damaged by careless handling, it could turn into a lethal projectile. In the event of a fire, overheating of a cylinder can create the same problem. Most of the compressed gases which are used in the laboratory are not themselves hazardous (for example, air, nitrogen, and helium). However, hydrogen, which is flammable, presents hazards in addition to the high pressures. Safety Data Sheets should be consulted for information on these additional hazards.

A. Compressed gases can be used safely in the laboratory if these guidelines are followed:

1. Cylinders must always be moved by laboratory staff in the hand cart and **NOT** by the valve portion of the cylinder. The valve cap must always be on when the cylinder is moved.
2. Cylinders in the laboratory must be chained or otherwise restrained at all times (except small dry gas cylinders used for breath instruments).
3. Lines carrying compressed gases must be labeled with the name of the gas:
    a. Air
    b. Helium
    c. Hydrogen
    d. Nitrogen
4. Valves and regulators should be visually inspected for damage each time a cylinder is changed.
5. Cylinders must be handled with extreme caution at all times to avoid dropping them and/or damaging the valves.
6. Cylinders, which are not in use, must have safety caps over the valves.
7. Never attempt to use a cylinder without the correct regulator. The threads and fittings on regulators are designed to fit only compatible tanks. Never connect a line directly to the tank valve.
8. Cylinders are to be stored upright at all times.
9. Cylinders must always be closed at the cylinder valve, never at the regulator. Always check to see that the cylinder valve is closed before disconnecting the regulator.

10. To avoid damaging delicate instruments, regulators should be closed or set at the proper pressure before opening the cylinder valve. If there is any doubt about the proper procedure, consult the directions for the instrument or a staff member familiar with the instrument.

11. Whenever fittings, regulators, or lines are changed, test them for leaks with a liquid soap solution (Snoop).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.19 - Preparation Of Reagents
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Preparation Of Reagents	

I. Reagents are prepared in normal laboratory functions. Staff should adhere to the following guidelines when making reagents of mixed chemicals:

A. **Always** read the label on a container before using the contents.

B. **Never** return excess chemicals to the original container. The excess should be discarded in the appropriate waste container to avoid contamination of the contents of the original container.

C. Use caution to avoid drawing liquids up into pipette bulbs. Do not lay used pipettes directly on work surfaces.

D. Chemical containers should be opened with the opening away from the employee's face.

E. The preparation of reagents or the transfer of chemicals from one container to another should be done in a fume hood.

F. All reagent or secondary containers (except those for immediate use) are to be labeled at the time of preparation or transfer with the name of the reagent or chemical, hazard warning label, the date of preparation, and the initials of the person preparing or transferring the substance.

G. Chemicals **must not** be pipetted by mouth.

H. Replace caps on chemical containers immediately after use. Follow Safety Data Sheet requirements on special handling or storing requirements.

I. Return chemicals immediately to their proper storage area after each use.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 05/02/2018	**NUMBER:** SAF.20 - Clean-Up and Disposal of Chemicals
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Clean-Up and Disposal of Chemicals	

I. Each staff member is responsible for the clean-up of their work area. These are guidelines for clean-up after chemical and/or physiological casework:

A. Any chemicals, which are spilled, must be cleaned up **immediately**.

B. Place all broken glassware, pipettes, test tubes, tissues, microscope slides, empty reagent bottles, etc. which are contaminated with chemicals in the "sharps" disposal location. These must not be thrown in the regular trash which is emptied by custodial staff.

C. Employees must clean non-disposable glassware and utensils as soon as practical after use with chemicals.

D. A general laboratory clean up should be performed periodically. Employees are responsible for cleaning up their work area to prevent any possible contamination or cross-contamination.

E. All evidence intake and release counters will be cleaned periodically by the custodial staff at the Muir and Summit locations.

II. Disposal of all chemical waste materials in the laboratory must be in compliance with local, state, and federal regulations.

A. The disposal of hazardous material falls under a number of state and federal statutes. Whenever questions arise regarding the proper procedures for waste disposal, they should be directed to one of the Hazardous Materials Specialists.

B. The Forensic Services Division is the waste generator for all of the hazardous chemicals disposed of by the laboratory which are produced from in-laboratory analyses. The laws make the generator of waste responsible for the waste from "cradle to grave". This means that the generator is responsible for the waste, even after it is turned over to an approved disposal company or site. Consequently, it is critical that all chemical wastes be properly disposed of.

C. Waste that is generated in the Laboratory should follow these guidelines:

1. Small residual amounts of chemicals may enter the sewer system when glassware is washed. However, this should be minimized to the extent possible. The water should be left on for several minutes to further dilute the substance.

2. Large volumes of volatile chemicals will not be evaporated in a fume hood for purposes of waste disposal.

3. All other liquid chemicals will be discarded by pouring into the proper waste containers at each facility.

a. Separate waste containers are available for flammables, acids, bases, and other toxic chemicals.

b. Care must be taken to ensure that a chemical is not added to a container with contents which will cause a reaction.

c. The chemical contents in a waste container need to be documented. These can be maintained on a waste log for each container or identified on a label attached to the waste container.

d. These waste containers can be stored in the fume hood until full or 90 days after the initial chemical was added to the container, whichever is sooner.

e. The container must be kept capped until it is filled. Once filled, containers are sealed, the waste log (when maintained) attached, and placed in the proper storage cabinet, drums or location until disposal is arranged.

f. Prior to the waste disposal, the waste containers/drums that get hauled will be labelled as "Hazardous Waste". The labeling on waste containers/drums shall include: name of the waste, address of the generation site, the accumulation date/initials, the composition, physical state, hazardous properties and NFPA rating.

III. The following is the Division Waste Disposal Procedures:

A. The Forensic Services Division facilities each have their own EPA ID number:

1. CAL 000384029 - 2530 Arnold Drive, Second Floor
2. CAL 923245042 - 1960 Muir Road, Second Floor
3. CAR 000114223 - 2099 Arnold Industrial Way, Concord

B. Hazardous waste is disposed of by contracting with a hazardous waste disposal company. A waste pick-up is coordinated for all facilities every 90 days.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.21 - Hazardous Chemical Spill
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Chemical Hygiene Plan	
CHAPTER: Safety	**SUBJECT:** Hazardous Chemical Spill	

I. Employees will exercise caution in the handling of all chemicals to avoid accidental spills. Employees will familiarize themselves with emergency procedures in the event that an accidental spill of a hazardous chemical occurs.

A. Information regarding the proper clean up procedures, including needed protective clothing, for hazardous chemicals can be found in the appropriate Safety Data Sheets.

1. The approach to clean up e.g.,dilution, neutralization, ventilation, absorption, etc. applies regardless of the size of the spill.

II. When an emergency spill occurs, employee will usually not have time to begin researching the proper emergency procedures before taking action. Therefore, it is critical that employees be familiar with the correct emergency action in the event of an accidental spill before using a chemical.

A. Although each chemical may require a different response in the event of a spill, certain general guidelines can be applied:

1. If an employee knows a chemical is not hazardous, he/she should clean up a spill in the appropriate manner as soon as possible.

2. If the employee knows that the chemical is hazardous, but is able to safely clean up the spill using available protective equipment as necessary, he/she must do so immediately.

a. If the chemical poses a contact hazard, the employee must ensure that other employees do not come into contact with the chemical.

b. If the chemical poses an inhalation hazard, the employee will ensure that employees without the proper protective equipment vacate the area.

3. If the employee does not know the identity of the chemical, does not know the correct clean up procedures, or it is beyond the capability of the laboratory to safely clean up the chemical, he/she will immediately vacate the area and advise other employees to leave also.

4. Anytime an immediate clean up is not possible, the employee will notify his/her supervisor. If that supervisor is not available, then at least one of the following individuals must be notified in the order listed:

a. Immediate Supervisor or Designee

b. Another Division Manager

c. Chief of Forensic Services

d. County Hazardous Materials (335-3200 or the 24 hour hotline 335-3232)

5. After evaluating the situation, the supervisor may determine that it is safe to proceed with cleaning up or may ask Hazard Materials personnel for advice or help with the clean up.

B. Containment and Clean-up Procedures:

1. **Small spill** (1 gallon or less) that **does not** require respiratory protection (such as corrosive chemical spills):

a. Immediately alert personnel in the area and your supervisor.

b. Check the Safety Data Sheet concerning relevant health hazards.

c. If flammable, extinguish ignition sources.

d. Use the personal protective equipment described in the Safety Data Sheet, confine the spill with spill socks, granular absorbent or absorbent pads.

e. Absorb the material, and dispose of in an appropriate container (usually a wide-mouth high density polyethylene (HDPE) container). Label as hazardous waste (include the type of chemical), date and store appropriately until the next available disposal.

2. **Small spill** (1 gallon or less) that **requires** respiratory protection (such as organic solvents):

a. Immediately evacuate the area; turn on ventilation hood and close doors to the room and place a warning sign on the door.

b. Alert personnel in the area and your supervisor.

c. If the spill is small and the type of spill is known then HAZWOPER trained laboratory staff may don appropriate personal protective equipment and proceed with the spill containment and cleanup.

d. If the spill appears unsafe for laboratory staff to clean, then contact the County Hazardous Materials Specialist at 335-3200 or the 24 hour hotline 335-3232.

3. **Large spills** or severe toxic substance release:

a. Possible situations:

i. In the event that a pressurized cylinder inside the building begins to release and cannot be shut off by normal means

ii. Stored waste chemicals overturns and spills

iii. Extremely toxic substances are being used and are spilled outside of a hood

iv. Chemical quantities exceeding 1 gallon

b. Actions to be taken:

i. Immediately evacuate the room and close all doors to the area.

ii. Notify your supervisor who will notify the chain of command and the Officer of the Day

iii. The laboratory will be evacuated until it can be determined that re-entry is safe.

iv. Contact the County Hazardous Materials Specialist at 335-3200 or the 24 hour hotline 335-3232.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 05/02/2018	**NUMBER:** SAF.22 - Employee Health Screening
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB:** Plan	Injury, Illness, Prevention
CHAPTER: Safety	**SUBJECT:** Employee Health Screening	

I. Medical and environmental screening is available, upon request, in order to provide early detection of harmful effects of certain chemicals and biological agents used or encountered in the laboratory and to ensure a safe working environment.

A. Biological Agent Screening

1. Engineering controls are used to prevent exposure of employees to infectious biological agents, which may be carried in physiological specimens. However, accidents, such as needle sticks, cuts by bloody glass, can occur which would expose the employee to possible infection. Diseases like Hepatitis, AIDS and many potential infectious agents may be encountered.

2. Any employee who experiences a body fluid to body fluid exposure by sharps injury or spilling blood on an open wound must report this immediately to their supervisor. The supervisor will obtain a Contra Costa County Office of the Sheriff "On The Job Injury" Packet and the supplemental Bloodborne Pathogen/Communicable Disease Exposure Packet. The following forms in these packet should be completed:

   a. A County Accident Report Form (AK-30)

   b. Employees Claim for Workers Compensation Benefits (DWC-1)

   c. Physician's Statement of Ability to Work (AK142 - completed by employee's physician)

   d. Notification for Possible Communicable Disease Exposure

   e. Consent for the HIV Antibody Blood Test (If appropriate)

   f. Petition for Order to Test Accused' Blood (If appropriate)

   g. Consent to Release the Results of Tests to Detect the Presence of HIV (If appropriate)

   h. Sharps Injury Log (this form remains in the Section)

      i. All completed forms except the Sharps Injury Log shall be forwarded to the Sheriff's Administration, Inspection and Control, and Risk Management via the chain of command within 24 hours of exposure.

      ii. Follow-up testing is highly recommended to establish a baseline test. Employees are encouraged to contact the County Public Health Department, Contra Costa Regional Medical Center, or their personal physician to be serially tested and receive counseling.

3. Division employees who handle biological samples may also wish to obtain a routine screening test for Hepatitis or AIDS.

    a. AIDS screening is available every Tuesday morning from the County Public Health facility. Testing is free and confidential.

    b. Hepatitis vaccination can be obtained through the employee's physician or, by prior arrangement, from the County Health Services Department at time of hire. Testing may be done on County time and, if the cost is not covered by the employee's health insurance, at County expense.

        i. Employees should notify their supervisor in advance if time off or payment for the testing is necessary.

        ii. Testing by County Health Services must also be arranged by the employee's supervisor.

4. Screening of other biological agents is not routinely available through the County. However, if an employee feels that such testing is needed, he/she should consult with his/her supervisor who will consult with Health Services to see if testing is necessary and if it is available.

B. Chemical Agent Screening

1. It is the Division's policy to employ engineering controls to minimize the exposure of employees so that they will not experience harmful effects from the chemicals used in the Division.

    a. Engineering controls include the use of fume hoods, the use of personal protective equipment, substituting less hazardous chemicals for harmful ones, minimizing the amount of chemical used, etc.

2. Firearms examiners may be tested yearly for lead levels in blood.

    a. Screening of employees for excessive exposure to other hazardous chemical agents is not routinely done.

3. For chronic exposures, environmental screening is usually available.

4. In acute exposures, tests may not be available or the level or form of the chemical may not be amenable to testing.

5. In the event of a significant chemical spill where protective measures were not in place or the measures may have failed, then the following should be completed:

    a. A County Accident Report Form (AK-30)

    b. Employees Claim for Workers Compensation Benefits (DWC-1)

    c. Toxic Substance Exposure form

C. If an employee feels that medical screening should be considered, he/she must submit a written request to his/her supervisor.

1. The request should include a justification for testing.

    a. A typical justification would include reasons why engineering controls do not effectively protect the employee from excessive exposures.

b. California Occupational Safety and Health Administration (Cal/OSHA) regulations do not require employee screening unless there is a reasonable belief that the employee's exposure exceeds allowable limits.

2. With the approval of the Chief of Forensic Services, the Supervisor will forward the request to the County Risk Management.

3. It will be the responsibility of the County Risk Management in conjunction with a Health Services consultant to determine what, if any, testing is practical and feasible or required under Cal/OSHA regulations.

D. Environmental Screening

1. If excessive chemical exposures are suspected, environmental monitoring is more likely to be used than employee testing. It is easier to perform and more likely to yield usable information. As indicated above, engineering controls are the preferred approach to avoid excessive exposure.

a. However, if an employee feels engineering controls are inadequate to protect personnel from exposure above allowable limits, a written request should be submitted to the supervisor in writing.

b. As with medical monitoring, the employee should state the reason for believing engineering controls are inadequate.

2. With the approval of the Manager, the supervisor will forward the employee's request to County Risk Management. Risk Management along with the County Health Services /Hazardous Materials/Occupation Health staff will determine what action is appropriate and practical.

a. Action may range from a site inspection to full environmental monitoring.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 12/31/2018	**NUMBER:** SAF.23 - Medical And Exposure Records
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB:**	Injury, Illness Prevention Plan
CHAPTER: Safety	**SUBJECT:** Medical And Exposure Records	

I. The Forensic Services Division will maintain records of employee exposures and medical records associated with employment, in compliance with state law. Employees will be permitted access to these records according to procedures specified by law.

A. **Employee Exposure Record** - A record containing any of the following kinds of information concerning employee exposure to toxic substances or harmful physical agents:

1. Environmental monitoring or measuring
2. Biological monitoring to directly assess the absorption of a substance by the body (e.g., the level of a chemical in the blood, urine, etc.) but not the biological effect of the substance
3. Safety Data Sheets (SDS)
4. In the absence of any of the above, any record which identifies a toxic substance or harmful physical agent.

B. **Employee Medical Record** - A record concerning the health status of an employee which is made by a physician, nurse, or other health care personnel or technician. This would include interpretation of the results of biological monitoring.

C. **Toxic Substance/Harmful Physical Agent** - Any chemical substance, biological agent, or physical stress which is:

1. Regulated as a health hazard by California or Federal law or rule
2. Listed in the latest edition of the NIOSH Registry of Toxic Effects of Chemical Substances
3. Shown by testing to have an acute or chronic health hazard
4. Described as a potential or known health hazard to humans in a Safety Data Sheet provided to the employer

II. Under California law, all employees are entitled to have access to records which are prepared by or for the employer and are related to exposure to toxic and harmful materials including infectious agents while on the job.

A. The law does not mandate employers to perform exposure monitoring or employee medical examinations in the absence of a reasonable belief that the employee is being exposed to greater than allowable limits of toxic or harmful materials. However, once records are prepared, even when an exposure is not believed to exceed allowable limits nor is the harmful material regulated, these records will be retained by the County in one or more locations for the period(s) specified by law.

B. Retention Requirements:

1. All Employee Medical Records must be retained for the duration of employment plus thirty years.

2. All Employee Exposure Records must be retained for at least thirty years.

3. SDS will be retained in the Division for thirty years.

C. Access Requirements:

1. The right of access to medical and exposure records is guaranteed to the employee, his/her designated representative, and any representative of the Division of Occupational Safety and Health.

2. Requests for records must be provided to the employee's supervisor in writing. If the records reside within the Forensic Services Division, the supervisor will provide a copy of the requested records to the employee or designated representative as soon as possible, and in any case, not more than 15 days after receiving the written request.

3. If the records reside in another location, the supervisor will forward the request to the appropriate location and will notify the employee in writing within 15 days that no records exist in the Division.

4. The supervisor will follow through when possible to assist in providing the employee with timely copies of records or access to the requested information.

5. Copies of records are provided to employees or designated representatives at no cost.

D. Authorization of an Employee Representative:

1. An employee representative may not receive exposure or medical records without written authorization from the employee.

2. The exception is that the employee's bargaining unit may receive exposure records (but not medical records) without written authorization.

E. Any written authorization must contain the following:

1. The name and signature of the employee authorizing release of the information.

2. The date of the written authorization.

3. The name of the designated representative authorized to receive the information.

F. A written authorization for medical information must also contain:

1. The name of the individual or organization authorized to release medical information.

2. A general description of the medical information to be released.

3. A general description of the purpose for release of the medical information.

4. A date or condition upon which the authorization will expire if other than one year.

G. Release of Medical Information:

1. Whenever an employee requests medical records, it is likely that the County will either 1) require the employee or his/her representative to consult with a physician employed by the County who will explain the records, or 2) authorize release of medical records only to the employee's physician.

H. Release of Exposure Records: Exposure records which are to be provided to an employee or his/her representative include:

1. Records of the employee's past or present exposure to toxic substances or harmful physical agents.

2. Exposure records of other employees with past or present job duties or work conditions related to or similar to those of the employee.

3. Records containing exposure information about the employee's work place or working conditions.

4. Exposure records related to workplaces or working conditions to which the employee is being transferred or assigned (for example, records of environmental monitoring.)

I. Preparation and Storage of Records:

1. Records, which are subject to these laws, may be prepared or received from a number of different sources or for a number of different reasons. Following are those records which it is anticipated a Division employee would most likely want to access:

2. County accident reports (form AK-30) prepared as the result of an illness or injury from exposure to a toxic material or infectious agent. Copies of these are retained in the Division. However, the official record for purposes of the retention of these records resides in the County Risk Management.

3. Pre-employment examinations. Copies are retained by the physician performing the examination and in the employee's personnel file in the Administration Division.

4. Medical questionnaires or histories such as those given as part of the Respiratory Protection Program. The Division receives only a report of fitness for a task. The medical records are retained by the physician in charge, in the County Health Services Department.

5. Any medical reports, diagnoses, treatments, or recommendations given to the County as the result of a job related accident or injury. These recommendations are retained by the physician performing the examination. A report may reside with the County Personnel Department. If an employee goes to his/her own physician for a job-related injury, these records may not be provided to the County in which case they would not be subject to these regulations.

6. Any monitoring of the Division for exposure levels of hazardous chemicals or other materials, usually performed by Hazardous Materials personnel or coordinated by Risk Management. The Forensic Services Division usually receives and retains copies of these reports. A more complete record is retained by Hazardous Materials or Risk Management.

7. Any employee exposure testing such as tests for AIDS or Hepatitis antibodies or tests for blood lead levels. These records are not usually supplied to the Division and are retained by the physician overseeing the testing.

8. Current Safety Data Sheets are in the binders in the various work stations. Outdated MSDS/SDS are retained in the Division administrative files for thirty (30) years.

9. Chemical inventories are performed at each laboratory yearly. Records will be located at each laboratory location or electronically.

10. Employees may wish to self-initiate an exposure to a chemical hazard. Potential toxic exposure may be documented using the AK30 and are available to the employee who wishes to document the use of toxic materials even though no effects are noticed or there is no reason to believe exposure exceeds allowable limits. These forms will be retained for thirty years and are subject to access as described in this policy.

11. Any injury caused by contaminated sharps (needle stick, scalpel cut) or while working with a physiological fluid shall be reported on an AK-30 form and a Blood-borne Pathogen Exposure packet will be completed, if applicable. A Sharps Injury Log form (SAFF.02) will also be reported for injuries by contaminated sharps.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/20/2013	**NUMBER:** SAF.24 - Employee Vaccinations
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	Blood Bourne Pathogens
CHAPTER: Safety	**SUBJECT:** Employee Vaccinations	

I. All laboratory employees who handle physiological samples in the course of their duties are encouraged to take advantage of the immunizations available for Hepatitis B.

A. The infectious agent most likely to cause death or serious illness among laboratory employees who handle liquid blood samples is the Hepatitis B virus. Because of the volume of physiological samples received in the Laboratory and because many of the samples come from the high risk population (intravenous drug users), employees who handle these specimens are encouraged to obtain immunizations against the Hepatitis B virus.

1. The process may begin with a test for the Hepatitis antibodies. If the antibody test is negative, then the vaccination process will proceed. The vaccination consists of three shots received one to two months apart. A vaccine is available from a genetically engineered source, thus eliminating the negligible potential for exposure to a secondary disease, such as AIDS, from the vaccine.

2. The vaccination series must be followed by another antibody test several months later to ensure that the employee acquired immunity from the vaccinations. A small percentage of people do not form antibodies and cannot be protected with the vaccination.

B. Employees who wish to receive the Hepatitis immunizations may arrange for them through his/her own physician or may receive them through the County Health Services Department. Employees are allowed County time to receive the tests and immunizations. Any employee who wishes to receive the series from the County must advise his/her supervisor who will make arrangements through Health Services.

C. The cost for immunization by the County Health Services Department is paid by the Forensic Services Division. (See Employee Authorization for Immunization and/or Hepatitis B Post Blood Titer form, SAFF.01)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 05/14/2018	**NUMBER:** SAF.25 - Emergency Safety
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB: Injury, Illness, Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** Emergency Safety	

I. Emergencies occurring at or around Forensic Services Division (FSD) facilities will be handled in a manner to preserve life and minimize injury and property damage. Division members are responsible for ensuring that emergency notifications are made and first aid or emergency evacuation is initiated.

A. Emergency Telephone Numbers:

1. Contact Emergency Services by dialing 9-911 from a County phone or by dialing 911 from a personal or public telephone. This process ensures connection to the proper Public Safety Answering Point (PSAP).

2. Those callers requiring an ambulance and/or the fire department are switched to Consolidated Fire District dispatch center.

3. Sheriff's Dispatch is not the PSAP for FSD facilities. Calling Dispatch would result in the call being transferred, which could result in delay and the call location will not appear in the 911 system.

B. For Medical Emergencies:

1. FSD staff members encountering a medical emergency will immediately provide emergency notification.

2. FSD staff trained for medical emergencies (first aid/CPA/naloxone) will provide assistance. Untrained FSD staff must immediately obtain the assistance of the nearest trained person.

3. It is preferable that an additional FSD staff member call for assistance using the 911 system, rather than suspend emergency treatment.

4. Typically, an ambulance and fire rescue will respond to a 911 call for a medical emergency.

5. If the medical emergency is not serious enough to warrant an ambulance, the patient may be transported by a family member.

   a. Under no circumstances should a seriously ill or injured person be allowed to drive.

6. All serious injuries must be reported to Risk Management and CAL OSHA by a Supervisor or Manager. To assess the incident for reporting see CAL OSHA Serious Injury Reporting.

C. For Fire Emergencies:

1. Upon discovery of a fire, FSD staff must immediately notify or designate staff to notify building occupants and call 911.

2. If trained, small fires may be extinguished by using fire extinguishers that are distributed in marked locations at each FSD facility. If danger to the occupants exists, they must be evacuated according to the emergency evacuation plan established for each work site.

D. For Emergencies Requiring Police Assistance:

1. The Summit and Muir facilities are under the jurisdiction of the Martinez Police Department. Property is under the jurisdiction of Concord Police Department. The police are contacted using the 911 System or, when telephone contact is not possible, by activating one of the emergency panic alarms.

a. When contact is made by telephone, the caller should provide their name, phone number, and a description of the emergency.

i. An emergency requiring the help of the police department might include a robbery, assault, or bomb threat.

2. If physical harm has or is likely to occur, it may be necessary for a sworn member to take action to subdue an offender prior to the arrival of the Police Department.

a. Any action by a Division member must be appropriate for the incident and must not further endanger others.

b. The Patrol and Investigation Divisions often have sworn personnel nearby and they may be a rapid source of aid for the Muir facility.

3. In the event that a bomb threat is received, the employee should refer to Department Policy 1.06.23 Major Disaster Response for a list of questions to ask the caller.

E. For Blackout Procedures:

1. Although blackouts may or may not be considered an emergency, all Division staff should be prepared for anticipated and unanticipated blackouts.

2. Plans and procedures are prepared for each Division facility consistent with the Contra Costa Emergency Management Plan. See SAF.26 , SAF.27, and SAF.28 for Blackout Policy and Procedure for Muir, Summit and Property facilities.

F. For Notification:

1. As soon as practical, emergency notifications must be made to management (supervisors, managers, chief and assistant sheriff) advising them of the situation.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 7/13/2016	**NUMBER:** SAF.26 - Blackout Policy and Procedures - Muir
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	Injury, Illness, Prevention Plan
CHAPTER: Safety	**SUBJECT:** Blackout Policy and Procedures - Muir	

I. BLACKOUT POLICY AND PROCEDURE FOR FORENSIC SERVICES DIVISION Muir Laboratory 1960 Muir Road, 2nd Floor, Martinez

II. GENERAL

A. The Drugs, Alcohol and Toxicology Laboratory (aka the Muir Lab) is located at 1960 Muir Road at the intersection of Glacier Drive and Muir Road on the 2nd floor of the Sheriff's Coroner's Office. The two-story building is located in the North central part of Contra Costa County approximately 1/2 mile from the junction of Highway 4 and I680.

B. There are approximately 15 employees assigned to the Lab typically during business hours (Monday through Friday, 0800 - 1700hours) and the area of the Lab includes 10,080 square feet.

C. The facility is currently exempt from rolling blackouts by virtue of being designated in a "Block 50" grid. This designation is due to the facility housing law enforcement services but may change as PG&E reevaluates its exempt blocks. Additionally a generator backs up limited areas of the facility. This is a 400 kW generator that is shared with the Field Operation Building (1980 Muir Rd). This generator is maintained by General Services Division and has a fuel capacity of 10,000 gallons of diesel in an underground storage tank. The generator is routinely checked and all equipment that utilizes electricity has been verified to operate in a normal manner. The generator automatically starts when the power is shut off.

D. All employees shall be issued a copy and shall be aware of the contents of this plan. The Forensic Manager shall be responsible for updating and revising this plan.

III. Communications

A. Forensic Manager Danielle Adams is designated the Energy Contact person with the Forensic Supervisor as the alternate.

B. The Manager and the Supervisor shall monitor KCBS radio on days when a blackout is likely. They shall relay information regarding pending blackouts to all occupants on the second floor of the building. If other occupants become aware of pending blackouts, they shall also relay the information to all occupants.

IV. Communications at Worksites

A. Outlook email system (Microsoft OWA 365) shall be the primary means to notify employees of an anticipated blackout. Employees should post notices, outside the entrance door of the laboratory if they are unable to keep appointments due to blackouts.

B. All occupants shall review Emergency Action and Fire Prevention plans posted next to the Safety Bulletin Board located in the main hallway.

C. Employees shall assist all handicapped staff and others that may be in need of assistance if in the building when an unanticipated blackout occurs.

V. Facility Preparedness/Safety

A. This facility is designated in a block 50 grid and as such is exempt for rotating power outages. It is unknown if PG&E will reassign this location to a rotating power outage block. During an unanticipated blackout most functions requiring electricity will be lost.

VI. Emergency Backup Power Generators

A. The facility is equipped with a 400 kW generator that backs up limited areas of the facility. General Services Division (GSD) maintains the generator. The Operating Engineering Section is responsible for maintaining the generator system. GSD performs a quarterly inspection and test under full load conditions. They also inspect bimonthly and test run the unit under no-load conditions.

VII. Uninterruptible Power Systems (UPS)

A. The facility is equipped with a UPS that powers the telephone system. This system has 48 volt batteries on a float charge. The fire and alarm systems also have a battery backup that is maintained by the GSD.

VIII. Telephone Systems

A. The telephone system is backed up by an UPS system. This system will allow the telephones to stay functional for approximately one hour. Thereafter the telephones will support only outgoing calls. The Telecommunications Services of General Services Division is responsible for maintaining the backup system. They perform the semiannual battery inspection.

IX. Fire Control and Suppression Systems

A. The facility is equipped with smoke detectors and a sprinkler system and has numerous wall mounted extinguishers distributed throughout the building. The fire alarms are on a lead acetate rechargeable battery backup that will stay functional for about 24 hours. The General Services Division is responsible for maintaining the fire alarm system. They perform quarterly, semiannual, and annual checks on the smoke detectors, sprinkler system and the backup batteries.

X. Security Systems

A. The facility is equipped with an alarm system that is operated by Denelect 646-6633. Systems are programmed to activate whenever power is lost. The system will stay functional for up to two days without power on a rechargeable battery. The batteries are maintained and checked by General Services Division. Panic alarms will be checked quarterly.

XI. Elevators and Handicapped Egress Routes

A. The facility is a two-story building and has one elevator. During an unanticipated blackout, the generator will not back up the elevator. There is an audible alarm in the elevator that can be activated in emergency situations. A communication will be maintained with the person(s) inside the elevator. If the electricity does not come back on within a half hour General Services Division and Fire Department will be contacted to

evacuate the person(s) inside the elevator. All employees have been instructed in evacuation routes and they are posted at several locations in the corridors. All employees have been instructed to provide assistance to others who are disabled or incapable of moving around the building.

XII. Computer Equipment Rooms

A. There are no environmentally controlled computer equipment rooms in this facility.

XIII. Public Address (PA) Systems

A. The PA is built into the telephone system and operates through individual telephones located throughout the facility. The system operates by lifting the receiver and pressing the * button, and then 31 for the drug section and 32 for alcohol and crime scene evidence area and 33, and 34 for toxicology area.

XIV. Emergency Lighting

A. Emergency lighting is present throughout the building. These lights are routinely checked to ensure functionality. During daylight hours, natural lighting is sufficient to perform some functions in most parts of the buildings when the blinds are open.

XV. Work Practices

A. Advance Planning for Work Activities

1. Most of the work in the building requires electricity and it would not be possible to continue performing normal work duties in the event of blackouts.

B. Secure Work Areas - Advance Notice of Blackouts

1. Surge protectors are in place on most computers and analytical instruments.
2. All employees have been instructed to cut down on electricity usage and use only necessary equipment during rolling blackouts to help alleviate power shortages even though the facility is located within Block 50.
3. All employees have been instructed to save data frequently and to ensure that their equipment is connected to a surge protection unit, if possible.
4. The Energy Contact or alternate will monitor KCBS (740 AM) for updates on outages.
5. The Site Facility Manager will email or telephone the Chief or his/her designee. The Chief or designee will forward on the info to the Assistant Sheriff, updating the work-site safety/hazard status.

C. Secure Work Areas - No Advance Notice of Blackouts

1. All employees have been instructed to notify all occupants of the building to ensure that everyone is made aware of any blackout situation.
2. All employees have been instructed to check walkways, bathrooms, and other areas for trip-fall victims and to arrange for needed medical attention or first aid.
3. All employees have been told to open blinds to provide natural lighting.
4. All employees have been instructed to ensure that all equipment and machinery that is in operation be shut down if necessary and secured.

5. All employees have been instructed to account for all staff, clients, and visitors and to move to safe areas if necessary.

6. All employees have been instructed to monitor KCBS (740AM) for updates on outages.

7. Site Facility Manager will email or telephone the Chief or his/her designee. The Chief or designee will forward on the info to the Commander updating the work-site safety/hazard status.

D. Direct/Manage Work Operations During Blackout

1. All employees have been instructed to make appropriate arrangements for reception of clientele or visitors in safe areas and or post appropriate notices regarding access and services if necessary.

2. If there is not enough light to work, all employees have been instructed to move to other areas or other offices that have enough natural light or battery powered light and space.

3. If there is not enough heat or coolness to work, all employees have been instructed to move to offices that have adequate air circulation, room temperature and space.

4. During a blackout all staff shall:

   a. Perform work that does not require electrical equipment, if adequate lighting is available: e.g., sorting, filing, reading, organizing desks and files, purging old records, etc.

   b. Work release: Division Chief will assess impact of blackout on work activities and safety (taking into account potential duration) and make decision whether to close down.

   c. If applicable, the Chief may release personnel under provisions of Contra Costa County Administrative Bulletin 316, Timekeeping in Emergency Situations.

   d. Division Chief or designee shall keep management advised, through chain of command, of:

      i. Blackout duration

      ii. Building safety

      iii. Work operation

      iv. Division Chief shall continue to monitor building/staff/client safety.

      v. Division Chief shall maintain essential services by invoking Emergency/Disaster Plans(s), if necessary.

E. Closing Facility

1. The Division Chief or designee has authority to evacuate the building in a local emergency. He/she will usually have the most updated information about the emergency and if closing the building will:

   a. Direct notices be posted notifying potential visitors or public of circumstances.

b. Ensure that data is saved, if possible.

c. Issue orders to staff and clarify how to report release time.

d. Assure building is secured.

F. Resumption of Normal Operations after Restoration of Power

1. Upon resumption of normal operations after restoration of power:

a. Employees will be advised of the all-clear notice and they may notify clients with appointments.

b. Posted notices will be removed and the Chief or his/her designee shall be advised.

c. Equipment will be restarted, if it is auto shut off, and a survey of safety status of building and equipment shall be made.

d. Any emergency supplies and equipment, that was utilized, shall be returned to its proper location.

e. Employees will be accounted for and shall assume normal work activities.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 08/31/17	**NUMBER:** SAF.27 - Blackout Policy and Procedures
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Injury, Illness, Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** Blackout Policy and Procedures	

I. BLACKOUT POLICY AND PROCEDURE: FORENSIC SERVICES DIVISION
Summit Center: 2530 Arnold Drive, Suite 200, Martinez, CA 94553

II. GENERAL INFORMATION

A. A rotating outage is also called a rolling blackout, and it is when power is cut deliberately in order to reduce the strain on an electricity grid or generating system. Rotating outages usually happen when demand grows faster than supply, but they can also stem from production issues, a shortage of fuel, and outdated grids.

Rotating outages are deliberate actions and are much less likely to cause damage to the power grid than an unexpected power outage. Power companies use rotating outages only as a last resort, and try to cut power to the least number of customers. Depending on the location of the rotating outage, the length of time may greatly vary.

The power grid is continually monitored, if an increase in demand is noticed an announcement asking customers to decrease power usage may occur to help prevent a rolling blackout. If the power supply goes below a critical level, the monitoring agency will use rotating outages or brownouts. These "roll" in order to ensure that power is not cut to a large section of the grid at any one time.

Power customers are divided into prioritized blocks. These are evenly distributed across the grid, to ensure that power is not cut to an entire community. This is done for safety reasons, as there has been established a link between long power outages and increased crime. Usually, hospitals and fire/police stations are not affected by rotating outages. California is known for rotating outages, however, there are exempt areas referred to as "Block 50".

B. The Criminalistics Section of the Forensic Services Division is located on the second floor (24,000 square feet) of the Summit Center at 2530 Arnold Drive, Suite 200, Martinez, CA. The Summit Center is a multilevel structure located in North Central Contra Costa County just North of Highway 4 and I680. This facility is located in a "Block 50" grid and should be exempt from rolling blackouts.

C. The facility does have a backup generator that during a power outage operates the elevators, and supplies power to select building occupants. The crime laboratory does not receive power from the backup generator.

D. Approximately 30 employees are assigned to the Criminalistics Section. Employees will be responsible to acknowledge that they have read and reviewed the blackout policy and procedures.

E. The Criminalistics Section Forensic Manager is responsible for updating and revising this plan.

III. Communications

A. The Criminalistics Section Forensic Manager is designated the Energy Contact person with the Unit Supervisors serving as alternates.

1. KCBS Radio (740) shall be monitored on days when a blackout is likely, alternate monitoring may be done using the internet. Information regarding pending blackouts will be relayed to staff.

IV. Communications at Worksites

A. The email system shall be the primary means to notify employees of an anticipated blackout. The floor paging system may also be used.

B. Employees should call or post notices to all members of the public if they are unable to complete meetings or appointments due to blackouts.

C. Employees shall be familiar with emergency action/fire/evacuation plans posted on the Safety Bulletin Board.

D. If an unanticipated blackout occurs, employees shall assist handicapped staff or others that may need assistance.

V. Facility Preparedness/Safety

A. Currently, this facility is located in a "Block 50" grid and should be exempt from rolling blackouts, however, PG & E can reassign this location to a rotating power outage block.

VI. Emergency Backup Power Generators

A. The facility is equipped with an emergency backup power generator that operates the elevators and select building occupants. The Crime Laboratory (2nd floor-Suite 200) is not supported by the generator.

VII. Uninterruptible Power Systems (UPS)

A. Select equipment within the Biology and Latent Units are equipped with a UPS.

VIII. Telephone Systems

A. The telephone system will not support calls during a blackout, however, mobile phones will be operational.

IX. Fire Control and Suppression Systems

A. The facility is equipped with a sprinkler system and has numerous wall mounted extinguishers distributed throughout the building. The fire control system is checked annually by the Contra Costa County (CCC) Public Works Department and Fire Protection to ensure it is functioning properly.

X. Security Systems

A. The facility is equipped with an alarm system that is operated by Denelect 925-646-6333. Systems are programmed to activate whenever power is lost. The alarm system is checked annually by the CCC Public Works Department to ensure it is functioning properly.

B. The facility has touch keypads at each of the three exits locations.

XI. Elevators and Handicapped Egress Routes

A. The facility is a four-story building and has two elevators. There is an audible alarm in the elevator that can be activated in emergency situations. The elevator call box will connect to Sheriff's Dispatch, and communication will be maintained with the person(s) inside the elevator during an emergency. It is expected that the generator will maintain elevator operations during a power outage, however, if the elevator is not operational for a 30 minutes, CCC Public Works and Fire Department will be contacted to evacuate the person(s) inside the elevator. All employees shall follow the evacuation plan; the evacuation routes are posted at each exit. All employees have been instructed to provide assistance to others who are disabled or incapable of moving around the building. Wheelchair and handicap access ramps are located on the main floor.

XII. Computer Equipment Rooms

A. There are two data rooms that are environmentally monitored on the floor.

XIII. Public Address (PA) Systems

A. The PA is built into the telephone system and operates through individual telephones located throughout the facility. The system operates by lifting the receiver and pressing #200.

XIV. Emergency Lighting

A. Emergency lighting is present within the building. During daylight hours, natural lighting is sufficient to perform some functions in most parts of the building when the blinds are open.

XV. Work Practices

A. Advance Planning for Work Activities

1. Most areas in the building would be inadequate to continue performing normal work duties in the event of blackouts.

B. Secure Work Areas - Advance Notice of Blackouts

1. Surge protectors are in place on most computers and technical instruments.

2. All employees are instructed to cut down on electricity usage and use only necessary equipment during rolling blackouts to help alleviate power shortages even though the facility is located within Block 50.

3. All employees are instructed to save data frequently and to ensure that their equipment is connected to a surge protection unit, if available.

4. The Forensic Manager or alternate will monitor KCBS radio (740 AM) or internet source for updates on outages.

5. The Forensic Manager will inform the Chief or his/her designee of a blackout. The Chief or designee will forward on the info through chain of command updating the work-site safety/hazard status.

6. Employees are instructed to take actions to protect, preserve and safeguard vital records and data.

C. Secure Work Areas - No Advance Notice of Blackouts

1. Employees are instructed to notify the occupants of the laboratory to ensure everyone is made aware of the situation.
2. Employees are instructed to check walkways, bathrooms, and other areas for trip-fall victims and to arrange for needed medical attention or first aid.
3. Employees are instructed to open blinds to provide natural light, and to use flashlights for non-lighted areas.
4. Employees are instructed to ensure that all equipment and machinery that is in operation be shut down if necessary and secured.
5. Employees are instructed to account for all staff, clients, and visitors and move to safe areas, if necessary.
6. Employees are instructed to monitor KCBS Radio (740) or internet source for updates on outages.
7. The Forensic Manager will inform the Chief or his/her designee of a blackout. The Chief or designee will forward on the info through chain of command updating the work-site safety/hazard status.

D. Direct/Manage Work Operations During Blackout

1. Employees are instructed to make appropriate arrangement for reception of clientele or visitors in safe areas and or post appropriate notices regarding access and services, if necessary.
2. If there is not enough light to work, all employees have been instructed to move to other areas or other offices that have enough natural light or battery powered light and space.
3. If not enough heat or air conditioning to work, all employees are instructed to move to offices that have adequate air circulation, room temperature and space.
4. During a blackout staff shall:
    a. Perform work that does not require electrical equipment, if adequate lighting is available: e.g., sorting, filing, reading, organizing desks and files, purging old records, etc.

E. Work release

1. Division Chief will assess impact of blackout on work activities and safety (taking into account potential duration) and make decision whether to close down.
    a. If applicable, the Chief may release personnel under provisions of Contra Costa County Administrative Bulletin 316, Timekeeping in Emergency Situations.
    b. Division Chief or designate shall keep management advised, through chain of command, of:
        i. Blackout duration
        ii. Building safety
        iii. Work operation
2. Division Chief shall continue to monitor building/staff/client safety.

3. Division Chief shall maintain essential services by invoking Emergency/Disaster Plans(s), if necessary.

F. Closing Facility

1. The Division Chief or designate has authority to evacuate the building in a local emergency. He/she will usually have the most updated information about the emergency and if closing the building will:

   a. Direct notices be posted notifying potential visitors or public of circumstances.

   b. Ensure that data is saved, equipment is shut down, turned off and secure.

   c. Issue orders to staff and clarify how to report release time.

   d. Assure building is secured.

G. Resumption of Normal Operations after Restoration of Power

1. Upon resumption of normal operations after restoration of power:

   a. Employees are advised of the all-clear notice and they shall notify clients with appointments.

   b. Posted notices will be removed and the Chief or his/her designee shall be advised.

   c. Equipment will be restarted and a survey of the safety status of the building and equipment shall be made.

   d. All emergency supplies and equipment shall be returned to its proper location.

   e. Employees will be accounted for and shall assume normal work activities.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 2/14/2017	**NUMBER:** SAF.28 - Blackout Policy and Procedures - Property Services
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:**	
CHAPTER: Safety	**SUBJECT:** Blackout Policy and Procedures	

BLACKOUT POLICY AND PROCEDURE
FORENSIC SERVICES DIVISION
Property & Evidence Services Facility
2099-D Arnold Industrial Way, Concord, CA

I. Policy: Staff are responsible for being aware of contents of this plan. The Director of Property and Evidence Services will be responsible for updating and revising this plan.

A. General

1. The Property and Evidence Services Facility is located at 2099-D Arnold Industrial Way, Concord. It is a brown wood and concrete building located in the North Central part of Contra Costa County approximately 2 miles east from the junction of Highway 4 and Interstate 680.

2. There may be up to 8 staff assigned to the facility at any given time.

3. The facility consists of approximately 19,000 square feet.

4. The facility is currently exempt from rolling blackouts by virtue of being designated in a "Block 50" grid. This designation may change as PG&E reevaluates its exempt blocks.

B. Communications

1. The Director of Property and Evidence is the designated Energy Contact person. In the absence of the Director, their designee is the alternate Energy Contact person.

2. The Energy Contact person shall monitor KCBS radio on days when a blackout occurs. They shall relay information regarding pending blackouts to all occupants in the building.

3. If other occupants become aware of pending blackouts, they shall relay the information to all occupants.

C. Communications at Work sites

1. Outlook e-mail system shall be the primary means to notify employees of an anticipated blackout called a brownout (not blackout).

2. All employees shall review emergency action/fire/evacuation plans posted on the Safety Bulletin Board located in the main hallway.

D. Facility Preparedness/Safety

1. This facility is designated in a block 50 grid and as such is exempt for rotating power outages. It is unknown if PG&E will reassign this location to a rotating power outage block.
2. During an unanticipated blackout, all functions requiring electricity will be lost.

E. Emergency Backup Power Generators

1. The facility is not equipped with an emergency backup power generator.

F. Uninterrupted Power Systems (UPS)

1. The facility is equipped with a UPS.

G. Telephone Systems

1. The telephone system will support outgoing calls only during a blackout.
2. If the telephone system is not available, cell phones will be used to communicate outside the facility.

H. Fire Control and Suppression Systems

1. The facility is equipped with a sprinkler system and has numerous wall mounted extinguishers distributed throughout the building.

I. Security Systems

1. The facility is equipped with an alarm system that is operated by Denelect (925) 935-2680. Systems are programmed to activate whenever power is lost.
2. The alarm system is checked quarterly to ensure it is functioning properly.

J. Elevators and Handicapped Egress Routes

1. The facility is a one-story building and does not have elevators.
2. Staff have been instructed in evacuation routes and they are posted on the Safety Bulletin Board.
3. Staff have been instructed to provide assistance to others who are disabled or incapable of moving around the building.
4. Wheelchair and handicap access ramps are located outside the entry.

K. Computer Equipment Rooms

1. There are no environmentally controlled computer equipment rooms in this facility.

L. Emergency Lighting

1. Emergency lighting is present in the office and warehouse.
2. These lights are routinely checked to ensure they are functioning.
3. Staff have been supplied with flashlights at each of their desks.

M. Work Practices

1. Advanced Planning for Work Activities

a. Most areas in the building would have inadequate lighting to continue performing normal work duties in the event of blackouts, with the exception of the front office.

2. Secure Work Areas - Advance Notice of Blackouts

a. Surge protectors are in place on all computers and technical instruments.

b. Staff have been instructed to cut down on electricity usage and use only necessary equipment during rolling blackouts to help alleviate power shortages even though the facility is located within Block 50.

c. Staff have been instructed to save data frequently and to ensure that their equipment is connected to a surge protection unit.

d. The energy contact or alternate will monitor KCBS (740 AM) for updates on outages.

e. The Director or designee will e-mail or telephone the Chief of status during a blackout.

i. The Chief will forward on the information to the Assistant Sheriff updating the work-site safety/hazard status.

f. Staff have been instructed to take action to protect, preserve and safeguard vital records and data.

3. Secure Work Areas - No Advance Notice of Blackouts

a. Staff have been instructed to notify all occupants of Suite D to ensure that everyone is made aware of situation.

b. Staff have been instructed to account for all staff, clients, and visitors and move to safe areas, if necessary.

c. Staff have been instructed to use flashlights for non-lighted areas.

d. Staff have been instructed to check walkways, bathrooms, and other areas for trip-fall victims and to arrange for needed medical attention or first aid.

e. Staff have been instructed to ensure that all equipment and machinery that is in operation be shut down if necessary and secured.

f. Staff have been instructed to monitor KCBS for updates on outages.

g. The Director or designee will e-mail or telephone the Chief of status during blackout.

h. The Chief will forward on the information to the Assistant Sheriff updating the work-site safety/hazard status.

4. Work Operations During Blackout

a. Staff have been instructed to make appropriate arrangement for reception of clientele or visitors in safe areas and/or post appropriate notices regarding access and services, if necessary.

b. If there is an insufficient amount of light to work, staff have been instructed to move to other areas or other offices that have enough natural light or battery powered light to space.

c. If there is insufficient heat or coolness to work, staff have been instructed to move to offices that adequate air circulation, room temperature and space.

d. During a blackout all staff shall perform work that does not require electrical equipment, if adequate lighting is available: e.g., sorting, filing, reading, organizing desk and files, purging old records, etc.

5. Work Release

a. The Chief will assess impact of blackout on work activities and safety (taking into account potential duration) and make decision whether to close down.

b. If applicable, the Chief may release personnel under provisions of Contra Costa County Administrative Bulletin 316, Timekeeping in Emergency Situations.

c. The Chief shall keep management advised, through chain of command, of: blackout duration, building safety, and work operation.

d. The Chief shall maintain essential services by invoking Emergency/Disaster Plan(s), if necessary.

6. Closing Facility

a. The Chief has authority to evacuate the building in a local emergency. The Chief will usually have the most updated information about the emergency and if closing the building will:

i. Issue orders to employees and clarify how to report release time.

b. The Director or designee will:

i. Ensure that data is saved, equipment is shut down, turned off and secured.

ii. Ensure the building is secured.

7. Resumption of Normal Operations after Restoration of Power

a. Upon resumption of normal operations after restoration of power:

i. Staff will be advised to the all-clear notice.

ii. Equipment will be restarted and a survey of safety status of building and equipment shall be made.

iii. All emergency supplies and equipment shall be returned to storage.

iv. Staff will be accounted for and shall assume normal work activities.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/14/2013	**NUMBER:** SAF.29 - Earthquake Safety
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB: Injury, Illness Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** Earthquake Safety	

I. In recognition of the high possibility of a serious earthquake in Contra Costa County, Division staff will take care to ensure that objects likely to cause serious injury are secured and will know the correct actions to take in the event of an earthquake.

A. Because of the close proximity of the laboratory to a major earthquake fault, it is likely that the laboratory staff will experience a serious earthquake some time in the future.

B. Earthquake Preparedness: Staff members should take action prior to an earthquake to minimize injury from objects within a building and they can act during an earthquake to reduce the possibility of serious injury.

C. In order to protect laboratory employees and visitors, it is necessary for all staff to observe the following safety guidelines:

1. All tall furniture must be secured in such a way to avoid tipping onto someone or across an emergency exit route.

    a. Any employee who notices an item such as a bookcase, coat rack, cabinet, etc. which is not bolted to a wall or is not otherwise stabilized must bring it to the immediate attention of his/her supervisor.

2. Heavy items must not be stored on high shelves, especially above a sitting area or aisle, unless they are secured or restrained.

3. All file cabinets higher than sitting height must have thumb-latches which prevent the drawers from opening freely.

    a. As an alternative, those without thumb-latches may have restraining bars or locks which are engaged at all times except when the files are being accessed.

4. All chemicals must be stored on shelves with restraining devices or in cabinets with doors.

5. Compressed gas cylinders must be secured at all times.

6. Exit aisles must be kept free of debris and items at all times.

7. Employees should know where to turn off gas and electricity in those locations where the utilities are accessible, should it be necessary.

    a. This is indicated on the posted emergency equipment diagrams at each location.

8. Employees must be familiar with the emergency evacuation routes and assembly areas posted at each laboratory location.

9. At least one flashlight will be available at each location for use in an emergency. Employees must not remove these flashlights except in an emergency.

D. Events during an Earthquake: Should an earthquake occur during working hours, employees should expect any or all of the following:

1. An interruption in gas, electricity and water services
2. A loss of telephone communications
3. Possibility of a fire
4. Injuries
5. Lack of transportation.
    a. These events may require any employee to take emergency action. Every employee is expected to exercise good judgment in responding to these emergencies.
    b. If there is serious damage to the County, sworn members may be called upon to help staff other divisions or to render emergency services to citizens. Employees must remain available for such assignments.
    c. If roads are damaged, employees may remain at the laboratory facilities, if safe, until transportation is available.
        i. Because isolation may occur for extended periods, employees may have to share food, water, and other essentials during this time.

E. Earthquake Response Procedures:

1. At the first indication of an earthquake, move to a safe area. If an exit is near, this may be outside. If not, this may be under a desk or table.
2. If the earthquake is severe, move immediately outside as soon as the initial temblor subsides. Help anyone needing assistance to move outside. Aftershocks may cause already weakened buildings or other structures to fall. Do not return to the building until it has been determined to be safe and given instructions by the Building/Floor Warden.
3. If possible, arm the laboratory doors upon evacuation after the temblor passes. If this is not possible, the individual responsible for the laboratory site should designate one or more persons to observe laboratory entrances from a safe location to ensure the integrity of evidence and laboratory records.
4. Report, if possible, to the designated assembly area and, in any event, well away from tall buildings, brick buildings, large glass windows, trees, and downed or overhead electrical lines. Low, wooden buildings are reasonably safe.
5. Those trained in first aid must administer first aid as they are able and when needed.
6. Do not leave the designated assembly area until given instructions by the Floor Warden.
7. Obtain directions from your supervisor for subsequent contact and work assignments before leaving the assembly area.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 11/08/2018	**NUMBER:** SAF.30 - First Aid
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB: Injury, Illness Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** First Aid	

I. All Division members trained in first aid, CPR and naloxone application are expected to take necessary and appropriate first aid measures.

A. First Aid Preparedness

1. Personnel

a. Department regulations and California standards for peace officers require sworn staff to be trained in administering first aid, including cardiopulmonary resuscitation (CPR). The Forensic Services Division (FSD) also provides sworn staff with naloxone training.

b. Non-sworn Division staff are strongly encouraged to obtain training in first aid, CPR and naloxone.

c. Each FSD location must have at least one staff member trained and have current certification in first aid and CPR.

d. Each laboratory location must have at least one staff member trained and current in naloxone application.

e. Managers are responsible to ensure that trained staff are available at their facilities.

2. Equipment

a. Each FSD location must have as least one first aid kit.

i. First aid kits must be easily accessible, and the locations must be designated by placards as indicated in the safety plan.

ii. The contents of the first aid kits are to be checked monthly by a person designated by the Section Manager and replenished as needed.

b. Each Laboratory should have at least one naloxone kit available for in-house use or to be deployed for field use. The naloxone must be replaced when expired or administered.

3. First Aid Responsibilities

a. Each employee is expected to perform or seek the correct first aid treatment for his/her own minor injuries such as small cuts, scrapes, or burns. This would include, for example, cleaning, disinfecting, and bandaging minor wounds.

b. Even minor injuries must be reported immediately to the employee's supervisor and the County Accident Report Form (AK-30) completed.

   i. The AK-30 form is provided in the Contra Costa County Office of the Sheriff on the Job Injury Packet.

   ii. If unavailable contact Sheriff's Administration.

c. Visitors to the laboratory who receive minor injuries are to be assisted in obtaining first aid supplies and treatment.

d. The Facility Manager must be notified of an injury to a visitor.

e. In the event of a more serious accident or injury, the first available employee trained in first aid is expected to go to the assistance of the injured person, assess the need for first aid action, and carry out the needed actions, including enlisting the aid of others as needed.

   i. Sworn employees are also expected to administer first aid to the public in an emergency, while on duty, and when medical personnel are not available.

f. Whenever a serious injury or medical emergency occurs (particularly for head injuries or if a person became unconscious or semi-conscious) the injured person must never be permitted to drive home or to another location for medical treatment.

   i. If the person appears to recover from the injury, medical evaluation by a physician of his/her choice is strongly encouraged.

   ii. If necessary, the supervisor will notify the Officer of the Day (OD) and prepare Unusual Incident Report.

g. As soon as possible, the employee's supervisor must be notified of the injury and the County Accident Report Form (AK30) must be completed.

   i. Injury resulting in death or requiring hospitalization of more than 24 hours must be immediately reported, by telephone, to Department Administration Personnel Director and to Risk Management during normal business hours. The Supervisor will also immediately notify Cal/OSHA (676-5333) unless the incident is:

      1. an auto accident without any mechanical malfunctions

      2. the result of a criminal act (i.e. Police shooting or an injury directly caused by a police function)

      3. a heart attack

h. Employees must not stay in a dangerous environment (e.g., a building on fire or a room saturated with extremely hazardous chemicals) to help an injured person. The individual should be removed, if possible, to a safe location for treatment. If removal is not possible, rescue may have to await the proper emergency personnel.

i. Special masks have been made available for administering CPR. These masks can help establish airways in persons with facial injuries and will significantly reduce the possibility of exposure to infectious agents while administering CPR.

j. Responsibility for performing first aid is relinquished when all reasonable first aid responses have been performed, medical personnel (e.g., a physician, paramedic, or registered nurse) are available for treatment, or further first aid treatment is not possible. First aid and CPR activities will be performed according to the principles taught in the employee's first aid and CPR classes.

4. First Aid Response by Employees Trained in First Aid:

a. Check the area and only offer first aid to an injured person if it is safe to do so. If the area is not safe call 911 and report the injury and circumstances.

b. Upon observing or encountering a serious injury or medical emergency, determine the necessary first aid measures.

c. Administer emergency CPR and first aid as needed. Seek assistance, if needed, from nearby individuals, but do not leave the injured person or stop CPR to seek help.

d. If other individuals are present, make sure that someone calls "911" for help. If no one else is present, wait until the injured person has received emergency first aid treatment before calling for help.

e. Arrange for transfer for medical treatment by relinquishing the person to emergency medical personnel at the injury site or arranging for transportation by another as dictated by the circumstances of the emergency.

f. Notify the employee's supervisor of the incident or your own supervisor if the injured party is not a laboratory employee.

g. The supervisor will ensure that the proper records or documents are completed and any necessary notifications are made.

5. Emergency Response - Staff Not Trained in First Aid:

a. If a serious injury or medical emergency is encountered, notify the nearest available person trained in first aid.

b. Standby to assist the person performing the first aid as needed.

c. If no one trained in first aid is immediately available and the person is unconscious or very seriously injured, call "911" and request emergency response. Give the information requested, such as location, nature of the emergency, etc.

d. Wait with the injured person until help arrives. Reassure the injured person that help is on the way and keep them warm, if needed. Do not move the person or give him/her anything to eat or drink.

e. If no one trained in first aid is immediately available and the injured person is conscious and indicates injuries are not serious, let him/her guide you in determining the appropriate actions that may be needed.

f. Notify the injured person's supervisor as soon as possible of the incident. If the injured is not a laboratory employee, notify your supervisor.

g. The supervisor will ensure that the appropriate records or documents are completed and that any necessary notifications are made.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 04/30/2018	**NUMBER:** SAF.31 - Driving Safety
	RELATED ORDERS: CCCSO 1.06.51, Injury, Illness Prevention Plan	
APPROVED BY: Debbie McKillop & Danielle Adams	**ANAB:** none	
CHAPTER: Safety	**SUBJECT:** Driving Safety	

I. A Division employee shall drive a County vehicle or their own vehicle on County business in accordance with State vehicle and Municipal codes to ensure the safety of both the employee and others.

A. Division employees driving County vehicles or their own vehicles for County business, shall possess a valid Driver's license that should be carried at all times.

1. Division employees shall observe the requirements of vehicle operation and parking procedures per Department policy 1.06.51.

2. Employees shall practice safe and responsible driving and wear seat belts provided.

B. Employees will not use cell phones unless it allows hands-free speaking and listening while driving.

C. Employees will not "text" or read e-mail from hand-held devices while driving.

D. Any Division employee who discovers a safety defect in a County car, such as a broken seat belt, a low tire, poor braking, etc., must bring this to his/her supervisor's attention as soon as practical. Employees are expected to cooperate in having Division cars serviced to keep them in optimum condition.

1. Division vehicles are equipped with basic safety equipment such as

a. Emergency Vests

b. Fire Extingusher

c. Basic First Aid Kit

d. Emergency Tool (including flashlight)

e. Orange Cone

2. Vehicle safety equipment will be checked on a quarterly basis.

E. Employees must use care with any cargo, which could pose a hazard to the occupants of a vehicle.

1. Objects, which could become airborne projectiles in an accident, must be secured, placed in the trunk, or transported in a vehicle behind a safety screen.

2. Heavy objects which could affect maneuvering by shifting must also be secured.

3. Small quantities of hazardous, volatile or explosive chemicals must be secured when transported inside the back portion of a crime scene van.

4. Unexploded bombs may **never** be transported by Division employees.

5. Chemicals shall not be transported by Division employees unless they are collected in small quantities from crime scenes.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 05/03/2018	**NUMBER:** SAF.32 - Firearm Safety
	RELATED ORDERS:	
APPROVED BY: Debbie McKillop & Danielle Adams	**ASCLD-LAB: Injury, Illness Prevention Plan**	
CHAPTER: Safety	**SUBJECT:** Firearm Safety	

I. All firearms related to casework will be handled with extreme care in a manner that recognizes the potential for accidental discharge, serious injury or death. Proper handling of firearms evidence is paramount for the safety of all staff. Employees who handle firearms in the course of their work will familiarize themselves with the necessary safe handling practices.

A. Forensic Services Division (FSD) staff required to handle firearms as part of their duties will be trained in the safe handling of firearms. Refer to the Comparative Evidence Technical Unit Manual CE.02 for further information on firearms safety requirements.

B. Packaging containing firearms that are submitted for evidence will be marked that the firearm is unloaded by the agency.

1. All submitted firearms must display safety information on the packaging indicating the firearm is "UNLOADED".

2. This may be accomplished utilizing an "UNLOADED" label provided by the laboratory, which includes the identifier of the person rendering the gun safe along with the date this action was performed.

3. Firearm submissions not bearing this safety information will not be accepted into the FSD.

4. If qualified FSD staff are available, they may render a firearm safe to expedite the submission process. Otherwise, the agency representative will retain custody of the firearm, return it to the agency, render the firearm safe, and resubmit to the laboratory.

C. Unloaded firearms may be handled like other evidence.

D. In rare circumstances, a loaded firearm will need to be submitted. This should be prearranged with a Firearms Examiner.

1. The Firearms examiner is contacted and will render the firearm safe. After being unloaded, the firearm can be treated like any other firearms evidence. Refer to the Comparative Evidence Unit for further information about safely unloading a firearm.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/20/2013	**NUMBER:** SAF.33 - Ergonomics
	RELATED ORDERS: CCCSO 1.07.26	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Injury, Illness and Prevention Program	
CHAPTER: Safety	**SUBJECT:** Ergonomics	

I. The Office of the Sheriff, in conjunction with State standards, has developed an ergonomic program in order to minimize or prevent ergonomic injuries of county employees. All employees should bring any ergonomic concerns to their Supervisor.

A. If an employee has obtained an ergonomic injury due to job-related repetitive motion injury, they should notify their Supervisor.

1. The Supervisor should complete the documents outlined in the "On the job Injury Packet" provided by Sheriff's Personnel Services Unit.

2. The Sheriff's Department, Director of Support Services - Personnel Services Unit, or a designee will co-ordinate ergonomic accommodation per CCCSO policy 1.07.26.

B. If an employee notices discomfort due to job-related repetitive motions, they should notify their Supervisor for a preventative Ergonomic Evaluation.

1. An Ergonomic Evaluation Request Form is completed and signed by the Supervisor and Safety Coordinator. The signed form will be sent by the Safety Coordinator to the County Risk Management Department.

C. Risk Management will either provide guidance and the equipment necessary to help with the situation or arrange for an Ergonomic Evaluation, Department policy 1.07.26.

D. An Ergonomic Evaluator will arrange an appointment to conduct an assessment of the employee's work environment. They will make suggestions on proper posture while the employee is working and purchase any equipment deemed necessary.

1. After the initial evaluation, an Ergonomic Work-Site Assessment Prevention Form and a Workstation Recommendations Approval (WRAP) Form will be sent to the Safety Coordinator and employee's supervisor for approval.

a. Upon receipt, installation and instruction of equipment/services provided, the Ergonomic Evaluation Follow-up Equipment Acknowledgement Form must be signed by employee.

b. If there is any problem with the equipment recommended and if the employee feels it is not beneficial to them they should notify their Supervisor.

i. Most equipment can be returned within 30 days of receipt. The equipment boxes should be retained for that time frame.

ii. The Ergonomic Evaluator will offer alternatives for the employee.

iii. Staff that are undergoing an ergonomic assessment must complete an employee feedback survey and participate in ergonomic training (an on-line training through TargetSolutions is available).

2. The Ergonomic Evaluator will provide training on the use of the new equipment and upon completion of all recommended changes, will complete all paperwork and close the ergonomic request.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Safety Manual	**REVISION DATE:** 8/20/2013	**NUMBER:** SAF.34 - Heat Illness Prevention Plan
	RELATED ORDERS:	
APPROVED BY: Pamela Hofsass	**ASCLD-LAB:** Injury, Illness and Prevention Program California Code of Regulations (CCR) Title 8 Section 3395	
CHAPTER: Safety	**SUBJECT:** Heat Illness Prevention Plan	

I. This Plan applies to all employees work outdoors or indoors when the environmental risk factors for heat illness are present.

A. There is a significant risk of heat illness for employees when the air temperature for the day is 80°F to 90°F or above.

1. If the humidity is high and the temperature is close to 80°F there may still be a potential for Heat Illness.

B. Employees assigned to the crime scene unit are the employees who may be primarily at risk for heat illness. Although other staff should also be aware of the risk factors associated with heat illnesses.

C. Supervisors and employees are responsible for the following:

1. Assessing Environmental and Personal Risk Factors

a. The environmental risk factors for heat illnesses are likely to be present from the beginning of April through the end of October.

i. Actual weather conditions (e.g., heat index, weather forecast, etc.) should be taken into consideration to determine the actual risk due to exposure to such inclement conditions.

b. Working conditions, the type of work, workload intensity and duration, and the use of personal protective equipment (PPE) are additional factors that must be considered when departments assess the risk for heat illnesses.

c. Personal risk factors may include but are not limited to an individual's age, degree of acclimatization, overall health, water consumption, caffeine consumption and use of prescription medications which affect the body's water retention or other physiological responses to the heat.

2. Drinking sufficient water

a. Forensic Manager overseeing the crime scene assignments must provide adequate supply of drinking water to staff assigned to crime scene response.

i. A minimum of one quart of drinking water per hour must be available to each employee or two gallons per employee for an eight-hour shift, to replace water lost by perspiration.

3. Assuring Access to Shade

    a. If adequate shade cannot be provided by buildings or trees, shade may be provided by a temporary structure. Staff will need to notify and request the Manager in-charge of the operation, as needed.

    b. Vehicle interiors or structures such as sheds are not permissible unless they are air-conditioned or can provide a cooling environment comparable to shade in open air.

    c. Employees who are affected by the heat or exhibit indications of heat illness must be permitted to have access to shade at all times whenever they request a preventative recovery period.

        i. The purpose of the recovery period is to prevent heat illness.

        ii. Recovery Period should be at least 5 minutes.

D. Employees should be aware of the causes, signs and symptoms as well as the treatment for the common types of heat illness.

1. **Heat cramps** are caused by strenuous activity in the heat and increased perspiration. Perspiration depletes the body's salt and moisture. The low salt level in the muscles cause painful cramps. Heat cramps may also be a symptom of heat exhaustion. If heat cramps are suspected:

    a. The employee should stop all activity and sit quietly in a cool place.

    b. The employee should rest and cool down.

    c. The employee should drink cool water (not iced), clear juice or a sports beverage containing electrolytes.

    d. Practice gentle, range-of-motion stretching and gentle massage of the affected muscle groups.

    e. The employee should not return to strenuous activity after the cramps subside as this can lead to heat exhaustion or heat stroke.

    f. If symptoms do not go away in one hour, seek medical attention.

2. **Heat exhaustion** is caused by excessive heat and dehydration. The warning signs of heat exhaustion include: heavy perspiring; paleness; muscle cramps; tiredness; weakness; dizziness; headache; nausea or vomiting and fainting. Symptoms of heat exhaustion may be cool and moist skin, fast and/or weak pulse rate, and fast and shallow breathing. If heat exhaustion is untreated, it may progress to heat stroke. If heat exhaustion is suspected:

    a. The employee needs to stop all activity, get out of the sun and into a shady or air-conditioned location immediately.

    b. The employee should lay down and be helped with elevating the legs and feet slightly.

    c. Loosen or remove clothing.

    d. If possible, the employee should drink cool water (not iced), clear juice or a sports beverage containing electrolytes.

e. The employee should be cooled down by spraying or sponging with cool water and fanning.

f. Seek medical attention.

3. **Heat syncope** is caused by strenuous activity in hot environments and dehydration. Heat syncope can be caused by blood pooling in the legs due to standing still for a long time in a hot environment. It can also be caused by vigorous physical activity for two or more hours before the fainting happens. The risk of developing heat syncope increases when a person has not acclimated to a hot environment. The warning signs for heat syncope include: pale, cool, and moist skin, feeling faint or lightheaded, light-headedness when a person changes position, (e.g. moving from a lying position to a standing position), and being dehydrated. If heat syncope is suspected:

   a. The employee should get out of the sun and into a shady or air-conditioned location immediately.

   b. The employee should lay down and be helped with elevating the legs and feet slightly.

   c. If possible, the employee should drink cool water (not iced), clear juice or a sports beverage containing electrolytes.

   d. The employee should be cooled down by spraying or sponging with cool water and fanning.

   e. Seek medical attention.

4. **Heat Stroke** is caused when the body's mechanism for dealing with heat stress, such as perspiring and temperature control, are lost. The main sign of heat stroke is elevated body temperature, generally greater than 104°F. The warning signs of heat stroke include: red, hot, and dry skin, rapid heartbeat, rapid and shallow breathing, elevated or lowered blood pressure, cessation of sweating, irritability, confusion, or unconsciousness, and fainting. If heat stroke is suspected:

   a. Move the employee out of the sun and into a shady or air-conditioned space immediately.

   b. **Dial 911** from a land-line or call 916-732-0100 from a cellular telephone for emergency medical assistance.

   c. Loosen or remove clothing.

   d. Cool the employee by covering with damp cloths or by spraying with cool water and fanning.

E. Training shall be provided initially on hiring and annually as a refresher. The Training shall include:

1. The environmental and personal risk factors for heat illness.

2. Review of Forensic Services Division's Heat Illness Prevention Plan.

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 06/23/2017	**NUMBER:** TOX.01 - General Information
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB: ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: 5.4.1.1**	
CHAPTER: General Information	**SUBJECT:** General Information	

I. Policy: Toxicology analysis is performed on blood and urine specimens from living subjects and post-mortem specimens.

A. The toxicology unit will screen blood and urine samples submitted from antemortem and postmortem cases submitted from police agencies in the Contra Costa County jurisdiction. The agency must request a drug screen by submitting a blood/urine sample in a Blood/Urine for Drugs evidence kit.

1. The toxicology unit routinely screens for methamphetamine, cocaine metabolite, and opiates. Samples submitted for driving offenses and persons crimes (i.e. deaths, assault, sexual assaults, child abuse, etc) are also routinely screened for benzodiazepines and cannabinoids.
2. Positive screens for blood samples should be confirmed and results reported qualitatively or quantitatively.
3. Positive screens for urine samples should be confirmed and results reported qualitatively only.
4. All analysis requested and not performed by the Forensic Services Division will be noted on the report, or forwarded to an outside laboratory as necessary.

B. Terminology

1. The verbs "shall", "must", and "will" indicate mandatory requirements, while "should" is used to denote compelling or recommended practices and "may" is used in the permissive sense.

C. Test Methods

1. The Toxicology Unit will use appropriate methods and procedures for all tests within its scope. (ISO/IEC 17025:2005 5.4.1) These include::

a. **Methods and procedures**, see:

i. Screening samples by Enzyme Immunoassay
ii. Amphetamine and Methamphetamine Identification in Urine
iii. Amphetamine, Methamphetamine, MDA and MDMA Identification and Quantitation in Blood
iv. Cocaine, Benzoylecgonine, Codeine, and Morphine Identification and Quantitation in Urine
v. Hydrocodone Identification and Quantitation in Urine
vi. Hydrocodone Identification and Quantitation in Blood
vii. Oxazepam Identification and Quantitation in Urine
viii. Diazepam, Nordiazepam, Oxazepam, and Temazepam Identification and Quantitation in Blood
ix. Gammahydroxybutyrate Identification and Quantitation in Urine
x. Gammahydroxybutyrate Identification and Quantitation in Blood
xi. Carboxy-tetrahydrocannabinol Identification and Quantitation in Urine
xii. Acid/Neutral and Basic Drug Screen in Blood
xiii. Cocaine and Benzoylecognine Identification and Quantitation in Blood
xiv. Opiates and Keto-Opiates Identification and Quantitation in Blood
xv. THC and metabolites Identification and Quantitation in Blood
xvi. Comprehensive Benzodiazepine Qualitative Identification in Blood

b. **Sampling of items to be tested**, see:
   i. Performing Immunoassay
   ii. Performing Extractions

c. **Handling of items to be tested**, see:
   i. Evidence Handling

d. **Storage of items to be tested**, see:
   i. Evidence Handling

e. **Preparation of items to be tested**, see:
   i. Evidence Handling
   ii. Performing Immunoassay
   iii. Performing Extractions
   iv. individual extraction procedures

f. **Estimation of uncertainty as well as statistical techniques for analysis of test data**, see:
   i. Uncertainty
   ii. Uncertainty Budget 2016

2. The Toxicology Unit shall have instructions on (ISO/IEC 17025:2005 5.4.1):

a. **The use and operation of all relevant equipment,** see:
   i. Training
   ii. Care and Maintenance of Equipment
   iii. Balances
   iv. Diluters and Pipettes
   v. Glassware
   vi. pH Meter
   vii. GC/MS Routine Maintenance
   viii. GC/MS Dean Switch
   ix. GC/MS Cleaning the Ion Source
   x. GC/MS Changing the Column
   xi. GC/MS Cleaning the Inlet
   xii. GC/MS Vacuum Pump Maintenance
   xiii. GC/MS Cleaning the Liners
   xiv. GC/MS Using the Software-Comparative Identifications
   xv. GC/MS Using the Software-Quantitative Identifications
   xvi. GC/MS Using the Software-Sequences
   xvii. Instruments-Storage of Data
   xviii. Dynex Operation
   xix. Dynex Maintenance
   xx. LIMS Reporting Results

b. **And handling and preparation of items for testing**, see:
   i. Evidence Handling

3. All instructions, standards, manuals and reference data relevant to the work of the Toxicology Unit shall be kept up to date and made readily available to personnel through the use of this Technical Unit Manual. (ISO/IEC

17025:2005 5.4.1)

4. All methods shall be documented and the documents readily available for review by laboratory personnel through PowerDMS. See the Division Manual for more information regarding Document Control. (Supplemental 5.4.1.1)

5. Deviation from test methods shall occur only if the deviation has been documented, technically justified and authorized. (ISO/IEC 17025:2005 5.4.1)

    a. See Technical Records

6. A Drug Alcohol and Toxicology (DAT) Handbook has been placed on ARIES, for review by the clients. The handbook includes the services provided by the Toxicology Unit and the equipment and methodology utilized in sample analysis.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** TOX.02 - Purchasing Supplies
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 6.6**	
CHAPTER: General Information	**SUBJECT:** Purchasing Supplies	

I. Policy: Laboratory personnel will follow procedures for the selection, ordering, verification and storage of supplies

A. Ordering Supplies-Putting Supplies on the List to be Ordered

1. General laboratory consumables and supplies may be placed on the order list by any member of the laboratory staff. These consumables and supplies do not affect the quality of the final result.
2. The following are some examples of consumables that **do not** affect the quality of the test results:
   a. Gloves
   b. Glass or plastic transfer pipettes
   c. Vials and caps
3. Supplies which *may affect the test result* should be placed on the order list by personnel within the unit in which the supplies are to be used. The following is a list of **supplies** that *may affect the test result* in Toxicology Unit :
   a. Chemicals used for Toxicology Analysis
      i. The "type" or "grade" of chemicals used in toxicology analysis is specified in the technical unit manual (See Performing Immunoassay and individual extraction procedures). Only the grade of chemical specified should be ordered.
   b. Parts for the GC/MS, Dynex or other equipment. These may be ordered based on part information in the instrument manual(s) (See *GC/MS Reference and Dynex References*).
4. The following is a list of **supplies** and **services** that can *affect the test result* in the Toxicology Unit . **The suppliers of these supplies and services must be evaluated yearly and the evaluation will be documented:**
   a. Certified Reference Material used to prepare standards for confirmations
   b. Calibration services for pipettes, repeat pipettes, and critical volumetric glassware
5. Supplies may be placed on the order list by any unit analyst.

B. Approval of Orders

1. The supplies on the "Supply Order List" are inputted into a computer database and retained electronically. The list(s) of supplies to be ordered is printed out.
2. The list(s) of supplies to be ordered are then given to a Forensic Manager, Supervisor or designee for approval.
   a. Technical approval for supplies that may affect test results will reviewed by a technically qualified individual.
   b. Fiscal approval will be completed by a Forensic Manager.
3. Any lab staff member or support staff may order supplies from the vendor.

C. Ordering Supplies from the Vendor

1. After the list(s) of supplies to be ordered have been approved, any lab staff member or support staff may order supplies from the vendor by phone/e-mail. The orders maybe placed:
   a. Using an existing open Purchase Order for vendors or
   b. Using a requisition form by the Account Clerk or
   c. Using the County credit card held by the Account Clerk.

2. After the supplies are ordered, the order information will be entered into the computer database and retained electronically.

3. The approved order lists will be retained electronically.

D. Receiving Supplies

1. Supplies that affect the test result are verified and not used until they have been inspected or verified as being the supply that was ordered.

2. When the consumables or supplies are received by the laboratory, the supplies are unpacked and verified by:

   a. Checking that the packing slip and/or shipping receipt match the item received. This can be done by checking the packing slip and/or shipping receipt against the labels on the supplies.

   b. Checking that the item received match the item ordered. This can be done by checking the supply label or packing slip/shipping receipt against the list of supplies ordered .

   c. The person checking the received supplies will initial the shipping receipt. This paperwork is forwarded to Accounts Clerk.

   d. The information from the list of supplies to be ordered is entered into the supply ordering database and stored electronically.

   e. The individual enters the date items were received/verified and his/her initials indicate when entering the information.

3. The supplies are then put away in a storage location.

4. General laboratory consumables and supplies are stored in the supply room or within the units of the laboratory. Any special storage requirements (refrigeration, storage in flammable or corrosive cabinets, etc.) will be adhered to.

5. Reagents and supplies will be re-evaluated on an on-going basis through the use of controls and intermediate checks.

6. Supplies required for specific instrumentation, chemicals required for certain procedures or supplies that are specifically listed in the method or procedure being used should be given to the lab staff member who ordered that supply item.

7. Reference materials are checked to ensure that the proper traceability paperwork accompanies the item or the traceability paperwork is retrieved from the vendor electronically. Reference materials (standards) are stored according to the storage recommendations on the package.

   a. The traceability paperwork (Certificates of Analysis or other verification paperwork) are maintained by the Toxicology Unit.

   b. Consumables provided by the manufacturer of the equipment being used - Manufacturer's consumables quality documentation is needed to ensure the quality of product is adequate for the testing being performed.

   c. Once a product is evaluated and approved for use, for example through validation or as supplied for use with an instrument, it will be ready for use in casework and may be ordered as needed

E. Discrepancies

1. If there is any discrepancy between the item ordered and the item received, the person ordering supplies will notify the vendor of the discrepancy and the item will not be used by the laboratory. The item will be returned and exchanged for the proper item.

2. If there are any problems exchanging the item for the correct item, the Forensic Manager or Supervisor will be notified.

3. If the item ordered is found to be defective or does not perform as expected it will not be used for casework.

4. Actions: Taking any actions arising from evaluations, monitoring of performance, and re-evaluations of the external providers. Actions may include ensuring the correct services or supplies are received, issues are resolved, or monitoring that services and supplies meet the needs of the unit.

F. Sole Source Vendors

1. Sole Source Vendors may be vendors that supply the lab with items that another vendor cannot readily supply. This may be because procedures were validated with items specific to a vendor (eg. immunoassay plates). The Department Account Clerk is required to maintain a justification for sole source vendors.

2. For the Toxicology Unit, a reference material used for confirmation is considered a supply that affects the quality of a test.
3. The laboratory chooses suppliers of reference materials by a number of factors including (but not limited to) price, ease of ordering, vendors with whom we have open purchase orders.
    a. The vendors commonly used to order drug reference materials are located in the supply ordering database.
4. Vendors that provide a service that may affect the test result are:
    a. Rice Lake Weighing Systems or equivalent for balance, pipette, diluter, titrator calibration.
        i. Calibration services provided from an ISO 17025 vendor - Certificate of Calibration is needed for evaluation and documentation when calibration occurs
5. The Unit is responsible for the evaluation, selection and monitoring of performance, and annual re-evaluation of external providers.
    a. Criteria for evaluation, selection, monitoring of performance, and re-evaluation of the external providers. For example:
        i. Checking a scope document to ensure the calibration being requested is within the scope of the vendor
        ii. Checking an accreditation certificate to ensure that accreditation has not lapsed
        iii. Checking that quality controls or standards meet the performance criteria of the equipment or method
        iv. Ensuring that a certificate is checked after the expiration date before ordering additional supplies or service

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 03/05/2019	**NUMBER:** TOX.03 - Blood and Urine Collection and Submission
APPROVED BY: Danielle Adams	**ANAB: 7.4**	
CHAPTER: General Information	**SUBJECT:** Blood and Urine Collection and Submission	

I. Kits for the collection of blood and urine samples for drugs are provided by the Forensic Services Division and must be used by submitting agencies to ensure proper preservation of the samples. Kits are available at no charge from the Division during normal working hours.

A. Two types of kits are provided by the Forensic Services Division for the submission of blood and urine samples for alcohol and/or drugs:

1. Blood Sample for Alcohol/Drug Analysis
2. Urine Sample for Alcohol/Drug Analysis

B. The containers in each of these kits contain particular anticoagulants and/or preservatives intended to ensure the quality of the sample for analysis. Failure to use the proper anticoagulant or preservative can reduce the reliability of test results. Preservative testing may be performed upon request by an outside laboratory.

C. Each kit is assigned a unique container number that can be found on the kit envelope and on the label(s) for the container(s). These container numbers are intended to prevent accidental mix-up of samples from different subjects. All kits are sealed when distributed to ensure that the contents are intact. Any kit, which is not sealed, should be returned to the Forensic Services Division.

D. Blood Sample for Drug Analysis

1. These kits are to be used for the collection of blood samples for testing for alcohol and/or drugs, even if the analysis is to be performed by an outside laboratory.
2. Each vacuum vial for blood collection has an expiration date, after which the vacuum in the vial cannot be guaranteed. Vials without a vacuum will not pull the blood from the vein into the vial. The vials usually maintain their vacuum well beyond the expiration date and expired kits may be used in an emergency. However, expired kits should be returned unused to the Forensic Services Division to reduce the chance of encountering a vial that has lost its vacuum.

E. Urine Sample for Drug Analysis

1. The "Urine Sample for Alcohol/Drug Analysis" kit is contained in a manila-colored envelope. For drug analysis, the kit is intended to collect the initial void urine sample of the subject. Voiding or emptying of the bladder is necessary if a subsequent urine sample will be collected for alcohol analysis. If the void sample was not collected, the intended sample for alcohol analysis may also be used for drug analysis.
2. Urine collection kits do not have an expiration date. They can be used indefinitely.

F. Using the Kits

1. Instructions for the use of the kits can be found on the back of each envelope. The instructions are self-explanatory and should be followed carefully to ensure proper collection of the sample and proper handling of the paperwork.
2. Any samples that are received not in compliance with these prescribed collection, withdrawal, handling, and preservation instructions shall still be analyzed, but the deficiency shall be described in laboratory records. (ISO/IEC 17025:2005 5.8.3)

G. Disposition of Samples After Examination

1. Blood and urine samples tested for drugs only may be returned immediately after analysis to the submitting agency for retention. Samples may be stored at room temperature. Those samples from driving cases which were also tested for alcohol will be stored in the laboratory and returned to the submitting agency after one year from the collection date. If a sample is not returned to the submitting agency, the disposition of evidence will be indicated in the notes.

II. The Forensic Services Division provides contract services for blood withdrawal on criminal cases, officer involved incidents and to all law enforcement agencies in Contra Costa County. The cost of the blood withdrawal is charged to the requesting agency.

A. As a convenience to our client agencies, the Forensic Services Division has arranged for blood withdrawal in Contra Costa County.

1. The Forensic Services Division contracts with a private group of phlebotomists (blood technicians) to provide blood withdrawal for law enforcement. The draws may be requested at police agencies, hospitals and any other location in Contra Costa County. Phlebotomists are on-call around the clock. Their services are used most frequently in the following instances:

   a. To draw blood at the Martinez Detention Facility

   b. To draw blood at hospitals

   c. To draw blood at police agencies with holding cells and who do not transport subjects immediately to the Martinez Detention Facility, and

   d. On DUI and other criminal cases

   e. HIV Testing in criminal cases

2. The contract blood technicians consider cooperation to be tacit consent. The contract blood technicians will participate in forced blood withdrawals when deemed necessary by the police agency. The forced draw is also performed in compliance with a court order specifically directing that the sample shall be taken with force when necessary.

3. The cost of blood withdrawal is borne by the agency requesting the sample. The contract company bills the Forensic Services Division for all blood withdrawals. The charge to the Division is passed on to the requesting agency in quarterly bills.

B. Procedures for Blood Withdrawal

1. Obtaining a Blood Withdrawal from a Contract Blood Technician

   a. Call Central Medical Laboratories (CML) dispatch at (800) 288-4441 any time 24 hours a day, and ask for the on-call blood technician.

   b. Give the dispatcher your name, location, and name of the subject.

   c. If circumstances arise whereby the contract blood technician is no longer needed, call dispatch and notify them immediately. Agencies will have to pay for a call-out, even if no sample is drawn, if the blood technician is in transit.

2. Blood Withdrawal Procedures for Alcohol/Drug Testing

   a. Use a blood withdrawal kit distributed by the Forensic Services Division only. They can be found in the Alcohol Testing Room of the MDF and are carried by the contract blood technicians.

   b. The requesting officer completes the information on the front of the kit envelope, in full.

   c. On driving offenses, the blood withdrawal may be performed only by a licensed doctor, nurse, medical technologist, biotechnologist, paramedic or phlebotomist. Any qualified medical personnel may perform blood withdrawal in other types of cases.

   d. Using the contents of the kit, the person withdraws the blood according to the directions on the back of the envelope. If the sample is to be analyzed for drugs, two additional vials of blood are desirable using the same type of grey top vials. The extra supplies are carried by the blood technicians.

   e. The blood withdrawal must be witnessed by an officer. He/she must watch carefully enough so that he/she can testify in court regarding the procedures used. The person performing the blood withdrawal may refuse to perform the withdrawal if it is not witnessed.

   f. The person drawing the blood completes the information required on the labels for the vials, attaches them to the vial, and gives the vials to the requesting officer.

   g. The person drawing the blood completes the Declaration form enclosed in the kit.

   h. The person drawing the blood retains his/her copy of the Declaration, and gives the other copies to the requesting officer.

   i. The requesting officer places the seals over the tops of the vials and initials them and the vial labels.

j. The copy of the Declaration for the District Attorney's Office is submitted by the requesting officer with the filing paperwork.

k. The requesting officer places the seal over the envelope flap and initials it.

l. The kit is submitted to the Drugs Alcohol and Toxicology Section, Monday through Friday between 8:00 a.m. and 5:00 p.m. or is placed in the refrigerated drop box in the Breath Testing Room at the MDF or at Property and Evidence Services if access is authorized to that facility.

3. Blood Withdrawal for HIV Testing

a. Blood tubes/kits will be distributed by the County Health Services Department to the on call contract blood withdrawal technicians.

b. Blood tubes/kits will not be submitted to the Forensic Services Division. The submission will be given directly to the County Public Health Laboratory at the Contra Costa Regional Medical Center in Martinez or placed in the refrigerator marked for Health Services in the MDF Breath Testing Room.

III. Requests for the analysis of blood and urine samples for alcohol and/or drugs are made by properly completing the front of the blood and urine collection kits and submitting them to the Forensic Services Division.

A. The Forensic Services Division performs drug analysis on blood and urine samples or forwards samples to an outside laboratory for drug analysis primarily for criminal cases.

1. Coroner's samples which include blood, urine and body fluids/tissues are also accepted and may be forwarded to an outside laboratory for analysis.

2. Cases involving probation, parole violations or inmate screening are not routinely accepted by the Forensic Services Division.

B. Completing the information required on the front of a kit and submitting it to the Drug, Alcohol, and Toxicology Section of the Forensic Services Division is a sufficient request for analysis in most cases.

1. The Coroners cases must have a "Coroners Office Toxicology Request Form" attached. The information requested on the envelope must be completed in full.

C. Unless otherwise marked on the kit, a Blood Sample for Alcohol/Drug Analysis kit will be tested for alcohol and drugs. If a drug analysis only is needed, this should be clearly noted in the check box near the top of the envelope by the requesting person or by the submission of a general examination request form.

1. Kits requesting analysis for both alcohol and drugs in a case of driving under the influence should be examined for alcohol first.

2. Drug analysis will also be performed, if requested, in this laboratory or forwarded to another laboratory for testing as per arrangements made with the client agency or with an authorization from laboratory manager or supervisor.

D. Blood and urine samples may be submitted to the Drug, Alcohol, and Toxicology Section Monday through Friday between 8:00 a.m. and 5:00 p.m. or placed in the drop box inside the refrigerator of the Alcohol Testing Room at the Main Detention Facility in Martinez 24 hours per day. Blood and urine samples can also be submitted at the Property and Evidence Service Facility in Concord, if permitted access to the building. Samples should be submitted as soon as possible after collection to avoid degradation of the drugs or alcohol. If a timely submission is not possible, blood and urine samples should be refrigerated, not frozen, until they can be submitted.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.04 - List of Abbreviations
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: 4.13.2.13**	
CHAPTER: General Information	**SUBJECT:** List of Abbreviations	

I. The following is a list of abbreviations approved for use in the Toxicology Unit. (Supplemental 4.13.2.13)

A. Abbreviations for commonly used terms in the forensic science community may not be listed. An explanation of the abbreviation will be included if the abbreviation is unique to this Laboratory.

(-)	NEGATIVE
(+)	POSITIVE
2D-GC/MS	2-DIMENSIONAL GAS CHROMATOGRAPHY MASS SPECTROMETRY
6-MAM	6-MONOACETYL MORPHINE
7-CLO, ACLO	7-AMINOCLONAZEPAM
7-FLN, AFLN	7-AMINOFLUNITRAZEPAM
A/N, AN	ACID/NEUTRAL
A/N/B, ANB	ACID/NEUTRAL/BASIC
ALP	ALPRAZOLAM
AMP	AMPHETAMINE
BARB	BARBITURATE
BE	BENZOYLECGONINE
BENZO, BEN, BENZ	BENZODIAZEPINES
BSTFA	N,O-BIS (TRIMETHYLSILYL) TRIFLUOROACETAMIDE
CAL	CALIBRATORS
CAR, CARI	CARISOPRODOL
CL, CLO	CLONAZEPAM
C/O, CO	CUTOFF
COC	COCAINE
COD	CODEINE
CONC	CONCENTRATION
C-THC, COOH-THC	CARBOXY-TETRAHYDROCANNABINOL
DAFR	DESALKYFLURAZEPAM
DMFN	DESMETHYLFLUNITRAZEPAM
DIAZ	DIAZEPAM
DFSA	DRUG FACILITATED SEXUAL ASSAULT
EDDP	ETHYLIDENE DIMETHYL DIPHENYLPYRROLIDINE
EIA	ENZYME IMMUNOASSAY
EM	ELECTRON MULTIPLIER
EME	ECGONINE METHYL ESTER
ENV	ENVELOPE
EV	ELECTRON VOLTS

EVID	EVIDENCE
EST	ESTAZOLAM
FID	FLAME IONIZATION DETECTOR
FLN	FLUNITRAZEPAM
GC/MS, GCMS	GAS CHROMATOGRAPHY MASS SPECTROMETRY
GHB	GAMMA-HYDROXYBUTYRATE
HFIP	HEXAFLUOROISOPROPANOL
HYD	HYDROCODONE
HYM	HYDROMORPHONE
IMM	IMMUNALYSIS
IS	INTERNAL STANDARD
L/L, LIQ-LIQ	LIQUID/LIQUID
LOD	LIMIT OF DETECTION
LOR	LORAZEPAM
LOQ	LIMIT OF QUANTITATION
LTM	LOW THERMAL MASS
METH, MAMP	METHAMPHETAMINE
MAR	MARIJUANA
MDA	3,4-METHYLENEDIOXYAMPHETAMINE
MDMA	3,4-METHYLENEDIOXYMETHAMPHETAMINE
MDN	METHADONE
MED	MEDIUM
MEP	MEPROBAMATE
MID	MIDAZOLAM
MOR	MORPHINE
MTBSTFA	N-METHYL-N- (TERT-BUTYLDIMETHYLSILYL) TRIFLUOROACETAMIDE
NEG	NEGATIVE
NEG CNTRL	NEGATIVE CONTROL
NMS	NMS LABORATORIES (formally National Medical Services)
NORD	NORDIAZEPAM
OH-	HYDROXY-
OH-THC	HYDROXY-TETRAHYDROCANNABINOL
OH-ALP	HYDROXY-ALPRAZOLAM
OH-MID	HYDROXY-MIDAZOLAM
OH-TRI	HYDROXY-TRIAZOLAM
O.D., OD	OPTICAL DENSITY
OLA	OUTSIDE LABORATORY ANALYSIS
OPI	OPIATES
ORA	ORASURE
OXA	OXAZEPAM
OXM	OXYMORPHONE
OXY	OXYCODONE
PA	PROPIONIC ANHYDRIDE
PFPA	PENTAFLUOROPROPIONIC ANHYDRIDE
POS	POSITIVE
POS CNTRL	POSITIVE CONTROL
RS	RESOLUTION SOLUTION
SIM	SELECTED ION MONITORING
SPE	SOLID PHASE EXTRACTION
STD	STANDARD

TEMA, TEM	TEMAZEPAM
THC	DELTA-9-TETRAHYDROCANNABINOL
TS	TAPE SEALED
QC	QUALITY CONTROL
QUAL	QUALITATIVE ANALYSIS
QUANT	QUANTITATIVE ANALYSIS

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 05/16/2013	**NUMBER:** TOX.05
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: General Information	**SUBJECT:** List of Forms	

I. Policy: The following are forms used in the Toxicology. Forms may be controlled (required for use) or non-controlled (suggested for use but not required).

A. Controlled forms are located on PowerDMS and must be used.

1. Toxicology Authorization Checklist

B. Non-controlled forms may be located on PowerDMS or maintained within the Toxicology Unit and the minimum information that must appear on the form is listed below.

1. Front of blood sample for alcohol/drug analysis kit
2. Back of blood sample for alcohol/drug analysis kit
3. Front of urine sample for alcohol/drug analysis kit
4. Back of urine sample for alcohol/drug analysis kit
5. GC/MS Maintenance/Usage Log
    a. Number and/or serial number of instrument
    b. Description of maintenance being performed (e.g. inlet change, cleaned source, etc.) and initials of person performing maintenance and date maintenance performed
    c. For sequences, the name of the sequence and initials and date
6. DYNEX Maintenance Log
    a. Name of the instrument
    b. Description of maintenance being performed (e.g. routine check, symptom and repair) and initials of person performing maintenance and date maintenance performed
7. Digital Diluter Log
    a. Name and/or serial number of instrument
    b. Description of maintenance being performed (e.g. checking lines, calibration check, etc.) and initials of person performing maintenance and date maintenance performed
8. Pipette/Digital Diluter Check Form
    a. Equipment Identification
    b. Temperature of Water
    c. Thermometer Identification
    d. Density of Water
    e. Target Volume and Allowable Tolerance
    f. Measurements (weights of water)
    g. Result (mean actual volume)
    h. Analyst and Date
9. Coroner's Office Toxicology Request

a. Name of Deceased
b. Coroner's Case Number
c. Requesting Pathologist
d. The evidence submitted for analysis
e. The type of analysis being requested
f. Related Agency (required for homicides)

10. Telephone Log/Additional Notes Page
    a. Laboratory number
    b. Initials at the top of the page are optional
    c. Date
    d. Page number
    e. For Telephone/Communication Log, it is suggested that the person spoken with (or communicated with) is identified
11. Toxicology GC/MS Worksheet
    a. Sample type (Blood, Urine, etc.)
    b. Sample volume used during analysis
    c. GC/MS method used for analysis
    d. Date(s) of analysis
    e. Instrument number used for analysis
    f. Results for each analyte evaluated to include:
        i. Standard concentration results (target and actual)
        ii. Quality Control concentration results (target and actual)
        iii. R^2 Value
        iv. Value of Blank
        v. Case sample concentration results
            1. note: case sample concentration results will be included on the paperwork filed with the case file, not with the paperwork filed with the batch documents
12. Toxicology Section Reagent Log
    a. Date reagent was prepared
    b. Name of reagent
    c. Lot # of Chemical
    d. Verification
    e. Initials of person who prepared reagent
13. Gas Line Moisture Trap and Oxygen Filter Check Log
    a. Gas line being checked (by number or location)
    b. Initials and date of person checking the gas line
14. Balance Calibration Check Log
    a. Instrument number and/or serial number
    b. Reference standards used to check balance
    c. Date and Initials of person checking balance
15. Balance Maintenance Log

a. The service needed or service performed/repair details
b. Date and Initials of person performing maintenance

16. Stock Log
    a. Analytes/Concentration
    b. Lot # of Reference Material
    c. Expiration
    d. Verification
    e. Initials/Date Prepared
17. Matrix Log
    a. Levels/Analytes/Concentration
    b. Lot # of Reference Material
    c. Matrix
    d. Expiration
    e. Verification
    f. Initial/Date Prepared
18. GC/MS Traceability
    a. Method
    b. Lot # for:
        i. Blank
        ii. Standards
        iii. Stocks
        iv. Chemicals
        v. Reagents
    c. Pipettes
    d. Analyst/Date
19. Screening Session Worksheet
    a. Diluter
    b. Immunoassay Kits used, to include:
        i. Analyte Lot #(s)
        ii. Plate Conjugate Identification
    c. Reagent Lot #(s)
    d. Standard Lot #(s)
    e. Kit Calibrator Lot#(s)
    f. Date/Analyst
20. Assignment Notification Sheet
    a. Lab #, including request #
    b. Subject Name
    c. Agency
    d. Agency Case #
21. Extraction Unsuccessful Run Log

a. Extraction Name
b. Issue
c. Analyst and Date

22. Screening Unsuccessful Run Log
    a. Plate/Analyte
    b. Issue
    c. Analyst and Date
23. Quality Log
    a. Issue
    b. Analyst/Date
24. Whole Blood Screening Log
    a. lot #
    b. date received
    c. screening results
    d. A/N/B results
25. Propionic Anhydride Verification
    a. lot #
    b. analyst/date
    c. morphine concentration tested
    d. 6-MAM below LOQ
26. Drug Usage Log & Drug Verification Log
    a. See *Controlled Substance Technical Unit Manual*
27. Tox Electronic Signature Form
    a. Analyst signature/date and number of pages created
    b. Reviewer signature/date and number of pages reviewed

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 4/12/2017	**NUMBER:** TOX.06 - Literature References
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB International Supplemental 2011: 5.2.7**	
CHAPTER: General Information	**SUBJECT:** Literature References	

Policy: The following is a list of references found in the Toxicology Binder sets (printed or electronic) available to analysts. Additional references may be found in the Toxicology Binder sets, in the Muir Library and Power DMS. The list should neither be considered inclusive of all references available nor complete for drug impairment qualification. (Supplemental 5.2.7)

A. *Alcohol*

Pharmacokinetics

Title	Author	Synopsis
Chapter 12: The Determination of Alcohol in Blood and Breath	Saferstein, Richard, PhD	Overview of Alcohol Consumption, impairment and testing
Ethyl Alcohol and Other Volatiles	Yale H. Caplan, PhD	Overview of factors relating to alcohol consumption, distribution within the body, and testing

Pharmacology

Title	Author	Synopsis
Pharmacology and Toxicology of Ethyl Alcohol	Garriott, James C	Physiological effects of different doses of ethanol
Pharmacology of Ethyl Alcohol; Effects on the Body	Garriott, James C	Effect of alcohol on various organs
Effects of Alcohol on Sensory-Motor Functions	Garriott, James C	Impairment effects of alcohol
Various Alcohol Appendices		Symptoms of alcohol abuse

B. *Analogs of Methamphetamine and Amphetamine*

Coroner's Tox

Title	Author	Synposis
"Eve" and "Ecstasy": A Report of Five Deaths Associated With the	Dowling, Graeme P., Edward T. McDonough III, Robert	Cases where MDEA or MDMA use has resulted in death
A Death due to 4-Bromo-2,5-dimethoxyamphetamine	Winek, C. L., Wellon D. Collom, J. Bricker	Case study of two deaths
Maternal Death Associated with Intravenous Methylphenidate (Ritalin)	Lundquest, David E., Winston K. Young, John F. Edland	Insoluble fillers may cause hypertension and other symptoms when administered intravenously
Two Propylhexedrine-Associated Fatalities: Benzadrine Revisited	Sturner, W. Q., F. G. Spruill, J. C. Garriott	Two cases involving "Benzadrex" inhalers
Toxicity and Deaths from 3,4-methylenedioxymethamphetamine	Henry, J. A., K. J. Jeffreys, S. Dawling	Toxic effects of MDMA
Methylenedioxyamphetamine: Clinical Description of Overdose,	Simpson, Dennis L., Barry H. Rumack	Overdose symptoms of MDA and study on the LD50 of MDA as compared to amphetamines

Effects

Title	Author	Synopsis

Chapter 3: Enactogens		Overview of MDMA
Phenmetrazine: an Obsolete Problem Drug	Mellar, John, Lo E. Hollister	Commentary on obsolescence of drugs and particularly phenmetrazine as an anorectic drug. It is replacing amphetamines as the abused stimulant of choice
Enhancement of Human Performance by Caffeine and the	Weiss, Bernard, Victor G. Laties	Extensive study on impairment and performance on caffeine and amphetamines

Epidemiological Studies

Title	Author	Synopsis
Traffic Fatality Related to the Use of	Crifasi, Joseph, Christopher Long	MDMA found in driver's blood after running car off road
Ecstasy-Fueled "Rave" Parties Become Dances of Death for English	Simpson, Dennis L., Barry H. Rumack	Review of case literature of MDMA
Ecstasy and the Dance of Death	Henry, John A.	General symptoms of MDMA use
Ecstasy/XTC	BKA (Bundeskriminalblatt: German Federal Criminal	Police bulletin translated from German on the appearance of MDMA at rave parties
How Stimulants Work		Overview of Stimulants
Pemoline Abuse	Polchert, Susan E., Robert M. Morse	Pemoline is addictive and results in paranoid psychosis
Multiple Severe Complication From Recreational Ingestion of	Brown, Christopher, John Osterloh	A single case with life threatening symptoms after MDMA ingestion
"Cat": Methacathinone--A New Drug of Abuse	Goldstone, Michael S.	Letter to editor: appearance of new drug

Identification

Title	Author	Synopsis
Qualitative Screening of Ecstasy Pills with DI/MS in EI and CI mode		MDMA on a Shimadzu machine
Impact of Revised NIDA Guidelines for Methamphetamine Testing in	Wu, Alan H. B., Kent G. Johnson, Shan S. Wong	Letter to the editor: new cutoff values
Isomeric Amphetamines--A Problem for Urinalysis	Smith, Frederick P., David A. Kidwell	Differentiating stereoisomers in a urine sample
MDA-MDMA Concentrations in Urine Specimens	Kunsman, G. W., B. Levine, J. J. Kuhlman, R. L. Jones,	Study to authenticate whether MDMA was present in urine from random drug tests
Urinary Methamphetamine Concentration Following Famprofazone	Yoo, Youngchan, Heesun Chung, Hwakyung Choi	Case of pain killer, Famprofazone, metabolizing to amphetamines
Analysis of 3,4-Methylenedioxymethamphetamine (MDMA) and its	Helmin, Hans-Jorg, Katrin Bracher, Daniel Bourquin,	Appearance of MDMA and metabolites in urine over time
Cross-Reactivity of Amphetamine Analogues with Roche Abuscreen	Cody, J. T.	Running designer drug analogs on amphetamine antibody tests
Chemical Profiling of "Ecstasy" Specimens	Bracher, Katrin, Hans-Jorg S. Helmlin, Rudolf M.	Procedure for detecting MDMA with MSGC
Enantiomer Profile for Amphetamine Derived From the Precursor	Cody, John T., Sandra Valtier	Enantiomer ratios of metabolites might prevent false positive in tests for amphetamine
Evaluation of a Procedure for the Identification and Quantification	Valtier, Sandra, and John T. Cody	Procedure for testing for Fenproperex in urine by metabolite
Expert Examination of MDA	Sorokin, V., A. Beljaev, K. Ponkrtov	IR, GC, and TLC method for identifying MDA

Pharmacological Studies

Title	Author	Synopsis

Amphetamine And Fenpropex Levels Following Multidose	Cody, John T., Sandra Valtier, Stedra Stillman	Fenpropex metabolizes to amphetamine and shows as a false positive in tested urine
Analogs of Amphetamine	Cody, John T.	New analogs and how to test for them
Oral Pemoline Kinetics in Hyperactive Children	Salle, Floyd, Richard Stiller, James Perel, Theodore	Plasma levels of pemoline in boys with attention-deficit disorder
Chemical, Analytical, Toxological, and Pharmacological Aspects of	Brenneisen, Rudolf M.	Overview of MDMA
MDMA: Its History and Pharmacology	McDowell, David M., Herbert D. Kleber	Use and prevalence of MDMA

C. *Methamphetamine and Amphetamine*

Coroner's Tox

Title	Author	Synopsis
Methamphetamine-Related Deaths in San Francisco: Demographic,	Karch, Steven B., Boyd G. Stephens, Chih-Hsieng Ho	413 methamphetamine cases studied in San Francisco
Methamphetamine--A Study of Postmortem Redistribution	Barnhart, F. E., J. R. Fogacci, D. W. Reed	Tissue distribution of amphetamines after death
Toxicological Finding in a Fatal Ingestion of Methamphetamine	Molina, Norma M., Subash G. Jejurikar	Case study of amphetamine overdose
The Pathophysiology of Acute Amphetamine Poisoning with	Zalis, Edwin G., George D. Lundberg, Richard A.	Toxic effects of amphetamine. Results are similar to hyperthermia
Fatal Intoxication with Amphetamines (A Case Report)	Adjutantis, G., A. Countselinis, G. Dimopoulous	One amphetamine overdose case in Greece

Effects

Title	Author	Synopsis
Clinical Effects of Methamphetamine Vapor Inhalation	Perez-Reyes, Mario, W. Reid White, Susan A. McDonald	Study of plasma concentration, and cardiovascular effects of methamphetamine vapor inhalation
Amphetamine Abuse: Pattern and Effects of High Doses Taken	Kramer, John C., Vitezslav S. Fischman, Don C.	Abuse cycles of amphetamine
Methamphetamine and Diphenhydramine Effects on the Rate of	Mohs, Richard C., Jared R. Tinklenberg, Walton T.	How methamphetamines and diphenhydramine effect work productivity
The Effect of Amphetamines on Selected Physiological Components	Chandler, Joe V., Steven N. Blair	Study involving amphetamines and exercise performance. It appears to extend strength and mask fatigue
Amphetamine, Secobarbital, and Athletic Performance: II.	Smith, Gene M., Henry K. Beecher	Subjective responses by athletes when dosed with amphetamines or secobarbital
Methamphetamine and Driving Impairment	Logan, Barry K.	Study of erratic driving and other observations in methamphetamine related traffic accidents
Stimulants		Overview of amphetamine and cocaine. Including sources, clan lab manufacture, use, effects, and DRE
chapter 13: Drugs Used to Stimulate the Central Nervous System		
Constricted Pupils in Cocaine and Methamphetamine Users	Tennant, Forest	Unlike first-time users, habitual stimulant users do not show pupil dilation.
Methamphetamine Abuse, Violence, and Appropriate Treatment	Smith, David E., Gantt P. Galloway, Richard B.	Abuse and violence in association with methamphetamine

Epidemiology

Title	Author	Synopsis
Amphetamine Toxicity: Experience with 127 Cases	Derlet, Robert W., Pam Rice, Zane Horowitz, Reginald	Retrospective study of symptoms of amphetamine use of 127 emergency room cases.
Metabolic Precursors to Amphetamine and	Cody, J. T.	Various precursors yield positive

Methamphetamine		amphetamines in tests

Identification

Title	Author	Synopsis
Detection and Quantification of Amphetamine and Methamphetamine		Amphetamines on a Shimadzu machine
Distinguishing Sympathomimetic Amines from Amphetamine and	Thurman, E. M., M. J. Pedersen, R. L. Stout, T. Martin	Method for differentiating amines and amphetamines
Simultaneous Analysis of Amphetamine, Methamphetamine, and	Gan, Ber K., Diane Baugh, Ray H. Lui, Amrik S. Walia	Method of solid-phase extraction using Bond Elute Certify
Issues Pertaining to Monitoring the Abuse of Amphetamines in	Cody, J. T.	Problematic areas in forensic drug urinalysis of amphetamines
Methamphetamine in Antemortem Blood and Urine by	Rasmussen, Susan, Raymond Cole, Vina Spiehler	Changes made to a commercially available test to make it more sensitive
Resolution of Methamphetamine Stereoisomers in Urine Drug Testing	Fitzgerald, Robert L., James M. Ramos, Jr., Stuart C.	Differentiating stereoisomers in a urine sample
Amphetamines--Sympathomimetic Amines	Cody, J. T.	Analysis of amphetamines
Analysis of Amphetamines by GC/GCMS	Cody, John T.	Analysis, standards, extraction, and chromatography of amphetamines
Urinary Excretion of d-Amphetamine Following Oral Doses in	Poklis, Alphonse, Jay Still, Patricia W. Slattum, Leslie	Experiment demonstrating that the FUDT for d-amphetamine is too high to detect small doses (5 mg), and that fluctuations of urine pH effect excretion

Pharmacology

Title	Author	Synopsis
Amphetamine Metabolism in Amphetamine Psychosis	Anggard, Erik, Lars-Erik Jonsson, Anna-Lena Hogmark,	Study on half-life kinetics if urine pH is changed. Excretion of metabolites with alkaline urine was longer and had more intense psychosis
Pharmacology of Methamphetamine	Logan, Barry K.	Detection, use, fatalities of amphetamines
Pharmacology of Methamphetamine	Logan, Barry K.	Handout detailing slideshow
The Relation Between Blood Levels and Urinary Excretion of	Beckett, A. H., J. A. Salmon, M. Mitchard	Amphetamine level in urine is only proportional to plasma levels if the urine pH is controlled
The Review of Methamphetamines/Amphetamine Positives	Baylor, Michael R., Ph.D.	Various prescription amphetamines that have metabolites that produce test positives
Urinary Excretion Kinetics of Amphetamine in Man	Beckett, A. H. and M. Rowland	Excretion of amphetamines in urine, especially with variable and constant urine pH
Subjective Responses and Excretion Patterns of Dextroamphetamine	Evans, M. A., G. Winbish, L. Griffis, B. S. R. Martz, D.	Study on urine excretion of amphetamines after therapeutic doses
Amphetamines		Overview
Ice: A New Dosage Form of an Old Drug	Cho, Arthur K.	Overview of "ice" methamphetamine

D. *Antidepressants and Other Toxicology Part I*

Coroner's Toxicology

Title	Author	Synopsis
Distribution of Paroxetine in Three Postmortem Cases	Vermeulen, Tanya	Three deaths associated with Paroxetine an SSRI antidepressant
Fatal Multiple Drug Intoxication Following Acute Sertraline Use	Milner, D. A., M. Hall, G. G. Davis, R. M. Brissie, C.	Case study of an overdose
Postmortem Forensic Toxicology of Trazodone	Goeringer, Kabrena E., Lionel Raymon, Barry K. Logan	Analysis of trazodone toxicology

Effects

Title	Author	Synopsis
Selective Serotonin Reuptake Inhibitors: Analysis and Interpretation	Beano, Jeane M.	Drugs pathways, effects, and complications

Epidemiological Studies

Title	Author	Synopsis
A Mixed-Drug Intoxication Involving Venlafaxine and Verapamil	Kunsman, Gary W., Cynthia M. Kunsman, Carolyn L.	Overdose case

Identification

Title	Author	Synopsis
Evaluation of the Coat-A-Count 125I Fentanyl RIA: Comparison of	Watts, Vickie W., Yale H. Kaplan	Accuracy of Coat-a-count when testing for fentanyl
Barbiturates	Bush, Donna M., Ph.D.	Overview of structure, half-life, and analytical difficulties with barbiturates

Pharmacological Studies

Title	Author	Synopsis
Mechanism of Action of Antidepressant Medications	Feighner, John P	History and overview of antidepressant drugs
Inhibition of Hepatic P-450 Isoenzymes by Serotonin Selective	Preskorn, Sheldon H., Ryan D. Magnus	Hepatic isoenzymes and drugs

E. *Benzodiazepines*

Coroner's Toxicology

Title	Author	Synopsis
Cases of Fatal Triazolam Poisoning	Steentoft, A., K. Worm	Case study of overdose fatalities

Effects

Title	Author	Synopsis
Selective Effects of Triazolam on Memory	Weingartnerm, H. J., D. Hommer, R. G. Lister, K.	Study detailing the memory impairment of triazolam, but not on memory that required conscious thought (such as semantic memory)
Comparison of the Effects of Intravenously Administered Midazolam,	Ziegler, W. H., E. Schalch, B. Leishman, M. Eckert	Study of relative effects and length of effect of related benzodiazepines

Brief Review of Published Alpralozam Clinical Studies	Straw, R. N. depressive disorders	Literature review of alpralozam used for anxiety states and

Epidemiological Studies

Title	Author	Synopsis
Triazolam Overdose, Alcohol, and Manslaughter	Medawar, Charles, Elaine Rassaby	Several cases where overdose of Triazolam had resulted in murder with out provocation
Halcion Used as a Defense in Britain	Dyer, Clare	Acquittals based on halcion's side effects
Benzodiazepines and Sexual Fantasies	Brahams, Diana	Increasing evidence of sexual hallucinations linked with benzodiazepines and false accusations brought against medical workers
Allegation of Sexual Assault Following Midazolam sedation in a man	Playford, R. J.	Letter to editor: hallucinated sexual allegation linked to sedation with midazolam
Differential Amnestic Properties of Short- and Long-Acting	Scharf, Martin B., Nandini Khosla, Nancy Brocker, Paula	Study involving word list recall memory tests and varying doses of lorazepam and clorazepate
Rebound Insomnia and Elimination Half-Life: Assessment of	Bixler, Edward O., Joyce D. Kales, Anthony Kales,	Correlation of the quickness of elimination of drugs with rebound insomnia
Early Morning Insomnia with Rapidly Eliminated Benzodiazepines	Kales, Anthony, Constantin R. Soldatos, Edward O.	Increased wakefulness during final hours of night linked with tolerance of rapidly eliminated benzodiazepines

Identification

Title	Author	Synopsis
Analysis of Benzodiazepines with GC-MS		Benzodiazepines on a Shimadzu machine
Toxicological Analysis if Benzodiazepine-Type Compounds in	Peel, Harold W., Brian J. Perrigo	GC method for rapid identification and quantification of benzodiazepines using 1 ml of blood
Benzodiazepines	Bush, Donna M., Ph.D.	Overview of structure, half-life, and analytical difficulties with benzodiazepines

Pharmacological Studies

Title	Author	Synopsis
Pharmacokinetics of Benzodiazepine Hypnotics	Greenblatt, David J., Marcia Divoll, Darrell R.	Metabolites of benzodiazepam derivatives
Current Theories about the Mechanisms of Benzodiazepines and	Richter, James M.	Neurotransmitters and benzodiazepines
Comparative Single-Dose Kinetics of Oxazolam, Prezepam, and	Ochs, Hermann R., David J. Greenblatt, Birgitt	Study of serum levels of desmethyldiazepam (DMDZ) up to two weeks after dosage with precursor benzodiazepines

Pharmacology

Title	Author	Synopsis
Pharmacology of Some Metabolites of Triazolam, Alprazolam, and	Gall, Martin, B. V. Kamdar, R. J. Collins	Activities of benzodiazepam derivatives derived from oxidation
Midazolam: Pharmacology and Uses	Reves, J. G., Robert J. Fragen, H. Ronald Vinik, David J.	The action of midazolam as a unique member of the diazepam family

F. *Cannabinoids*

Effects

Title	Author	Synopsis
Cannabis: Pharmacology and Interpretation	Mason, Andrew P., Arthur J. McBay	THC and other cannabis constituents and their effect on performance
Cardiovascular Effects of Prolonged Delta-9-tetrahydrocannabinol	Benowitz, Neal, Reese T. Jones	Various symptoms observed after long-term ingestion of THC. Inhibition of sympathetic nervous system
Chapter 7: Marijuana		Overview of marijuana
Drug Abuse Profile: Cannabis	Jones, Reese T.	Overview of marijuana
Marihuana and Driving	Moskowitz, Herbert	Review of driving impairment literature
Impairment in Drivers Due to Cannabis in Combination with Other	Gjerde, Hallvard, Gunnar Kinn	Impaired drivers were tested for presence of THC
Tolerance to Marijuana: Heart rate and Subjective "High"	Nowlan, Robert, Sidney Cohen	Study showing tolerance after a 94 day study
Marijuana and Alcohol: A Driver Performance Study	Biasoti, A. A., P. Bolland, C. Mallory, R. Peck, V. C.	Study of the impairment of alcohol and marijuana on drinking

Epidemiological Studies

Title	Author	Synopsis
Delta-9-Tetrahydrocannabinol: Localization in Body Fat	Kreuz, David S., Julius Axelrod	After injecting rats, delta-9-THC and metabolites were found in the greatest concentration in fat tissue
Passive Inhalation of Cannabis Smoke	Law, B., P. A. Mason, A. C. Moffat, L. J. King, V.	Study involving detectable THC metabolites from second-hand smoke
Contact Highs and Urinary Cannabinoid Excretion after Passive	Cone Edward J., Rolley E. Johnson	Study showing THC positive urine tests for second-hand smoke
Passive Inhalation of Marijuana Smoke: Urinalysis and Room Air	Cone, Edward J., Rolly E. Johnson, William D. Darwin	Two studies on passive marijuana smoke exposure and results of urine tests
Passive Inhalation of Marihuana Smoke and Urinary Excretion of	Perez-Reyes, Mario, Stephanie Di Guiseppi, Andrew P.	Detectability of second-hand exposure to marijuana
Blood Cannabinoids: I. Absorption of THC and Formation of	Huestis, Marilyn A., Jack E. Henningfield, Edward J.	Study on metabolites of smoked marijuana
Comparison of Effects of Marijuana	Perez-Reyes, Mario, Stephanie Di Guiseppi, Kenneth H.	Various attributes were recorded for marijuana

Cigarettes of Three Different		smoking of differing doses
A Positive Cannabinoids Workplace Drug Test Following the	Struempler, Richard, Gordon Nelson, Francis M. Urry	A health food consisting of cold-pressed hemp seed oil shows up positive on urine tests
Forensic Aspects of the Metabolism and Excretion of Cannabinoids	Law, B., P. A. Mason, A. C. Moffat, R. I. Gleadle, L. J.	Metabolites may persist in blood and urine for several days following ingestion. This may be mistaken for more recent use
Metabolism of Tetrahydrocannabinol in Frequent and Infrequent	Kelly, Peggy, Reese T. Jones	Study looking at ratios of THC in frequent versus infrequent users
Excretion Patterns of Cannabinoid Metabolites after Last Use in a	Ellis, George M. Jr., Marian A Mann, Barbara A. Judson,	Study detailing the time it took for a subjects urine THC to remain below the cutoff. As many as 77 days were required
Differentiating New Marijuana Use From Residual Drug Excretion in	Huestis, Marilyn A., Edward J. Cone	Using the cannabinoid ratios of creatinine normalized urine tests to detect new drug use
Persistence of Urinary Marijuana Levels After Supervised	Dackis, Charles A., A. L. C. Pottash, William Annito,	Presence of THC in urine after 21 days of forced abstinence
Loss of THCCOOH from Urine Specimens Stored in Polypropylene	Stout, Peter R., David R. Lesser	THCCOOH may bind to the lipophilic plastic of containers at low temperature.
Tetrahydrocannabinol Stability in Whole Blood: Plastic Versus Glass	Christophersen, Asbjorg Solberg	THC differences reported from plastic to glass storage containers.

Identification

Title	Author	Synopsis
Detection Times of Marijuana Metabolites in Urine by Immunoassay	Huestis, Marilyn A., John M. Mitchell, Edward J. Cone	Detection times for marijuana metabolites were shorter than expected using various commercial immunoassays
GC/MS and EMIT Analysis for Delta-nine-tetrahydrocannabinol	McBurney L. J., B. A. Bobbie, L. A. Sepp	Detection of the major metabolite after marijuana use
Evaluation of Immunoassays for Cannabinoids in Urine	Irving, John, B. Leeb, Rodger L. Foltz, C. Edgar Cook,	Comparison of various screening techniques and confirming techniques. Cut-off levels proved the source of most of the discrepancies
Solid Phase Extraction of Marijuana Metabolite Using Micro-bed	O'Dell, Lisa, Kathy Rymut	Procedure for extraction of marijuana
Lowering the Federally Mandated Cannabinoid Immunoassay Cutoff	Huestis, Marilyn A., John M. Mitchell, Edward J. Cone	Proposed changes to guidelines for testing urine
Marijuana-Positive Urine Test Results from Consumption of Hemp	Fortner, Neil, Robert Fogerson, David Lindman, Todd	Food products give a positive immunoassay, but do not pass the cut-off value on GC-MS

Pharmacological Studies

Title	Author	Synopsis
Metabolism, Disposition, and Kinetics of	Wall, Monroe E., Brian M. Sadler, Dolores Brine,	Differences between the sexes as to the pharmacokinetics of marijuana: none were observed
Tolerance and Disposition of Tetrahydrocannabinol in Man	Hunt, C. Anthony, Reese T. Jones	Changing elimination kinetics as tolerance is built up

Do Plasma Concentration of Delta-9-Tetrahydrocannabinol Reflect	Hollister, L. E., H. K. Gillespie, A. Ohlsson, J. E.	Study showing that THC plasma concentrations do not correlate with a high
Blood Cannabinoids: II. Models for the Prediction of Time of	Huestis, Marilyn A., Jack E. Henningfield, Edward J.	Models to predict the exposure to marijuana from metabolite ratios
Stability of Delta-9-tetrahydrocannabinol (THC), 11-Hydroxy-THC,	Johnson, Judy R., Thomas A. Jennison, Michael A. Peat,	Stability of THC metabolites under different storage temperatures and stoppers
Characterization of the Absorption Phase of Marijuana Smoking	Huestis, Marylyn A., Angela H. Sampson, Barbara J.	Symptoms coincide with appearance of delta-9-tetrahydrocannabinol
Analysis of Forensic Specimens for Cannabinoids. II. Relationship	Moody, David E., Kim M. Monti, and Dennis Crouch	Correlation study between blood and urine THC markers. Although a high degree of correlation exists, it has too much individual variance to interpolate results
Urinary Excretion Profiles of	Huestis, Marylyn A., John M. Mitchell, Edward J. Cone	Urine was analyzed in this case to help establish a timeline for marijuana metabolite excretion
Doses, Detection Times, and Creatinine Normalization in Drugs of	Cone, Edward J.	Correlation between blood and urine THC levels
Cannabis (Marijuana)		Physiological effects of Marijuana
Metabolism and Pharmacokinetics of delta-9-tetrahydrocannabinol	Manno, Joseph C.	Difficulties and interpretations of testing body fluids for marijuana
Pharmacokinetics and Pharmacodynamics of Marijuana	Huestis, Marilyn A.	Marijuana metabolite presence in tests
Marijuana (whole issue) [The DRE]		
Pharmacology of Cannabis	Burns, Marcelline	References to various articles on cannabis impairment deaths

G. *Cocaine*

Effects

Title	Author	Synopsis
Drug Abuse Profile: Cocaine	Jetlow, Peter I.	Overview of cocaine
Acute Cardiac Events Temporally Related to Cocaine Use	Isner, Jefferey M., Mark Estes III, Paul D. Thompson,	Cardiac arrests and cocaine use
Cocaine Hallucinations	Siegel, Ronald K., Ph.D.	Review of literature concerning cocaine induced hallucinations
Cocaine and Other Stimulants: Actions, Abuse, and Treatment	Gawin, Frank H., Everett H. Ellinwood	Pathology of Cocaine
Cocaine-Induced Psychosis and Sudden Death in Recreational Cocaine	Wetli, Charles V., David A. Fishbain	Symptoms of fatal cocaine users
Cocaine and the Heart	Tazelaar, Henry D., Steven B. Karch, Boyd G. Stephens,	Heart tissue samples from overdose cases were analyzed
The "Body Packer Syndrome"--Toxicity Following Ingestion of Illicit	Wetli, Charles V., R. E. Mittleman	Autopsies of smugglers who attempted to swallow packets of cocaine and got overdosed.
Brain Concentrations of Cocaine and Benzoylecgonine in Fatal Cases	Spiehler, Vina R., Dwight Reed	A ratio of blood/brain levels of cocaine and benzoylecgonine give an idea of time elapsed since dosing
Tissue Distribution of Lidocaine After Fatal Accidental Injection	Poklis, Alphonse, Mary A. Mackell, Eugene F. Tucker	Dosages of Lidocaine found in various tissues

Epidemiological Studies

Title	Author	Synopsis
Cocaine-induced Myocardial Infarction	Rollingher, Irving M., Allan S. Belzberg, Ian L.	Various ways in which cocaine attacks the heart
Cocaine Excretion in the Semen of Drug Users	Cone Edward J.	Cocaine and metabolites in semen 1 hour after use

Identification

Title	Author	Synopsis

Quantitation of Cocaine, Benzoylecgonine, Cocaethylene,	Bourland, James A., Eugene F. Hayes, Raymond C.	Identification of cocaine metabolites in hair to rule out external contamination
The Reliability of a Solid-Phase Extraction System for the Analysis of	Jennison, Thomas A., Charles W. Jones, Elizabeth	A 12 month study detailing the variance between column lots and analysts for the solid phase extraction of benzoylecgonine
Simultaneous Assay of Cocaine, Heroin, and Metabolites in Hair,	Wang, Wen-Ling, William D. Darwin, Edward J. Cone	Assay for simultaneous measurement of cocaine and heroin in various tissues and fluids
Determination of Cocaine Usage in Pregnant Women by a Urinary	DiGregorio, G. John, Andrew P. Ferko, Edward J.	Hair and urine samples used to identify cocaine usage by mothers and exposure to newborns
Simultaneous Measurement of Cocaine, Cocaethylene, Their	Cone, Edward J., Mary Hillsgrove, William D. Darwin	New assay for measurement of cocaine metabolites
Validity Testing of Commercial Urine Cocaine Metabolite Assays:	Cone, Edward J., John Mitchell	Comparison of 8 commercial immunoassays testing for cocaine
A Pyrolysis Product, Anhydroecgonine Methyl Ester	Peyton, Jacob, III, Evan R. Lewis, Barbara A. Elias,	AEME is only found in pipe smoked and not intravenous cocaine
A Method for the Detection of Cocaine and its Metabolites and		Column procedure

Pharmacological Studies

Title	Author	Synopsis
Pharmacokinetics and Pharmacodynamics of Cocaine	Cone, Edward J.	Study on how route of entry (smoked, intravenous, intranasal) effected behavioral and physiological responses to cocaine
Cocaine-mediated Hepatotoxicity	Kloss, Michelle W., Gerald M. Rosen, Elmer J.	Role of cocaine in damaging liver function especially when used with heroin
Kinetics of Pharmacologic Response to Cocaine	Mayersohn, Michael, and Donald Perrier	Concentration-time data
Passive Inhalation of Cocaine	Cone, Edward J., David Yousefnejad, Mary J. Hillsgrove,	Study on how passive cocaine exposure shows in urine tests
Interpreting Cocaine Blood Levels		Various cases with high levels of cocaine in blood with no apparent symptoms
Elimination of Cocaine and Metabolites in Plasma, Saliva, and Urine	Jufer, Rebecca A., Abraham Wstadik, Sharon L. Walsh,	Study used to verify if cocaine metabolites can accumulate and prolong elimination during abstinence
Cocaine and Metabolite Elimination Patterns in Chronic Cocaine	Moolchan, Eric T., Edward J. Cone, Abraham Wstadik,	Study demonstrating the longer half-life of cocaine in chronic users versus single use. Benzoylecognine half-life was unchanged.
Pharmacology of Cocaine and its Relationship to Behavior	Isenschmid, Daniel S., PhD	Overview of all aspects of cocaine to use, metabolites, detection, and impairment

H. *DRE Class 1998*

Publication

Title	Author	Synopsis
The DRE Sept./Oct. 1991		Various articles
The DRE January/February 1992		Various articles
The DRE May/June/July 1992		Various articles
The DRE August/September 1992		Various articles
The DRE October/November 1992		Various articles
The DRE Spring 1993		Various articles
The DRE Summer 1993		Various articles
The DRE Winter 2000		Various articles

I. *General Toxicology II*

Addiction

Title	Author	Synopsis
Methamphetamine Addiction and Patterns of Use	Stalcup, S. Alex	Biological and psychological factors in drug abuse
Dependence Syndrome: A Critical Analysis of Essential Features	Miller, Norman S., Mark S. Gold	Definition and patterns of abuse and addiction
Diagnostic and Statistical Manual - IV		Criteria for abuse
Appendix A: Conference #1--Alcoholism: Screening and Establishing		Statistics and diagnosis of alcoholism

Coroner's Toxicology

Title	Author	Synopsis
Post-Mortem Drug Redistribution--A Toxicological Nightmare	Pounder, Derrick J., Graham R. Jones	Case data showing diffusion of drugs from solid organs to major blood vessels, artificially inflating the blood level
Postmortem Forensic Toxicology of Heroin and Cocaine	Logan, Barry K.	Overview of Heroin and Cocaine
Chapter 19: Pathology and Pathophysiology of the Systemic	Cowley, R. Adams, MD	Effects, treatment, and testing for CO
Why Think of Toxicology	Keen, Phillip E.,	Autopsy signs that indicate drug abuse
Forensic Entomo-toxicology	Pounder, Derrick J.	Maggots, flies, beetles, etc can be tested for the presence of drugs
How Comprehensive is Comprehensive? A Post Mortem Case Study	Anderson, Daniel T.	Tricky cases and the need for thorough testing

Effects

Title	Author	Synopsis
Stimulant Induced Impairment: A Perspective Across Dose and	Ellinwood, Evertt H. Jr., Arlene M. Nikaido	Impairment and dependence on stimulants
The Drug Recognition Process		Symptoms of major categories of drugs
Descriminant Analysis of Signs of Drug Impairment	Voas, R. B., A. S. Tippetts, R. A. Hemmans	A study involving the efficacy of certain symptoms in DRE
National Standards of the Drug Evaluation and		DRE qualification criteria

Classification		
DRE Evaluation of Drug Impaired Drivers and DRE Evaluation of	Page, Thomas	Drug categories and a procedure on how to recognize the drug by the symptoms

Toxicology and the Law

Title	Author	Synopsis
Legal Issues in Workplace Urine Drug Testing	Shults, Theodore F.	Legal difficulties and responsibilities of forensic drug labs
Overview of Issues in Regulated Urine Drug Testing	Autry, Joseph H. III	Overall statistics of national illegal drug use and government programs, policies, and laws concerning them.
Interpretation of Drugs of Abuse for Court	Meeker, James E., Thomas W. Rogers	Court procedures for testifying
Sounding Board: U.S. Drug Laws--An Introduction		Letters for and against relaxing US drug laws
Illegal Drug Price/Purity Report 1988 though march 1991		Price of drugs by area
The Drug Impaired Driver: Detection, Forensic Specimen Analysis		Flowchart of a vehicle stop

J. *General Toxicology I*

Epidemiological Studies

Title	Author	Synopsis
Laboratory Validation Study of Drug Evaluation and Classification	Heishman, Stephen J., Edward G. Singleton, Dennis J.	Case study to verify DEC methods which identify which drug is causing impairment
Laboratory Validation Study of Drug Evaluation and Classification	Heishman, Stephen J., Edward G. Singleton, Dennis J.	Case study to verify DEC methods which identify which drug is causing impairment
A 5-Year Stability Study of Common Illicit Drugs in Blood	Giorgi, Susan N., James E. Meeker	Stability of various drugs in blood
Whole Blood Quality Assurance Control Samples for Forensic	Osselton, M. David, Margaret Japp, Sandra I. Weston,	Freeze dried aliquots of blood as controls
Treatment of Narcolepsy with Methamphetamine	Mitler, Merrill M., Roza Hajdukovic, Milton K. Erman	Effects of methamphetamine on regular sleep, and narcoleptic conditions
Clinical Toxicology in a Nutshell	Chan, Kwok-Ming (Michael)	Poisoning identification and case studies

Identification

Title	Author	Synopsis
RIA in the Clinical Laboratory [whole book]	Allene M. Geitner, Nelie May Bering	Radio Immuno Assay
Analysis of Forensic Specimens for Cannabinoids. I. Comparison of	Moody, David E., Linda F. Rittenhouse, Kim M. Monti	Comparison of RIA and GC/MS

Drug Screening with Fast-GC/MS		Various drugs on a Shimadzu machine
Methods of Sample Preparation for Drug Screening with GC/MS		Methods on a Shimadzu machine
Determination of Drugs of Abuse Mentioned in Section 24a Traffic		Various drugs on a Shimadzu machine
GCMS in the Forensic Laboratory	Spanbauer, Alan C.	GCMS methods
Some Aspects of High Performance Liquid Chromatography, HPLC	Stafford, David T.	Overview of physics of HPLC
Extraction and Benzoylecgonine (Cocaine Metabolite) and Opiates	Diamond, Francis X., William E. Vickery, John de	Product features and drug analysis
Drugs-of-Abuse Testing in Urine: Statistical Approach and	Ferrara, S. D., L. Tedeschi, G. Frison, G. Brusini, F.	Using various types of tests for various drugs
Doses, Detection Times, and Creatinine Normalization in Drugs of	Cone, Edward J.	Doses and detection times of various drugs
Impact of Adulterants on RIA Analysis of Urine for Drugs of Abuse	Cody, J. T., Robert H. Scharzhoff	How various external chemicals change the veracity of results obtained via RIA
Interference of Common Household Chemicals in Immunoassay	Warner, Ann	How various external chemicals change the veracity of results obtained via RIA
Performance Evaluation of Four On-Site Drug-Testing Devices for	Peace, Michelle R., Lisa D. Tarnai, Alphonse Poklis	Sensitivity and specificity of commercial on-site drug-testing kits. Triage brand was the best in this study
Screening of Blood and Urine for Drugs of Abuse Utilizing Diagnostic	Appel, Timothy A., Norman A. Wade	Crossreactivity study
Radioimmunoassay Screening and GC/MS Confirmation of Whole	Spiehler, Vina R., Paul Sedgwick	Immuno assays for urine can be adapted for blood use
Urine Drug Testing		List of factors concerning urine drug tests
Performance Testing	Mitchell, John M.	Requirements and guidelines for drug testing
Quality Assurance in Clinical Laboratories Demonstrated with Drug		QA on a Shimadzu machine
Analytical Approaches in Forensic Toxicology	Anderson, William H.	Overview of assay types

Instrumentation Data

Title	Author	Synopsis
[Various J&W GCMS printouts]		Various GCMS printouts
[Various GCMS printouts]		Various GCMS printouts
[Various GCMS printouts]		Various GCMS printouts

Pharmacological Studies

Title	Author	Synopsis
Pharmacology of Drug Abuse	Lofholm, Paul	Overview of pharmacology
Principles of Pharmacokinetics	Henderson, Gary L.	Mathematics behind pharmacokinetics
Chapter 12: Drugs of Abuse		General overview of drug classes
Cocaine [various drugs--cocaine is first page]		Overview of Various drugs
Implications of Drug Levels in Body Fluids: Basic Concepts	Chiang, C. Nora, Richard L. Hawks	Discussion of factors contributing to drug levels in fluids
A Compendium of Therapeutic and Toxic Concentration of	Baselt, Randell C., Robert H. Cravey	Table of name, dosage, frequency, medical use, and plasma concentration of various therapeutic drugs
Appendix I: Pharmacokinetic Data for Commonly Used Drugs	Scott, Gregory, David Nierenberg	Tables of pharmacokinetics
Therapeutic Drugs	Levine, Barry	Prescription drugs that are often abused
Chapter 2: Review of Functional Neuroanatomy	Sugarman, Richard A., Cleveland F. Kinney	Basic anatomy of the CNS

K. *Hallucinogens*

Effects

Title	Author	Synopsis

Hallucinogens		Overview of LSD and phencyclidine
The Phencyclidine-Intoxicated Driver	Clardy, D.O., R. H. Cravey, B. J. MacDonald, S. J.	50 case histories of driving incidents
Inward the Mind's I: Description, Diagnosis, and Treatment of Acute	Giannini, A. James	Description of hallucinations

Epidemiological Studies

Title	Author	Synopsis
The Epidemiology, Attitudes, and Pharmacology of LSD Use in the	Gold, Mark S.	Use and prevalence of LSD
Stability of Phencyclidine in Stored Blood Samples	Grieshaber, Alison, Anthony Costantino, Nicholas Lappas	3 year retroactive study on the stability of PCP in blood stored at 4 °C and -20 °C.

Identification

Title	Author	Synopsis
Evaluation of a Commercial Radioimmunoassay Kit for the Detection	Altunkaya, Diane, R. N. Smith	Evaluation of commercial kit

Pharmacological Studies

Title	Author	Synopsis
LSD and Ecstasy: Pharmacology, Phenomenology, and Treatment	Miller, Norman S., Mark S. Gold	Joint use of LSD and MDMA
Phencyclidine, LSD, and other Hallucinogens	Bush, Donna M., PhD	Overview of hallucinogens

L. *Opiates -- Heroin, Morphine, Codeine & other Opiates*

Coroner's Tox--Heroin

Title	Author	Synopsis
Disposition of Heroin and Its Metabolites in Heroin-Related Deaths	Goldberger, Bruce A., Edward J. Cone, Terrance M.	Post-mortem samples were re-analyzed for opiate metabolites to establish heroin-related cause of death
Acute Heroin Fatalities in San Francisco	Baselt, Randell C., Donna J. Allison, James A. Wright,	Blood levels from overdoses versus controls; no difference found
Acute Heroin Overdose	Sporer, Karl A.	Heroin overview
Death from Intravenously Administered Narcotics: A Study of 114	Richards R. G., Dwight Reed, R. H. Cravey	Morphine concentrations in various organs of heroin overdose cases
Tramadol Distribution in Four Postmortem Cases	Levine, Barry, Vera Ramcharitar, John E. Smialek	Detection of tramadol in unrelated deaths

Coroner's Tox--Morphine

Title	Author	Synopsis
Morphine in Postmortem Blood: Its Importance for the Diagnosis of	Staub, C., R. Jeanmonod, O. Frye	Method of morphine quantification and amounts of free and total morphine levels
Computer-Assisted Interpretation on Forensic Toxicology:	Spiehler, Vina R.	Computer programming to predict dose and time from a known blood level
Postmortem Distribution and Redistribution of Morphine in Man	Logan, Barry K., D. Smirnow	Site and time dependant changes in post mortem morphine concentrations
Case Report: Interpretation Difficulties in a Case Involving Fatal	Dinn, H.	Possible explanations of an overdose case

Coroner's Tox--Other

Title	Author	Synopsis
Interpretation of Postmortem Dextromethorphan Concentrations--A	Singer, P. P., K. E. Janzen, G. R. Jones	Dextromethorphan related deaths

Effects

Title	Author	Synopsis
Understanding the Opioid Analgesics and Their Effects on Skills	Checher, Gregory B.	Various studies done on the symptoms of opiate use and reaction times of users and non-users
Pharmacology of Narcotic Analgesics	Spiehler, Vina R.	Traffic case studies
Opiates	Goldberger, B.	Overview of Opiate derivatives
Substances of Abuse: Opiates		Overview of opiates
Opiates		Overview of opiates
Degree of Tolerance and the Relationship Between Plasma Morphine	Tress, Kathleen H., Wynne Aherne, Evelyn Piall	Study correlating the pupil diameter to degree of dependence of heroin
The Pharmacologic Effects of Heroin in Relationship to its Rate of	Way, E. Leong, John W. Kemp, Joseph M. Young,	Metabolites of heroin

Epidemiological Studies

Title	Author	Synopsis
A Case of High Opiate Tolerance: Implications for Drug Analysis	Gjerde, H., and J. Morland	High blood morphine levels can be misinterpreted as morphine of heroin use instead of other opiate products (cough syrup)

Identification--Codeine

Title	Author	Synopsis

Urine and Plasma Pharmacokinetics of Codeine in Healthy	Lafolie, Pierre, Olaf Beck, Zhen Lin, Freidoun	Levels of codeine metabolites in blood
Forensic Drug Testing for Opiates: III. Urinary Excretion Rates of	Cone, Edward J., Phyllis Welch, John M. Mitchell, and	Morphine and codeine levels in urine after intramuscular injection of codeine

Identification--Heroin

Title	Author	Synopsis
Forensic Drug Testing for Opiates: V. Urine Testing for Heroine,	Cone, Edward J., Sandra Dickerson, Buddha D. Paul,	Comparison of 4 commercial immunoassays testing a known dose of opiates
Forensic Drug Testing for Opiates: VII. Urinary Excretion Profile	Cone, Edward J., Rebecca Jufer, William D. Darwin	Urine level of opiate metabolites after snorting
Detection of O6-Monoacetylmorphine in Urine Specimens of Heroin	Lui, Chi Pang, Ching Ong Lau, Tong Kooi Lee	O6-MAM as a metabolite marker for heroin abuse
Observations on Urinary Excretion of Codeine in Illicit Heroin	Mari, Francesso, Elisabetta, Bertol	Study showing that heroin and morphine can be differentiated by the presence of codeine in urine

Identification--Morphine

Title	Author	Synopsis
Simultaneous Determination of Monoacetylmorphine, Morphine,	Bowie, Lemuel J., Peter B. Kirkpatrick	GS/MS method for determining similar opiates by acetylating free hydroxyl groups
A Practical Approach to Determine Cutoff Concentrations for Opiate	Paul, Buddha D., Eric T. Shimomura, Michael L. Smith	New methods to better quantify opiates in urine without multiple tests
A Solid Phase Extraction Technique for the Isolation and	Huang, Wei, Wilmo Andollo, William Lee Hearn	Method for analysis of opiates
Plasma Profile After Intravenous Administration of 200 mg	Bourquin, Daniel, Barbara von Wattenwyl, Thomas	Study to establish plasma level data for heavy heroin users
Forensic Drug Testing for Opiates: II. Metabolism and Excretion	Mitchell, John M., Buddha D. Paul, Phyllis Welch, and	Morphine levels in urine after intramuscular injection
The Measurement and Interpretation of Morphine in Blood	Logan, B. K., J. S. Oliver, H. Smith	Morphine in post-mortem blood
Morphine Disposition on Opiate-Intoxicated Patients: Relevance of	Got, P., F. J. Baud, P. Sandouk, O. Diamant-Berger, J.	Immuno assays and opiate overdose deaths
Morphine Formation from Ethylmorphine: Implications for	Popa, Cornelia, Olaf Beck, Kerstin Brodin	Studies looking at morphine/ethylmorphine ratios to distinguish anti-tussitives from illicit drugs
Forensic Drug Testing for Opiates: I. Detection of 6-Acetylmorphine	Cone, Edward J., Phyllis Welch, John M. Mitchell, and	Study on the usefulness of various metabolites (6-AM, free morphine, total morphine) for detecting heroine use
Forensic Drug Testing for Opiates: IV. Analytical Sensitivity,	Cone, Edward J., Sandra Dickerson, Buddha D. Paul,	Comparison of 4 commercial immunoassays testing a known dose of opiates
Morphine: Radioimmunoassay	Spector, Sydney, Charles W. Parker	Development of a radioimmunoassay for morphine

Identification--Other

Title	Author	Synopsis
Forensic Drug Testing for Opiates. VI. Urine Testing for	Smith, Michael L., Robert O. Hughes, Barry Levine,	Comparison of 4 commercial immunoassays testing a known dose of opiate analogs
The Stability of Morphine Glucuronide in Blood Samples	Sachs, Hans, Inge Herrle, Ludwig von Meyer, Gustav	Morphine metabolite stability and its effect on interpreting blood levels

Pharmacological Studies--Heroin

Title	Author	Synopsis
Pharmacokinetics and Pharmacodynamics of Smoked Heroin	Jenkins, Amanda J., Robert M. Keenan, Jack E.	A computer assisted smoking device was used to deliver puffs of smoked heroin to two volunteers, effects were studied
Plasma Concentrations of Heroin and Morphine-Related Metabolites	Skopp, Gisela, Beate Ganssmann, Edward J. Cone, Rolf	Blood levels and half-life of heroin metabolites
Urinary Excretion of Heroin and its Metabolites in Man	Yeh, S. Y., C. W. Gorodetzky, R. L. McQuinn	Blood levels of heroin metabolites
Heroin		Encyclopedic overview and chemistry of heroin

Pharmacological Studies--Morphine

Title	Author	Synopsis
Pharmacokinetics of Morphine and Its Surrogates II: Methods of	Garrett, Edward R., Turkan Gurkan	Methods to extract and stabilize heroin metabolites in urine
Morphine		Morphine concentrations in various organs
Serum Morphine Concentration After Oral Administration of	Aherne, G. Wynne, Evelyn M. Piall, R. G. Twycross	Study looks at the correlation between oral dose and blood levels of morphine
Urinary Excretion of Morphine and Its Metabolites in	Yeh, S. Y.	Daily excretion rates from various morphine sub-types
Morphine and Metabolite Behavior After Different Routes of	Osborne, Richard, Simon Joel, Duncan Trew, Maurice	Relevance of glucuronide metabolites in morphine studies

Pharmacological Studies--Other

Title	Author	Synopsis
Drug Testing with Alternative Matrices I. Pharmacological Effects	Joseph, Robert E., Jr., Jonothan M. Oyler, Abraham T.	New ways to measure drug exposure: hair, skin, sweat, etc.
Human Pharmacokinetics of Intravenous, Sublingual, and Buccal	Kuhlman, James J., Shairose Lalani, Joseph Magluilo,	Blood levels of opiate derivative by route

The Poppy Seed Issue

Title	Author	Synopsis
Poppy Seed Ingestion as a Contributing Factor to Opiate-Positive	Selavka, Carl M., PhD	Study showing how poppy seed ingestion causes positive urine opiate tests
Poppy Seed Ingestion and Opiates Urinalysis: A Closer Look	ElSohly, Hala N., Mahmoud A. ElSohly	Opiate levels following normally ingested amounts of poppy seeds
Gas Chromatographic/Mass Spectrometric Analysis of Morphine and	ElSohly, Hala N., Don F. Stanford, Alan B. Jones,	The use as thebaine a marker for poppy seed ingestion. Thebaine does not work
Excretion of Codeine and Morphine Following Ingestion of Poppy	Struempler, Richard E.	Poppy seeds ingestion results in measurable codeine and morphine in urine
Poppy Seeds: Differences in Morphine and Codeine Content and	Pelders, Marinus G., Johannes J. W. Ros	Different brands of poppy seeds yield differing amounts of opiates
Countering the "Poppy Seed Defense": No Piece of Cake	Midkiff, Charles R., Jr.	Viability of poppy seed ingestion as defense for a positive drug test
Morphine Levels in Urine Subsequent to Poppy Seed Consumption	Fritsch, Giselher, William R. Prescott Jr.	Study attempting to differentiate poppy seed from opiate abuse. 6-O-acetylmorphine may work, but identifying minor alkaloid constituents does not.
Morphine and Codeine in Biological Fluids: Approaches to Source	ElSohly, M. A., A. B. Jones	Poppy seed opiate content and guidelines on how to differentiate seeds from opiate abuse
Difficulty Issues--The review of Opiate Positives	Bush, Donna M., Ph.D.	Levels of morphine and codeine in urine after ingestion of poppy seeds

M. Antidepressants and Other Toxicology Part II

Caffeine

Title	Author	Synopsis
Caffeine		Overview of caffeine

Alcohol and Other Volatiles

Title	Author	Synopsis
Ethyl Alcohol and Other Volatiles & Carbon Monoxide and Other	Yale H. Caplan, PhD	Physiological effects and analysis of CO

Carbon Monoxide

Title	Author	Synopsis
Carbon Monoxide Poisoning	Norman, Peter, John R. Wherrett	Pathology of CO
Determination of Carbon Monoxide in Blood	Allen, Lynn C., PhD	Pathology and measurement of CO

GHB

Title	Author	Synopsis
GHB: What is it and how will it affect me as a DRE?	Scott, Wayne	Overview of GHB
Analogs of GHB Continue to Surface	Porrata, Trinka D.	GHB appearing under health additive labels by alternative chemical names

Inhalants

Title	Author	Synopsis
Organic Solvents		Overview of inhalants
Chapter 6: Inhalants		Types and effects of inhalants

Nicotine

Title	Author	Synopsis
Nicotine		Effects and withdrawal symptoms of nicotine
Chapter 8: Nicotine		Overview of nicotine

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/22/2019	**NUMBER:** TOX.07 - Evidence Handling
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Evidence Handling	**SUBJECT:** Evidence Handling	

I. Policy: Evidence is handled in a manner to ensure its integrity and to protect it from loss, cross-transfer, contamination and deleterious change.

A. Tape Seals

1. All evidence received at the laboratory or retrieved from evidence lock boxes shall be tape sealed with tamper proof tape. Evidence seals will be such that they are likely to yield evidence of an intrusion.
2. The seal shall be initialed by the officer or property personnel placing the evidence in the envelope or package.
    a. If the seal was not initialed, the laboratory staff person shall apply tamper proof evidence tape across the agency seal, or use the "received without initials" (RWI) stamp and initial and date the stamp.
3. Unsealed evidence shall be properly sealed before it is accepted for examination.
4. Staff opening evidence is responsible for inspecting evidence in their possession to ensure the evidence packaging requirements are met.
    a. Staff opening evidence should initial the box on the lower left hand corner of the envelope indicating that the evidence received was sealed.
5. See the Division Manual policy for more information on tape seals.

B. Chain of Custody

1. The chain of custody for alcohol and toxicology evidence transfers is recorded on the evidence envelope when received initially and when released from the laboratory.
2. The chain of custody within the lab will be electronically recorded at all stages using the Laboratory's Information Management System (LIMS).
3. The chain may also be signed on the envelope.
4. Evidence splits shall also be documented.
5. See the Division Manual policy on Chain of Custody for more information.

C. Opening Evidence Package

1. Laboratory staff should open envelopes in such a way that does not disturb the integrity of the seal of the submitting agency. This may be done by cutting through the top edge or side edge of the envelope.
2. Evidence may be opened by an aide or criminalist

D. Instructions for Re-assigning Casework

1. It is common in the toxicology section for multiple analysts to be involved in the case. Analysis is generally assigned to the unit rather than an individual analyst.
2. Minimally, the analyst who is closing the case for casework analysis must:
    a. re-assign the case(s) in LIMS
    b. seal, mark and verify all vials (if not the individual who opened the evidence) - see below for more information on marking evidence

E. Evidence Itemization (See QA.09 Itemizing Evidence)

1. For all items within the same container itemization will occur when:
    a. Samples are of a different type

i. Blood, Urine, Vitreous, Cavity Fluid, etc.

ii. Coroner's blood collected from different locations (peripheral, heart, etc)

b. Samples in which the collection time is significantly different

c. Hospital vials

i. Each color top will be itemized separately (similar top tubes may be itemized together)

2. Test results will be associated with the sample analyzed.

a. In the event that a sample needs to be pooled with another in order to perform analysis then

i. A new item may be created which will reflect the combination of samples OR

ii. A note may be made in the Report Comments

F. Marking and Verification of Evidence

1. When the package is first opened, each vial or jar must be marked in an indelible manner with the following:

a. Laboratory number

b. Request number

c. Laboratory submission number

d. Initials of the person opening the evidence

e. Date

2. When a vial or jar is used for analysis:

a. Vials used in analysis must be labeled with a sticker (typically yellow) containing the case number, barcode, initials and date

i. The case number, request number and submission number must be included in a barcode format that allows the use of a barcode scanner during analysis (see TOX.65 for more information on use of a comparator barcode scanner)

1. The barcode placed on the vials will be independent of the LIMS generated barcode on the evidence envelope.

ii. The barcode needs to be placed on a relatively flat location with minimal curvature to ensure effective scanning.

1. Samples submitted in non-Contra Costa County Containers may have limited space for sticker placement. The sticker may be cut or reduced in size to ensure placement of the barcode.

2. If the barcode does not fit, or cannot be placed in a position that allows for scanning, an explanation will be included in the notes.

b. If a new vial is opened, it should also be labeled with a yellow sticker including a barcode.

c. Each vial used for analysis must be marked with the analyst's initials and date at the time of initial contact

d. Analysts are not required to initial and date every contact with the same vial.

i. If a new vial is opened, it requires initials and date

ii. If the same vial is analyzed under a different request, it requires initials and date

3. Verifying/Closing evidence: A criminalist shall verify evidence opened by an aide. This may be done after all analysis is completed.

a. Verify that the required information listed above is present on each vial or jar

b. The analyst will place their initials and date of verification on the vial/jar

4. For each blood or urine envelope that is submitted for the purpose of toxicology analysis an Assignment Notification Report (ASN) may be printed. This form is used to notify the unit that a sample has been submitted for analysis. This page will contain, at a minimum, laboratory number, request number, submission number, subject name, the submitting agency, and the agency case number. Due to the nature of toxicology casework, analysis is not usually assigned to a specific analyst.

a. Other LIMS generated reports with the same information are available and may also serve as notification a sample has been submitted

5. Upon opening evidence, the case information on the evidence packaging and sample container(s) shall be compared against the case information existing in LIMS. Upon completion of a request, the information on the evidence and packaging may again be compared to LIMS. The comparison may be completed with the aid of the ASN, use of LIMS generated reports, comparison to the case notes, or direct comparison in LIMS. Discrepancies shall be documented in the analysis notes or corrected by the clerical staff after verifying the correct information with the appropriate agency.

G. Events that will halt analysis and require communication with the customer prior to proceeding with testing include:

i. Samples that have insufficient sample for analysis such as short draws or broken vials

ii. Samples not conducive to testing requested such as serum separator tubes

iii. Samples that would not have sufficient amount of sample for all testing requested

H. Procedural Precautions

1. Procedural precautions must be taken to reduce the risk of evidence loss, cross-transfer, contamination and other deleterious change. Examples include the following:

a. Using disposable pipette tips and transfer pipettes, when applicable

b. Adequately labeling jars and vials

c. Changing contaminated gloves

d. Maintaining a clean work area

e. Rinsing the dilutor tubing

f. Disinfecting external surfaces of a pipette

I. Split Items or Items Removed from the Parent Item (Itemization)

1. Materials removed from the original item of evidence and packaged separately are considered "split evidence". The split evidence will be tracked with its own item number and chain in LIMS.

2. Splitting evidence is routinely done for expediency when evidence is requested for multiple types of analyses (alcohol and toxicology analyses) within the laboratory or when a referee or outside laboratory analysis is requested.

a. For referee or outside laboratory analysis procedures see TOX.56 and BA.37

b. For procedures for splitting evidence (Itemization) for alcohol and toxicology analyses see BA.08

3. See Division Manual policy FSD.38 on Evidence Itemization for more information

J. Evidence Storage

1. All evidence not in the process of examination shall be maintained in a secured, limited access storage area that is appropriate for avoiding deterioration, loss or damage to the test item.

a. The evidence room "Muir-Refrigerator-Incoming Evidence" refrigerator is the primary storage location for evidence awaiting examination.

b. The evidence room "Muir-Refrigerator-Incoming Evidence" refrigerator is also the primary storage location for evidence that has been forwarded from the Alcohol Unit to the Toxicology Unit for analysis..

c. Open cases must be secured in a locked "Muir-Refrigerator-Toxicology" pending completion of analysis

d. The evidence room is the primary storage location for evidence awaiting return to the submitting agency.

2. Each analyst in the Toxicology unit is provided with a key to the "Muir-Refrigerator-Toxicology" for storing and securing evidence.

3. Keys to the "Muir-Refrigerator-Toxicology" are limited and maintained in a locked key box by the Muir Administration or under the personal control of the Analyst(s) responsible for the case.

4. For short absences (e.g., lunch), it is not necessary to package and/or seal "in-progress" evidence being examined. The toxicology unit is a limited access location in the laboratory. The caps should be placed on containers containing biological fluids to prevent evidence loss or cross-contamination.

a. In-progress evidence will not be left open for an "open-ended" period of time.

K. Sealing and Returning Evidence

1. Once analysis is complete, an analyst shall seal and return evidence from the laboratory to the Evidence Storeroom.

    a. The analyst responsible for closing the case is generally responsible for also sealing and returning the evidence. However, if the analyst is unavailable and the evidence needs to be returned, another analyst may seal and return the evidence.

2. Examined containers must be tape sealed, and then initialed and dated. Scotch tape is acceptable for this purpose.

3. The evidence envelope seal must be initialed and dated across the tape seal to identify the staff member who sealed the evidence.

4. Evidence associated with the California Vehicle Code and have had alcohol analysis shall be retained and stored in the refrigerator in the Evidence Storeroom for one year after the date of collection, in order to allow for analysis by the defendant. Charges such as 655 H&N (Boating DUI), 192 PC (Vehicular Manslaughter), 215 PC (Carjacking), Accident, and Traffic will be evaluated on a case by case basis and may also be retained for one year. See BA.08 for more details.

5. All other evidence will be returned after analysis to the submitting agency. The evidence from the Sheriff's Office and Contra Costa County Contract Cities will be forwarded to Sheriff's Property and Evidence Services.

L. Evidence Release

1. A Division staff person must sign the chain of custody on the package when evidence is released from the Forensic Services Division.

    a. The release or disposition of a sample is recorded under chain of custody in the laboratory case file in the LIMS system.

2. An evidence receipt must be signed when the evidence is released from the Forensic Services Division.

3. Please refer to the Division Manual for required documentation on release of evidence for referee analysis or outside laboratory analysis (OLA).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 11/21/2019	**NUMBER:** TOX.08 - Technical Records
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 7.5**	
CHAPTER: Case Records	**SUBJECT:** Technical Records	

I. Policy: The following guidelines for the preparation of examination records must be followed in all cases. Failure to do so will result in the report and examination records being returned to the analyst for correction.

These guidelines represent the most common note taking requirements. See the Division Manual policy for more information.

A. The case record is considered files containing administrative and examination documentation generated or received by a laboratory pertaining to a particular case. For more information about Case Records refer to the Division Policy. The case record consists of:

1. The report and case notes or examination documentation, defined as the case file.
2. Any administrative records will be uniquely identified by the laboratory number and may include:
    a. Communications (phone or e-mail communication)
    b. Declaration of blood withdrawal
    c. Coroner's Request Forms
    d. District Attorney's Request Forms
    e. Police report
    f. Discovery requests or referee analysis requests
3. The electronic chain of custody. The official chain of custody is maintained in the Laboratory Information Management System (LIMS).
    a. The chain of custody at the time the case is submitted for review may be included in the case file.
4. A **reference** to the Lot # of solutions (reagents, stock solutions, internal standards, matrix standards) will be included in the "batch" or "run" documents.
    a. More information about the Lot # may be found in the respective logs
5. A **reference** to the equipment used in the case will be included in the case notes or the "batch" or "run" documents, filed separately
    a. Maintenance records of equipment used is maintained in their respective maintenance logs
    b. The GC/MS used is indicated on the GC/MS worksheet in the case notes.
    c. Additional equipment, such as pipettes and dilutors, is recorded in the batch records.
6. The only methods used for quantitative analysis are those which have been validated and approved for use.
    a. The operating parameters for these methods may be located in the Validation Binders. Any deviations from the operating parameters will be documented.
7. The following "batch" or "run" documents are generated and reviewed for each screening session.
    a. Session Traceability Worksheet
    b. Plate Reports
    c. Barcode Scanner Report
8. The following "batch" or "run" documents are generated and reviewed for each extraction.
    a. GCMS Worksheet (summary of results of standards and QCs)

b. Traceability Worksheet

c. LIMS Generated Worklist

d. Instrument Autotune

e. Instrument Maintenance Log (since last cleaning)

f. Instrument Sequence

g. Chromatograms of all standards and QCs (including test shot)

h. Calibration Curves (for quantitative methods)

i. Method Control/Instrument/Tune Parameters

j. Barcode Scanner Report

k. GC Sequence Checklist

9. Sequence "batch" or "run" documents are entered as requests in LIMS. These "run" requests will follow the normal LIMS signature pattern at each milestone to show review of data.

   a. See BA.10 "Technical Records" for the general procedure.

   b. Note the following differences:

      i. The service type used will be "Tox Screening Data" or "Tox Confirmation Data".

      ii. The lab number will correspond to the year, the quarter, and the run type (e.g. "2019 Q1 Tox Scr" or "2019 Q1 Tox Con").

      iii. The analyst will enter the Session # or Extraction # in the data extension form.

10. Communication on Business Record or Official Record for court is maintained electronically under case activities in the Laboratory Information Management System (LIMS).

B. Examination Records

1. Examination records (notes) and observations, data and calculations shall be recorded at or near the time they are made and shall be identifiable to the specific task.

2. Examination records shall be of a permanent nature in ink or computer generated. Batch documents, instrument records and logs may be maintained in print or electronic format. If corrections are made to printed records, the procedure for making handwritten corrections will be followed (see below).

3. The case notes and records shall be sufficiently detailed to include the test conditions and shall include the identity of the personnel responsible for performance of each test and technical review of results.

   a. The individual responsible for Technical Review will be documented both on the Batch Record and the signature on the Report

4. The records must be sufficiently detailed that in the absence of the analyst, another competent analyst or supervisor could evaluate what was done and interpret the data and would know the basis of the conclusions.

   a. The date(s) of analysis will appear in the report.

5. The following information for each submission should be entered into the case notes:

   a. Description of sample (including number of vials and matrix)

   b. Note about volume of sample, if less than approximately 5 milliliters for blood vials

   c. Condition of sample (sealed or unsealed)

   d. Kit number of the sample(s)/submission

   e. Notation about drugs requested on the envelope

   f. The total number of containers must be added to "number of containers" box. This information will appear on the report

   g. Use of smaller sample volumes

6. Any remarks or discrepancies will be recorded in the examination records and on the final Report of Laboratory Examination.

   a. The following conditions should be noted, these include but are not limited to

i. Any non-compliant conditions

ii. Broken Sample Container

iii. Insufficient sample for analysis

iv. Sample consumed during analysis

v. Sample not in a container provided by the laboratory (Non CCCSO Container).

7. Only the approved procedures for analysis in the Toxicology Technical Unit Manual will be used. Any discrepancies will be noted as indicated above.

8. Case notes will be single-sided on a page

9. For more information about retention of case records refer to the Division Manual.

10. In the toxicology unit, the analyst that prepares the report may not be the same as the analyst who tested the items. The individual analysts will ensure that their initials, either handwritten or secure electronic equivalent, are present on the relevant images or notes.

11. If an individual, **other than the analyst on the report**, interprets the findings including testifying concerning the documentation (eg. Business Record or Official Record), that individual will document the review of the examination documentation. Entering an activity in LIMS is documentation of the review.

    a. For cases that are associated with lab number, the business record or official record activity should be related to the request.

    b. For non-case related activity, click on the "activity button"

    c. The documentation should include that:

        i. the report and notes were reviewed

        ii. the purpose (eg. business/official record)

        iii. the reason for the review (eg. analyst retired, in training, on vacation, sick, etc.)

    d. LIMS Instructions:

        i. Under the request tab, select the request

        ii. Right click and select "activity"

        iii. Click the green "+" button

        iv. Choose the appropriate activity (court prep or court testimony)

        v. Add the time spent and the notes should document the review of the report and notes as well as the purpose and why a business or official record was done

12. Page Identification

    a. All note pages shall have the laboratory number, handwritten or computer generated initials of the examiner and the page number on the upper right hand corner of the page.

    b. The first and last page shall have the total number of pages.

13. Corrections:

    a. Technical/Administrative Review Corrections:

        i. Technical review corrections: All corrections will be recorded in LIMS in the request, in the "Notes: Reviewer" field

            1. Identify correction(s) and include the reason for the correction

            2. Record the date and technical reviewer's initials

            3. The analyst enter what correction was made and when the correction was completed with their initials and date.

        ii. Administrative review corrections: All corrections will be recorded in LIMS in the request, in the "Notes: Reviewer" field

            1. Identify corrections

            2. Record the date and administrative reviewer's initials

3. It is recommended that the analyst enter when the correction was completed with their initials and date.

b. An electronic audit trail is maintained to view changes made electronically after a case has been draft complete.

14. Disposition of Evidence

a. Routine evidence disposition is included on the report annex. Evidence associated with California Vehicle Codes (CVC) and tested for Alcohol will be kept for one year in the laboratory, then returned to the agency. All other evidence will be returned to the agency, unless otherwise noted on the report.

i. Charges such as 655 H&N (Boating DUI), 192 PC (Vehicular Manslaughter), 215 PC (Carjacking), Accident, and Traffic will be evaluated on a case by case basis. The disposition will be noted on the report as a report comment if not returned to the agency.

15. Generating Worklists

a. The analyst will generate a worklist (a list of cases to be analyzed) within LIMS. A worklist contains the following information:

i. laboratory number

ii. subject's name

iii. sample type

b. LIMS has an analytical module for Toxicology to create Confirmation Worklists. This will restrict the cases that can be added to the worklist to a specific screening analyte.

i. LIMS menu: Analysis >Toxicology> Create confirmation worklist

ii. Choose the assigned analyst (for example: Unit, Toxicology), screening analyte, and matrix (if desired)

1. The confirmation checkbox of the screening analyte must be checked (regardless of whether it is marked as positive or negative) to appear on the list.

2. Only one matrix type can be selected. If multiple matrix types are going on the list (such as blood and Coroner-blood), leave blank.

iii. Select the cases and create the worklist

iv. For extractions that have multiple related analytes (Amphetamine screen and Methamphetamine Screen have the same confirmation extraction; Cocaine screen and Opiate screen have the same urine confirmation extraction), multiple worklists will have to be created to capture all of the cases to be confirmed.

c. The LIMS created worklist is used to create the GC Sequence Checklist though a LIMS crystal report.

i. The GC Sequence Checklist will be used to ensure that vials are placed in the correct positions on the autosampler.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 02/04/2019	**NUMBER:** TOX.09 - Reports
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 7.8**	
CHAPTER: Case Records	**SUBJECT:** Reports	

I. Policy: Reports will be written in accordance with the following guidelines.

A. Report Writing

1. Reports are to be prepared by the analyst at or near the time of completion of the analysis.
2. The results of each test or series of tests carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively, and in accordance with any specific instructions in the test methods. The results shall include all the information requested by the customer and necessary for their interpretation of the test results and all information required by the method used.
3. The results will be reported in a laboratory report of examination and include the information required by the customer necessary for their interpretation of the test result (the results of analysis) as well as the method used (analytical techniques).
    a. If the request for analysis is cancelled by the requestor, the Laboratory will issue a report indicating no work was performed.
4. Reports will include information, **unless otherwise indicated**:
    a. Title of report or "Report of Laboratory Examination"
    b. Identity and location (address) of the testing laboratory
    c. Unique case identifier (laboratory number) and clear identification of the end of the report
    d. Name of the customer (submitting agency) the address of the customer is in the **report annex**
        i. The address of the contracted agencies in Contra Costa County will be maintained by the Laboratory.
        ii. An *effort* will be made to obtain addresses for agencies that do not *routinely* use the services of the Drug, Alcohol, and Toxicology Section.
    e. Method(s) used or analytical techniques employed is in the **report annex.**
    f. Description of, condition of and unambiguous identification of submitted evidence. This is the contents of the envelope. The tape-sealed condition of the outer packaging is also included.
    g. The date of request is included on the report. The date of receipt of evidence is in the **report annex.**
    h. The date(s) of the examination will be included on the report. The analyst will enter the examination date(s), a date range if applicable, in the LIMS in extended data field of the request.
    i. The reference to the sampling plan is in the **report annex**.
    j. Results of analysis including units of measurement.
    k. Routine evidence disposition will be included in the **report annex.** Evidence associated with the California Vehicle Code (CVC) and tested for Alcohol will be kept for one year in the laboratory, then returned to the agency. All other evidence will be returned to the agency unless otherwise noted on the report.
        i. Charges such as 655 H&N (Boating DUI), 192 PC (Vehicular Manslaughter), 215 PC (Carjacking), Accident, and Traffic will be evaluated on a case by case basis. The disposition will be noted on the report as a report comment if not returned to the agency.
    l. Identity and signature (or electronic equivalent), for the Toxicology Unit reports, the "approved by" signature refers to the individual who technically and administratively reviewed the case
    m. Sampling information is in the **report annex.**

5. In addition, reports shall, where necessary for the interpretation of test results, include the following, **unless otherwise indicated**:
    a. Any deviations in analytical techniques, will be included in the **case notes.**
    b. Uncertainty of reported toxicology quantitative analysis, which is included in the **report annex.**
    c. Results of toxicology analysis are conclusions.
    d. Additional information required by customer if necessary (eg. *information contained on the request*)
6. In addition, test reports containing the results of sampling, will include the following when necessary for the customer's interpretation of test results, **unless otherwise indicated**:
    a. The date of sampling will be in the case notes. The date(s) of analysis performed will be on the **report**.
    b. Unambiguous identification of the item (contents of the envelope)
    c. Location of sampling or analysis is the crime laboratory, which is included on the **report annex.**
    d. The sampling procedure is in the **Toxicology Technical Unit Manual.**
    e. There are no environmental conditions that would affect sampling, thus this is **not applicable**.
    f. Any significant deviations from the casework protocol or sample selection plan in the SOP will be authorized by the Supervisor or Manager and be noted in the **case notes**
7. In addition, test reports will contain the following:
    a. Date of report (Draft Complete date in LIMS)
    b. If no definitive conclusions can be reached, the reason will be documented
        i. For screening results that are reported as **Indeterminate**, the report will reflect that analysis indicates the sample response is below the administrative cut-off. If no confirmation is done, and further work may be performed.
        ii. For confirmatory analysis that is reported as **Inconclusive**, the reason will be indicated on the report, for example: sample matrix interference.
    c. If the sample was consumed during analysis.
    d. A statement to indicate when an item was not tested.
8. Laboratory personnel, **other than the analyst on the report**, who issue findings, interpret results, or provides testimony based on examination results will document the review of examination documents in LIMS.
    a. See *Technical Records* for a more detailed instruction.
9. For more information on the release of case report information refer to the Division Manual.
10. The electronic release of reports will be done through the Automated Regional Information Exchange System (ARIES) and in accordance with the Division Policy.
11. The format of reports will be in conformance with the Division Manual policy.
12. Amendments to reports will be in conformance with the Division Manual policy.

B. Expression of analytical results.

1. Quantitative results are expressed in appropriate concentration units.
2. Qualitative results are expressed as positive or negative.
3. **For quantitative results, the analytical result with associated uncertainty will be reported on the report.**
4. Blood or urine samples below the reporting limit will be reported as "NOT DETECTED".
5. For results that are above the linear range, the sample will be reported as "greater than" or "above" the upper limit of the linear range or limit of quantitation.
6. Where blood or urine samples are received not in compliance with prescribed collection, withdrawal, handling or preservation procedures the results are reported together with an explanation of any non-compliant condition.
    a. Any remarks will be recorded in the Laboratory Examination Notes and on the final Report of Laboratory Examination. These remarks will include, but are not limited to, any non-compliant conditions (e.g., Broken Sample Container, Non CCCSO Container…).

7. LIMS will create a final Report of Laboratory Examination of the analysis. The following information will be maintained with the report as part of the case record for each case:

    a. Laboratory Examination Notes

    b. Immunoassay data

    c. GC/MS data

    d. Image of the chain of custody which reflects the evidence transactions that are **not secure** in LIMS; typically found on the evidence envelope

    e. Any communication with requesting agency, if applicable

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE: 05/16/2013**	**NUMBER:** TOX.10
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: General Information	**SUBJECT:** Case File Images	

I. Policy: The following is the procedure for adding electronic images. Toxicology analysis often involves multiple analysts. The analyst preparing the final report may not be the only individual entering images and notes. These Instructions are intended to be a guide for usage and slight variations may be made for file names, names of folders, etc.

A. Instructions for adding **single images** to the case file:

1. Printouts from instrument software can be converted to electronic images for use in case notes by printing through an application such as JusticeTrax Imaging.

   a. When printing from an application, the printer should be set to JusticeTrax Imaging and Printer Properties set for the desired image.

   b. The following settings are adequate for imaging of the majority of text documents with JusticeTrax Imaging, however settings may be changed to meet the needs of the user and image (ie. colors, pictures, storage locations).

      i. Device Settings - select "Portrait" and "Low Resolution 200 x 200 DPI"

      ii. File Formats - select "TIFF Packed", "1 bit"

      iii. File Formats - each page saved as separate file ("Create Multipage Image" should be unchecked or "Save each page as a separate file" should be checked)

      iv. Filename Generation - "C:\Temp". Temp folders on most instrument computers will be accessible from LIMS computers.

      v. File format is dictated by LIMS requirements, settings such as resolution and color depth should be used to minimize file sizes.

2. In general, images from the GC/MS and Dynex are added into JusticeTrax using a program called JusticeTrax Indexer.

   a. The person performing the data analysis and putting the images into JusticeTrax should be logged into JusticeTrax Indexer.

   b. If the person performing the data analysis is different from the person closing the case, the analyts's initials, or secure electronic equivalent, must appear on the images.

      i. The person performing the data analysis must be logged into the indexer.

      ii. The annotation can be anywhere on the page, but the font size should be large enough to be visible.

      iii. The indexer will automatically add annotations with the username on each image. The laboratory considers this an secure electronic equivalent.

   c. Each page must be a separate image.

   d. If indexer is open when printing from JusticeTrax Imaging, the image may automatically appear in the application.

   e. Alternatively, select File > Load File from Disk and navigate to a saved image.

   f. Type the laboratory number into the Locate field to search for requests associated with that laboratory number.

   g. Select the appropriate request and then enter the image number into the Enter Image Name field.

      i. Specific prefixes are used to order images; within a prefix, images are ordered by number (eg CON01, CON02).

ii. The prefix NMS will make images appear with the report instead of notes.

iii. The prefix SCR should be used for screening images.

iv. The prefix CON should be used for confirmation images.

v. In the notes, images will appear in the following order: ENV, COR, IMG, SCR, CON, (any other name).

h. Hit the Save button.

i. Analysis images in the notes should be ordered by date, this may require renaming images in LIMS.

i. Renaming an image will not alter the secure username attached to the image.

ii. Anyone can add images, however once in LIMS images may be renamed or edited by either the person who entered the image or the person assigned to the case.

3. Images that do not require initials can be added to a case through LIMS.

a. Images must have been saved in an appropriate format and accessible from the computer being used.

b. The case is accessed in LIMS.

c. The LIMS-Imaging module can be accessed from the image button. This can be seen in case view or edit findings.

d. Select the desired request and add images (Image > Insert New Image).

e. In the dialog box that opens, navigate to the saved images.

f. Select the image to be added. If the Image >"Allow multiple images on Add" is activated, multiple images can be added at once.

g. An image name can be entered, LIMS automatically adds the date/time and iterates the images.

h. Rename the images as needed.

B. Instructions for adding **multiple images** to the case file:

1. JusticeTrax Batch Imaging can upload multiple images to LIMS using a Directory (text files within a folder for each image) or a Batch File (a single text file that lists all images)

2. Load from Directory

a. When printing through JusticeTrax Imaging, the “extract text to file” feature must be selected

b. Each image must have an associated text file, all text files for the batch must have similar formatting

c. Within Batch Imager – Application Settings, the location of the case number and request number must be set prior to loading images

i. The BA value will be 0 (Imager will not look for a BA value)

ii. For the Case and Request, a search string is entered with the number of occurrence in the file (1) and the start position and the length (number of characters)

iii. Changes in the formatting of a report may require changing the Batch application settings

3. Batch File

a. A Batch file is a text file that contains the case number, request number and the file name for the image

b. The batch file may be created by a macro or a database

c. On startup, select the text file that contains the batch image list

d. All images listed in the batch file must be present

e. To create the images, JusticeTrax Imaging may require different settings depending on the method of batch imaging

i. Chemstation Quant reports

1. The export quant macro will also create a batch text file to be used for batch imaging “imagebatch.txt” in the Temp folder.

2. JusticeTrax should be set with the desired settings prior to printing. The main difference from normal printing is the use of ini file. The names of the samples must be in case format (ie 12-1234-2) without any characters other than a space immediately after the request number (ie use "12-1234-2 s2", not: "12-1234-2, s2")

ii. GCMS worksheets (from database)

1. If you create a batch text file for the case results "worksheetBatch.txt", then you can use batch indexer for the GCMS worksheets.

2. The text file created by Access assumes that the images are printed to "C:\temp" and named "GCMS Worksheet w Case Results000001.tif" (printer settings of "Use the document name" should produce this).

f. Open the Batch Indexer. Select the desired source for images when asked. Batch Indexer will load the images and case numbers.

i. Annotation should be in an area where it is unlikely to overwrite text in the image (ie, bottom left).

ii. Uncheck the "Send BA val to LIMS" box

iii. Verify that the images correspond to the correct case and request numbers

iv. If secure electronic initials are required, the user must login before images are sent to LIMS

v. The Send box should be checked for each image along with the "Sample Data" box. The "Control Data" box should be unchecked

vi. To send the images to LIMS, click the "submit to LIMS" button

vii. The Indexer will send the images to the specified request, naming each image based on the date submitted. (If an instrument has been selected, it will be placed in a folder with the instrument name).

viii. For correct order in the lab notes, the images should be renamed per toxicology unit convention (ie con01, con02). The images will appear in the notes in the named order, regardless of folders.

C. The following is the procedure for creating **electronic "batch" or "run" documents**:

1. Batch Records may be stored electronically in a format such as PDF

2. PDF files can be created by JusticeTrax Imaging or other programs such as PDFcreator

3. Pages for the batch record may be created separately and then combined into a single PDF file with an electronic signature page

4. JusticeTrax Imaging

a. The JusticeTrax imaging can print PDFs, but generally works best for widely used software, such as Word and Access. Documents from other applications may not print as expected.

b. Set the file type to PDF or "PDF image"

i. "PDF images" will not be searchable PDFs, but may generate images as desired for the less common software applications

c. The file name and location can be set to the folder desired.

5. PDF creator

a. If PDF creator has been installed there will be an application in the Windows Program menu in addition to the printer in the Windows Printers and Faxes.

b. The application is where default settings can be selected.

i. The type of file should be PDF and the desired output folder can be set as C:\temp.

ii. AutoSave will automatically save each file printed to the desired folder.

c. If AutoSave is not selected, the user will have the option to change filenames and locations prior to saving. A dialog box will appear with each printing to allow the user to select how to proceed.

i. The user can enter the filename and save location

ii. Using the "Wait-collect" feature allows multiple files to collect into the queue

1. Previously saved files can also be added (Document menu – "Add")

iii. Once all the desired files have been printed to the queue, they can be combined into one file (Document menu – "Combine").

iv. Files can be reordered prior to combining by using the arrow buttons.

v. When ready to save the final file, click the print button. Enter the name and location and then select save. A PDF file will be created.

6. PDF file for secure electronic signatures

   a. Saving a file with the signature form requires use of Adobe Acrobat Pro (or similar)

      i. Variations may occur between different versions of Adobe. There are multiple ways to perform the same actions. See Adobe help for more information if needed.

   b. Open Adobe Pro, Select "Combine file into PDF" from the task list.

   c. Add the desired files in the dialog box that opens. The files can be organized into the desired order. Click "Combine Files"

   d. A pdf document will open with all of the individual files combined.

   e. Indvidual pages can moved/rotated/deleted.

      i. Show page thumbnails.

      ii. To move an image, select and then drag to the desired position

      iii. To rotate an image, select and the click on the rotate button. This is how the image will be viewed by default after it is saved.

   f. Once the document is formatted as desired, select "Save as Other – Reader Extended PDF – Enable More Tools (includes form fill-in & save)"

   g. Name the file and save in the desired location

   h. The file is now ready to be signed

7. Signing PDF file

   a. A properly created PDF file can be signed in Adobe Acrobat Pro or Reader. Signatures and signature appearances should be created per SOP. Signatures and appearance must be created for each different computer and software (Pro/Reader) used. The computer must have access to the network folder containing signature identities in order to validate the signature.

   b. Open the file to be signed

   c. Add the total number of pages created (for the first signature). Add any comments needed.

   d. Click on the signature box, the "Sign Document" dialog box will open.

   e. Select the desired signature and appearance and enter the password.

   f. Save the document.

   g. Document should be saved to a designated location. The file can be linked to the record in the database for ease of retrieving.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** TOX.11 - Reference Materials
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 6.4**	
CHAPTER: Quality Assurance	**SUBJECT:** Reference Materials	

I. Policy: Reference Materials will be verified, labeled and stored in a manner to ensure the integrity of the standard.

A. Reference Materials

1. Reference Material (RM): A material, sufficiently homogeneous and stable with respect to one or more specified properties (properties can be quantitative or qualitative), which has been established to be fit for its intended use in a measurement process. A reference material is a substance of known concentration and/or composition from a known source. These are defined as follows:

   a. **Certified Reference Material (CRM)**: A reference material characterized by a metrologically valid procedure for one or more specified properties, accompanied by a certificate that provides the value of the specified property, its associated uncertainty, and statement of metrological traceability

      i. Some material sold as CRMs have no stated evidence of traceability

   b. **NIST-Traceable Reference Material™ (NTRM™)**: A commercially-produced reference material with a well-defined traceability linkage to existing NIST standards for chemical measurements established via criteria and protocols defined by NIST.

      i. A NIST NTRM may be recognized by a regulatory authority as being equivalent to a CRM

2. Laboratory-generated solutions

   a. The stock and matrix solutions used for quantitation of drugs in samples are considered to be a reference material. The standards used to establish the concentration curve will be traceable to NIST (NIST Reference Material) or a CRM, where possible. The documentation of traceability will be maintained by the Toxicology Unit.

B. Ordering and Receiving

1. All reference materials will be ordered at the request of the unit. The reference standards will meet the criteria of the method in which they are used.

2. When reference materials are received they will be checked with the order and packing slip to verify order prior to use.

C. Storage, Handling and Use

1. All reference materials will be stored, handled and used in a manner that prevents contamination, deterioration and protects their integrity. This includes:

   a. **Storing** reference materials according to the vendor instructions on the reference material label or certificate.

      i. Ampules, or sealed glass containers with solution, are stored refrigerated or frozen.

      ii. Reference materials, or stock solutions and matrix solutions, are stored frozen or refrigerated within the laboratory.

         1. See respective procedures for more information about storage.

      iii. Drug Standards, controlled, non-controlled and prescription, are located in the Drug Unit or Chemical Store Room. Drug Standards should not be stored at an analyst's workbench for an extended period.

         1. If it is necessary to keep a standard for an extended period of time, including overnight, then the manager or supervisor should be notified, about the standard being kept at the workbench along with the assigned drug inventory tracking number.

2. Amounts of drugs consumed should be documented on a Drug Usage Log. See *Controlled Substance Unit Manual* for more information regarding documenting usage.

b. **Handling** the reference material with care when removing it from its storage location and returning it to its designated location.

i. Movement of reference materials within the laboratory is not considered transport.

c. **Using** the reference material utilizing good lab practices to prevent against contamination and to protect the integrity of the reference material. This may include:

i. Ensuring proper labeling.

1. Purchased reference materials are labeled with all relevant information, including concentration and expiration date. See *Lab Generated Solutions* for information.

ii. Using a calibrated pipette, draw the appropriate amount of the reference material and dilute with the requisite solvent indicated in the specific procedure.

iii. Abiding by any expiration dates on the reference material label or certificate, and not using the reference material or any solution made from that reference material past the expiration date.

1. This includes ensuring the expiration date on the reference material label or certificate is transferred to any secondary bottle or solution made from that reference material. Or, if there is a laboratory assigned expiration date that is before the expiration date of the reference material, the laboratory assigned expiration date will be transferred to any secondary bottle or solution made from that reference material.

iv. Following any safety warnings on the reference material label or certificate.

D. Verification

1. Purchased reference materials are verified. Examples of verification include:

a. Instrumental analysis such as FTIR or GC/MS analysis and comparison to a published spectrum. Some examples of publication include but are not limited to:

i. CND Analytical Profiles

ii. Instrumental Data for Drug Analysis, T. Mills & J. Roberson

iii. Mass Spectral and GC Data, K. Pfleger, H. Mauer & A. Weber

iv. Peer reviewed published articles

b. NIST or NIST-traceable standard

c. Analysis and comparison to an existing verified standard

d. A document form the vendor certifying the standard (certificate of analysis)

e. Other recognized standard from a known source

2. Documentation of verification will be maintained. These records may include:

a. Certificates of Analysis (COA) maintained either electronically or hard-copy

b. A Drug Verification Log. See *Controlled Substance Unit Manual* for more information regarding documenting verification.

3. Laboratory Generated Solutions are verified by successful use in analysis

a. See Laboratory Generated Solutions for further information

4. Source of Reference Materials

a. Reference material used in preparation of matrix standards and QCs are purchased as ampules - a solution of a drug in solvent contained within a sealed glass container

i. Where possible, standards should be a Certified Reference Material purchased from a vendor who in accredited to ISO 17025 and Guide 34.

1. If the vendor is ISO 17025 and Guide 34, the vendor's accreditation certificate and scope will be checked yearly.

2. Where possible, standards and QCs should be prepared from different vendors, this is used as a check of the identity and concentration of the materials .

3. If an alternate vendor is not available, a different lot from the same source can be used .
4. For a Resolution Solution (RS), powdered drug standards may be used

E. Reference Standards (Balance Check Weights)

1. See the policy on *Balances* for the program and procedure for calibration of check weights.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 07/31/2018	**NUMBER:** TOX.12 - Lab Generated Solutions
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 5.1**	
CHAPTER: Quality Assurance	**SUBJECT:** Lab Generated Solutions	

I. Policy: Many types of solutions are prepared by lab staff for use in analysis. This includes reagents, stock solutions and matrix solutions. Effectiveness of solutions will be verified.

A. The appropriate log must be filled in with the appropriate information.

1. Logs may be divided based on the type of solutions - Reagent, Stock, and Matrix
2. Instructions for the preparation of stock and matrix solutions can be found in the respective method.
3. A list of commonly used reagents and recipes can be found in the Reagent Preparation procedure.
4. Elution Solutions are made the same day they are used and are not logged separately from the extraction. Information regarding the chemicals used are recorded in the Extraction Traceability section of the Tox Database.
5. Working solutions are not logged separately. Information regarding working solutions for matrix solutions may be included in the matrix standard section of the Tox Database. For IS working solutions, the pipette used is included in the Extraction Traceability form.

B. Flexibility of recipes and instructions

1. Recipes and instructions are provided for a single volume.
2. The final volume for any solution can be adjusted to meet the needs of analysis. Any deviation from the published concentrations or final volumes must be approved by the Supervisor/Manager prior to adjustment.
   a. Reagent recipes must be adjusted proportionally
   b. Stock/working/matrix solutions can be adjusted for volume and/or concentration. Solution containers must be labeled clearly with the concentration so that analysts can correctly calculate amounts needed for any subsequent solutions
   c. For matrix solutions, each extraction procedure has suggested concentrations for standards and quality controls based on method validation. It is at the discretion of the analyst which concentrations will be used as long as they fall within the validated linear range of the method (unless otherwise stated in the extraction procedure). Any deviation from the published concentrations or final volumes must be approved by the Supervisor/Manager prior to adjustment.
      i. However, if there is an indication that a sample is positive within the validated linear range and it cannot be reported due to the concentrations made at the discretion of the analyst (eg. elevated LOQ) the sample should be re-run with a lower LOQ or a notation should be included on the report indicating further work may be performed.
3. Multi-analyte solutions can be made in combinations of analytes that are necessary for analysis.
4. Screening and extraction procedures indicate concentrations and volumes of solutions to be prepared; deviations from these volumes and concentrations are acceptable and will be approved by the Supervisor/Manager then documented. This can be accomplished by including information such as final volumes, starting concentrations, ending concentrations and flask size in the matrix standard logs.
5. For blood matrix solutions, preservative and anti-coagulant should be incorporated into the final solution. This may be accomplished by using blood containing a preservative and anticoagulant (eg. from a blood bank) or adding the preservative and anti-coagulant to the solution. The concentration of preservative and anti-coagulant in the matrix solution should be similar to concentrations specified in a gray-top Vacutainer vial.
6. For urine matrix solutions, preservative should be incorporated into the final solution. This may be accomplished by adding preservative to the urine. The concentration of preservative in the urine should be similar to concentrations specified in the urine jars.

C. Verification:

1. Solutions are verified and the check is documented in the respective logs.
    a. Logs will indicate who prepared the reagent and who verified the reagent
2. Buffer solutions should be tested for pH before use in casework
    a. This can be done by pH paper or use of a pH meter
    b. The method of testing may be documented
3. Solutions that do not have independent methods available for verification are verified by successful use in an extraction
    a. The method of testing will be documented (ie GCMS)
    b. The use of an extraction number (GCMS) or plate number (Dynex) can be used to identify the method
4. There may be multiple steps between a solution and verification (e.g. A stock solution is used to make a matrix solution which is then used in an extraction. The successful use of the matrix solution in an extraction can serve as verification of both the stock and the matrix solution).

D. Traceability

1. The standards used to establish the concentration curves will be traceable to NIST reference material or a Certified Reference Material (CRM), where possible.
2. The pipettes and volumetric glassware will be calibrated by vendor accredited to meet ISO 17025 by an ILAC signatory requirements with the requisite scope of work. see FSD.30 .
3. The documentation of traceability will be maintained by the Toxicology unit

E. Labeling

1. Reagents will be labeled, at minimum, with:
    a. The identity of the reagent
    b. The date of preparation and/or lot number
    c. Hazard label, if appropriate. See SAF.11
    d. Chemicals will be stored in accordance with SAF.12 and manufacturing labeling recommendations
    e. Reagents are stored in a fume hood
    f. All reagents are stored at room temperature unless labeled otherwise
2. All other solutions will be labeled, at minimum, with:
    a. The identity of the solution, including:
        i. Concentration and/or level
        ii. Analytes present
        iii. Due to limitations in the size of containers and labels, the list of analytes present may be indicated using a descriptive name based on its intended use (ie 4-panel in place of METH/BE/MOR/OXA or opi blood in place of HYD/COD/OXY/HYM/OXM/MOR)
    b. The date of preparation and/or lot number
    c. Expiration date if present

F. Expiration Dates

1. Reagents prepared from a source, or chemical, with an expiration date must carry that expiration date to the label on the reagent. If the source material used for the preparation of the reagent does not have an expiration date then the reagent will not have an expiration date. The reliability of reagents is continually checked with each extraction.
2. The expiration date for solutions prepared from reference materials are based on the expiration date of the original reference material (e.g. ampule) or may be specified by the procedure.
    a. The expiration date on a solution should not be later than the earliest expiration date of any individual component.

b. Procedures may specify or indicate earlier expiration dates (earlier than the date provided by the reference material provider) from validation data.

3. If the reference material provider does not provide an expiration date, subsequent solutions prepared from that reference material may not have an expiration date

4. If no specific expiration date is present and only a month is provided, the last day of the month will serve as the expiration date (eg. if an ampule reports an expiration date of 01/2016, the expiration date of the ampule is 01/31/2016).

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE:** 6/30/2017	**NUMBER:** TOX.13 - Reagent Preparation
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Quality Assurance	**SUBJECT:** Reagent Preparation	

I. Policy: Reagents will be prepared in accordance with recipes in the extraction methods and/or reagents binder.

A. Reagent Recipes

1. Refer to the Reagent Recipe list below for reagent recipes and hazard information.
2. Recipes may be adjusted proportionally to produce the desired final volume.
3. Reagents may be stored with appropriate chemicals (ie acids, bases, flammable) based on the properties of the reagent, or in a storage location for Extraction Reagents.
4. Most reagents made in large quantities will have a primary and secondary container, which may not be stored in the same place. (The smaller secondary containers are typically stored with extraction reagents)

B. Reagents will be checked to ensure their reliability

1. See *Lab Generated Solutions* for more information about checking reagents as well as expiration dates for reagents.

Reagent Recipes

0.1 M sodium acetate (NaOAC) buffer pH 6.0
13.6 g sodium acetate in 1 L water, add 6-10 drops glacial acetic acid



5% zinc sulfate ($ZnSO_4$) in 50% methanol
50 g zinc sulfate hydrate in 500 ml methanol and 500 ml water



0.01M acetic acid (CH_3COOH)
57 µl conc. acetic acid in 100 ml water



0.1 M acetate buffer pH 4.0
2.85 ml glacial acetic acid and 8.0 ml 1.0 M potassium hydroxide in 500 ml water



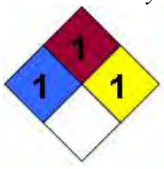
1.0 M potassium hydroxide (KOH)
5.611 g KOH, add water to a volume of 100 mL



10 N sodium hydroxide (NaOH)
40 g sodium hydroxide in 100 ml water



0.1 M hydrochloric acid (HCl) in water
4.2 ml conc. hydrochloric acid in 500 ml water



10:1 glacial acetic acid/conc. hydrochloric acid
10 ml conc. hydrochloric acid in 100 ml flask, QS with acetic acid



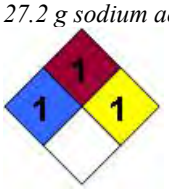
1% hydrochloric acid (HCl) in methanol
1 ml conc. hydrochloric acid, dilute to 100 ml with methanol



1.0 N sulfuric acid (H_2SO_4)
13.88 ml conc. sulfuric acid, dilute to 500 ml with water



2 M sodium acetate (NaOAC) buffer pH 4.5
27.2 g sodium acetate in 75 ml water, adjust pH with acetic acid, add water to volume of 100 ml



0.1 N sulfuric acid (H_2SO_4) (cold)
10 ml 1.0 N sulfuric acid, dilute to 100 ml with water



2.0 M TRIS buffer, pH 8.1
60.5 g TRIS base in 250 ml volumetric, dissolve with 150 ml water, add 1 ml conc. hydrochloric acid, adjust pH with HCl, QS with water



10 M potassium hydroxide (KOH) saturated with potassium bicarbonate ($KHCO_3$)
** add 150 ml DI water to 250 volumetric, add 140 g KOH, dissolve with 200 ml water, add powered KHCO3 (stirring) until no more will go into solution*



70 µg/ml phentermine
43.5 mg phentermine in 500 ml DI water



1.0 M acetic acid ($HC_2H_3O_2$)
5.75 ml acetic acid in 100 ml water



0.1 M sodium acetate (NaOAC) buffer pH 4.5
2.93 g sodium acetate in 400 ml water, add 1.62 ml acetic acid (adjust if needed with additional acetic acid), add water to volume of 500 ml



2.0 N Nitric Acid (HNO_3)
6.25 ml conc HNO_3, add water to volume of 500 ml



2 N sodium hydroxide (NaOH)
80 g NaOH, add water to a volume of 1 L



5% NH_4OH
5 ml conc. NH_4OH, add DI water to 100 mL



0.1 M potassium phosphate (KH_2PO_4) buffer pH 6.0
13.6 g potassium phosphate in 1 L water, adjust with 1M KOH to pH 6.0



0.2 M potassium bicarbonate ($KHCO_3$)/ 0.07 M potassium carbonate (K_2CO_3) pH 9.0
20.0 g potassium bicarbonate and 10.0 g potassium carbonate in 1 L water, adjust with HCl or KOH to pH 9.0



* Strong Alkaline solutions should not be stored in PET (polyethylene terephthalate) or PC (polycarbonate) containers.

10% Methoxylamine Hydrochloride
5g methoxylamine hydrochloride, dissolve in 50mL DI water
storage: EXTRACTION REAGENTS-small clear bottle



2.0 N sulfuric acid (H_2SO_4)

55.5ml conc. sulfuric acid, dilute to 1.0L with water



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/22/2019	**NUMBER:** TOX.14 - Technical and Administrative Review
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:**	
CHAPTER: Quality Assurance	**SUBJECT:** Technical and Administrative Review	

I. Policy: The technical review process addresses the appropriate use of analytical controls; correct interpretation based on analytical controls; and the consensus of results between the examiner and the reviewer. This process ensures the conclusions of the analyst's are reasonable, within the constraints of validated scientific knowledge and supported by examination documentation.

A. Any significant differences in results by the reviewer must be resolved prior to issuing a final result and report.

1. If a discrepancy is found, the report and notes along with a notation describing the discrepancy is returned to the analyst for correction.

B. Technical review shall be conducted by individuals having experience gained through training in the Toxicology Unit.

1. Personnel who have successfully passed the Toxicology competency test(s) in all areas encompassing the case are minimally qualified to perform administrative review in the Toxicology unit. **However, based on the work load and experience of the analysts the Manager/Supervisor may choose to designate a specific Criminalist as Tech Reviewer in their absence.**

2. Documentation of personnel authorized to perform technical review will be documented on the Training authorization checklist.

3. The technical reviewer will consider the following scope, which includes, but may not be limited to:

   a. Approved technical procedures used and documented, any deviations in analytical techniques will be included in the case notes

   b. Accuracy of test reports

   c. Results properly transferred from notes to report

   d. Screening performed matches the request and laboratory protocol

   e. Immunoassay controls met established criteria

   f. GC/MS positive and negative controls run with case

   g. If identification is made by GC/MS, a drug standard(s) is run with the batch of samples

   h. If selective ion monitoring (SIM) is used, established criteria are met

   i. Limit of quantitation threshold is exceeded to report positive SIM results

   j. Quantitative analysis QC met established criteria before reporting

4. The Technical Reviewer of screening or confirmation packets will use **Screening Session Technical Review Checklist** TOXF.05 or **Confirmation Packet Technical Review Checklist** TOXF.06 which includes scope listed above for each packet reviewed.

   a. The checklist will be signed, dated, and added in LIMS. (In the same request as the run packet)

5. The Technical Reviewer of a report may use a **Report Review Checklist TOXF.02** encompassing the scope listed above.

   a. It is recommended that any newly competent analyst review TOXF.02 prior to submitting cases for technical review.

   b. It is recommended that any technical reviewer that is not currently proficiency tested to reference TOXF.02 upon reassignment to this task.

6. The author of the report shall not conduct the technical review.

7. The Administrative review milestone in LIMS reflects the technical and administrative review of the case.

a. The signature of the reviewer on the laboratory report designates technical and administrative review of the report.

b. Multiple analysts may be involved in the technical review process, the administrative reviewer will ensure all batch analysis have been technically reviewed by checking for a technical reviewer signature on each batch analysis.

II. Policy: The administrative review process addresses the case report package for format and content. The reviewer verifies the requested examination has been performed and the basis for the conclusions is supported in the notes.

A. It is the responsibility of the analyst, not the Administrative Reviewer, to prepare and present a completed report package that complies with the Laboratory's policies and is free of errors.

B. All reports will be technically and administratively reviewed by a Manager/Supervisor or a person designated by the Manager/Supervisor.

C. The author of the report will not perform the administrative review.

1. Personnel who have successfully passed the Toxicology competency test(s) for all areas encompassing the case are minimally qualified to perform administrative review in the Toxicology unit. **However, based on the work load and experience of the analysts the Manager/Supervisor may choose to designate a specific Criminalist as Admin Reviewer in their absence.**

2. Documentation of personnel authorized to perform administrative review will be documented on the Training authorization checklist.

3. The Administrative Reviewer may use a **Report Review Checklist** **TOXF.02** encompassing the scope listed below.

a. It is recommended that any newly competent analyst review TOXF.02 prior to submitting cases for administrative review.

b. It is recommended that any administrative reviewer that is not currently proficiency tested to reference TOXF.02 upon reassignment to this task.

D. Administrative review will take place prior to the release of the report. Refer to FSD.43 for requirements to release information verbally.

1. The administrative reviewer will consider the following scope, which includes, but may not be limited to:

a. All information is correct on case report header (agency case number, name, agency, offense, request date, etc.)

b. The administrative and examination records are uniquely identified.

i. The unique identifier is the laboratory number.

ii. There is a clear identification of the end of the report.

c. Proper report format followed per Division policy

d. The signature (or electronic equivalent) of the author appears on the report

e. NMS Labs reports are consistent with the request.

i. All case identification is consistent with information in LIMS

ii. All pages of the NMS report are included.

f. Clarity of conclusions in report

i. Date(s) of analysis are stated accurately

ii. Uncertainty of each analyte reported quantitatively will be listed in the report annex.

iii. Inconclusive results include a report comment with a reason.

g. Method(s) used or analytical techniques employed listed on report

h. The description and identification of submitted items is clear

i. The tape-sealed condition of the outer packaging is noted

j. Chain of custody documented in report and LIMS. The date of request is included on the report. The date of receipt of evidence is in the report annex.

i. Chain of custody on envelope is consistent with the chain of custody in LIMS.

k. Evidence items listed on request form correspond to reported items

l. The notes are legible

m. Correct grammar and spelling

n. All handwritten corrections to notes shown by initialed single line strike-out, if applicable

o. All handwritten notes in ink, if applicable

p. All notes pages, including data, are properly marked with lab number, date and initials

    i. Any notes pages generated by other analysts are properly marked with lab number, initials and date.

q. The first and last notes page includes the total number of pages

r. Applicable worksheets used

s. Disposition of the evidence is included in the report.

t. Any communication is documented in the notes or telephone log documents and may be imaged into the case notes.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 02/20/2018	**NUMBER:** TOX.15 - Court Testimony and Proficiency Testing
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: 5.9.3, 5.9.3.1, 5.9.3.2, 5.9.3.3, 5.9.3.4, 5.9.3.5, 5.9.3.6, 5.9.6, 5.9.7**	
CHAPTER: Quality Assurance	**SUBJECT:** Court Testimony and Proficiency Testing	

I. Policy: Managers/Supervisors or persons designated by the Manager will review the testimony of their staff annually according to the following procedure.

A. Each analyst providing testimony will be technically reviewed by an individual who is technically competent in the tasks the review is encompassing. See FSD.26.

1. A review must be done in each discipline in which the analyst testifies at least once per calendar year.
2. Technical review is typically documented on the Internal Court Critique Form FSDF.02 according to the procedure outlined in QA.13.

B. Court Critique Forms are also available to staff members to encourage input from judges, attorneys, or peers regarding employee performance for courtroom testimony. The forms cannot be used in lieu of technical review of testimony. FSDF.03

C. There are other means of review of testimony that include, but may not be limited to, reviewing transcripts. Refer also to the Division Manual policy on Courtroom Testimony Monitoring FSD.26 .

D. Individuals shall be given feedback regarding their courtroom monitoring. Documentation of feedback will be maintained in LIMS.

1. The testimony review consists of:
   a. An evaluation of technical correctness or "content review"
   b. An evaluation of courtroom demeanor or "style review"

E. The Manager or Supervisor is responsible for assessing the feedback provided by the individual performing the review and determining if follow-up or additional action is required.

1. Deficiencies in the technical content of an analyst's testimony will be addressed per FSD.15.
2. Suggestions for improvement to the analyst's style will be addressed at the discretion of the Manager or Supervisor.

F. The records of testimony monitoring shall be retained for at least the current accreditation cycle.

G. If an individual does not testify in the calendar year, the Supervisor/Manager will document this according to the Division Manual policy.

II. Policy: Proficiency samples will be submitted to each analyst who performs testing, or an activity which contributes to the quality of testing, on a yearly basis.

A. These samples will be supplied by an outside agency, internally, or blind.

1. The samples may be for screening, confirmation or both.
2. When participating in proficiency testing, the Toxicology Unit's own approved and documented test procedures shall be used
3. Criteria for passing an external toxicology proficiency:
   a. The expectation is that staff correctly identify all drugs the lab is capable of testing.
   b. If the drug is quantitated and the vendor provides statistics (grand mean and standard deviations), the laboratory quantitative value should be within 2.5 standard deviations of the grand mean. Values between 2.5 and 3 standard deviations will be evaluated and action may be taken by the laboratory. Values outside of 3 standard deviations are considered unsuccessful and corrective actions will be taken and documented through the QA Action process.

c. If the drug is quantitated and the vendor does not provide statistics, the laboratory quantitative value should be within 25% of the mean value from the Vendor Summary Report.

4. Criteria for passing internal toxicology proficiency (spiked samples)
   a. The qualitative result must be the same as the spiked sample
   b. The quantitative result must fall within +/- 20% of the expected target value
5. Preparation of internal proficiency samples (spiked samples)
   a. Not all analytes within an extraction are required to be present
   b. Traceability information will be recorded including lot numbers of standards, lot number of blank matrix, serial numbers for equipment
   c. If an analyte with known stability issues is included:
      i. The preparation of sample, logging in of proficiency and analysis within the toxicology unit must be coordinated to ensure the sample can be analyzed in a timely manner
      ii. If appropriate, sample may be frozen until it can be analyzed
      iii. If the proficiency cannot be completed within the assigned due date, the analyst will communicate with the supervisor. The supervisor will determine whether a new sample will be made or an alternate analyte/extraction will be chosen.
6. See Division Manual policy on Proficiency Testing for more information about complying with Proficiency Review Program from the laboratory's accrediting body. FSD.23
7. The laboratory shall maintain records of proficiency testing, including:
   a. The test set identifier
   b. How samples were obtained or created
   c. Identity of the person taking the test
   d. Date of analysis and completion
   e. All data and notes supporting the conclusions
   f. Proficiency test results
   g. Discrepancies noted (refer to the Division Manual Policy)
   h. Indication that performance has been reviewed and feedback provided to the analyst
   i. Details of any corrective action taken (refer to the Division Manual Policy)
8. Records shall be retained not less than one full accreditation cycle.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 02/08/2019	**NUMBER:** TOX.16 - Validation
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 7.2**	
CHAPTER: Quality Assurance	**SUBJECT:** Validation	

I. Policy: New procedures or methods of analysis must be validated or verified before use in casework.

A. Any new method or procedure or adjustment to a current procedure must be tested in the laboratory to ensure that the method or procedure works, the verification or validation shall be as extensive as necessary. The laboratory shall record the results and document the procedure. Approval of the method for use in casework is documentation that the method is fit for toxicology analysis.

1. A Quality Action Request, or equivalent, should be generated and given to the Manager/Supervisor to be approved; then forwarded to the Quality Assurance Coordinator.

2. For more information on validation of methods see the Division Manual.

B. **Selection of Methods**

1. Screening samples by immunoassay is appropriate for reporting the possible presence of a class of drugs in a sample and meets the needs of the customer. The objective and scope of analysis is the presumptive screening of samples for classes of drugs.

2. Confirmation of samples by gas chromatography mass spectrometry is appropriate for identification or qualitative analysis of drug(s) in samples and meets the needs of the customer. Confirmation may also include quantitative analysis. The objective and scope of analysis is the identification of drug(s).

3. The customer shall be informed as to the method chosen by the Toxicology Unit by listing the analytical techniques on the report.

4. The following factors shall be taken into account in developing test methods and procedures :

a. Human factors

b. Accommodation and environmental conditions

c. Test and calibration methods and method validation

d. Equipment

e. Measurement traceability

f. Sampling

g. The handling of test and calibration items

C. **Guidelines for Performance Verification**

1. The purpose of performance verification is to ensure that a previously validated method, or method from a manufacturer, will work in the Laboratory with the Laboratory's procedure's and instrumentation.

2. Performance verification should consist of evaluation of the validated method, without making significant changes to sample preparation or instrument parameters, and demonstrating that the standards or controls have been carried through the process and yielded the expected results.

a. Prior to implementation of a validated method new to the laboratory, or a method from a manufacturer, the reliability of the procedure shall be documented in-house to ensure it is reliable.

b. Records of performance verification shall be maintained.

3. Qualified personnel criteria for a Performance Verification:

a. For an instrument verification, an analyst who is competent in the unit can complete a performance verification.

b. An analyst who is competency tested or in training can acquire data to be evaluated for the performance verification.

c. For new technology (such as instrumentation), an analyst who is competent in the unit can complete a performance verification.

D. **Qualified personnel criteria for a Method Validation:**

a. For a method validation, an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

b. An analyst who is competency tested or in training (with supervisor/manager approval) can acquire data to be evaluated by a competent analyst for a method validation.

c. For new technology (such as instrumentation), an analyst who is competent and currently proficient in the unit can plan and coordinate a method validation.

E. **Guidelines for Method Validation-Quantitative Confirmation**

1. Method validation is required on new methods, methodology or procedures. Validation is the confirmation of the requirements for identification and quantitation of drugs.

2. Methods developed by the laboratory for its own use will be a planned activity and assigned to qualified personnel. Plans will be updated as development proceeds and effective communication between the analyst and Supervisor/Manager will be ensured.

3. Documentation is required. A written description of the method used, instrument parameters, reproducibility data, and any other data (such as the criteria listed below) should be documented and available for review.

4. A method validation should consist of

a. Selecting the compounds for identification and quantitation. This may be accomplished by researching the drug of interest and looking at elimination kinetics in the appropriate matrix (blood or urine) to determine if the parent drug is an appropriate compound to use for identification, and what metabolites (if any) should be identified.

b. Evaluation of the range and accuracy of values obtained from the validated method, including uncertainty for reported quantitative values.

c. Selecting a suitable specimen size or volume of sample to be used.

d. Selecting suitable standards and quality control materials, including selection of concentrations. This may be accomplished by selection of standards and quality control materials from different manufacturer's to "check" the concentration of one against the other. The standards and quality control reference materials are "matrix matched" to the samples being extracted. Traceability is required for reported quantitative results.

e. Selecting a suitable internal standard. This may be accomplished by selecting an internal standard with chemical and physical properties as similar as possible to the drug(s) of interest. Stable isotopes (eg. deuterated) standards are recommended for GC/MS assays, although non-deuterated standards may also be used. The internal standard should be added at the earliest possible stage in the extraction so that the internal standard is taken through the extraction process.

f. Establishing selectivity for the drug of interest. This may be accomplished by running similar compounds with the same temperature program to establish different retention times and/or ions of interest to demonstrate that compounds in the same "family" will not be misidentified due to similar retention times and sharing of common ions.

g. Establishing the linearity of the method. This may be accomplished by running standards of a known concentration to establish the upper and lower limits of linearity for the extraction. When the limit of detection (LOD) and limit of quantitation (LOQ) is being selected (drug use patterns for the drug of interest should be taken into account, including therapeutic ranges. Linearity should be demonstrated by a minimum of three standards as calibrators of the curve.

h. Evaluating Robustness of the method or procedure against external influences, and/or cross-sensitivity against the matrix of the sample tested, and/or variations in equipment or personnel.

i. Establishing lack of carry-over. This may be accomplished by running standards higher than the highest calibrator and establishing that no carry-over is present in the next sample. For quantitative analysis, this is a sample that is typically 10 times greater than highest calibrator.

j. Establishing criteria for acceptance of chromatographic calibration. This may be accomplished by stating in the method the minimum criteria for a passing run:

i. Correlation coefficient or "r2" value (for quantitative analysis, typically above a 0.96)

ii. Ion ratios within specified range (for quantitative analysis, typically above a +/- 20% absolute)

iii. QC values passing (for quantitative analysis, typically +/- 20% of known value)

iv. Retention times acceptable for samples (for quantitative analysis, typically +/- 3% of standard retention times

v. Blank is negative (for quantitative analysis, typically blank is below LOQ)

vi. Acceptable chromatography (sufficient peak shape and resolution)

F. **Guidelines for Method Validation-Qualitative Confirmation**

1. The guidelines for qualitative method validation are the same for quantiative method validation, as indicated above, and should be evaluated and documented, with the following exceptions:

a. Evaluation of uncertainty is not required.

b. Selection and evaluation of quality control samples is not required.

c. Establishing linearity is not required. However, it is suggested an appropriate cut-off sample and high sample are selected that will encompass the range of values expected to be encountered in casework.

2. The analyst should establish criteria for acceptance of chromatographic calibration. This may be accomplished by stating in the method the minimum criteria for a passing run:

a. Ion ratios within specified range (typically above a +/- 20% absolute)

b. Retention times acceptable for samples (typically +/- 3% of standard retention times)

c. Blank is negative (typically blank is below cut-off)

d. Acceptable chromatography (sufficient peak shape and resolution)

3. Documentation is required. A written description of the method used, instrument parameters, reproducibility data, and any other data (such as the criteria listed above) should be documented and available for review.

G. **Guidelines for Method Validation-Immunoassay Screening**

1. A method validation should consist of:

a. Selecting the target analyte and sample matrix for screening. This may be accomplished by abiding by the suggested analytes from the manufacturer of the specific immunoassay plate kits.

b. Selecting a suitable specimen size and dilution. Manufacturer’s suggestions will be considered. The selection of the specimen size and dilution will aide in determining the anticipated results for the blank/negative matrix sample.

c. Selecting appropriate cutoff for the assay. If possible, the cutoff for the assays should coincide with the established LOQ for the corresponding confirmatory analysis for the drug group of interest. The results for the immunoassay cutoff should have a significant difference from the result of the blank/negative matrix sample.

d. Specificity/selectivity should be considered by the analysis of controlled substances that are similar to the drug group of interest. The list of controlled substances may contain the controlled substances that the manufacturer has listed in their cross-reactivity information or may include available controlled substances to the drug group of interest.

e. Establishing repeatability by analyzing at least five replicate samples of known composition at an amount between twice the cutoff to four times the cutoff. The number of false negative should not exceed more than one sample in five replicates. The number of runs for establishing repeatability should be at least two.

2. Documentation is required. A written description of the method used, instrument parameters, reproducibility data, and any other data (such as the criteria listed above) should be documented and available for review.

H. **Software**

1. When computers or automated equipment are used for the acquisition, processing, recording, reporting, storage or retrieval of test data, the laboratory shall ensure that **laboratory configured** software is suitably validated and

documented as being adequate for use.

2. Commercial off-the shelf software used within its designed application range will be considered to be sufficiently validated. In the Toxicology Unit, this may include, but is not limited to:

    a. Agilent ChemStation software and firmware

    b. Agilent MassHunter software and firmware

    c. Libraries used for presumptive identifications

    d. Dynex Revelations Software and firmware

3. Documentation of software validation will be reviewed by a Supervisor/Manager prior to approval for use. If the software is controlled or approved through the use of a software log, the approval initials in the log will document the review and approval of the validation. If the software is controlled or approved through PowerDMS, the electronic approval signature will document the review and approval of the validation.

I. **Equipment**

1. Equipment that is new to the laboratory shall be properly evaluated to ensure its reliability. The evaluation will be documented.

    a. If the type of equipment already exists within the laboratory and additional equipment of the same type is obtained, a verification of the equipment may be satisfactory to ensure its reliability. This verification shall ensure that the equipment is operating properly. This will be evaluated by the Supervisor/Manager.

    b. If the equipment is a new methodology or the operation is significantly different from equipment already in the laboratory, validation, training and an associated competency may be necessary. This will be evaluated by the Supervisor/Manager. The competency test will meet the requirements of the laboratory's accrediting body.

2. Before being placed into service, equipment shall be calibrated or checked to establish that it meets the laboratory's specification requirements. It shall be checked or calibrated before use in casework.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 08/28/2018	**NUMBER:** TOX.17 - Care and Maintenance of Equipment
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: None**	
CHAPTER: Equipment	**SUBJECT:** Care and Maintenance of Equipment	

I. Policy: Analysts or outside service technicians perform calibration checks and maintenance of equipment and instruments.

A. The Toxicology Unit is furnished with the measurement and test equipment required for the correct performance of tests.

1. The measurement equipment includes:

a. Eppendorf Pipettors, or equivalent, adjustable volumes: various sizes and ranges

b. Repeating Pipettors (Ripette or equivalent)

c. Serialized volumetric flasks, Class A: various sizes

2. When equipment is transported to an external calibration laboratory, it should be packaged and transported to prevent damage.

a. The laboratory specification for the calibration for the above listed equipment are typically documented in a letter sent to the external calibration laboratory along with the equipment or is maintained in a customer file at the external calibration lab. A copy of the letter is also retained in the laboratory.

3. The test equipment includes:

a. Agilent Gas Chromatograph/Mass Spectrometer (GC/MS)

b. Dynex DSX

c. Hamilton digital dilutor with hand probe, Model 500, or equivalent

d. Thermo Scientific Orion Star A111 pH meter, or equivalent

e. Centrifuge

f. Heating block

g. Evaporator

h. Volumetric flasks, Class A: various sizes

i. Balance

j. Vortex Mixer

B. The equipment listed and its software used for testing is capable of achieving the accuracy required for qualitative and quantitative testing of suspected controlled substances in biological fluids.

C. Equipment will be operated by authorized personnel. The authorization will be documented on the authorization checklist.

D. Each piece of equipment and its software significant to the test result in the toxicology unit is uniquely identified.

E. Before being placed into service, equipment will be calibrated or checked to establish that it meets the laboratory's requirements. The test equipment shall meet the vendor's performance check criteria or the laboratory criteria before being used. The check criteria will be documented.

1. All new pipettes or serialized volumetric flasks will be calibrated before being used in casework.

F. After being placed into service, equipment will be calibrated or performance checked to establish that is continues to meet the laboratory's requirements. If equipment does not pass a performance check criteria or calibration tolerances (eg. AS FOUND data listed on the calibration certificate), an evaluation of the equipment's impact on casework will be completed and documented.

1. When an evaluation determines that the reported results are not affected, a level 2 log entry will be cross referenced in the equipment calibration log.
2. When an evaluation determines the reported results are affected, the impact will be documented through the QA ACTION process. See FSD.15

G. GC/MS

1. Each uniquely identified GC/MS in the Toxicology Unit has an accompanying maintenance binder or electronic equivalent that includes :
   a. The identity of the equipment, given as the laboratory assigned identifier and software (version number or equivalent)
   b. The manufacturer's name and serial number or other unique identification
   c. The Tune reports to ensure the equipment complies with specifications
   d. The dates, results or reports of any adjustments. The report of the tune indicates acceptance criteria for use in casework
   e. Any damage, malfunction or repair
   f. Documentation of maintenance carried out
2. The instructions for use of GC/MS and the maintenance plan are contained in the Toxicology Unit manual:
   a. See GC/MS Dean Switch
   b. See GC/MS Routine Maintenance
   c. See GC/MS Cleaning the Ion Source
   d. See GC/MS Changing the Column
   e. See GC/MS Cleaning the Inlet
   f. See GC/MS Vacuum Pump Maintenance
   g. See GC/MS Using the Software-Comparative Identifications
   h. See GC/MS Using the Software-Quantitative Identifications
   i. See GC/MS Using the Software-Sequences
   j. See Instruments-Storage of Data
   k. See GC/MS References

H. Dynex DSX

1. The uniquely identified instrument in the Toxicology Unit has an accompanying maintenance binder or electronic equivalent that includes :
   a. The identity of the equipment, given as the laboratory assigned identifier and software (version number or equivalent)
   b. The manufacturer's name and serial number or other unique identification
   c. The self checks which are diagnostic checks that the equipment complies with manufacturer's specifications
   d. The dates, results and copies of reports or certificates of maintenance or adjustments
   e. Any damage, malfunction or repair
   f. Documentation of maintenance carried out
2. The instructions for use of the Dynex and the maintenance plan are contained in the Toxicology Unit manual:
   a. See Performing Immunoassays
   b. See Dynex Operation
   c. See Dynex Maintenance
   d. See Dynex References

I. Variable Pipettes and Repeating Pipettes

1. The term pipettes will apply both to single use (variable) and repeating pipettes
2. The uniquely identified Pipettes in the Toxicology Unit have a maintenance binder or electronic equivalent that includes :
    a. The identity of the pipette
    b. The manufacturer's name and serial number or other unique identification
    c. The annual external calibration which indicates that the equipment complies with specifications as listed on the calibration certificate
    d. The dates, results and copies of reports or certificates of maintenance or adjustments
    e. Any damage, malfunction or repair
    f. The documentation of the maintenance is in the maintenance log.
3. The instructions for use and the maintenance plan are contained in the Toxicology Technical Unit Manual.
    a. See Diluters and Pipettes

J. Balances

1. The uniquely identified balance in the Toxicology Unit has a maintenance binder or electronic equivalent that includes :
    a. The identity of the balance
    b. The manufacturer's name and serial number or other unique identification
    c. The Monthly Calibration checks that the equipment complies with specifications as indicated in Balances
    d. The dates, results and copies of reports or certificates of calibrations or any adjustments.
    e. Any damage, malfunction or repair
    f. Documentation of maintenance carried out
2. The instruction for use and the maintenance plan are located in the Toxicology Unit manual.
    a. See Balances

K. pH Meter

1. The pH meter in the Toxciology Unit has a maintenance binder or electronic equivalent which includes :
    a. The identity of the pH meter
    b. The manufacturer's name and serial number or other unique identification
    c. The calibration checks performed, and the buffer levels used
    d. The dates, results and copies of reports or certificates of calibrations or any adjustments.
    e. Any damage, malfunction or repair
    f. Documentation of maintenance carried out
2. The instruction for use and the maintenance plan are located in the Toxicology Unit manual.
    a. See pH Meter

L. Volumetric Flasks

1. Flasks are divided into two categories: serialized and non-serialized
2. Serialized flasks are uniquely identified and used to prepared standards for quantitative analysis, and have a binder or electronic equivalent which includes :
    a. The identity of the flask
    b. The manufacturer's name and serial number or other unique identification
    c. The Calibration checks performed
    d. The dates, results and copies of reports or certificates of calibrations or any adjustments.
    e. Any damage, malfunction or repair

f. Documentation of maintenance carried out

3. Non-serialized flasks are not calibrated or documented

4. The instructions for use and the maintenance plan are contained in the Toxicology Technical Unit Manual.

a. See Glassware

M. Thermometers

1. Thermometers are only occasionally used by the toxicology unit. The toxicology unit may use the thermometers maintained in the Alcohol Unit.

2. The instructions for use and the maintenance plan are contained in the *Blood Alcohol Technical Unit Manual* .

N. Diluters-Hamilton 500 or equivalent

1. Each uniquely identified diluter in the Toxicology Unit has a maintenance binder or electronic equivalent that includes:

a. The identity of the diluter

b. The manufacturer's name and serial number or other unique identification

c. The Calibration checks that the equipment complies with specifications as indicated in Diluters and Pipettes

d. The dates, results and copies of reports or certificates of calibrations or any adjustments.

e. Any damage, malfunction or repair

f. Documentation of maintenance carried out

2. The instructions for use and the maintenance plan are contained in the Toxicology Technical Unit Manual.

a. See Diluters and Pipettes

O. Centrifuges

1. Centrifuges are used to separate samples into layers (solid/liquid or liquid/liquid)

2. The speed of the centrifuge is not critical for analysis, nor is the exact time of centrifugation

3. Speeds may be indicated on the centrifuge as a number (1-10) or RPM, depending on model.

a. Speeds indicated in extraction methods are suggestions.

b. The analyst may use the settings that produce the desired separation.

4. Centrifuges are not uniquely identified or documented.

P. Evaporator

1. An Evaporator is used to reduce the liquid volume of a sample by applying heat and nitrogen gas or air flow.

2. The temperature, air flow and time are not critical for analysis

3. Evaporators are not uniquely identified or documented

Q. Heating Block

1. A heating block is used to apply heat to samples, it is typically employed for hydrolysis or derivatization

2. Temperatures listed in methods do not have to be exact

3. Temperature of a heating block can be monitored using a thermometer placed directly into the heating block

a. Heating blocks and thermometers can be verified with a NIST traceable calibrated thermometer

b. Heating blocks are not uniquely identified or documented

R. Vortex Mixer

1. The mixer is used to mix samples

2. This can be for single or multiple tubes

3. Neither the speed nor the amount of time at which the samples are mixed are critical

4. Vortex Mixers are not uniquely identified or documented

S. Equipment that needs repair shall be taken out of service. It shall be clearly marked or labeled as being out of service until it has been repaired and/or shown by calibration or test to perform correctly. If there is a concern that the defect affected previous tests, the laboratory shall investigate. Any investigation will be documented and referenced appropriately and retained in the unit.

T. Equipment can be cleaned with isopropanol, methanol, a diluted bleach solution or any other suitable chemical.

1. External surfaces of pipettes used to dispense blood or urine should be disinfected with a diluted bleach solution after all samples have been dispensed in a batch

U. Test equipment will be handled according to procedures in the SOP and in accordance with training such that the equipment is safeguarded from adjustments which would invalidate the test and/or calibration results. If any damage, malfunction or repair is needed the equipment will not be used for casework until remedial action is taken.

1. Procedures for proper use of the GC/MS, Dynex, pipettes, Hamilton Diluter, volumetric glassware, pH meter, and balance can be found in the associated sections of this technical unit manual. By following the procedures and using equipment in accordance with proper training, equipment will be safeguarded from adjustments that may invalidate test results.

V. Accommodations and Environmental Conditions

1. The laboratory is in a climate controlled building and the lighting and energy sources are suitable for general toxicology analysis

2. There are no environmental conditions in the technical requirements for general testing of drugs that need to be documented or monitored

a. Specific methods may include additional data about the impact of environmental conditions. A bypass switch is present in the toxicology unit that can be used to maintain the climate controlled conditions after hours if needed.

b. Reference materials that require refrigeration or freezing are stored in a refrigerator or freezer which is monitored

3. If power to equipment is lost, analysts will ensure that it is working properly prior to resuming toxicology analysis.

4. Access to areas of the laboratory are limited and controlled.

a. There is separation between drug unit and toxicology units, where cross contamination may occur. Analysts from toxicology remove lab coats before entering drugs and vice versa.

5. Analysts are responsible for maintaining a clean work area and general lab cleanliness. Trash is picked up from the lab and routine cleaning is performed by General Services Department (GSD). Non-routine cleaning (eg.. floor waxing, etc.) is scheduled with General Services Department (GSD)

W. Temperature Monitoring System

1. The laboratory will utilize an online temperature monitoring system (such as Freshloc) to record refrigerator and freezer temperatures.

a. Refrigerators or freezers that contain reference materials, standards or evidence may be monitored.

b. A sensor will be placed in the refrigerator or freezer.

i. The monitoring system will collect temperature data from each the sensors approximately every 5 minutes.

ii. Criteria for acceptable temperature ranges will be determined by the laboratory.

iii. If the sensor reads outside of the acceptable criteria and email will be generated by the monitoring system to lab staff.

c. If a sensor fails to read or record an email will be sent to lab staff.

i. Lab staff will re-mediate any problems encountered by the equipment.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** TOX.18 - Software
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 7.11**	
CHAPTER: Equipment	**SUBJECT:** Software and Report Validation	

I. Policy: The following is the policy for controlling software and tracking the version of software in use in the Toxicology Unit.

A. Software

1. **Validation of Software**

a. If the software is off-the-shelf software, no validation or verification is required.

i. If this software is used to make calculations that would affect the result, the application of that software (eg. formulas) may need to be validated.

b. If the software is "custom" or developed by the user, then documentation of validation or verification is required. See *Validation* for more information about Software.

2. **Identification and Control (or Approval) of Software**

a. Any version of Microsoft Word, Excel, Access, ActiveSync, Adobe Reader, Adobe Pro, PDFcreator, JusticeTrax Indexer, JusticeTrax Batch Image Capture, or MiniTab is considered to be approved for use and does not need to be uniquely identified or approved.

i. If this software is used to make calculations that would affect the result, the application of that software (eg. formulas) may need to be uniquely identified (eg. excel spreadsheet) and approved for use (eg. as a document in PowerDMS).

b. For the barcode scanning devices, any version of SSE Technologies Comparison Checker software is considered approved for use and does not need to be uniquely identified or approved.

c. Equipment and its software need to be uniquely identified and approved for use.

i. The identity, version of software or equivalent, will be logged in the maintenance binder for each piece of equipment used for qualitative and quantitative testing. See *Care and Maintenance of Equipment*. The control or approval for use should be documented in the maintenance log by the Manager or Supervisor.

d. Custom or user-developed software needs to be uniquely identified and approved for use. The control or approval for use should be documented by the Manager or Supervisor.

3. **Software Upgrades/Changes/Additions**

a. Manufacturer's technical support personnel, technical personnel contracted by the Laboratory, technical services personnel and approved lab staff may make changes, additions or upgrades to software.

i. Only Laboratory staff designated by the Manager or Supervisor should make changes, additions or upgrades to custom or user developed software. The documentation of approval by the Manager or Supervisor on the Software log will be considered as documentation that the Laboratory staff that made the change was designated to do so by the Manager or Supervisor.

B. Chemstation Macros are present on certain GC/MS instruments within the Toxicology Unit. They are sometimes edited to accommodate any changes in Chemstation software or instrument installed. A Verification is performed when changes occur. A log of any changes/edits are kept in the instrument maintenance log.

C. The Toxicology Unit has a Traceability Database that is an MS Access database program created and maintained by laboratory staff. The purpose of the Traceability Database is to maintain records regarding all equipment used within the unit. Information from reference materials inventory to chemicals, glassware and instruments used to analyze samples for controlled substances content. For more information on the Traceability Database see TOX.64 Toxicology Tracking Database which includes operation, functionality, instructions for use, data entry, and backing up data.

1. The Toxicology GCMS Worksheet that is included in the notes of each toxicology report displays all of the traceability data for the run.

2. Changes to the toxicology tracking database are kept in a log for the database by laboratory staff.
3. The toxicology tracking database is backed up routinely onto an external hard drive at least every month.

D. The Toxicology Unit will validate crystal templates used for final LIMS Case Reports and Notes.

1. The following is the procedure for LIMS generated report and note validation:
    a. Any relevant changes in the Technical Unit Manual and any other related procedures need to be updated prior to implementing the changes in the LIMS crystal reports.
    b. Ensure that all of the outstanding reports have been Administratively Reviewed.
        i. Reports in Progress (i.e. extraction in progress, results manually entered) are unaffected during the validation process as long as notes are not printed for the Case File.
    c. LIMS administrator can now make the necessary changes.
    d. Log off of LIMS and then log back into LIMS to ensure that the current updated crystal reports are loaded into LIMS at your workstation.
    e. Obtain a copy of the Uncertainty Budget that is to be approved
        i. An excel document can be found in Muir Lab network share (LAB\MUIR\1-MUIR ALL\Uncertainty Budget Committee\Uncertainty Budgets\Tox Budgets)
        ii. Obtain a printed copy of the crystal report for the final LIMS Case Report and the Notes with the Uncertainty Budget that is to be approved, see LIMS administrator for assistance.
        iii. Check the excel document with the crystal reports.
    f. Open the Excel spreadsheet "LIMS Report Validation Template" located on the Toxicology Unit network share (LAB\MUIR\1-TOX\LIMS Report Verification)
        i. Update the UOM values in the spreadsheet.
        ii. Update cells as necessary based on the newly calculated values.
    g. Laboratory Report Number 12-2191 has been created for Toxicology report verification purposes.
        i. The numerical results do not need to be changed for each analyte, but can be if warranted.
        ii. Print the report and notes for all of the requests associated with uncertainty.
        iii. Laboratory Number 12-2191 is a test case, so not all requests may pertain to the Uncertainty of Measurement validation.
    h. Compare the values in the spreadsheets with what has been printed in the LIMS reports and notes.
    i. Rounding procedures for the result and the uncertainty are as follows:
        i. The reported uncertainty for an analyte cannot exceed two significant figures and should not exceed the number of decimal places of the calculated results.
        ii. The uncertainty calculation is rounded up using the GUM rounding method. (Examples below for a three digit result.)
            1. 0.0211 is rounded to three decimals as 0.022
            2. 0.0210 is rounded to three decimals as 0.021
            3. 0.0041 is rounded to three decimals as 0.005
            4. 0.0040 is rounded to three decimals as 0.004
        iii. The report and the analytical result are not to exceed the same number of decimal places as the reported uncertainty (i.e. 0.500 mcg/mL ± 0.075).
            1. If the reported uncertainty has fewer decimal places than the calculated result, the result is truncated (i.e. a result of 0.756 mcg/mL ± 0.26 is truncated to 0.75 mcg/mL ± 0.26)
        iv. The number of significant figures of the report result and analytical result may exceed the number of significant figures of the reported uncertainty (i.e. a result of 1.256 mcg/mL ± 0.32 is reported as 1.25 mcg/mL ± 0.32 or a result is reported as 0.025 mcg/mL ±0.006)
    j. Open the Word document titled " LIMS Report Verification Template" located on the Toxicology Unit network share (LAB\MUIR\1-TOX\LIMS Report Verifications)

i. Update the applicable changes to the report.

k. Save both the Excel and Word documents on the network share (LAB\MUIR\1-TOX\LIMS Reports Verifications)

i. create a new sub-folder with the year of validation as the title if necessary

l. Submit the following documents to the Supervisor or Manager for review:

i. Excel Spreadsheets

ii. Word Documents

iii. Crystal Report print out

iv. Printed reports and notes for all of the requests validated.

m. The LIMS administrator will document written notification (i.e. e-mail) of the changes made in LIMS report and note templates.

n. Make a new entry in the "Toxicology Unit Software Verification Binder."

i. Entry should be signed off by a Supervisor or Manager.

ii. Include all paperwork submitted for review and the LIMS administrator's written notification.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 08/29/21018	**NUMBER:** TOX.19 - Balances
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.5, 5.6**	
CHAPTER: Equipment	**SUBJECT:** Balances	

I. Policy: Balances will be calibrated and checked to ensure their reliability.

A. New or Serviced Balances

1. A balance new to the laboratory, or a balance that has been serviced or has undergone substantial maintenance will be calibrated before being used in casework.

B. Annual Calibration

1. The balance in the toxicology unit will be calibrated yearly.
2. The laboratory will maintain copies of the certificates obtained for at least the current five year accreditation cycle.
3. The external calibration service should label the balance to indicate the calibration status, including the last calibration and the recommendation for the next calibration.

C. Monthly Accuracy or Calibration Check

1. The balance in the Toxicology Unit will be checked monthly to ensure that it is operating satisfactorily. This procedure shall be performed by an analyst or a specialist.
   a. Calibration or accuracy checks must be done with reference standards that are NIST (National Institute of Standards and Technology) traceable or using American Society for Testing and Materials (ASTM) - ASTM 1 or ASTM 2 weights.
   b. The results of the check will be logged. During the monthly check, the balance should also be checked for cleanliness and to ensure that it is level.
2. **Procedure for checking the calibration of the balances in the Drug, Alcohol and Toxicology Section**.
   a. Turn the balance on
   b. Ensure that the balance is level
   c. Tare the balance to a zero weight (0.000)
   d. Place the weight (M1) on the center of the balance.(See Table 1 for the reference standard M1 as appropriate for each balance).
   e. Record the weight result in the Balance Calibration Log
   f. Remove the reference standard (M1)
   g. Tare the balance to a zero weight (0.000)
   h. Repeat with the reference standard M2. (See Table 1 for the reference standard M2 as appropriate for each balance).
   i. Record the weight result in the Balance Calibration Log
   j. Remove the weight (M2)
3. Refer to Table 1 for the allowable error range
4. If the balance falls outside the acceptable range the balance must be taken out of service. Calibration or adjustment shall be performed by an external calibration service which meets the guidelines of ANAB ISO/IEC 17025.
5. The following references were used during the development of this procedure:
   a. Instruction Manual for Precision Advance Electronic Balances, GT Series. Ohaus

b. 1998 Annual Book of ASTM Standards, General Methods and Instrumentation. ASTM. Section E 898-88, pages 541-544.

D. **Instructions for weighing on the balance.**

1. Balances are not typically used directly in casework in the toxicology unit. The balance is used to weigh out a specified amount of chemical in preparing reagents. The following instructions apply to the weighing of a substance to achieve a target amount.

   a. Place the weighing media near the center of the scale. Tare the weighing media.

   b. Dispense estimated amount of item to weighing media.

   c. Check weight, add or remove sample as necessary to obtain a weight near target.

   d. Close the draft cover (if applicable).

   e. Allow time for balance to settle. If the balance will not settle (more than 10 seconds and still fluctuates) use the lowest weight.

   f. Observe the weight. Compare to target weight in reagent recipe.

   g. Repeat steps above (3-6) until target weight is achieved.

E. **Handling of Equipment**: Follow the instructions for using the equipment. The balance should not be adjusted by laboratory staff as this may invalidate the calibration. If adjustments are necessary, the equipment will be sent out for adjustment and calibration.

TABLE 1

Balance ID	Model	Serial #	Location	M1/M2	Error Range (+/-)
1	Mettler PB303-S	112116384	Drug Station 1	0.100g/10 g	0.005
2	Mettler BB244 Delta Range	J94874	Clan Lab Area	0.100g/10 g	0.005
7	Mettler PB303-S	1118390093	Drug Station 2	0.100g/10 g	0.005
8	Mettler PB303-S	1118390092	Drug Station 3	0.100g/10 g	0.005
10	Metter PG503-S Delta Range	1118190952	Toxicology	0.100g/10 g	0.005
11	Mettler AB204-S	1119122298	Alcohol	1.0 g/10 g	0.0005 for 1.0 g and 0.005 for 10
12	Mettler PB303-S	1122252848	Drug Station 4	0.100g/10 g	0.005
13	Ohaus EP4102	N217 1123271769P	Large Drug Balance	50 g/1000 g	0.05

F. Reference Standards

1. The reference standards, check weights, will be checked yearly by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification. See FSD.28 and FSD.30.

   a. The Drug unit will evaluate the certificates and report correction factors to the UOM committee for evaluation.

2. The laboratory will maintain copies of the certificates obtained for not less than the current five year accreditation cycle.

3. All reference standards will be stored, handled, used and transported in a manner that prevents contamination, deterioration and protects the integrity of the reference standard. This includes:

   a. **Storing reference standards in the packaging provided by the manufacturer to prevent deterioration.**

b. **Handling reference standards, when practical, with the tweezers provided to minimize deterioration.**

c. **Using** reference standards for their intended purpose, i.e. balance calibration checks.

   i. If a reference standard is dropped, it will be sent out for calibration.

d. **Transporting** reference standards in the packaging provided by the manufacturer to prevent deterioration. Transporting reference standards may be necessary when weights are transported to/from the external calibration laboratory.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 05/08/2017	**NUMBER:** TOX.20 - Diluters and Pipettes
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6, 5.5.8, 5.5.10, 5.6.2.1.1** **ASCLD-LAB International Supplemental 2011: 5.6.1.1**	
CHAPTER: Equipment	**SUBJECT:** Diluters and Pipettes	

I. Policy: All instruments used for toxicology analysis are kept in good working order to ensure their reliability. Below are the procedures that should be followed for the care and maintenance of diluters and pipettes in the Toxicology Unit. (ISO/IEC 17025:2005 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6)

A. **Hamilton Diluter (Microlab 500 series)**

1. **New or Serviced Diluters**

   a. A diluter new to the laboratory, or a diluter that has been serviced or has undergone substantial maintenance will be checked before being used in casework.

2. **Accuracy or Calibration Checks** (ISO/IEC 17025:2005 5.5.10)

   a. The diluters in the Toxicology Unit will be checked periodically to ensure that they are operating satisfactorily.

      i. See below for the specifications.

   b. The results of the check will be logged in the Hamilton Diluter Maintenance Log.

   c. If the equipment falls outside the acceptable tolerance range the equipment must be taken out of service.

   d. For toxicology analysis, the calibration checks will be performed at least once per year

      i. See procedure below for gravimetric check

      ii. External calibration may be performed by an ISO 17025 compliant vendor, but is not required if used only for screening analysis

      iii. The check, minimally, will include a separate measurement of the right and left syringes and one combined measurement. The accuracy of the mean of at least six replicates must be within ±1% of the target value for volumes greater than or equal to 250 µl. The accuracy of the mean of at least six replicates must be within ±5% of the target value for volumes less than 250 µl.

      iv. Suggested Volumes for checks:

Left syringe (µl)	Right Syringe (µl)	Combined (µl)
800	200	1000
885	15	900
1770	30	1800

3. **Routine Maintenance-Monthly Visual Checks:** The purpose of the visual inspection is to assess wear or build-up. Visual inspections for leaks need to be conducted by either priming the diluter or while in use. Replacement or cleaning should be performed if build-up, wear or leaks are detected. The monthly checks consists of:

   a. Inspection of the tubing and syringes for leaks and build-up

   b. The check will be documented in the Hamitlon Diluter Maintenance Log.

4. **Instructions for Use**: referenced from: Hamilton User's Manual MicroLab 500 B/C Part #69176 (rev. D) © **July 1999** (ISO IEC/17025:2005 5.5.3)

   a. The Hamilton Microlab 500 series Digital Diluter is routinely used to dispense known quantities of sample mixed with known quantities of a diluent for immunoassay analysis. The Hamilton 500 series is an instrument which accurately and precisely aspirates and dispenses fluid at the touch of a hand probe button or the tap of a foot switch.

b. The Hamilton Diluter as maintained within the laboratory is a dual liquid solution dispensing unit which combines liquid samples into a single mixture by incorporating two syringes each controlling the amount of each solution volume to be dispensed. One syringe extracts and dispenses solution from a bottle containing internal standard and the other extracts from a desired sampling source.

c. The Hamilton Diluter Microlab 500 series is an easily-programmed instrument ideal for performing multiple dilute and dispense methods. The programmed method is used to dispense the samples. See individual immunoassay methods for the programs.

d. How a Hamilton Microlab Diluter works:

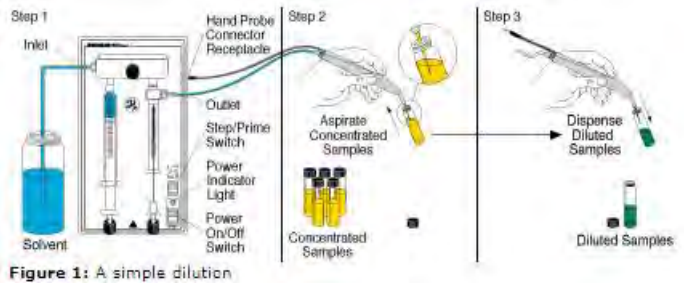


Figure 1: A simple dilution

i. **Step 1**: Fill the left syringe with the programmed amount of solvent (diluent) from the reservoir.

ii. **Step 2**: Aspirate the programmed amount of sample into the end of the probe using the right syringe. Steps 1 and 2 may occur simultaneously.

iii. **Step 3**: Dispense the sample and solvent into a vial to complete the dilution.

e. The instructions for general use of the Hamilton Diluter are as follows:

i. The Hamilton Diluter needs to be plugged in. Turn the unit ON with the black rocker switch located on the front right side of the face of the unit.

ii. Make sure the correct bottle with the proper solution is connected to the left syringe unit prior to dispensing.

iii. Flush the syringe several times (3-4 times) with the solution within the bottle to clear out any residual solution/bubbles in the syringe and tubing.

iv. There are preset methods that are programmed into the base unit for dispensing specific volumes. On the Controller Unit follow the menu to load the desired method (i.e. 1:5) press the display key under the display which points to the word "SELECT".

v. Choose the desired method and press the display key under the display which points to the word "SELECT" to load the desired method

vi. "CONFIRM" the display question whether the installed syringe sizes are correct by pressing the display key under the display which points to the word "CONFIRM".

vii. The "Drive Unit Initialization" Screen is displayed and asks to "CONFIRM" (Display Key under display) that the probe is directed towards a waste area because any fluid in the syringes on the drive unit will be purged.

viii. Dispense the preset volume into a flask, using the probe wand button or foot pedal one time. This will aspirate the fluid from the desired reservoir of diluent and sample.

ix. Press the probe wand or foot pedal again to dispense the volume of each syringe into desired vial.

x. Flush with water repeatedly in between sample dispensing to minimize any carryover.

5. **Handling of Equipment:**

a. Follow the instructions for using equipment.

b. The Diluter should **not** be adjusted by laboratory staff as this may invalidate the calibration. If adjustments are necessary, the equipment will be sent out for adjustment and calibration.

c. External surfaces may be disinfected with methanol or diluted bleach solution

B. **Pipettes**

1. **New or Serviced Pipettes**

a. A pipette (e.g. Eppendorf) new to the laboratory, or a pipette that has been serviced or has undergone substantial maintenance will be calibrated by an ISO 17025 compliant vendor before being used in casework. (ISO IEC/17025:2005 5.6.2.1.1, Supplemental 5.6.1.1)

2. **Yearly Calibration**

a. The pipettes in the Toxicology Unit will be calibrated yearly by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification. (ISO IEC/17025:2005 5.6.2.1.1)

b. The laboratory will maintain copies of the certificates obtained for at least the current accreditation cycle.

c. The external calibration service labels on each pipette indicate the calibration status, including the last calibration and the recommendation for the next calibration. (ISO/IEC 17025:2005 5.5.8)

3. **Accuracy or Calibration Check:**

a. Calibration checks of pipettes may be performed in-house, if needed.

i. This check cannot be used in place of external calibration

ii. The check can be performed gravimetrically

1. See procedures below

b. Variable pipettes may be checked at multiple levels: ie. one at the high end, one at the low end, and one in the middle range.

c. The pipette will be checked at the levels checked by the external calibration vendor. The mean of six replicates must be within the criteria provided by the external calibration vendor (ie: percent imprecision).

d. Documentation of the check will be stored in the Tox Pipette Maintenance Log

4. **Instructions for Use, Variable Pipettes:** referenced from: Eppendorf Reference Operating Manual © **2001** (ISO IEC/17025:2005 5.5.3)

a. **Aspirating liquid**

i. The liquid which is to be aspirated is taken from a suitable vessel

ii. Attach suitable pipette tip to the pipette firmly

iii. Press down the control button to the first stop

iv. Immerse the pipette tip vertically approximately 3 mm into the liquid

v. Allow the control button to slide back slowly

vi. Pull the top out of the liquid slowly

b. **Dispensing liquid**

i. Hold the tip at an angle against the inside wall of the tube

ii. Press down the control button slowly to the first stop and wait until the liquid stops flowing

iii. Press down the control button to the second stop (blow-out) until the tip is completely empty

iv. Hold down the control button and pull the tip up the inner wall of the tube

v. Tip is ejected by pressing the control button to the final stop or the ejection button, depending on model

c. **Special Notes**

i. To guarantee the highest degree of precision and accuracy, it is recommended to pre-wet the tip by aspirating and dispensing liquid two to three times before pipetting.

ii. Make sure to completely empty the liquid from the tip before pipetting (via blow-out).

5. **Instructions for Use, Repeating Pipettes:** referenced from: VWR Instruction Manual (ISO IEC/17025:2005 5.5.3)

a. **Inserting and Filling the tip**

i. The liquid which is to be dispensed is taken from a suitable vessel

ii. Push the fill lever down until it stops

iii. Lift the locking lever

iv. Attach suitable tip to the pipette firmly, large volume tips (50) require a separate reusable adapter secured to the top of the reservoir

v. Secure the locking lever

vi. Set the volume adjustment dial for the desired volume

vii. Immerse the pipette tip into the liquid and slowly raise the fill lever upwards. The reservoir does not have to be filled completely, but this will affect the number of "steps" available.

viii. Press the plunger to dispense of the first step

b. **Dispensing liquid**

i. Try to hold the tip at an angle to the wall of the container

ii. Press down the plunger to the stop to dispense liquid

iii. Each press of the plunger will dispense the same volume

iv. The total number of steps will depend on the dial setting and the volume of the tip

c. **Removing the Tip**

i. Empty the tip completely by pushing the fill lever all the way down.

ii. Lift the locking lever and remove tip**.**

6. **Handling of Equipment:**

a. Follow the instructions for using equipment.

b. The pipettes should be stored to prevent jostling that may invalidate the calibration.

c. The Pipettes should **not** be adjusted by laboratory staff as this may invalidate the calibration. If adjustments are necessary, the equipment will be sent out for adjustment and calibration.

d. External surfaces may be disinfected with methanol or diluted bleach solution

C. **Gravimetric Check Procedure**

1. The **gravimetric procedure** is done by weighing the amount of water delivered by the apparatus. The mean of six replicates is used to calculate the true volume delivered using the equation below. The temperature of the water is taken to determine the density, see Table below. The results for each check are recorded in the corresponding Instrument Check Log.

a. To calculate the volume of water from it's mass: **V = W/d**

b. where:
V = volume of the water (mL)
W = weight of the water (grams)
d = density of water (see Table below)

c. Table from: Jones, Frank and Harris, Georgia. *ITS-90 Density of Water Formulation for Volumetric Standards Calibration*, Journal of Research of the National Institute of Standards and Technology, Volume 97, Number 3, May-June 1992, pg. 335-340

2. If the results deviate more than the specifications for the equipment, as indicated above, the calibration check has failed. A supervisor is required to take remedial action to investigate and correct the source of the failure.

3. If the diluters or pipettes fall outside the acceptable tolerance range the equipment must be taken out of service. Calibration may be performed by an external calibration service meeting the requirements of ISO IEC/17025:2005 5.6.2.1.1.

Table 1. Density of *air-saturated* water (g/cm^3)from Eq. (6) using Kell [2] data

t(°C)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
5	0.999961	0.999959	0.999957	0.999955	0.999953	0.999950	0.999948	0.999945	0.999942	0.999939
6	0.999936	0.999933	0.999930	0.999926	0.999922	0.999919	0.999915	0.999911	0.999906	0.999902
7	0.999897	0.999893	0.999888	0.999883	0.999878	0.999872	0.999867	0.999861	0.999856	0.999850
8	0.999844	0.999838	0.999832	0.999825	0.999819	0.999812	0.999805	0.999798	0.999791	0.999784
9	0.999777	0.999769	0.999761	0.999754	0.999746	0.999738	0.999730	0.999721	0.999713	0.999704
10	0.999695	0.999687	0.999678	0.999669	0.999659	0.999650	0.999640	0.999631	0.999621	0.999611
11	0.999601	0.999591	0.999581	0.999570	0.999560	0.999549	0.999538	0.999527	0.999516	0.999505
12	0.999494	0.999482	0.999471	0.999459	0.999447	0.999435	0.999423	0.999411	0.999398	0.999386
13	0.999373	0.999361	0.999348	0.999335	0.999322	0.999309	0.999295	0.999282	0.999268	0.999255
14	0.999241	0.999227	0.999213	0.999199	0.999184	0.999170	0.999156	0.999141	0.999126	0.999111
15	0.999096	0.999081	0.999066	0.999051	0.999035	0.999019	0.999004	0.998988	0.998972	0.998956
16	0.998940	0.998923	0.998907	0.998891	0.998874	0.998857	0.998840	0.998823	0.998806	0.998789
17	0.998772	0.998754	0.998737	0.998719	0.998701	0.998683	0.998665	0.998647	0.998629	0.998611
18	0.998592	0.998574	0.998555	0.998536	0.998517	0.998499	0.998479	0.998460	0.998441	0.998421
19	0.998402	0.998382	0.998363	0.998343	0.998323	0.998303	0.998283	0.998262	0.998242	0.998221
20	0.998201	0.998180	0.998159	0.998138	0.998117	0.998096	0.998075	0.998054	0.998032	0.998011
21	0.997989	0.997967	0.997945	0.997924	0.997901	0.997879	0.997857	0.997835	0.997812	0.997790
22	0.997767	0.997744	0.997721	0.997698	0.997675	0.997652	0.997629	0.997606	0.997582	0.997559
23	0.997535	0.997511	0.997487	0.997463	0.997439	0.997415	0.997391	0.997366	0.997342	0.997317
24	0.997293	0.997268	0.997243	0.997218	0.997193	0.997168	0.997143	0.997118	0.997092	0.997067
25	0.997041	0.997015	0.996990	0.996964	0.996938	0.996912	0.996885	0.996859	0.996833	0.996806
26	0.996780	0.996753	0.996726	0.996700	0.996673	0.996646	0.996619	0.996591	0.996564	0.996537
27	0.996509	0.996482	0.996454	0.996426	0.996399	0.996371	0.996343	0.996314	0.996286	0.996258
28	0.996230	0.996201	0.996173	0.996144	0.996115	0.996086	0.996057	0.996028	0.995999	0.995970
29	0.995941	0.995912	0.995882	0.995853	0.995823	0.995793	0.995764	0.995734	0.995704	0.995674
30	0.995643	0.995613	0.995583	0.995553	0.995522	0.995491	0.995461	0.995430	0.995399	0.995368
31	0.995337	0.995306	0.995275	0.995244	0.995212	0.995181	0.995149	0.995118	0.995086	0.995054
32	0.995023	0.994991	0.994959	0.994927	0.994894	0.994862	0.994830	0.994797	0.994765	0.994732
33	0.994699	0.994667	0.994634	0.994601	0.994568	0.994535	0.994502	0.994468	0.994435	0.994402
34	0.994368	0.994334	0.994301	0.994267	0.994233	0.994199	0.994165	0.994131	0.994097	0.994063
35	0.994028	0.993994	0.993960	0.993925	0.993890	0.993856	0.993821	0.993786	0.993751	0.993716
36	0.993681	0.993646	0.993610	0.993575	0.993539	0.993504	0.993468	0.993433	0.993397	0.993361
37	0.993325	0.993289	0.993253	0.993217	0.993181	0.993144	0.993108	0.993071	0.993035	0.992998
38	0.992962	0.992925	0.992888	0.992851	0.992814	0.992777	0.992740	0.992702	0.992665	0.992628
39	0.992590	0.992553	0.992515	0.992477	0.992439	0.992401	0.992363	0.992325	0.992287	0.992249

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	REVISION DATE: 03/21/2012	NUMBER: TOX.21
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6, 5.5.8, 5.5.10, 5.6.2.1.1 ASCLD-LAB International Supplemental 2011: 5.6.1.1	
CHAPTER: Equipment	SUBJECT: Glassware	

I. Policy: Below are the procedures that should be followed for the care and maintenance of glassware in the Toxicology Unit. (ISO/IEC 17025:2005 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6)

A. **Volumetric Glassware**

1. A serialized volumetric flask new to the laboratory will be calibrated by an ISO 17025 compliant vendor before being used in casework. (ISO IEC/17025:2005 5.6.2.1.1, Supplemental 5.6.1.1)

2. Class A Volumetric Glassware may be used for preparation of solutions without calibration. Volumetric Glassware used for preparation of calibrator (standard) solutions used to create calibration curves shall be calibrated periodically by an external calibration service that is ISO 17025 compliant. Volumetric flasks used for other solutions (QC, internal standards, reagents) do not have to be calibrated.

B. **Calibration**

1. Volumetric Class A Glassware used for preparation of traceable standard solutions may be calibrated every 5 years by an external calibration service that is ISO 17025 compliant. The certificates obtained will contain the measurement results including the measurement uncertainty and/or statement of compliance with an identified metrological specification (ISO IEC/17025:2005 5.6.2.1.1)

2. The laboratory will maintain copies of the certificates obtained for at least the current five year accreditation cycle.

3. The external calibration service provides information regarding the calibration status, including the last calibration and the recommendation for the next calibration. (ISO/IEC 17025:2005 5.5.8) Due to the size and type of use, it is not possible to label each flask. Labels or reports with the required information should be placed in proximity to the regular storage location of flasks so that it may be inspected by an analyst as needed.

C. **Accuracy or Calibration Check** (ISO/IEC 17025:2005 5.5.10)

1. Periodic calibration checks are not required for Class A Glassware

2. If there is an indication of an issue with the glassware, the equipment must be taken out of service. Calibration may be performed by an external calibration service meeting the requirements of ISO IEC/17025:2005 5.6.2.1.1

D. **Instructions for Use of Volumetric Flasks** (ISO/IEC 17025:2005 5.5.3)

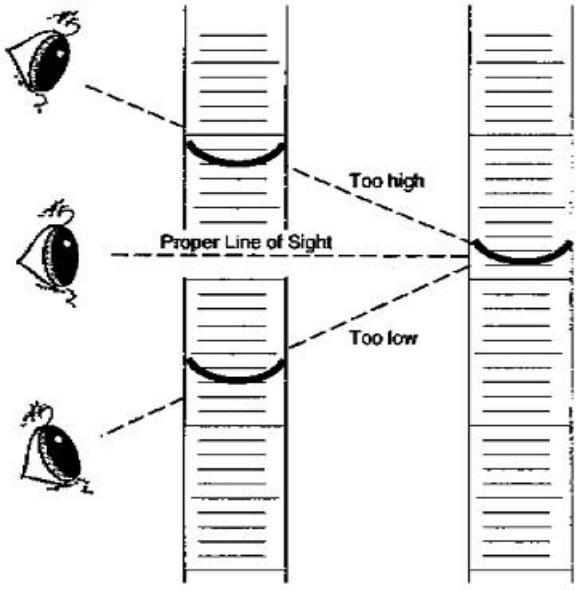
1. Volumetric flasks are generally graduated "to contain" (TC) known volumes of solutions and should never be used "to deliver" (TD) known volumes unless they have been so calibrated. Volumetric flasks are used to make up solutions to a given volume.

2. **Safety**: Volumetric flasks are fragile, and when shaken, should be held at both the neck and bottom. A flask should never be shaken when held at the neck only. When inserting a stopper, hold at the neck rather than at the bottom.

3. **Cleanliness**: Use a clean flask. It usually does not have to be dry (depending on solvent), but it must be clean. For solutions of organic solvents, the flask can be rinsed with the intended solvent to remove any residual water

4. **Diluting to Volume**: Add the solution or solute to be diluted to the flask, and add distilled water or specified solvent to bring to volume. While raising the meniscus to the graduation mark, hold the mark at eye level and add the last few drops from a wash bottle or from a small pipet. Stopper and invert at least three times to assure homogeneity. Where possible, the solution may be mixed by a rotator for 10-15 minutes. Care should be taken that the stopper is secure, or loss of the solution may occur.

5. **Reading the Meniscus**: In the use of graduated cylinders, pipets, burets, and flasks, the lowest point of the meniscus should be taken as the reading. See below.



a. For opaque liquids, use the center top rim of the liquid surface

b. Reference: NIST, August 2005, "Important Technical Guidance on Glassware"

6. **Handling of Equipment**: Follow the instructions for use.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 08/14/2017	**NUMBER:** TOX.22 - pH Meter
	RELATED ORDERS: None	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6, 5.5.10** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** pH Meter	

I. Below are the procedures that should be followed for the care and maintenance of the pH Meter in the Toxicology Unit. (ISO/IEC 17025:2005 5.5.3, 5.5.5.c, 5.5.5.g, 5.5.6)

A. General Information

1. The pH meter must be checked before use to ensure it meets the slope criteria listed below. (ISO/IEC 17025:2005 5.5.10)
   a. The performance check utilizes two solutions to verify the instrument is functioning properly.
   b. The results will be recorded in the pH Log.
2. If the performance check does not meet laboratory criteria or there is an indication of a technical issue, the instrument may be sent out for repair and/or calibration.
   a. Replacement of the probe may be performed by laboratory staff by following manufacturer's instructions.

B. Maintenance:

1. Check the level of the Ag/AgCl Reference Electrode filling solution in the electrode probe. The level should be close to the fill hole at the top of the electrode, not past the fill hole.
2. If additional Ag/AgCl Reference Electrode filling solution needs to be added, remove the rubber stopper and fill the electrode probe to the appropriate level.
3. Refer to the instruction manual for more information about electrode maintenance.
4. The electrode probe should be stored in pH electrode storage solution.
5. Turn OFF the pH meter when not in use, **once the pH meter is turned OFF it must be recalibrated before use**

C. **Accuracy or Calibration Check Instructions using Autoread Function and Instructions for Use:**

1. Turn on the pH meter (*On/Off* button)
2. Press the *Mode (enter)* button to enter pH measurement mode
3. Choose the two buffers that will be used to calibrate the pH meter; typically two buffers are chosen that bracket the pH reading of interest
4. Remove the rubber stopper on the probe
5. The probe is stored in a storage solution, typically pH electrode storage solution. Remove the probe from the storage solution, rinse the probe with DI water and blot dry
6. Press the *Cal* button
7. *Cal.1* will appear on the screen
8. Choose the higher pH solution to be used for calibration and put a small amount of the solution in a beaker or vial so that it covers the electrode.
9. The meter will automatically read the pH and indicate *Ready* and the resulting pH when the reading is complete.
10. Press the *Cal* button
11. Cal.2 will appear on the screen
12. Remove the probe from the higher pH buffer solution and rinse the probe with DI water and blot dry
13. Put a small amount of the lower pH buffer solution to be used for calibration in a beaker or vial so that it covers the electrode
14. The meter will automatically read the pH and indicate *Ready* and the resulting pH when the reading is complete
15. Press the *Mode (enter)* button to save and end the calibration
16. The slope will appear on the screen
17. Remove the probe from the solution and rinse the probe with DI water and blot dry
18. Record the slope number in the pH Log along with which levels were used for calibration.
    a. **A slope ≥ 95% is acceptable for use.**
    b. *See Instruction manual for further information on "Reviewing pH Calibration Slope Data" and electrode maintenance
19. Place the solutions used for calibration in the appropriate chemical waste receptacle, after calibration is complete
20. To measure the sample solution, place the probe in the solution, and press the *Measure (Esc)* button. The meter will automatically read the pH and indicate *Ready* and the resulting pH when the reading is complete.
21. Remove the probe from the solution and rinse the probe with DI water and blot dry
22. When the pH meter is not being used, the rubber stopper should be put back in place, and the electrode should be placed in the storage solution.
23. If no further readings are to be done, the pH meter can be turned off

D. **Manual Accuracy or Calibration Check Instructions and Instructions for Use:**

1. Turn on the pH meter (*On/Off* button)
2. In measurement mode, press the *Setup* button

3. Press the *Store* button until *1.0* is shown on the top line and *Conf* is shown on the lower line
4. Press *Mode (enter)*
5. Press the *Store* or *Recall* buttons until *Cal* appears, press *Mode (enter)*
6. Use the *Store* or *Recall* buttons to select *MAN* for manual calibration
7. Choose the two buffers that will be used to calibrate the pH meter; typically two buffers are chosen that bracket the pH reading of interest
8. Remove the rubber stopper on the probe
9. The probe is stored in a storage solution, typically pH electrode storage solution. Remove the probe from storage solution, rinse the probe with DI water and blot dry
10. Choose the higher pH solution to be used for calibration and put a small amount of the solution in a beaker or vial so that it covers the electrode
11. Press the *Cal* button
12. Cal.1 will appear on the screen
13. *Ready* will appear when the reading is complete.
14. Press Store or Recall to set value.
15. Press the *Cal* button
16. Remove the probe from the solution and rinse the probe with DI water and blot dry
17. Put the lower pH solution to be used for calibration and put a small amount of the solution in a beaker or vial so that it covers the electrode
18. *Ready* will appear when the reading is complete
19. Press *Store* or *Recall* to set value
20. When finished, press *Mode (enter)* and the slope number will appear on the screen
21. Remove the probe from the solution and rinse the probe with DI water and blot dry
22. Record the slope number in the pH Log along with which levels were used for calibration. See below for slope interpretation
    a. **A slope ≥ 95% is acceptable for use.**
    b. *See Instruction manual for further information on "Reviewing pH Calibration Slope Data" and electrode maintenance
23. Place the solutions used for calibration in the appropriate chemical waste receptacle, after calibration is completed
24. When the pH meter is not being used, the rubber stopper should be put back in place, and the electrode should be placed in the storage solution.
25. If no further readings are to be done, the pH meter can be turned off

E. References

1. Thermo Scientific Orion Star A111 Benchtop pH Meter Reference Guide (2011)
2. User Guide Thermo Scientific Refillable Ag/AgCl pH Electrodes (2007)

F. **Handling of Equipment:**

1. Follow the instructions for using equipment as recommended by the manufacturer and TOX.17.

Calibration

1. Prepare the pH electrode according to the electrode instructions.
2. Connect the electrode and ATC probe, if separate, to the meter. Press the ⏻ key to turn on the meter and press mode (enter) to display pH for pH measurement mode.
3. Select fresh pH buffers. If calibrating more than one point (highly recommended), select pH buffers that bracket the expected sample pH and are at least one pH unit apart.
4. Press cal. Rinse the electrode (and ATC probe, if separate) with distilled water, blot dry and place into the buffer.
5. Wait for "**READY**" to appear.
   a. With automatic buffer recognition (default, AUTO CAL appears at the top of the display): to calibrate additional points, repeat steps 4 and 5a.
   b. With manual calibration (MAN CAL appears at the top of the display): press ▲ or ▼ keys to set value. To calibrate additional points repeats steps 4 and 5b.
6. When finished, press mode (enter) to save and end calibration.
   a. For one-point calibration, press ▲ or ▼ to edit the slope to match prior calibration (if desired) and press mode (enter) to save and return to measurement mode.
   b. For two- or three-point calibration, the average slope (SLP.A) will be displayed and the meter will automatically proceed to measurement mode.

Measurement

1. Prepare the pH electrode according to the electrode instructions. Press mode (enter) to display pH for pH measurement mode.
2. Rinse the electrode (and ATC probe, if separate) with distilled water, blot dry and place into the sample.
3. If the meter is in AUTO-READ mode (meter default) press measure (esc). If the meter is in continuous read mode, the meter will immediately start taking readings. Record the pH and temperature of the sample when "READY" is displayed and "pH" stops blinking.

   Note: *If in AUTO-READ mode and memory storage is enabled, the reading will automatically be stored when the "AR" appears. If in continuous read mode and memory storage is enabled, press* **store** *to store into the meter's memory.*
4. Remove the electrode (and ATC probe, if separate) from the sample, rinse with distilled water, and blot dry. To continue taking measurements , place electrode (and ATC probe, if separate) into the next sample and repeat steps 3 and 4.
5. When finished measuring all samples, store electrode according to electrode instructions.

Reviewing pH Calibration Slope Data

1. In pH measurement mode, press **setup**. Press ▲ five times so that "6.0" is on the top, secondary display and "CAL" is on the larger, primary display.
2. Press mode (enter) to view slope. If a 3-point calibration was done, press ▲ to view the second slope segment, and ▲ again to display the average slope (SLP.A).
3. Press measure (esc) to return to measurement mode.

pH Calibration Selection

1. In pH measurement mode, press **setup**.
2. Press mode (enter) twice.
3. Press ▲ to select automatic buffer recognition (AUTO) or manual calibration (MAN).
4. If automatic buffer recognition was chosen, press mode (enter). Press ▲ to select USA or DIN buffer set for automatic buffer recognition.

   Note: *USA buffer points are: 1.68, 4.01, 7.00, 10.01 & 12.46. DIN buffer points are 1.68, 4.01, 6.86 & 9.18. The default buffer set is for USA buffers.*
5. Press mode (enter) to save configuration and measure (esc) to return measurement mode.

Read Type Selection

1. In measurement mode, press **setup** .
2. Press ▲ in setup until "4.0" is shown on the top line and "READ" is shown on the lower line. Press mode (enter).
3. Press ▲ or ▼ to select the measurement mode:

   CONT = Continuous

   AUTO = AUTO-READ™
4. Press mode (enter) to save selection. Press measure (esc) to return to measurement mode.

Storing Readings into Memory

This meter stores up to 50 readings.

To automatically store readings into memory after each stable reading:

1. In measurement mode, press **setup**.
2. Press ▲ in setup until "4.0" is shown on the top line and "READ" is shown on the lower line. Press mode (enter).
3. Press ▲ or ▼ to show "AUTO" on the second line. Press mode (enter) to save selection.
4. Press ▲ to show "5.0" on the top line and "LOG" on the lower line. Press mode (enter).
5. Press ▲ to show "ON" on the second line. Press mode (enter) to save selection.
6. Press measure (esc) to return to measurement mode. Each time the reading is locked onto the screen with the "AR" icon. The reading will automatically be stored in the datalog.

Viewing Stored Readings

1. In measurement mode, press **recall**.
2. Press ▲ or ▼ to scroll through the memory points.
3. Press mode (enter) to review the reading stored at that point.

Keypad Information

measure (esc)	*In the measurement screen:* Press to take a measurement. *In the setup screen:* Press to escape the setup menu. *In the calibration screen:* Press to abort calibration.		
⏻	Press to turn the meter on or off.	mode (enter)	*In the measurement screen:* Press to switch between modes. *In the setup screen:* Press to confirm the selection.
cal	Press to enter the calibration mode.	setup	Press to enter setup mode.
store ▲	*In the measurement screen:* Press to store the data on the screen in continuous read mode and with data logging on. *In the setup screen:* Press to scroll up in the list of options.	▼ recall	*In the measurement screen:* Press to see the stored data. *In the setup screen:* Press to scroll down in the list of options.

Electrode Calibration

General Calibration Procedure

For detailed instructions on pH calibration, manual pH calibration and temperature compensation, consult your meter user guide. When using PerpHecT electrodes with a PerpHecT pH meter, refer to the PerpHecT meter user guide for instructions on temperature calibration and LogR temperature compensated pH measurements.

One Buffer Calibration

1. Choose a buffer near expected sample pH.
2. The buffer should be at same temperature as the sample. If the buffer and samples are at varying temperatures, temperature compensation is recommended.
3. Prepare the meter according to the meter user guide.
4. Rinse the electrode first with distilled water and then with the buffer being used for calibration.
5. Place the electrode into the buffer. When the reading is stable, set the meter to the pH value of the buffer at the measured temperature. Refer to the meter user guide for a detailed procedure. **Table 1** provides pH values at various temperatures.
6. Proceed to the **pH Measurement** section.

Table 1
pH Values of Buffers at Various Temperatures

Nominal Buffer Value at 25°C	Temperature				
	0 °	5 °	10 °	20 °	30 °
1.68	1.67	1.67	1.67	1.67	1.68
3.78	3.86	3.84	3.82	3.79	3.77
4.01	4.00	4.00	4.00	4.00	4.02
6.86	6.98	6.95	6.92	6.87	6.85
7.00	7.11	7.08	7.06	7.01	6.98
7.41	7.53	7.50	7.47	7.43	7.40
9.18	9.46	9.40	9.33	9.23	9.14
10.01	10.32	10.25	10.18	10.06	9.97

Two Buffer Calibration

This procedure is recommended for precise measurements.

1. Select two buffers that bracket the expected sample pH. The first buffer should be near the electrode isopotential point (pH 7) and the second should be near the expected sample pH (pH 4 or pH 10).
2. The buffers should be at same temperature as the sample. If the buffers and samples are at varying temperatures, temperature compensation is recommended.
3. Rinse the electrode first with distilled water and then with the first buffer.
4. Place the electrode into the first buffer. When the reading is stable, set the meter to the pH value of the buffer at the measured temperature. Refer to the meter user guide for a detailed procedure. **Table 1** provides pH values at various temperatures.
5. Rinse the electrode first with distilled water and then with the second buffer.
6. Place the electrode into the second buffer. When the reading is stable, set the meter to the pH value of the buffer at the measured temperature. Refer to the meter user guide for a detailed procedure. **Table 1** provides pH values at various temperatures.
7. Proceed to the **pH Measurement** section.

Temperature					
40 °	**50 °**	**60 °**	**70 °**	**80 °**	**90 °**
1.69	1.71	1.72	1.74	1.77	1.79
3.75	3.75				
4.04	4.06	4.09	4.13	4.16	4.21
6.84	6.83	6.84	6.85	6.86	6.88
6.97	6.97	6.97	6.99	7.03	7.08
7.38	7.37				
9.07	9.01	8.96	8.92	8.89	8.85
9.89	9.83				

pH Measurement

1. Calibrate the electrode as described in the **Electrode Calibration** section.
2. Rinse the electrode with distilled water and then with the sample.
3. Place the electrode into the sample.
4. When the reading is stable, record the pH and temperature of the sample.

Electrode Storage

To ensure a quick response and free-flowing junction, the sensing element and reference junction must not dry out.

Short-term Storage (up to one week)

Soak the electrode in pH electrode storage solution, Cat. No. 910001. To prevent crystallization of the fill solution, cover the fill hole whenever the electrode is being stored and open the fill hole when calibrating and measuring.

Long-term Storage (more than one week)

Fill the reference chamber and securely cover the filling hole. Cover the sensing element and reference junction with the protective cap/sleeve containing a few drops of storage solution. Before returning the electrode to use, prepare it as a new electrode.

Electrode Maintenance

1. Inspect the electrode for scratches, cracks, salt crystal buildup, or membrane/junction deposits.
2. Rinse off any salt buildup with distilled water. Remove any membrane/junction deposits as directed in the **General Cleaning** section.
3. Drain the reference chamber, flush it with fresh filling solution and refill the chamber with fresh filling solution.

Electrode Cleaning Procedures

General Cleaning

1. Soak the electrode in 0.1 M HCl or HNO_3 for half an hour.

   The electrode can also be soaked for 15 minutes in a 1:10 dilution of household laundry bleach or a 0.1 to 0.5% liquid detergent solution mixed with hot water. The solution should be stirred at a moderate to fast rate.
2. Drain the reference chamber and refill it with fresh filling solution.
3. Soak the electrode in pH electrode storage solution for at least one hour.

Cleaning Solutions

Cat. No. 900021– pH cleaning solution A for removing protein contaminants.

Cat. No. 900022– pH cleaning solution B for removing bacterial contaminants.

Cat. No. 900023– pH cleaning solution C for general cleaning.

Cat. No. 900024– pH cleaning solution D for removing oil and grease contaminants.

Cat. No. 900020– pH cleaning solution kit, includes cleaning solutions A, B, C and D.

Chapter 7 Appendix

Automatic pH Buffer Recognition Feature

The Orion Star A111 benchtop pH and Star A121 portable pH meters are capable of automatically recognizing pH 1.68, 4.01, 7.00, 10.01 and 12.46 buffers or pH 1.68, 4.01, 6.86, and 9.18 buffers during a pH calibration, depending on the pH buffer set that is selected in the setup menu. During a calibration, the meter uses the selected buffer set and the raw mV reading of the pH electrode in the buffer to recognize and display the buffer value at the measured temperature. The raw mV reading of the pH electrode in the buffer must be about ± 60 mV from the theoretical mV reading of the buffer in order for the meter to automatically recognize the buffer.

USA pH Buffer Set	
Buffer	mV Range

DIN pH Buffer Set	
Buffer	mV Range

Buffer	mV Range
1.68	+255 to +375
4.01	+117 to +237
7.00	-60 to +60
10.01	-237 to -117
12.46	-383 to -263

Buffer	mV Range
1.68	+255 to +375
4.01	+117 to +237
6.86	-52 to +68
9.18	-189 to -69

Electrode Condition Icon

The electrode condition icon indicates the performance of the pH electrode, based on the last saved calibration and electrode measurement stability.

Icon	Definition of Icon
	Electrode condition is good and the electrode slope is 95 to 105 %.
	Electrode condition is fair and the electrode slope is 85 to 115 %.
 Blinking	Electrode condition is bad and the electrode slope is less than 85 % or greater than 115 %. Consult the electrode user guide for instructions on how to clean, condition and troubleshoot the electrode.

Instruction Sheet

Thermo Scientific Orion pH Electrode Cleaning Solutions

Thermo Scientific Orion pH electrode cleaning solutions are designed to simplify pH electrode maintenance. Bottles of the ready-to-use cleaning solutions are provided along with a small beaker to hold the cleaning solution and a plastic pipette for removing the electrode internal filling solutions.

The cleaning solutions are identified by the letters A, B, C, and D. Each letter designates a unique formulation that gently removes dirt and deposits from the electrode without causing damage to the electrode. Cleaning a dirty or clogged electrode restores proper electrode performance and prolongs the useful life of the electrode. The cleaning solution kit, Cat. No. 900020, features one bottle of each cleaning solution for operators who are working with a variety of sample matrices.

Optimal cleaning procedures are dependent upon the sample type, extent of buildup or clogging and the type of electrode. The following general instructions offer a starting point for developing an effective cleaning protocol.

NOTE: *Please read MSDS sheets and bottle labels for safety information prior to use. Follow all handling instructions.*

Cleaning Instructions

1. Choose the appropriate cleaning solution. Cleaning solution D is a mild cleaner. If a stronger cleaning solution is required, use cleaning solution C. Cleaning solution A is for removing protein deposits and cleaning solution B is for removing bacterial contaminants.
2. Shake the cleaning solution. Pour enough of the cleaning solution into the beaker to cover the electrode junction and immerse the section of the electrode that requires cleaning.
3. Soak the electrode for a few minutes in the cleaning solution while moderately stirring the solution. Non-glass electrodes and electrodes with wick and fiber junctions may require more cleaning time.
4. Remove the electrode from the cleaning solution and rinse the electrode thoroughly with distilled water to remove all traces of the cleaning solution.
5. If cleaning a refillable electrode, remove the filling solution from the electrode using the pipette that is included in the kit. Add fresh filling solution to the electrode. Repeat removing and adding filling solution two or three times for optimal electrode performance.
6. If cleaning a Sure-Flow electrode, flush a few drops of filling solution through the electrode junction by pressing down on the electrode cap. Ensure that the junction flushes and resets properly.
7. Rinse the electrode thoroughly with distilled water and measure samples as usual. If the electrode response is slow or the electrode does not calibrate correctly, repeat the cleaning procedure. Viscous samples and samples that contain solid materials often require additional cleaning and additional filling solution changes.

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** TOX.23 - GC/MS Routine Maintenance
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:6.4**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Routine Maintenance	

I. Policy: The Gas Chromatograph/Mass Spectrometer (GC/MS) instruments will be checked to ensure their reliability. Maintenance will be carried out if needed according to the procedures below.

A. **Sequence Maintenace**: The following checks are performed prior to analyzing casework.

1. Change Insert (Liner)

   a. A clean, silanized insert liner is replaced prior to a sequence

   b. A small amount of silanized glass wool is added to the insert.

   c. Replace the O-ring on the insert.

   d. See *GC/MS-Cleaning the Liners* (TOX.29) for procedure for cleaning dirty liners

2. A Standard Spectra Auto Tune is performed.

3. Standard Spectra Auto Tune Interpretation:

   a. EM Volts should be reasonable depending on EM age (typically 1200-2400 Volts). New multipliers may have values below 1000. Higher EM Volts may indicate a need for a source cleaning. The EM Volts should not exceed 3000.

   b. The EM Volts should not vary significantly from previous autotunes.

MASS	*RELATIVE ABUNDANCE*
69	100%
219.0	= or > 30%
502.0	= or > 1%

   c. Peak widths (Pw50): 0.45-0.65 amu.

   d. Ions with an amu of less than 69 should have an abundance less than 10% of the base ion (69 amu). If ions 18, 28, and 32 are higher than 10% this may be an indication of a leak in the system.

   e. Vacuum and mass spectrum temperatures should not vary significantly from previous autotunes.

   f. If the above criteria are not met, maintenance and preventive action shall be taken.

   g. The analyst evaluating the autotune will initial the log.

   h. Printouts or an electronic equivalent of the tunes will be kept by the toxicology unit

      i. For instruments running Chemstation Acquisition software, the tune will be printed and kept in the Gas Chromatography/Mass Spectrometry Maintenance Binder (see *Care and Maintenance of Equipment* (TOX.17) for further information about the maintenance log).

      ii. For instruments running Masshunter Acquisition software, an electronic copy of the tune is automatically saved in a folder on the computer and named based on the date/time and type of tune (example file location: D:\Masshunter\GCMS\1\5977\PDF)

4. Documentation

   a. Changing the insert liner, performing the autotune, and any additional maintenance performed prior to analyzing casework will be noted in the Gas Chromatography/Mass Spectrometry Maintenance Log.

B. **Quarterly**-Moisture Traps

1. The moisture traps for each of the gas lines shall be checked quarterly. **The check will be logged in the Sheriff Specialist Safety Checks. See SAFF.04.04** .
2. A change in the color of the indicator beads is a sign of moisture or oxygen present and the trap/filter kit needs to be replaced.
    a. Moisture Trap, the original color is yellow originally and turns clear when saturated
    b. Oxygen Filter, the original color is green originally and turns grey when saturated
    c. The medical air line will have the oxygen filter saturated and can still be used
3. Procedure for changing moisture traps:
    a. Turn off the main gas line.
    b. Refer to manufacturer's instruction for replacing the trap/filter kit.
    c. **REMEMBER: Changing the filters on the carrier gas line means that the oven, injector, and detector temperatures have to be at room temperature, unless the procedure is performed rapidly. If proper shut down is not performed, the column will be damaged.**
    d. Changing the trap/filter will be logged in the Sheriff Specialist Safety Checks. See SAFF.04.04.

C. Non-Routine Maintenance

1. Refer to *GC/MS-Cleaning the Ion Source* (TOX.25)
2. Refer to *GC/MS-Changing the Column* (TOX.26)
3. Refer to *GC/MS-Cleaning the Inlet* (TOX.27)
4. For non-routine maintenance and ordering parts, see the *GC/MS-References* (TOX.34). These references may be used for troubleshooting and maintenance procedures.
5. Merlin Seal Replacement:
    a. The Merlin Seal can last thousands of injections, however its exact lifetime cannot be predicted
    b. Presence of an air leak or inability to maintain inlet pressure may indicate the merlin seal needs to be replaced
    c. The merlin seal sits at the top of the injection port and uses a microseal nut
    d. Care should be taken to handle the new seal with tweezers when replacing
6. Septum Replacement:
    a. The Merlin Seal is used in place of a septum, but a septum can be used if needed
    b. The recommended septum is the Agilent Inlet Septa. These septa are preconditioned and it is recommended that they be handled with tweezers for best results.
    c. The septum uses a hex nut instead of the microseal nut
    d. If a traditional septum is used, it should be replaced with every sequence and should be documented in the log
7. The calibration vial is refilled with PFTBA as needed. **Refilling of the vial and subsequent purging of the valve will be documented in the maintenance log.**
8. Changing the split vent trap (may also be referred to as chemical trap)
    a. Split vent trap maintenance should be done after approximately 1 year
    b. Change the method to maint.m to cool the inlet and oven.
    c. Stop the inlet gas flow.
    d. Remove the top, rear cover on the GC. It is on by pressure-fit only, no screws need to be removed.
    e. Remove the weldment and gas lines from the holding bracket. Try not to stress or kink the gas lines.
    f. Unscrew the big knurled knob of the vent line trap weldment.
    g. Note the orientation of the old trap.
    h. Remove the white trap and 2 o-rings. The o-rings may stick and can be removed with tweezers.

i. Place 2 new o-rings into the indentations onto the ends of the new trap.

j. Place the new trap into the trap weldment, narrow end toward the front of the GC. Screw the knurled knob until the vent line trap weldment is back together, but do not tighten yet.

k. Place the weldment and gas lines back into the bracket.

l. Tighten the knurled knob until sealed.

m. Replace the GC cover.

n. Reload a valid method and allow gases to purge the inlet for about 15 minutes.

o. There is a video on the Agilent web site: http://www.chem.agilent.com/en-US/products-services/Columns-Sample-Preparation/GC-GC-MS-Columns/Pages/splitventtrap.aspx

9. Cleaning the split vent line

a. Split vent line maintenance is an option when troubleshooting GCMS issues

b. Change the method to maint.m to cool the inlet and oven.

c. Stop the inlet gas flow. The column may need to be capped to prevent air from entering the system. This may not be necessary if other maintenance is being done such as changing the column.

d. Remove the top, rear cover on the GC. It is on by pressure-fit only; no screws need to be removed.

e. Move the tower.

f. Unscrew the auto-sampler carousel.

g. Unscrew the top, left inlet access panel.

h. Unscrew the top, left, back cooling-fan access panel if needed.

i. Unscrew the nut connecting the split vent line to the inlet.

j. Unscrew the nut connecting the split vent line to the trap weldment.

k. Carefully extract the vent line from the GC housing. Try not to stress or kink the vent line or other gas lines.

l. Place the line vertically in a large beaker. Use the beaker to catch solvent wash waste. Dispose of organic chemical waste properly.

m. Wash the vent line with a variety of solvents until the washes run clear. Solvent suggestions include: methanol, acetone, chloroform, and methylene chloride. Use gravity to add each solvent at the trap weldment end, washing debris out the inlet end.

n. Cotton swabs can be used to clean debris out of the vent line ends and the inlet port.

o. Allow the vent line to dry.

p. Thread the vent line back into the GC housing.

q. Reconnect the nuts at the inlet and trap weldment ends.

r. Replace the 3 GC covers, the carousel, and the tower.

s. Start the gas inlet flow.

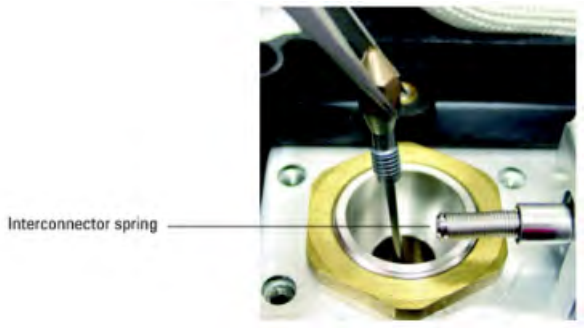
t. Slowly increase the inlet temperature over time, allowing any remaining solvents to evaporate and purge.

u. Allow gas to flow through the inlet at high temperature for about 15 minutes.

10. FID Jet Maintenance

a. Agilent recommends replacing the FID jet during maintenance. But the following is a cleaning procedure from Agilent.

i. Remove the FID jet by using a 1/4 inch nut driver to loosen the jet. Remove the jet with tweezers, being careful as to not touch or bend the interconnect spring.



1.

ii. Run a 0.010-inch cleaning wire through the tip of the jet. Scratches on the FID jet will affect the performance, so use caution to ensure the jet is not scratched or bent.

iii. Run the wire back and forth a few times until it moves smoothly. Again, use caution to ensure the jet is not scratched or bent.

iv. Rinse the jet with methanol.

v. Air dry the jet.

vi. Should the jet become bent, discard the jet and replace it.

11. Any additional maintenance will be noted in the Gas Chromatography/Mass Spectrometry Maintenance Log.

a. This includes but is not limited:

i. vacuum pump maintenance (i.e. checking/changing pump oil or changing scroll pump tip seals)

ii. replacing Weldment Assembly

iii. replacing chemical trap

12. References

1. Agilent FID Maintenance Kit Instructions.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.24 - GC/MS Dean Switch
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Dean Switch	

I. The Dean Switch is a pressure flow device that allows for two-dimensional gas-chromatography (2D-GC). The instrument is equipped with a Dean Switch, a low thermal mass (LTM) heating/cooling system and a flame-ionization detector (FID) attached to the GC/MS. (ISO/IEC 17025:2005 5.5.3)

A. The Dean Switch instrument has 2 GC columns, an FID detector, and a MS detector. The injection process is the same as the standard laboratory GC/MS. Sample is injected onto the primary column which is in the GC/MS oven. The Dean Switch controls whether sample from the primary column flows to the FID or to the secondary column. The secondary column leads to the MS. The temperature of the secondary column is controlled by the LTM attached to the GC/MS oven door. See diagram below.

1. Selectively controlling the sample allowed onto the second column reduces interfering background around the compounds of interest.
2. Using two different columns (2D-GC) can allow for improved separation of compounds.
3. The primary column connects directly to the Dean Switch.
4. Connections between the Dean Switch/columns/detectors can be pieces of uncoated fused silica tubing.
5. The secondary column can connect directly to the Dean Switch, or connect to an uncoated fused silica tubing of the same diameter as the column, which connects to the Dean Switch.
6. **The tubing into the MS must be 0.1 mm diameter to limit the amount of gas flow into the MS**.
7. The flow of sample from the primary column to the secondary column is controlled through the Runtime parameters in chemstation by switching the assigned valve on/off.

B. Dean Switch Calculator

1. In chemstation, the primary column must be operated in constant pressure or ramped pressure mode. The Dean Switch pressure is set through the assigned auxiliary channel.
2. Chemstation cannot determine the flow through both columns. Information about flow rate provided by chemstation may not reflect actual flows on the instrument.
3. The Dean Switch Calculator is used to determine the pressure settings for the desired flow rates.
    a. The detectors, carrier gas, column dimensions, temperature and desired flow rates are entered into the calculator. It will provide the pressure for the inlet and the Dean Switch.
    b. The calculator also provides the length required for the tubing that travels from the Dean Switch to the FID based on the chosen column diameter. The larger the diameter of the tubing, the longer the equivalent length will be, therefore a diameter of 0.1 mm is recommended.
    c. The flow through columns will vary with temperature. The desired flow rates are achieved at the entered temperature.
    d. The Dean Switch Calculator is located on the computer desktop
    e. The references below include how to use the calculator

C. The Dean Switch “cuts” portions of the sample from the first column onto the second column

1. Running the sample through the primary column to the FID can be used to identify the approximate times of the peaks for turning the valve on/off in chemstation Runtime parameters.
2. Due to the low levels of analytes being examined in the presence of significant background interference, it may be difficult to identify the target peaks in an extracted sample by FID.
3. A neat standard can be used to identify the approximate retention times and verify performance of the column.

4. From an extracted sample, the windows can be checked by observing changes in response when expanding or shortening the windows. Once established, this does not need to be repeated unless retention times on the primary column have changed.

5. The FID should be off when not being used to minimize gas use.

D. The secondary column is controlled by the LTM heating/cooling system. It is attached to the outside of the door of the GC oven

1. The temperature program is set from the LTM Method in the Instrument Menu of chemstation. The LTM system is capable of much more rapid heating and cooling than the GC oven.

2. The initial hold time or the final hold time can be adjusted without affecting the temperature program for the analysis of the compounds

    a. The first temperature ramp should begin just after the last analyte of interest is cut from the primary column.

3. Because the LTM is outside the GC, the column passes from the LTM system through the GC door. The short sections of the column through these transfer lines are not temperature controlled. This means that the ambient temperature can effect the retention time. The ambient temperature is not critical, but it is important that the variation in temperature is limited throughout a sequence. The climate controlled environment of the laboratory is adequate for use of the instrument.

4. Do not turn off the LTM system, even for maintenance, unless changing the secondary column

E. Maintenance on the Dean Switch instrument is the same as traditional GC/MS in the following areas:

1. Inlet maintenance

2. Ion source maintenance

3. Vacuum pump maintenance

4. Installing the primary column into the inlet

5. Installing the secondary column into the MS

F. Maintenance on the Dean Switch instrument is different from traditional GC/MS in the following areas:

1. Connections from the primary column, secondary column, and FID transfer line to the Dean Switch

2. Unions on the secondary column ends

    a. Dean Switch connections and unions are made with metal ferrules

    b. See Agilent, Swaging sil-tite ferrules

        i. The swaging technique will be practiced prior to any independent maintenance on the instrument

3. Directions for changing the LTM column are included with the purchased column module

4. The Dean Switch provides pressure and gas flow through columns so that venting of the MS is not required when performing inlet or column maintenance. Venting of the MS would be required for any maintenance of the MS transfer tubing.

G. Analysis of MS data collected by the Dean Switch instrument is same as the standard ChemStation software found in the Toxicology Unit

H. Backflushing

1. Backflushing is the reversal of flow on the primary column so that unwanted compounds on the column will be flushed out the column head through the split vent trap instead of continuing to a detector. This can help reduce maintenance required for columns and detectors.

2. Backflushing can be accomplished by lowering the pressure at the inlet or increasing the pressure at the Dean Switch once the compounds of interest have eluted from the primary column.

3. In a sequence, a solvent blank is run prior to each sample. Backflushing is not required to prevent carryover of samples. It may be used to extend the lifetime of columns and detectors.

I. References: The following references shall be reviewed

1. Capillary Flow Technology: Dean Switch; Increase the Resolving Power of Your GC, Agilent Part Number 5989-9384EN, June 2013

2. Agilent G2855A Deans Switching System: Installation and Operation, Agilent Part Number G2855-90100, January 2003

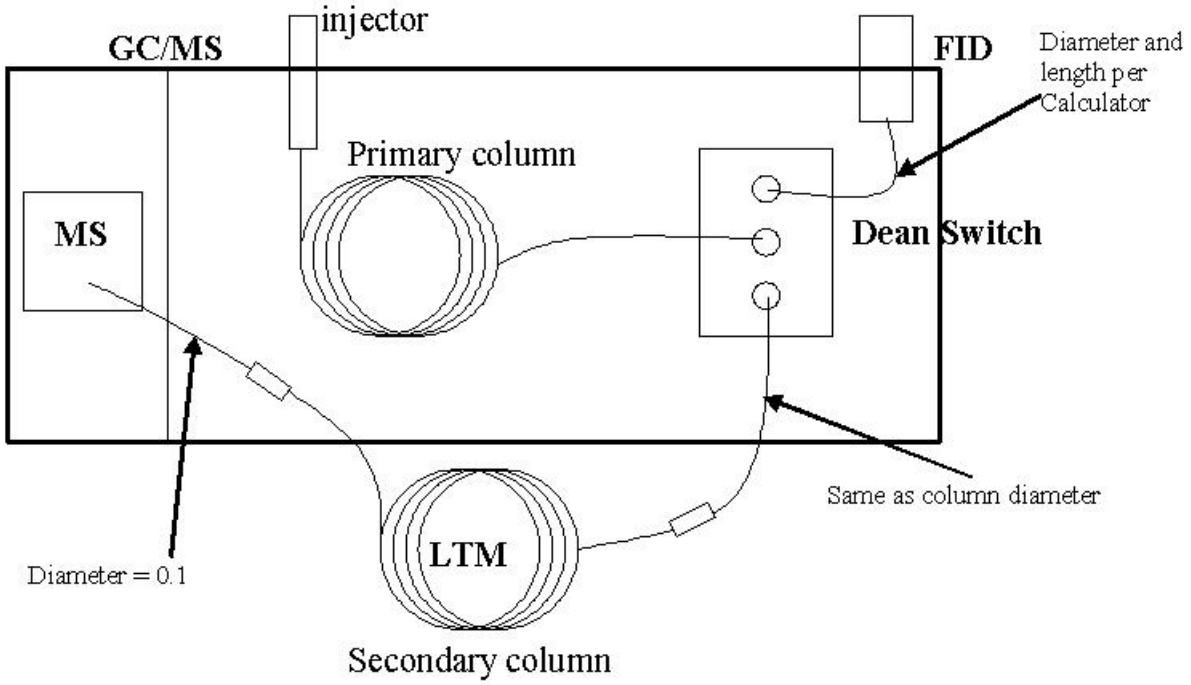
3. Agilent G2855B Deans Switching System: Installation and Operation, Agilent Part Number G2855-90120, April 2006

4. Agilent G6578 Low Thermal Mass System, Agilent Part Number G6578-90003, March 2010

5. Swaging SilTite Ferrules, Agilent Part Number 5969-1573, November 2005

6. Agilent J&W LTM GC Column Module Installation Guide, Agilent Part Number G6578-90025, April 2011

7. Agilent LTM Series II Rapid Heating/Cooling System for Agilent 7890 Series GCs, Agilent Part Number G6678-90020, April 2011



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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 6/19/2018	**NUMBER:** TOX.25 - GC/MS Cleaning the Ion Source
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: none**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Cleaning the Ion Source	

I. Policy: Procedures for cleaning the ion source.

A. Ion Source Cleaning

1. There isn't a recommended interval for ion source cleaning. The following changes in the tune are indications that the ion source needs cleaning:
    a. Inadequate abundances at high masses
    b. Low overall sensitivity
    c. Missing isotopes
    d. Incorrect isotope abundances
2. For additional information, refer to the HELP menu on any version of the instrument software and look for "*Testing for a dirty ion source*"
3. Refer to the Cleaning the Ion Source/Changing the Column procedures **below** if needed.

B. Cleaning the Ion Source (see diagrams below or individual instrument manuals for removing, taking apart, reassembling, and reinserting the source)

1. On the computer, from Instrument Control, go to the pull-down menu and select View-Tune and Vacuum Control
    a. Chemstation: From the Vacuum menu select vent, then click OK. This takes about 40 minutes
    b. MassHunter: From the Vacuum menu select MS Vacuum Control, click on the vent button
2. Chemstation software may be shutdown at this point. Some versions of software will automatically shutdown once venting is complete.
3. Set up the workstation with butcher paper, beakers, microgrit, GC instrument bag, sand paper, etc.
4. Turn the front inlet down to 40°C
5. After the vent cycle has completed, turn the mass spec off using the power switch
6. Remove the cover of the mass spec
7. Open the vent valve (turn to the left), the hissing should not last more than one minute. After venting close the valve.
8. Loosen the side plate front thumbscrew if necessary. The side plate rear thumbscrew should remain unfastened during instrument use. Tighten side plate rear screw for shipping only.
9. Disconnect the side board control cable and the source power cable
10. Open the mass spectrometer
11. Put on lint free gloves
12. The quadrupole wires (top set of green beaded wires and white wires) do not need to be disconnected from the feedthrough board. Disconnect the ion source wires from the feedthrough board (bottom set of green beaded wires and white wires).
13. Disconnect the wires from the ion source
14. Remove the thumbscrews that connect the source heater assembly to the source radiator
15. Gently slide the source out of the source radiator
16. Close the door, tighten the thumbscrew to keep the door closed during source cleaning

17. Take the source over to a clean area, with tools, butcher paper, green sandpaper, and lint free cloth.
18. Set the source on top of the source rest, on top of the lint free cloth
19. Using a Hex wrench (small black wrench with red top) unscrew the screws on the top of the source starting with the screws on the filaments. Pull out the filaments with the tweezers and set the filaments and screws aside.
20. Take the nut & the washer off the top and set aside
21. Take the repeller out and take the white ceramic loop off. The latter is not cleaned.
22. Set the plastic pieces off to the side with the screws and ceramic parts
23. The plastic pieces may be cleaned with a cotton tipped applicator dipped in methanol. Do not touch the plastic pieces with your hands after cleaning them. The ceramic part is too fragile to clean.
24. Only the metal parts require cleaning:
    a.

5973/5975	**5977**
repeller	repeller
interface socket	*repeller block insert
source body	source body
drawout lens	extractor lens
drawout cylinder	*extractor insulator is not cleaned*
ion focus lens	ion focus lens
entrance lens	entrance lens

    b. The metal repeller block insert is not directly in the sample path, but may be cleaned if needed.
25. Sand all the surfaces, inside and outside, of all the metal pieces until they are shiny and there are no longer any black marks. Try to use a figure eight pattern when possible to reduce scratching. To sand the inside of some pieces, wrap the sandpaper around the metal rod and sand the inside surface.
26. Mix approximately two scoops of microgrit with methanol to achieve a "slurry-like" consistency.
27. Use cotton tipped applicators to clean any remaining black surfaces. Rinse the microgit off into a waste beaker before putting the pieces in a 250 ml beaker with DI water.
28. Sonicate the cleaned parts using one of the following schemes:
    a. Traditional
        i. One time in DI water for 15 minutes
        ii. Two times in Methylene Chloride for 15 minutes each (organic waste)
        iii. One time in Acetone for 15 minutes
        iv. One time in Methanol for15 minutes
    b. Non-chlorinated solvent option
        i. Two times in DI water for 15 minutes each
        ii. One time in Methanol for 15 minutes
        iii. One time in Acetone for 15 minutes
        iv. One time in Hexane for 15 minutes
29. When transporting the parts from one bath to another, use the tweezers to grab the "non-shiny" surfaces when possible. When sonicating be sure to fill the water level up so it ½ to ¾ up the side of the beaker.
30. After the final sonication put metal pieces in a clean dry beaker to dry. They can be allowed to dry overnight at room temperature or dried more quickly in an oven. To dry in oven, cover beaker loosely with aluminum foil and place in the oven at 100 degrees for approximately 15 minutes
31. Put on lint free gloves and assemble the source:
    a. Assemble the lens stack:

i. Slide the draw out plate (disk) and draw out cylinder into the source body (ensure the windows of the draw out cylinder align with the windows on the source body).

1. 5977: insert extractor insulator and then extractor lens

ii. Reassemble the entrance lens and ion focus lens inside the plastic lens insulator.

iii. Slide the lens assembly into the source body.

b. Slide the lens stack into the source body, ensure the prongs on the side are lined up in the center

c. Tighten the set screw into the source body to hold everything together, check that the windows are still lined up on the cylinder and source body

i. 5977 has two set screws

d. Set the assembly on the source rest

e. Screw in interface socket (not present in 5977)

f. Place the ceramic piece into the repeller, and put the repeller into the repeller assembly

i. 5977: repeller block insert goes over the ceramic insulator

g. Put the repeller assembly on the source body and tighten the washer and nut. The wires of the repeller assembly are on the same side of the source body as the prongs that stick out

h. Tighten the screws on the top of the assembly

i. Put the filaments on (the one on top is #1). The shield should face out and the filament should face the source

j. Tighten the filament screws

32. Slide the source into the source radiator, tighten the thumbscrews (2) until they are finger tight.

33. Reconnect the wires from/to the feedboard:

a. Blue wire to entrance lens

b. Orange wire to ion focus lens

c. White wires to filament 1 (top)

d. Red wire to repeller

e. Black wires to filament 2 (bottom)

f. Ion source heater wires (green)

g. Ion source sensor wires (white)

h. 5977 Extractor Source: Extractor lens wire (brown)

34. Close the analyzer chamber door.

a. 5977: There will be slight resistance to the closing of the door as the interface tip seal fits into the source body. Be sure the the parts are aligned and do not try to force if strong resistance is felt.

35. Reconnect the side board control cable and the source power cable.

36. Ensure the vent valve is closed. Turn to the right to close, do not over tighten.

37. Apply pressure to the MS door by pushing on it.

38. Turn on the MS. Maintain pressure while the instrument initiates and pumps down.

a. Pump down can be initiated/completed with or without the instrument software being loaded

b. Pump Down is typically initiated once the MS is turned on. However, it can also be initiated from the MS front panel (Menu: Maintenance, Item: Pump Down).

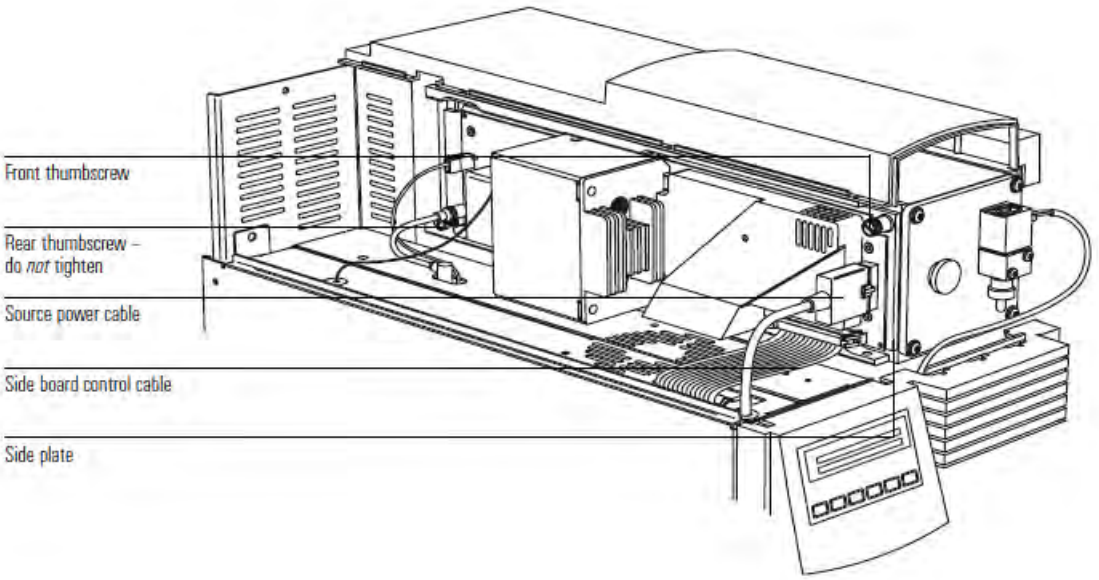
c. If the instrument software is loaded, it can be initiated from the Vacuum menu: Pump Down

39. The turbo speed should rise, or for the diffusion pump it will begin the cycle. Completion of the pump down can be seen on the instrument front panel or the instrument software. Once pump down is complete, the MS temperatures must be returned to operating conditions: when asked about temperatures click APPLY (MS Zones) and OK. From Instrument Control, load a method other than Maint.M, such as TOXSCR.M.

40. The front thumbscrew may be used to hold the door closed. Do not overtighten.

C. Diagrams

1.



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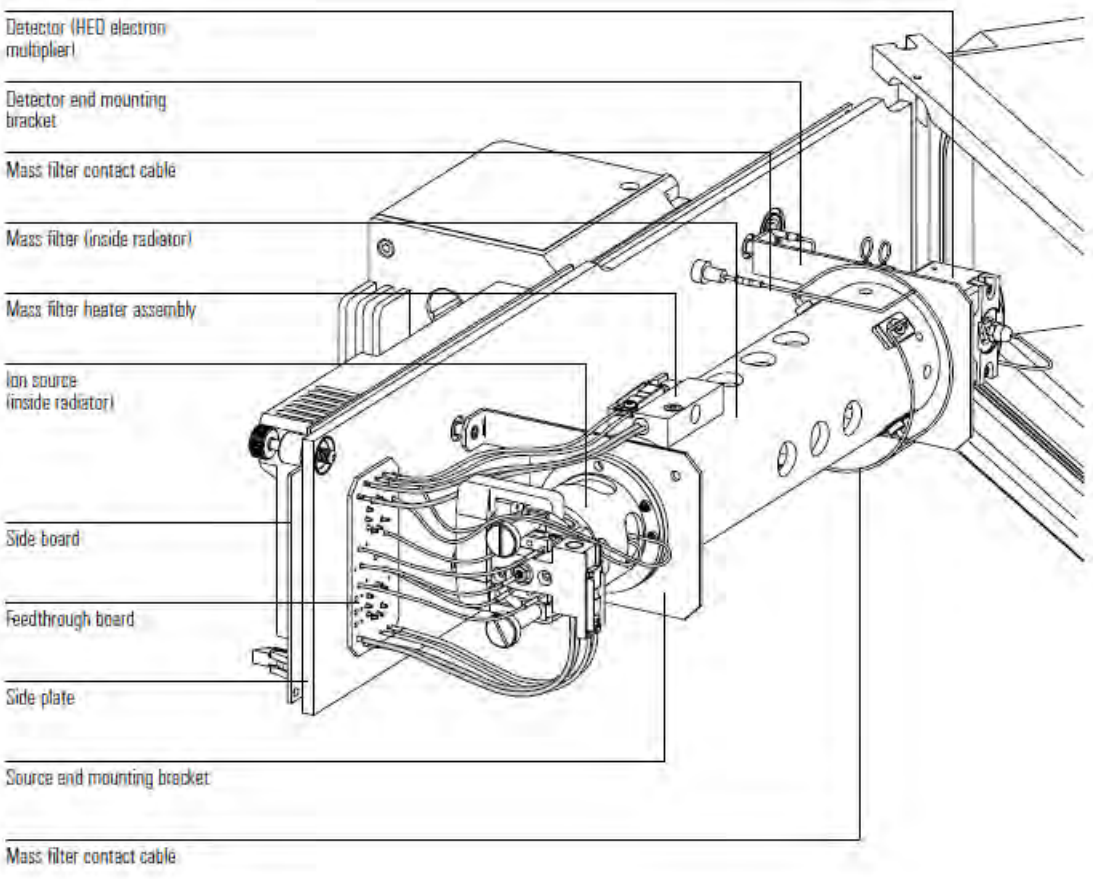

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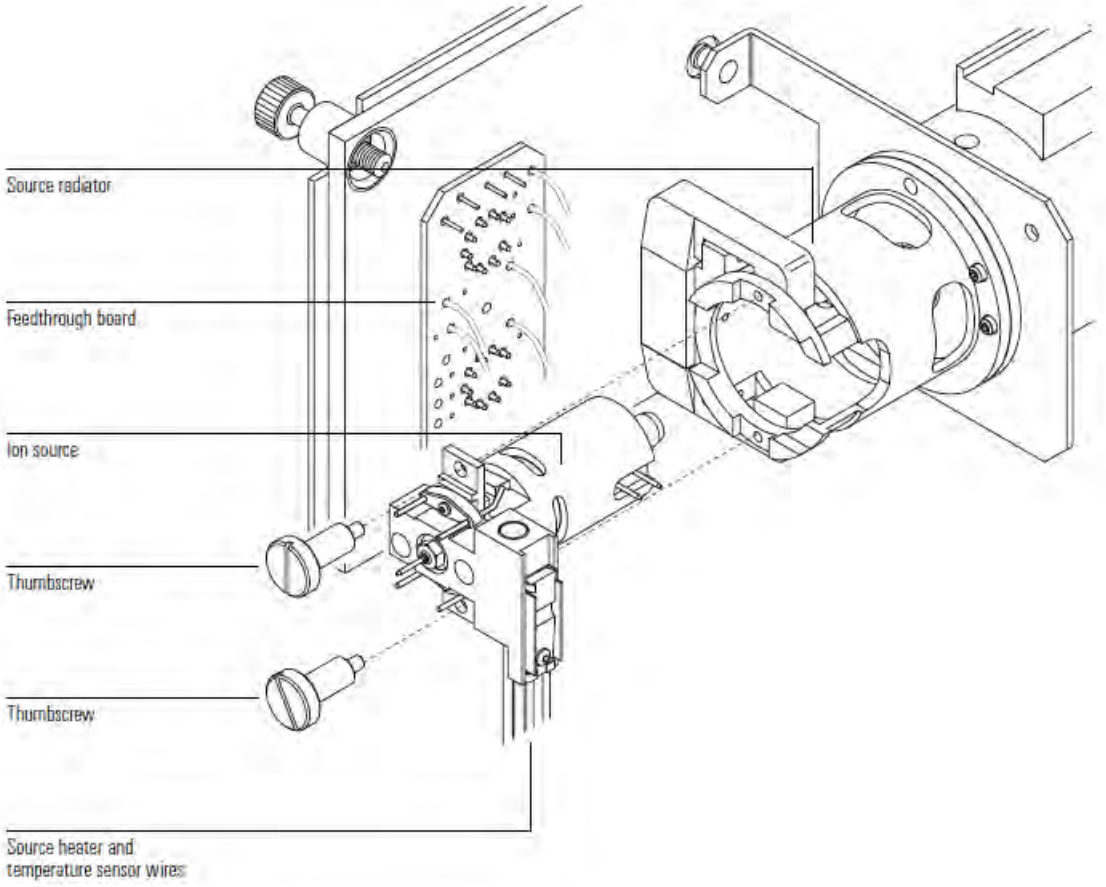
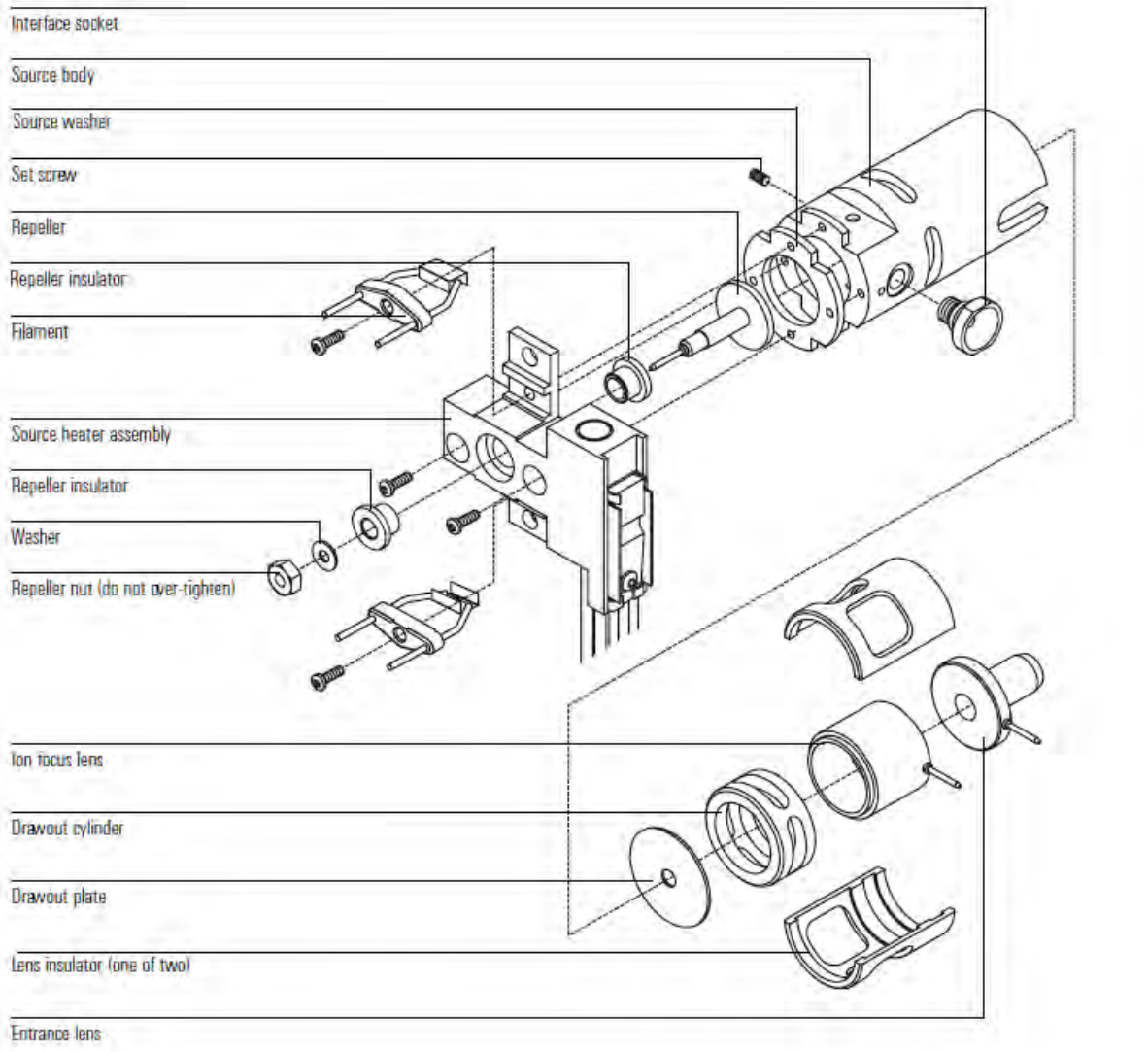

Source radiator
Feedthrough board
Ion source
Thumbscrew
Thumbscrew
Source heater and
temperature sensor wires

4.



D. References

1. See TOX.34

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 5/30/2018	**NUMBER:** TOX.26 - GC/MS Changing the Column
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Changing the Column	

I. Policy: Procedures for changing the column.

A. Changing the Column

1. Injector end

a. Best practice when changing the column is to first vent the MS and allow to cool

b. Turn the inlet and oven temperature down to room temperature

i. **DO NOT turn off the GC which houses the Dean Switch**

ii. **The Dean Switch instrument may not require venting**

c. Unscrew the nut from the inlet, remove the column. The nut may be saved and re-used

d. Remove the insulator cup under the injector port by removing the screws

e. Remove the Reducing nut with a 1/2 inch wrench to access and replace the goldseal

f. Discard the old goldseal, the washer may be reused

g. Before inserting the new goldseal, sonicate it in methylene chloride for 15 minutes

h. Put in the washer, then the gold seal. The flush part of the gold seal should be facing up so it comes in contact with the liner. Attach the Reducing nut and insulator cup

i. The liner rests of the flush part of the gold seal

i. If a guard column is used, the guard end should be marked. The guard end of the column goes into the inlet.

j. Unwind a little of the column.

k. Cut a septum into quarters, insert a piece of the septum onto the column to use as a guide.

l. Following the septum, thread the column through the nut, then thread an injector ferrule.

i. The flat end of the ferrule goes against the column nut

m. Cut 10 cm off the column and check the column under the magnifying glass, it should be smooth and not jagged.

n. Wipe off the column with methanol

o. Adjust the septum up the column until there is 4-6 mm of column sticking out of the end of the ferrule/nut

p. Screw the nut and ferrule assembly into the inlet

q. Turn on the pressure and inspect the detector end of the column. Stick the end of the column in a vial of methanol and look for bubbles to make sure there is pressure throughout the column.

r. Make sure the pressure is on before conditioning the column. Set the pressure to at least 12 PSI.

s. Oven parameters:

i. Time-30 min

ii. Temp-30

iii. Rate-10

iv. Final Temp-280 (or 5-10 degrees above the highest temperature method)

v. At least 120 minutes (up to 8 hrs - 480 min)

vi. Enter, then hit START

t. The serial # of the column, if provided, should be logged in the maintenance log. Any manufacturer's verification paperwork for the column should be filed in the maintenance log.

2. **Detector end (MS):**

a. Disconnect the nut on the detector end with a wrench; slide the column completely out of the transfer line. The nut may be saved and re-used.

i. 5977 MSD: unscrew the knurled nut and remove the tip seal

b. Cut a rubber septum into quarters, insert a piece of the septum onto the new column to use as a guide.

c. Insert the nut

d. Insert the ferrule, the pointed end rests against the nut

i. Self-tightening nut uses the short ferrule (same ferrule as used in the inlet end)

e. Wipe the column down with methanol

f. Cut the column approximately 3-8 cm (1-3inches), check that the cut is straight and not jagged.

g. Wipe down the column again with methanol

h. Insert the column into the detector, then move the septum and nut up to the thread and lightly screw the nut on

i. Start backing up the column, approximately 1 mm sticking out to the MS

i. The column insert tool can be used to assist in proper measurement of the column

j. Continue backing up the column, tightening the nut, and checking the distance until the proper distance of 1 mm is achieved. Finish tightening the nut until it is sufficiently tight. It may make noise to indicate a tight fit.

i. If using a self-tightening nut: tighten to finger tight, there will not be any noise.

k. 5977 MSD: reinstall interface tip seal

l. Close the doors to the oven and MS

B. **Dean Switch End**

1. Insert nut and Flexible Metal Ferrule (or equivalent) on end of column, swage according to instructions in Agilent's "Swaging SilTite Ferrules"

2. Insert column into the Dean Switch (the center port is for the primary column)

C. Clipping the Column

1. As sections of the column become contaminated, they can be removed.

a. Typically 1 or 2 loops from the inlet side will need to be removed to bring the column to acceptable performance

b. One loop is approximately 50 centimeters

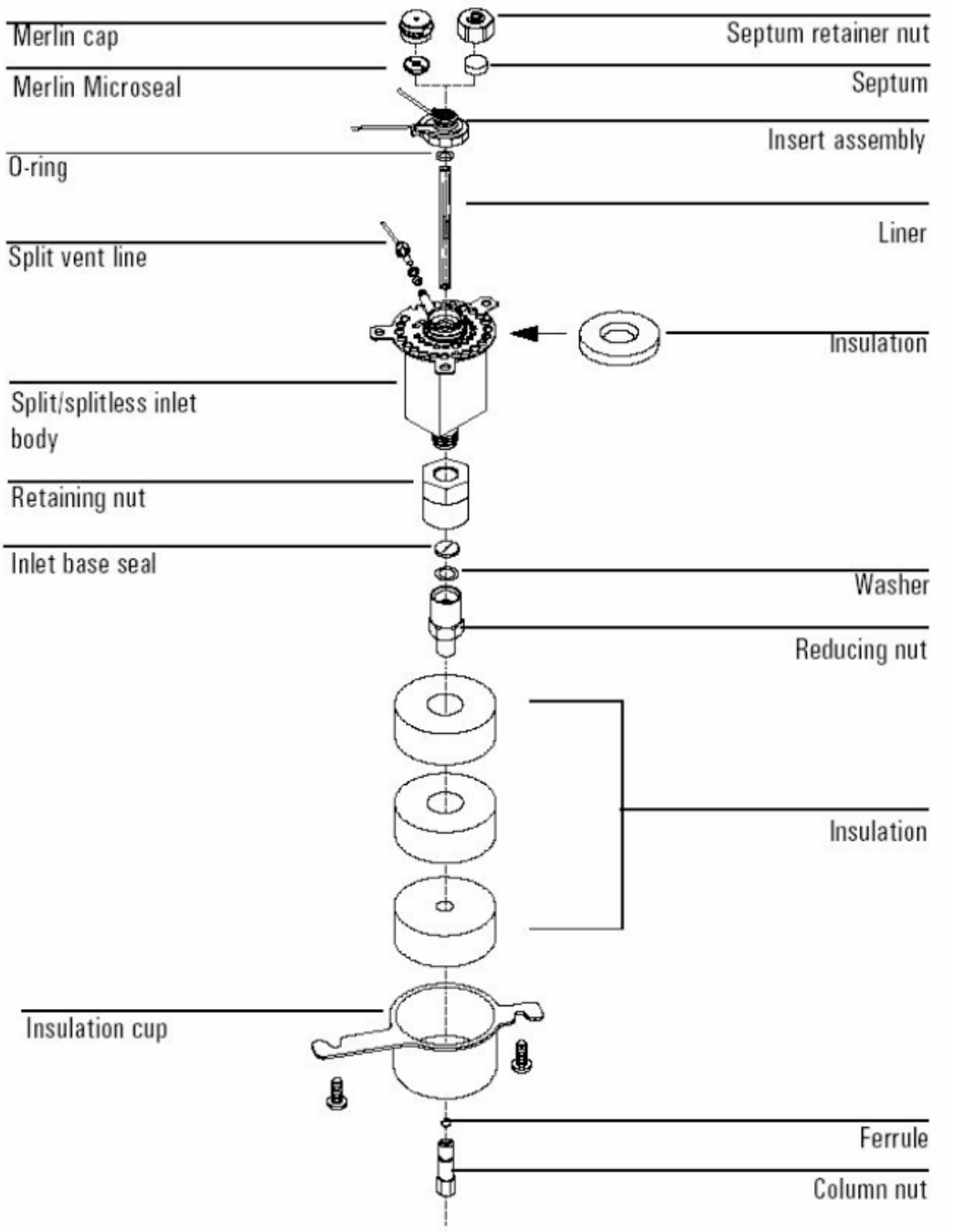
2. The procedures for changing the column on the Inlet end can also be used to "clip" the column to extend the life of the column, without replacing the column.

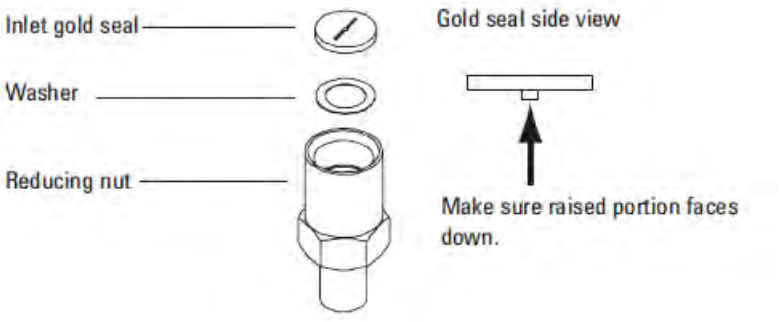
3. The MS is left on and does not need to be vented, as long as the maintenance is done quickly. The oven and inlet are cooled so that the inlet column assembly can be taken apart.

4. The desired amount is clipped from the column and then the column is re-inserted into the inlet.

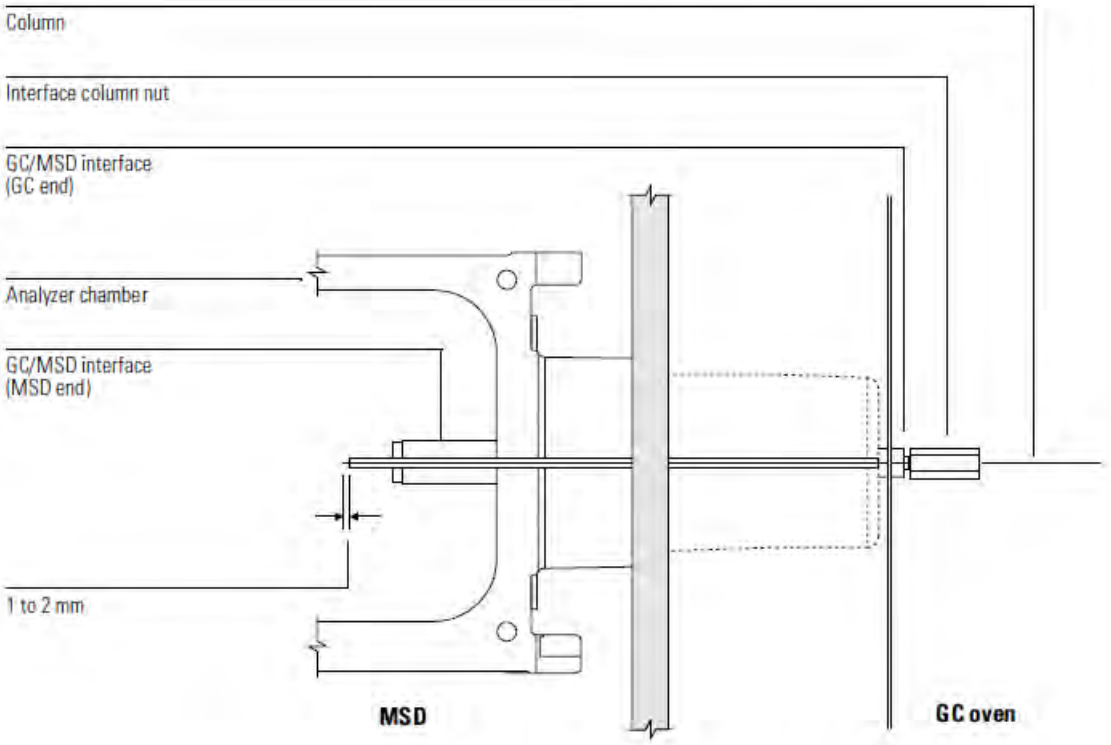
5. Log in the maintenance log.

D. Diagrams

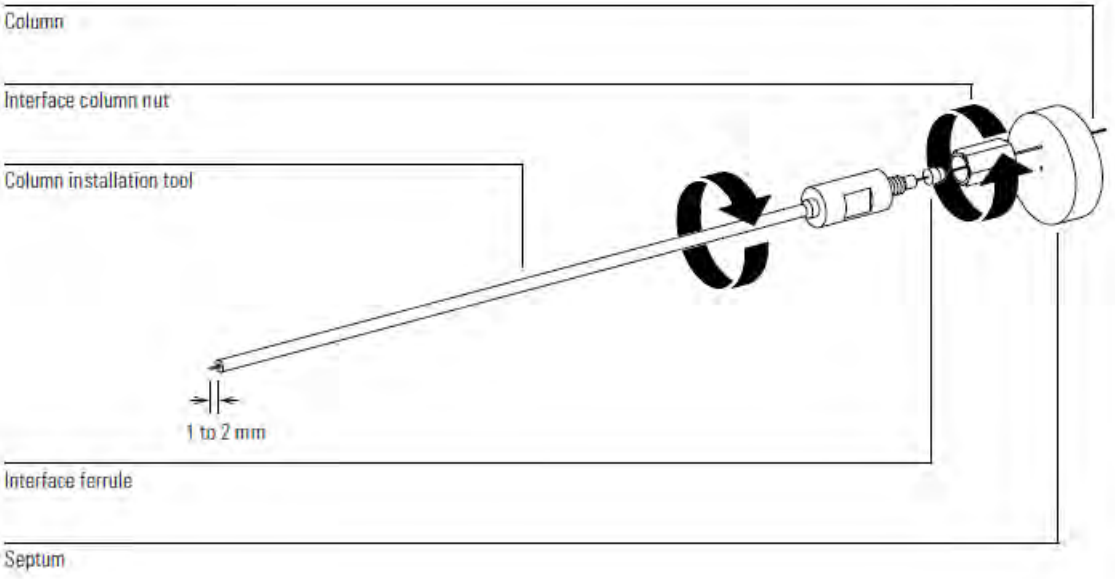

Merlin cap
Merlin Microseal
O-ring
Split vent line
Split/splitless inlet body
Retaining nut
Inlet base seal
Insulation cup
Septum retainer nut
Septum
Insert assembly
Liner
Insulation
Washer
Reducing nut
Insulation
Ferrule
Column nut


Inlet gold seal
Washer
Reducing nut
Gold seal side view
Make sure raised portion faces down.

To install a capillary column in the GC/MSD interface



To install a capillary column using the installation tool



E. References

1. See TOX.34

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.27 - GC/MS Cleaning the Inlet
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Cleaning the Inlet	

I. Policy: The following procedures will be used for cleaning the inlet. (ISO/IEC 17025:2005 5.5.3)

A. The procedure is from the Agilent website-see reference on document.

Agilent Technologies

Split/Splitless Inlet Cleaning Procedure

5890 and 6890 Split/Splitless Inlets

The Split/Splitless inlet will become active (degrading certain types of compounds) over time. In some cases, just changing the liner and the gold seal will not remedy this problem. In these cases a more vigorous cleaning procedure must be implemented. The following procedure has been developed to help in this process.

The following parts and solvents will be needed:

38-caliber brass gun barrel cleaning brush with metal rod.
Methylene Chloride
Acetone
Methanol
Glass transfer pipettes with bulb
"Kimwipes"
Safety Glasses
Lab Coat
Nitrile Chemical Resistant Gloves

1. Cool the inlet. This is best accomplished by reducing the inlet temperature to 40C. Leaving the inlet on allows the injection port fan to continue to operate thus, aiding in cooling the injection port. It is also helpful to lower the oven temperature to 40C. These steps can be performed from the GC front panel or the Chemstation software.

This document is believed to be accurate and up-to-date. However, Agilent Technologies, Inc. cannot assume responsibility for the use of this material. The information contained herein is intended for use by informed individuals who can and must determine its fitness for their purpose.

2. After the inlet has cooled sufficiently (at least 70C), turn the inlet flow off.

3. If an autosampler is in place, remove tower, tray and top cover.

4. While wearing appropriate safety apparel, remove the weldment assembly that covers the GC liner. Remove the liner completely from the GC. Notice a flow line that sits below the weldment, this is the split vent flow line. This should have a 7/16" swagelok fitting, loosen the fitting and remove the split vent flow line.

5. Turn the GC oven off and open the door. Loosen and remove the GC column nut from the inlet. Place a septa over the injection port end of the column, so as NOT introduce O2 to the column. Remove the insulator and the gray reducing nut that houses the gold seal and washer from the bottom of the inlet.
6. The injection port consists now of just a long metal tube. All flow lines and the glass liner have been removed from the assembly. Dip the gun brush into the Methylene chloride and insert the brush into the inlet completely. **MOVE THE BRUSH UP AND DOWN DO NOT TWIST.** Perform this step twice. Then use the glass pipette to rinse the inlet with Methylene Chloride. Follow the Methylene Chloride rinse with an Acetone brush and rinse and finish with a Methanol brush and rinse.

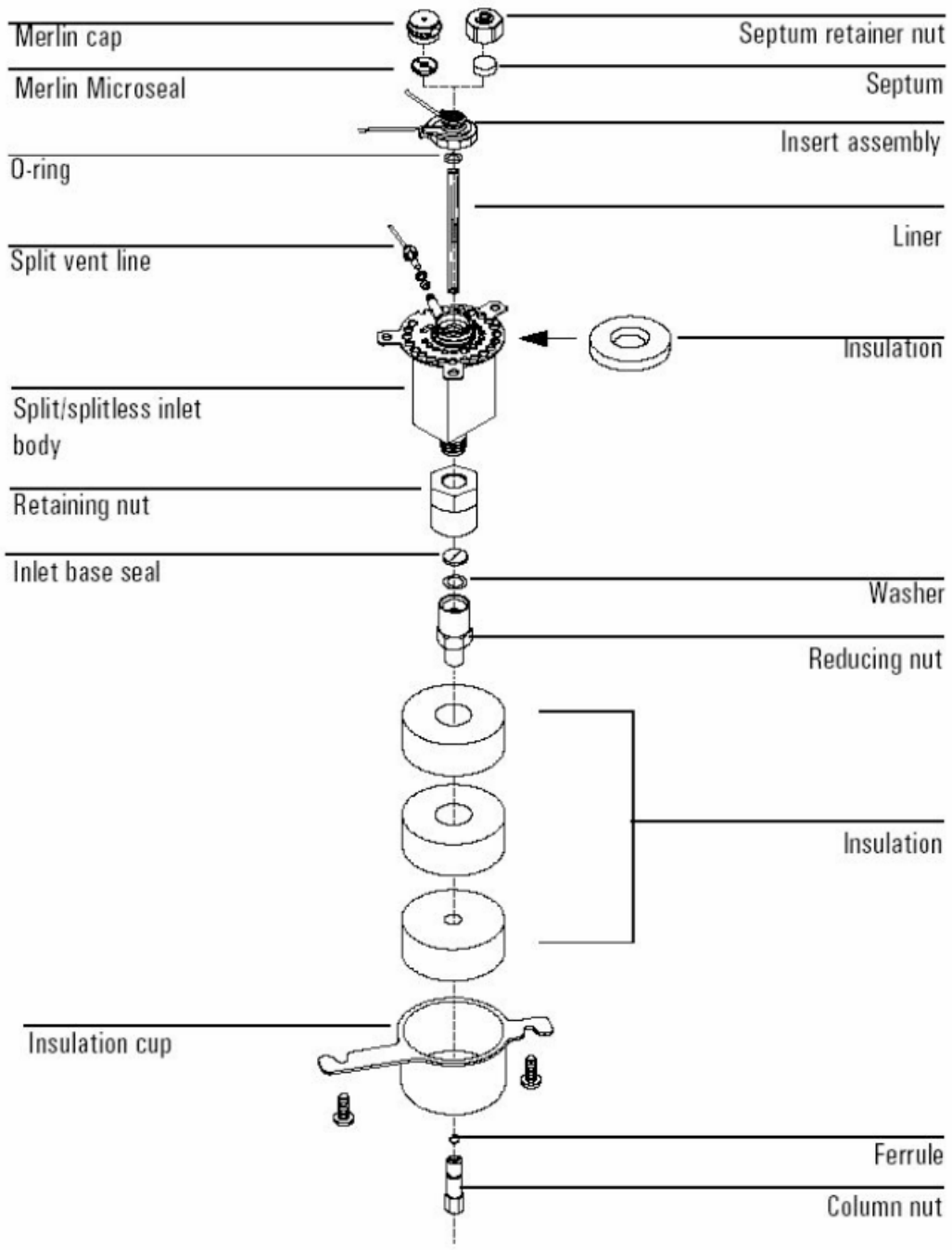
7. After the last Methanol brush and rinse, dab the top of the inlet with a "kimwipe" to remove any residual solvent that may pool. Look down through the assembly to make sure that it is free of particles that may stick to the walls of the inlet. Heat the inlet to 65C to flash vaporize the solvent away. **(THIS IS A CRITICAL STEP THAT CANNOT BE BYPASSED).**
8. Reassemble the inlet with a new gold seal, washer, liner, and a new ferrule on the column. Make sure that the column is re-cut prior to installation. Reinstall the split vent line and tighten. Reinstall the weldment assembly **(NOTE: Prior to reinstalling the autosampler assembly turn the injection port flow back on. Do not turn the injection port temperature on.)** Check to make sure that proper head pressure can be obtained, if not recheck all fittings for leaks.

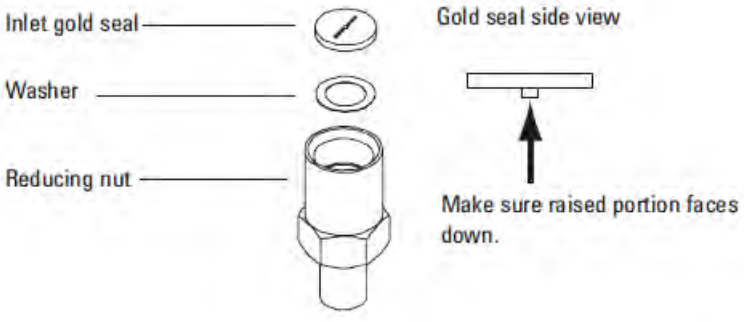
   Before increasing the temperature, let the inlet sit at 65C for about 10 minutes to remove any oxygen that might be in the inlet. **THIS STEP MUST NOT BE SKIPPED. IF IT IS THE CLEAN PARTS JUST INSTALLED WILL BE REOXIDIZED.**

9. After 10 minutes heat the inlet to operating conditions. Let it stabilize for 5 minutes. Make at least 2 blanks runs before any analyte is injected, to make sure that the inlet has been successfully cleaned. Be aware this technique does not work on all applications, and over time will not bring the inlet back. The assembly will need to be changed in time.

Please make sure that there is full understanding of this procedure prior to disassembly of injection port. If you are unable to complete this procedure please Call Agilent.

B. Diagrams





C. References

1. Agilent Technologies Split/Splitless Inlet Cleaning Procedure, a16022.doc
2. Agilent 6890 Gas Chromatograph, Maintaining Your GC, March 2007, Part Number G1530-90010

END OF DOCUMENT

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 5/30/2018	**NUMBER:** TOX.28 - GC/MS Vacuum Pump Maintenance
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB ISO/IEC 17025:2005: None**	
CHAPTER: Equipment	**SUBJECT:** TOX.28 - GC/MS Vacuum Pump Maintenance	

I. Policy: The following is the procedure for vacuum pump maintenance.

A. **General Information**

1. There are three types of GC/MS vacuum pumps that may be found in the Toxicology Unit:
   a. Oil rotary pumps
   b. Dry scroll pumps
   c. Diaphragm pumps

B. **Dry Scroll Pump Maintenance**

1. The only maintenance for a dry scroll pump is to change the tip seal. The tip seal should be changed approximately every 9000 hours or when there is an increase in pump base pressure
   a. Vent the Mass Spec. See the instructions in *GC/MS-Cleaning the Ion Source* for proper venting.
   b. Make sure the Mass Spec power is OFF
   c. Turn off pump and remove electrical cord
   d. Remove the Front Cowling and Outboard Housing by removing their respective bolts
   e. Change the Tip Seal
   f. Attach Front Cowling and Outboard Housing
   g. Plug in electrical cord and turn on pump
   h. Pump down MS
   i. Make an entry in the maintenance log
   j. Exterior surfaces may be cleaned with isopropyl alcohol

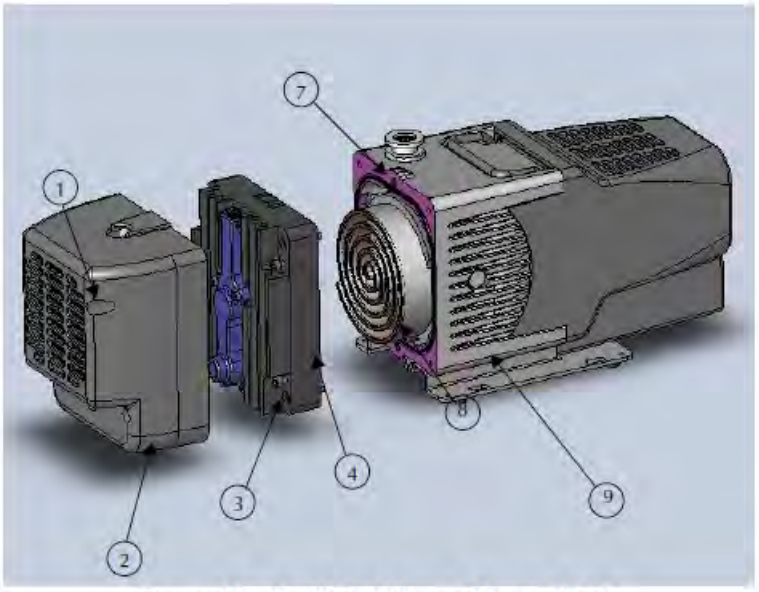


Figure 12 Exploded View of Pump Body

1. Front Cowling Bolts; M5 (4)
2. Front Cowling
3. Frame Bolts; M5 (4)
4. Outboard Housing
5. Tip Seals (Not shown)
6. Main O-ring Parker No. 2-160 (Not shown)
7. Locating Pins (2)
8. Orbiting Scroll
9. Frame

C. **Oil Rotary Pump Maintenance**

1. If possible, the pump oil should be changed approximately every 6-12 months and in conjunction with a source cleaning when the instrument is already vented
    a. Vent the Mass Spec. See the instructions in *GC/MS-Cleaning the Ion Source* for proper venting.
    b. Make sure the Mass Spec power is OFF
    c. Place a container under the oil drain plug (drain valve) on the pump to catch the oil
    d. Open the oil filler located on the top of the pump
    e. Open the oil drain plug on the bottom of the pump and let the oil drain out
    f. Pour a small amount of clean oil through the oil filler to ensure all the dirty oil has been drained out
    g. Replace the oil drain plug
    h. Fill the oil filler with clean oil SLOWLY while viewing the oil sight glass
    i. Fill to at least ½ full in the oil sight glass, but do not fill completely (the oil level should remain visible in the window)
    j. Close the oil filler
    k. Make an entry in the maintenance log
    l. Once the pump is working again, check the oil level to ensure it is at least ½ full.

D. Diaphragm Pump Maintenance

1. The diaphragm pump does not require routine maintenance.

E. References

1. Agilent IDP-3 Dry Scroll Vacuum Pump Instruction Manual; Manual No 699904350, Revision F, February 2016.
2. http://www.agilent.com/en-us/video/agilent-idp-3-dry-scroll-pump-maintenance

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Controlled Substances Technical Unit Manual	**REVISION DATE: 03/21/2012**	**NUMBER:** TOX.29
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Cleaning the Liners	

I. Policy: The following is the procedure for cleaning the GC liners. (ISO/IEC 17025:2005 5.5.3)

A. The criminalists should remove the glass wool from the liners and place them in a storage location away from clean liners.

B. Liners for controlled substances and toxicology can be cleaned at the same time or separately; the procedure is the same.

C. **SAFETY**: Label all your glassware and put chemicals away when you are finished with them. Use Nitrile gloves, and clean the liners under a hood.

1. Soak the liners in chromic or nitric acid (**cleaning solution**) for one hour
    a. The cleaning solution is an acid. It is located in the acid cabinet.
    b. Use a pasteur pipette to thoroughly wash the liners with the cleaning solution and attempt to submerge all the liners in the solution
    c. Recycle the cleaning solution acid after use (by pouring back into the bottle)
2. Rinse with **distilled water** (4-5 times with a pasteur pipette or squirt bottle). The waste should be collected into a beaker or equivalent and the water and acid waste should be disposed of in the acid waste.
    a. The liners should be placed onto paper towels, or another clean material, in between rinses to dry.
3. Rinse with **methanol** (4-5 times with a pasteur pipette or squirt bottle). The methanol waste should be disposed of in the organic waste.
4. Rinse with **hexane** (4-5 times with a pasteur pipette or squirt bottle). The hexane waste should be disposed of in the organic waste.
5. Soak the liners in **siloxane** or silane for 30 minutes (attempt to submerge all the liners)
    a. Cover the siloxane or silane with parafilm (or equivalent) or it will evaporate.
    b. Recycle the siloxane or silane after use (by pouring back into the bottle)
        i. The Siloxane Solution is 10% Dichlorodimethylsilane in Pentane. The bottle should be labeled with the following hazard information:
            1. Blue 3, Red 4 and Yellow 3.
6. Rinse with **toluene** (4-5 times with a pasteur pipette or squirt bottle). The toluene waste should be disposed of in the organic waste.
7. Rinse with **methanol** (4-5 times with a pasteur pipette or squirt bottle). The methanol waste should be disposed of in the organic waste.
8. Rinse with **hexane** (4-5 times with a pasteur pipette or squirt bottle). The hexane waste should be disposed of in the organic waste.
9. Air dry completely (overnight) under the hood on a paper towel.
10. **Handle the liners with kim-wipes (or equivalent). Do NOT handle the clean liners with bare hands or gloves.**
11. Put the liners into their protective plastic sleeves (or equivalent) and return to the appropriate section.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 07/23/2019	**NUMBER:** TOX.30 - GC/MS Using the Software - Comparative Identifications
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Using the Software - Comparative Identifications	

I. Policy: The following is the procedure for performing data analysis of full scan data collected using the GC/MS.

A. Instructions based on Instrument #10, MSD ChemStation ver. E.02.00.493. Instructions do not account for discrepancies between software versions (some screen images are from Instrument #7).

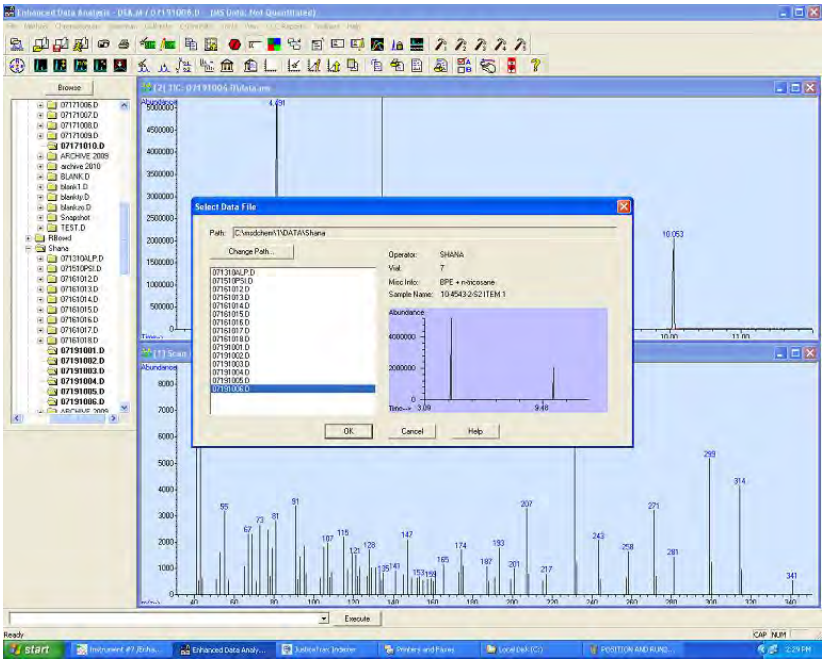
B. These suggestions are intended to be a guide for use and slight variations may be made for file names, names of folders, etc.

1. The Macros may be used to perform data analysis for comparison identification and qualitative analysis. If desired, select the macro to be used (eg. Generic 3-panel, Meth 3-panel, etc). (CCC Reports>Generic 3-Panel).

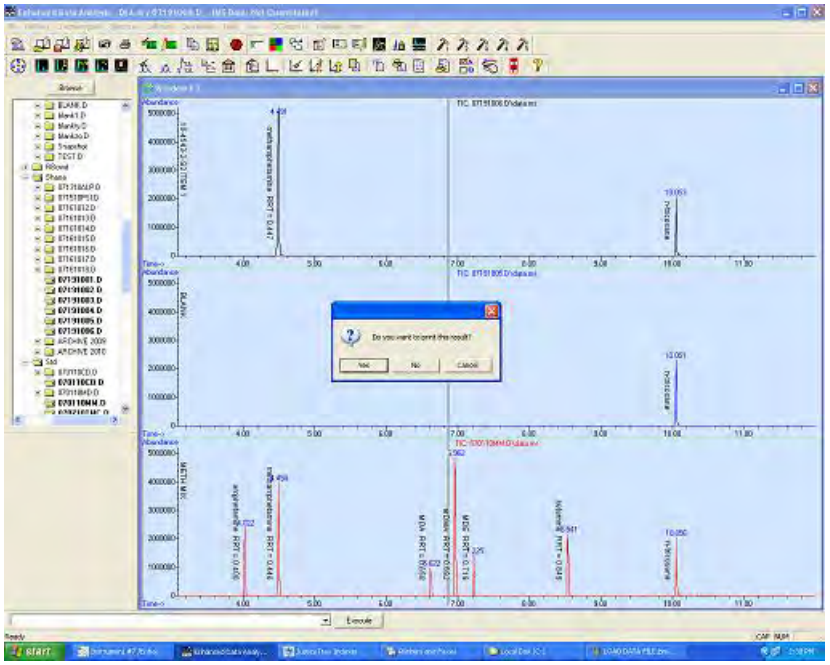
a. Some macros may require a blank sample containing an IS (not a solvent blank) and a standard that has been annotated

b. The data file for the sample is loaded first. Ensure the chromatogram is loaded and desired peaks are integrated before selecting the macro.

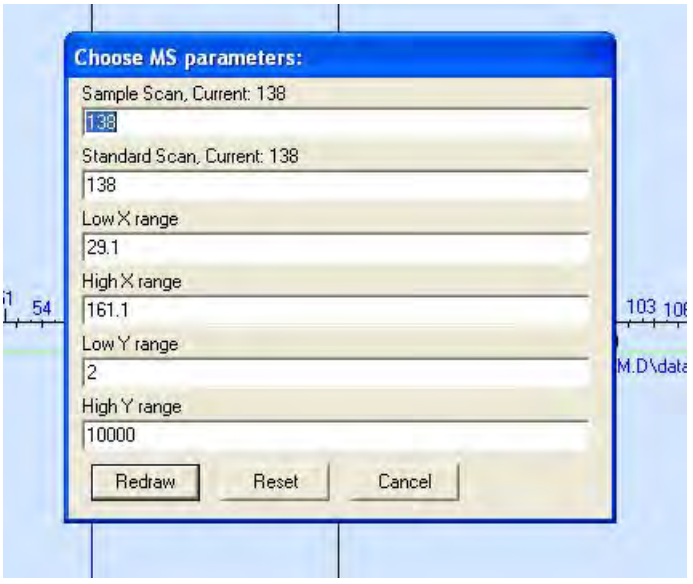
c. The macro will request the files needed for data analysis. The next data file requested is typically the blank (the matrix blank shot at the beginning of the sequence can be used). Then the data file for the annotated standard to be used is loaded.



d. The Macros are a tool created for expediency; it is still up to the analyst to evaluate chromatographic criteria such as peak resolution and shape, retention times, and acceptable spectral matches for qualitative confirmation.



The MS parameters may have to be altered to obtain acceptable spectral matches. The scan for the sample or standard can be changed as well as the High X, or Y range to optimize the spectra.



e. The Total Ion Chromatogram (TIC) and Spectra (MS) for the files of interest may also be obtained in the Annotate Mode. The annotation mode allows for more alterations than the pre-programmed macros. (CCC Reports>Annotate Mode)

   i. The annotated chromatograms can also be printed when in the Annotate Mode (Annotation>Print Window)

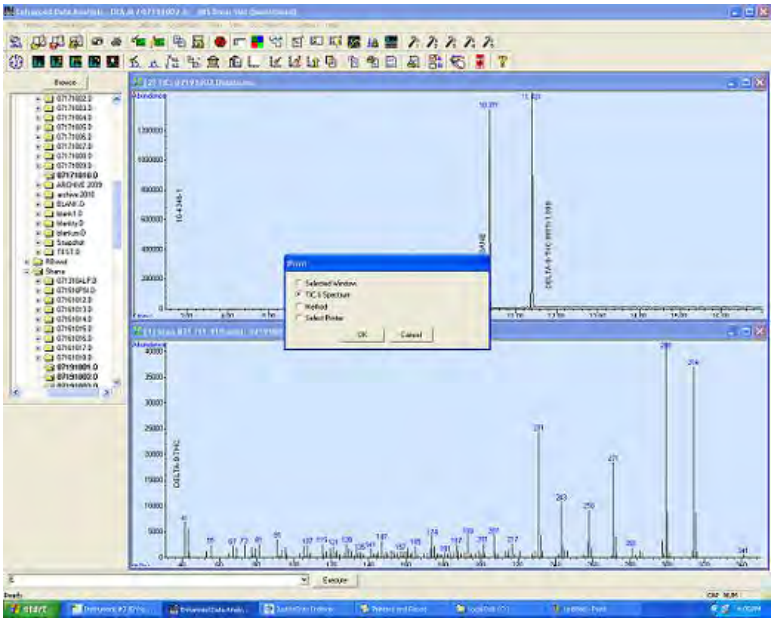
f. A Total Ion Chromatogram (TIC) and Spectra (MS) of the sample and standard used for identification can also be printed manually (without using the Macros).

   i. Load The data file of interest (TIC in window 2)

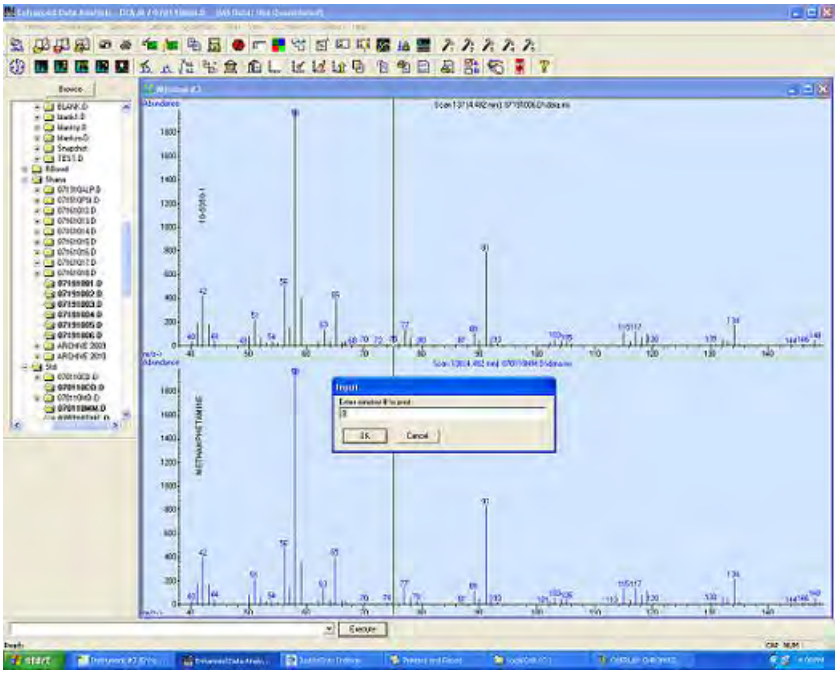
   ii. Click on the peak of interest to obtain the spectra (SCAN in window 1)

   iii. Label the TIC and SCAN appropriately

   iv. Print the TIC & SPECTRUM



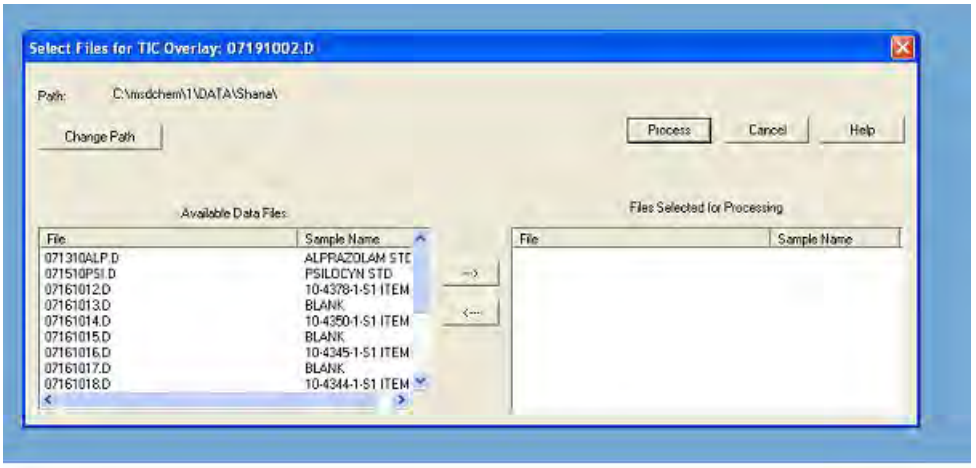
2. Comparison of spectra between a case sample and standard may be done manually (without using the Macros)
    a. Load the data file of interest and click or scan the desired peak
    b. Load the appropriate standard and click or scan the desired peak
    c. In the Command bar merge the two spectra, MERG
    d. In the Command bar Normalize the two spectra, NORM
    e. In the Command bar draw the two spectra in a window with the appropriate X and Y parameters, eg. DRAW 3,X,38:150:0:2000
    f. Label each spectra with the appropriate information (eg, case identifier, standard)
    g. Print the new window (eg. 3)



3. Chromatograms may be overlaid by using the Overlay Chromatograms tool (Tools> Overlay Chromatograms)
    a. Select the data file for overlay
    b. Integrate the Chromatograms
    c. (Chromatogram>Integrate)

d. In the Command Bar draw the two chromatograms in the same window, eg. DRAW 3,R0

e. Label each chromatogram with identifying information (eg case number with request, standard name)



4. Printer settings

   a. Set the default printer to the desired printer (File > Select Printer)

      i. Images for casework that will uploaded into LIMS are printed in the TIFF format

         1. See TOX.10 for information on uploaded images into LIMS

      ii. Images for electronic batch records are usually in the PDF format

         1. Standards, QCs, Curve data, Method, and Sequence are included in the electronic batch records

      iii. Images saved to the Temp folder on an instrument computer can be accessed from other computers on the network

5. Ion Requirements

   1. See specific method for required ions to make identification.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 02/04/2019	**NUMBER:** TOX.31 - GC/MS Using the Software - Quantitative Identifications
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Using the Software - Quantitative Identifications	

I. Policy: The following is the procedure for performing data analysis of SIM data collected using the GC/MS.

A. Instructions do not account for discrepancies between software versions

B. These suggestions are intended to be a guide for use and slight variations may be made for file names, names of folders, etc.

1. Chemstation is used to create a calibration curve and quantitate samples

a. Chemstation uses the responses and concentrations of the standards and internal standards to create the calibration curve

b. The analyst should ensure the concentrations used in the extraction are entered correctly in Chemstation. (Calibrate > Edit Compounds > Calibration Tab > Choose desired analyte)

c. Responses for the calibration curve are updated for each batch of samples.

i. The response can be updated manually by printing the standards and then entering the responses for all internal standards and analytes (Calibrate > Edit Compounds > Calibration Tab > Choose desired analyte response)

ii. A single level can be updated using Calibrate > Update - one level

1. The file to be used should be loaded first

2. Select the desired level to update. For single file per level, the responses will be replaced. The retention time can also be updated here.

iii. All levels can be updated at once with Calibrate > Update - Quick levels update

1. Do you want to clear responses first > Yes

2. Requant files before update > Yes

3. Select Single Data File/Level

4. Chemstation will ask for the file for each level

5. Chemstation will then ask to update the retention times

1. analyst can chose one level to be used for this update

2. retention time does not need to be updated

d. Run Method on Standards

i. Select Standard data file, and select Method > Run Method

ii. Repeat for each Standard, QC, and matrix blank

1. Ensure integration of all internal standards, and analytes are acceptable

e. Update Qualifier ion relative response ratios

i. Calculate the average response ratio for all Qualifier ions identified in the procedure.

1. The average response ratio for each Qualifier ion is the average of the ratios of the standards used to create the calibration curve.

ii. Update the relative response ratios for each analyte and IS. The calculated values are entered manually (Calibrate > Edit Compounds>Identification Tab).

f. Calibration Curves and Data for each analyte can be printed from the Edit Compounds screen or from Calibrate > Print Calibration Curve.

i. Curves and data are usually printed in the PDF format for electronic batch records

g. Quantitation reports can be printed individually or in a batch

i. To print one report, load the data file and select Method > Run Method

ii. To print reports for multiple files use Tools >DOLIST for the desired operation (i.e. Run Method) and then select the files to be run

2. Quantitation reports and Calibration Curves can be obtained automatically by using customed Macros. (CCC Reports > Export Quant)

a. Images for case samples can also be obtained automatically during this process

b. A batch file is created for ease of placing into LIMS

c. A results text file is created for importing results into the Toxicology Database

3. Printer settings

a. Set the run method printer to the desired printer (File > Select Printer)

i. Images for casework that will be uploaded to LIMS are printed in the TIFF format

1. See TOX.10 for instruction on entering images into the case records

ii. Images for electronic batch records are printed in the PDF format.

1. Standards, QCs, Curve data, Method, and Sequence are included in the electronic batch record

iii. Images saved to the Temp folder on an instrument computer can be accessed from other computers on the network

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 11/21/2019	**NUMBER:** TOX.32 - GC/MS Using the Software - Sequences
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: none**	
CHAPTER: Equipment	**SUBJECT:** GC/MS Using the Software - Sequences	

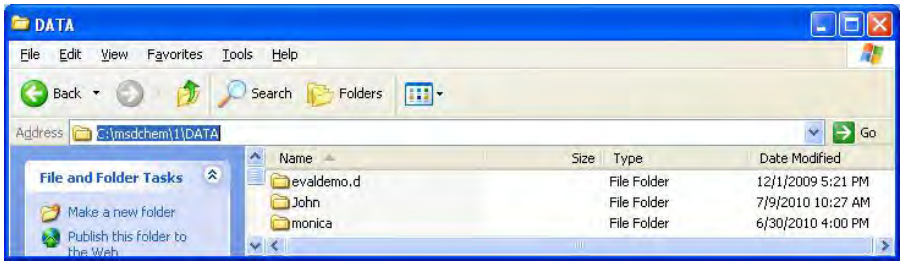
I. Policy: The following is the procedure for running a sequence on the GC/MS.

A. Instructions created on instrument 12, using MSD ChemStation ver. E.02.00.493. Instructions do not account for discrepancies between software versions (some screen images are from instrument 7).

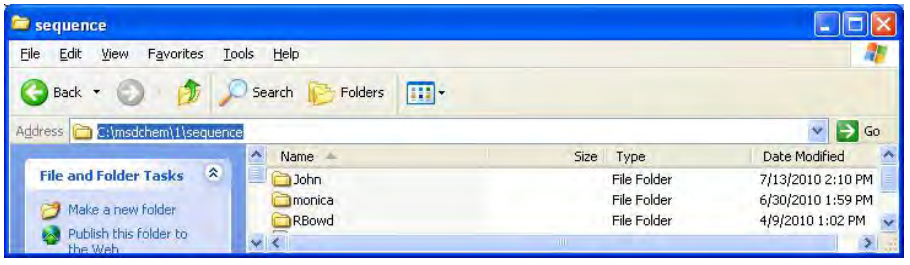
B. These suggestions are intended to be a guide for usage and slight variations may be made for file names, names of folders, etc.

1. Create folders on the local drive (through explorer) for the storage of **(a.)Data** and **(b.)Sequence** information. Create folders as instructed below.

2. The default data location is C:\msdchem\1\DATA\xxxxxx (some systems are configured with D:\ as the default or C:\DATA).



3. The default sequence location is C:\msdchem\1\sequence\xxxxxx (some systems are configured with D:\ as the default).



4. Open the Instrument software application by double-clicking the instrument icon on the desktop. Wait for the system to initialize.

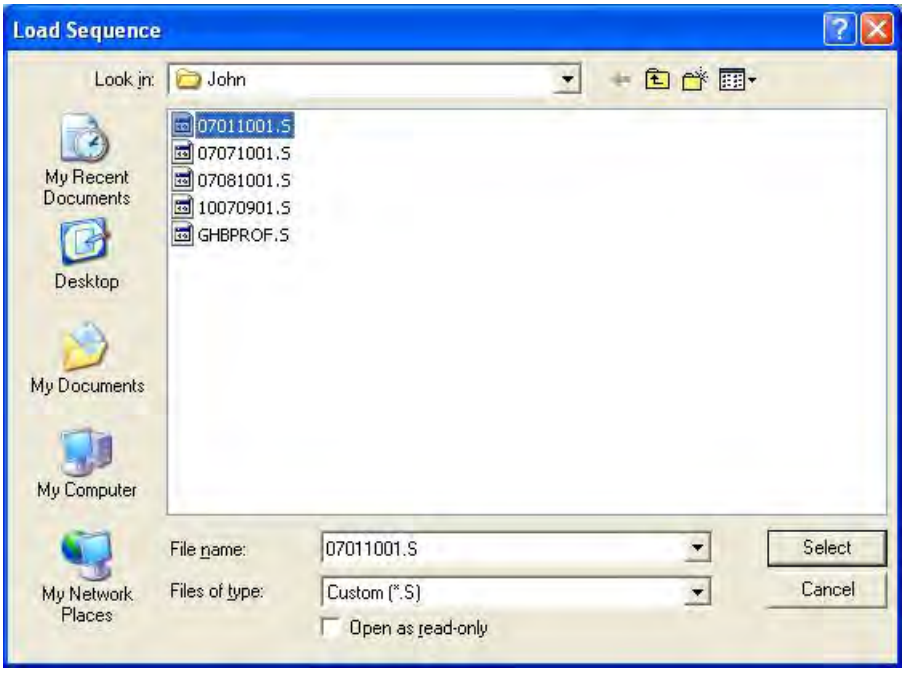
5. Load any currently existing sequence as a template (analyst may have to copy an existing sequence into their folder using Explorer). (Sequence > Load Sequence).

   a. Analyst should create a new sequence for each batch of samples run on the instrument (typically the sequence is named by date)

   b. Using a sequence of the same type of extraction as a template will minimize alterations required to prepare a sequence

6. If the analyst uses a past sequence, they must ensure that the standards and concentrations listed match the concentrations used.





7. Make changes to the sequence by selecting Edit Sequence from the menu bar (Sequence > Edit Sequence).
    a. The Sample Log Table window opens.
    b. Make sure the Data Path is correct. If it is not correct, browse to the correct data path
        i. It is helpful to have all the data for an extraction in one folder, named with identifying information (eg. D:\DATA\meth bld 12-12-12)
    c. In the Method Data box, ensure the local method storage location is displayed.
    d. The default method location is C:\MSDCHEM\1\METHODS (*some systems are configured with D:\ as the default*).



8. The Sample Log Table can contain different fields. Ensure the the following fields are present and populated as instructed below.

   a. **Type** - click the dropdown menu to select the appropriate sample type (typically sample or blank)

   b. **Vial** - indicate the location of the sample vial on the autosampler tray

   c. **Sample** - enter a sample description; the description should be either blank, Std or QC with concentration, or the specimen lab number including request.

      i. MassHunter: this field is titled **Name**

   d. **Method/Keyword** - enter the method to be used for data acquisition and analysis

      i. Note: the Data Path may be changed from one folder to another mid-sequence by using the Method/Keyword field. In the Type field select Keyword and indicate the new Data Path in the Comment/Keyword String. See Chemstation Help for additional Keywords

         1. MassHunter: There is a separate field titled **Data Path** that can be used to change the folder for data files within the sequence

      ii. Mass Hunter: the **Keyword** field is separate from the **Method** field

   e. **Data File** - enter the name of the data file.

      i. The sample in line 1 of the sequence table should be named using a date format, such AS MMDDYY01 or YYMMDD01, each subsequent line should be identified similarly, with only the two digit number at the end of the name changing to correspond with the sample line.

      ii. For example, in a sequence with 18 lines, the sample in line 1 will be identified as YYMMDD01, while that in line 18 will be YYMMDD18. To fill in this data automatically, enter the correct name in line 1, highlight/select the entire column, then right click and select fill column and increment. This can also be done from the sequence menu-Additional Sequence Options - Resequence Datafile.

   f. **Comment/Keyword String** - enter a description (such as lot # of standard, the solvent used, any dilution used, or coroner blood type)

      i. MassHunter: the **Comment** field and **Keyword String** fields are separate

   g. **Multiplier** - enter the correct multiplier required if a dilution has been performed, or enter 1.00000

      i. MassHunter: this field is titled **Dil**

   The following fields may also be present:

   h. **Level** - complete per analytical method requirements, if no instruction exists, leave blank

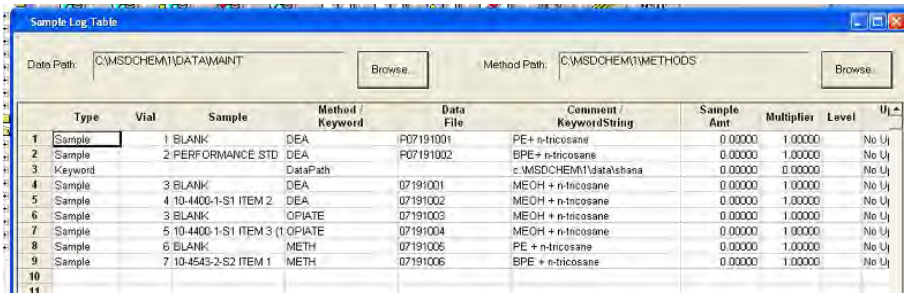
   i. **Update RF** - complete per analytical method requirements, if no instruction exists, select no update

   j. **Update RT** - complete per analytical method requirements, if no instruction exists, select no update

   k. **Update QI** - complete per analytical method requirements, if no instruction exists, select no update

l. **Update MZ** - complete per analytical method requirements, if no instruction exists, select no update

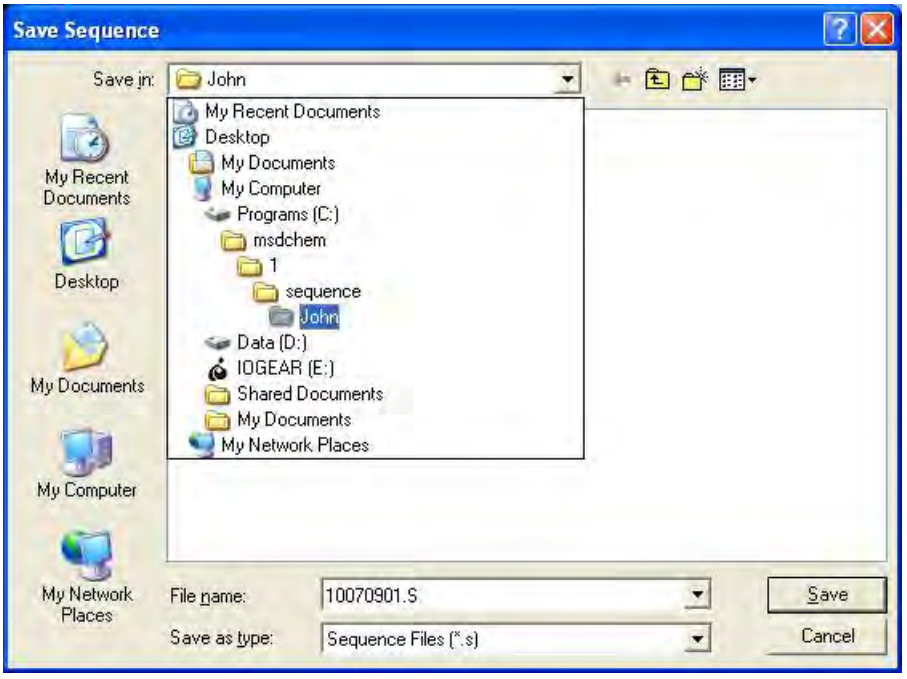
m. Additional MassHunter fields: Method Path, DA Method Path, DA Method File



9. Save the sequence

a. Select Sequence > Save As

b. Navigate to the correct location on C:\ (default location should be C:\msdchem\1\sequence\xxxxxx) (some systems are configured with D:\ as the default).



c. Name the sequence using a date format, such as MMDDYY## or YYMMDD##, where the ## is a two digit number indicating the sequence number. For the first sequence of a particular day, the sequence would be named YYMMDD01, each subsequent sequence would be numbered 02, 03…as appropriate.

d. Ensure the sequence is saved with the appropriate file extension (.s for Chemstation and .s or .sequence.xml for MassHunter).

10. Print the Sequence

a. Select Sequence > Print sequence > Brief Format

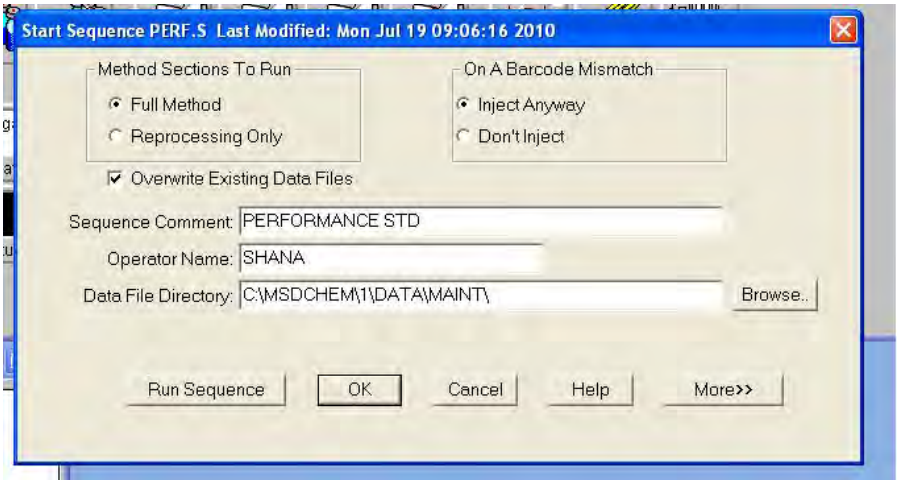
i. MassHunter: select the printer icon and then Print sequence

b. The printed sequence will be added to the run packet.

c. The sequence will be archived with the batch results

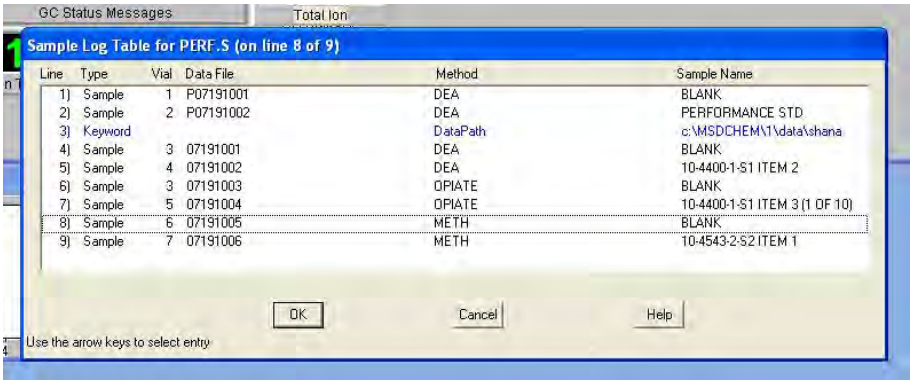
11. Start the Sequence and check that the information in the Run Sequence screen is correct before beginning a run

a. (Sequence > Run Sequence) to run from the beginning of the sequence



b. (Sequence > Position and Run Sequence) to run from a certain place within the sequence

c. The program will ask if the analyst wants to process the keywords before beginning the sequence. If there are keywords that need to be processed, the analyst must select Yes



END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION** **DATE:** 06/23/2017	**NUMBER:** TOX.33 - Instruments - Storage of Data
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025: none** **ASCLD-LAB International Supplemental 2011: 4.13.2.5.2**	
CHAPTER: Equipment	**SUBJECT:** Instruments - Storage of Data	

I. Policy: The following is the policy and procedure for storing data.

A. Electronic data files

1. Analysts shall periodically back up all data files on a storage disk. Typically all instrument data for a year is stored to a back up at the beginning of the proceeding year. Data files shall be maintained on the instrument of origin for a period of one year after the last backup made on the disk. Analysts may back up files on an external hard drive more frequently, but a disk should be created yearly.

2. The back up copy will be kept at a location designated by the Manager/Supervisor.

B. GC/MS Methods and Dynex Assays

1. All methods will be backed up onto a storage disk. A copy will be kept at a location designated by the Manager/Supervisor.

2. Minor changes may be made to methods without validation .

3. A record of the instrument operating parameters will be kept (Supplemental 4.13.2.5.2) This may be accomplished by recording any deviations from the default method, printing a copy of the method used at the time of analysis, or storing a hard copy in the respective validation binder.

4. Examples of changes that can be made to GC/MS methods that do not need validation include, but are not limited to, changing the solvent delay, end run time, SIM windows, and EM voltage.

C. Copies of Data/Forms

1. Copies of instrument reports or forms may be hard copies or electronic format.

2. Hard copies of data are typically printed out at the time of analysis. These hard copies may be scanned and stored in an electronic format (such as pdf) anytime after they have been printed out.

3. Copies (print or electronic) of Autotunes shall be kept for at least the current accreditation cycle.

4. Copies (print or electronic) of the Standards and QCs shall be kept for at least the current accreditation cycle.

5. Equipment Logs shall be kept for at least the current accreditation cycle.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 05/30/2018	**NUMBER:** TOX.34 - GC/MS References
	RELATED ORDERS:	
APPROVED BY: Danielle Adams & Joaquin Jimenez	**ANAB ISO/IEC 17025:2005: 5.5**	
CHAPTER: Equipment	**SUBJECT:** GC/MS References	

I. Policy: The following is a list of references in relation to the GC/MS.

A. Operating Manual Volume 1 General Information HP 6890 Series Gas Chromatograph © 1989-1997

B. Operating Manual Volume 2 Inlets HP 6890 Series Gas Chromatograph © 1989-1996

C. Operating Manual Volume 3 Detectors HP 6890 Series Gas Chromatograph © 1989-1996

D. Hardware Manual HP 5973Network Mass Selective Detector © 1999

E. Installation Manual G1701DA MSD Productivity ChemStation Software version D.02.xx © 2005

F. Drug Analysis Software Getting Started Agilent G1701DA GC/MSD ChemStation © 2005

G. Getting Started Agilent G1701DA GC/MSD ChemStation © 2005

H. Quick Reference 5973N Local Control Panel (LCP) © 2001

I. Quick Reference HP 5973 MSD HP 6890 GC © 2001

J. Getting Started Custom Reports Software © 2001

K. Site Preparation and Installation Manual HP 6890 Series Gas Chromatograph © 1989-1996

L. Supplement HP 5973 Mass Selective Detector © 1998

M. Hardware Installation Manual HP 5973 Mass Selective Detector © 1998

N. Sampling Techniques Handbook HP Automatic Liquid Samplers © 1997

O. Operation Guide HP 7683 Automatic Liquid Sampler © 11/1997

P. Installation Guide HP 7683 Automatic Liquid Sampler © 11/1997

Q. Restek Insert for "Integra-Guard Columns" Rev. date 5/01

R. Restek GC Column Installation (Chromatography Products) Guide © 2010

S. Agilent website: chem.agilent.com

T. **HELP menu** on any version of CHEM STATION

U. Agilent Low Thermal Mass System © 2009, 2010

V. Agilent Deans Switching Systems © 2003, 2008

W. Swaging SilTite Ferrules, Agilent © 2005

X. Agilent 5975 Series MSD, Operating Manual © 2010

Y. Agilent 5975 Series MSD, Troubleshooting and Maintenance Manual © 2010

Z. Agilent Changing the Number of Decimal Places in the EnviroQuant / Enhanced Summary Report (a05049)

AA. Agilent 5977 MSD, Operating Manual (G7077-90026)

AB. Agilent 5977 MSD, Troubleshooting and Maintenance Manual (G7077-90025)

AC. Agilent 7890 Operating Manual (G3430-90054)

AD. Agilent 7693 ALS Manual (G4513-90010)

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 02/04/2019	**NUMBER:** TOX.35 - Performing Immunoassays
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 7.2**	
CHAPTER: Procedures	**SUBJECT:** Performing Immunoassays	

I. The following is information about performing immunoassays on casework samples.

A. **General Information**

1. Immunoassay testing is a method for detection of common drugs or drug classes in biological specimens. Immunoassay is an analytical technique that uses antibodies or antibody related agents for selective determination of sample components. EIA makes use of an enzyme label which may use antibodies immobilized onto the surface of the microtiter plate. The immunoassay technique available to the laboratory is a competitive, solid-phase, heterogeneous, enzyme immunoassay (EIA). Immunoassays can provide great sensitivity to target analytes and are excellent methods for exclusionary evidence. In most cases, immunoassays can be used to "rule out" the presence of target analytes.
2. Immunoassays are considered "presumptive" tests, due to the fact that immunoassays are not always specific for a single analyte. Caution must be exercised when basing opinions solely on immunoassay results.
3. The following are definitions of terms commonly used in immunoassay screening:
    a. **assay**: qualitative determination of the components of a material. In screening, there is a separate assay for each illicit drug and/or drug classes.
    b. **batch**: an assay including blank, controls, calibrators and case samples.
    c. **calibrator**: a sample prepared with a known concentration of analyte for calibration of the assay. Where possible, calibrators should be prepared in a matrix similar to that of case samples.
    d. **high calibrator (positive control)**: a sample containing more analyte than the cutoff calibrator.
    e. **cutoff calibrator**: a sample containing an analyte concentration that delineates between a positive or negative screen result.
    f. **low calibrator (negative control)**: a sample containing more analyte than the blank calibrator and less than the cutoff calibrator.
    g. **blank calibrator**: a sample containing no analyte
    h. **quality control (QC)**: a sample in which the concentration is between the cutoff and the high control
4. Refer to *Screening Validation* binder(s) for information on validated assays. The validated assays can be programmed into an automated microplate analyzer. Minor deviations from plate manufacturer's instructions may be performed if adequate calibration and control samples are used.
5. **Batch analysis**: The following are analyzed and monitored:
    a. Serum Negative Calibrator, Oral Fluid Negative Calibrator, or Immunalysis Negative Calibrator
    b. Serum Cutoff Calibrator, Oral Fluid Cutoff Calibrator, or Immunalysis Positive Calibrator
    c. Blank Urine/Blood Calibrator
    d. Low (negative) Urine/Blood Calibrator
    e. Cutoff Urine/Blood Calibrator
    f. High (positive) Urine/Blood Calibrator
    g. Case samples
    h. QC Sample or Positive Control Sample with blood and urine analysis (optional)
        i. Controls and calibrators may be vendor provided or made in-house.

B. **Urine Cutoff Values**: The following cutoff values are used for the urine assays:

1. methamphetamine 500 ng/mL
2. amphetamine 500 ng/mL
3. morphine 300 ng/mL
4. benzoylecgonine 300 ng/mL
5. oxazepam 300 ng/mL
6. COOH-THC 50 ng/mL

C. **Blood Cutoff Values**: The following cutoff values are used for blood assays:

1. methamphetamine 20 ng/mL
2. amphetamine 20 ng/mL
3. morphine 20 ng/mL
4. benzoylecgonine 50 ng/mL
5. oxazepam 50 ng/mL
6. COOH-THC 20 ng/mL

D. **Blanks**

1. Blank urine: Drug free urine with sodium fluoride is analyzed with each urine assay batch, as a blank.
2. Blank blood: Drug free whole blood with sodium fluoride is analyzed with each blood assay batch, as a blank.
    a. Drug free human urine and whole blood must be obtained. The blood and urine used may be obtained from a Blood Bank, lab staff or a vendor such as *UTAK Laboratories*.

E. **Specimen Requirement:** A minimum of 200µL of blood and 60µl of urine sample is needed for the respective analysis.

F. **Equipment:** This procedure uses the following laboratory equipment and supplies:

1. 12 x 50-100 mm disposable culture tubes
2. programmable digital dilutor (Hamilton Microlab 500 or equivalent) or 10-1000 µL pipettor and disposable pipette tips
3. vortex mixer (Thermolyne or equivalent), if not using digital dilutor
4. specimen rocker (LabQuake Shaker or equivalent)
5. Dynex DSX
6. Micro-Plate EIA Kits
7. Forensic Diluent

G. **Dilutions:** Samples must be diluted prior to application on the automated immunoassay instrument. Samples should be diluted using the digital diluter but may be diluted by hand if necessary. The following dilutions should be carried out:

1. **Urine Dilutions**
    a. 1:60 (i.e. add 15 µL of sample/calibrator to 885 µL of forensic diluent)
        i. Methamphetamine
        ii. Amphetamine
        iii. Morphine
        iv. Benzoylecogonine
        v. Oxazepam
        vi. COOH-THC.
2. **Blood Dilutions**
    a. 1:5 (i.e. add 200 µL of sample/calibrator to 800 µL of forensic diluent)
        i. Methamphetamine

ii. Amphetamine

iii. Morphine

iv. Benzoylecogonine

b. 1:10 (i.e. add 100 µL of sample/calibrator to 900 µL of forensic diluent)

i. Oxazepam

ii. COOH-THC

H. **Preparation and Analyzing in Batches**

1. Select one vial or urine jar for analysis after opening and documenting the evidence per procedures.

2. **The following is the sampling procedure for screening:** Homogeneity is assumed among multiple containers within an envelope or kits as long as containers were collected sequentially, from a single event, into multiple similar containers, and having similar volumes. The reported results pertain to the entire item (all containers), not just the tested amount or the vial analyzed

3. Inspect the samples visually for any visible clotting or discoloration. The analyst should note any clotting or discoloration.

4. Bring the samples to room temperature before analysis.

5. Gently mix the samples to be analyzed before pipetting. This mixing assures homogeneity within the sample. Typically samples are mixed for a minimum of 20 minutes.

6. The analyst may homogenize samples that cannot be pipetted because of clotting.

7. When analyzing hospital vials, the analyst should attempt to analyze a vial (or vials) containing preservative and anticoagulant. The vial(s) selected should be indicated in the notes. It should be indicated in the notes if multiple vials are combined and used for analysis.

I. **Interpretation of Results:** If the following quality control conditions are not met, the assay may need to be repeated or sample re-screened.

1. Calibrator criteria:

a. The minimum optical density (O.D.) of the blank calibrator is greater than the maximum optical density of the negative calibrator (low).

b. The minimum optical density of the negative calibrator (low) is greater than the maximum optical density of the cutoff calibrator.

c. The minimum optical density of the cutoff calibrator is greater than the maximum optical density of the high calibrator (high).

d. The duplicate optical densities of the calibrators should be within 15% of their average.

e. The results from the immunalysis/serum/oral fluid negative calibrators and immunalysis positive/serum/oral fluid cutoff calibrators provided by the manufacturer may be used as additional information in evaluating assay performance.

2. Sample criteria:

a. The optical density values for the case samples should be checked to ensure correlation between the duplicates. If the standard deviation (S.D.) is greater than 0.2 **and** the coefficient of variation (C.V.) is greater than 12% for a negative result, the sample should be re-screened.

b. A not detected sample may be reported indeterminate if both duplicate optical densities are within 15% of the cutoff. These samples may be taken to confirmation.

c. A sample for which one O.D. result is positive, and one is negative or indeterminate:

i. If the duplicate results are within 15% of the cutoff, the sample may be reported as positive and proceed to confirmation

ii. If either of the duplicate results is not within 15% of the cutoff, or if they exceed the S.D. and C.V. criteria in paragraph 1.I.2.a, the sample should be re-screened.

d. A sample for which one O.D. is negative and one is indeterminate:

i. If either of the duplicate results is within 15% of the cutoff, the sample may be reported as indeterminate and proceed to confirmation.

ii. If either of the duplicate results is not within 15% of the cutoff and if they exceed the S.D. and C.V. criteria in paragraph 1.I.2.a, the sample should be re-screened.

3. Percent Displacement: The percent displacement (formula listed below) is a calculated number that may be monitored to evaluate the performance of the assay. The calculated number should fall within the recommended limits specified in the Orasure's Lot Specification Sheet. Although falling outside the recommended limits does not invalidate an assay, it is recommended that the manufacturer is contacted for assistance if this issue persists.

$$\% \text{ Displacement} = \frac{\text{O.D. Serum Neg Cal - O.D. Serum Cutoff Cal}}{\text{O.D. Serum Neg Cal}} \times 100\%$$

a. This percentage displacement can be noted on the Screening Report for each assay; and checked against the ORASURE Plate Specifications (sent with each kit) to ensure it falls within an acceptable range.

$$CV = \frac{SD}{X} \times 100$$

$$SD_{\text{duplicates}} = v\ \frac{\sum d^2}{2n}$$

J. **Quality Control Re-screen**

1. 1 out of every 10 negative samples should be re-screened to confirm the original result.

a. Sample with requests for drugs the laboratory does not confirm may not be counted toward re-screens.

K. **Quality Log**

1. A quality log shall be kept in the Toxicology Unit and contains details of unsuccessful screening assays.

2. The definition of an unsuccessful assay is that a plate assay was started and there were no reported results for that plate. If the error is an operator error (i.e. vials were placed in the wrong positions) that can be remedied, it may not constitute an unsuccessful assay and would not need to be logged in the quality log.

3. If there is a mechanical issue with the instrument, the mechanical issue should also be recorded on the instrument maintenance log regardless of the ability to recover an assay.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Unit Manual	**REVISION DATE: 06/20/2013**	**NUMBER:** TOX.36
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** Dynex Operation	

I. Policy: The following is the procedure for using the Dynex for routine casework analysis. (ISO/IEC 17025:2005 5.5.3)

A. Instructions for Operation

1. Instructions created with Revelations Software 6.0.
    a. Minor deviations from the instructions may occur with software updates.
2. Plates and reagents should be at room temperature.
3. Turn on DSX system - printer, monitor, computer and instrument.
4. Double click on "Revelations" icon on desktop. Enter User and Password if necessary. Press "Enter".
5. Select "Connect to DSX (using Port 1)". Select "Do it" to connect immediately. Self Test will start automatically
6. Verify that all parameters have passed during Self Test and print copy to be placed in DSX binder. See *Dynex Maintenance*.
7. A worklist can be ordered by using a Button with preset assays or by loading individual assays.
    a. To order a worklist by using a button:
        i. Click button for preferred assays (assays will automatically be added for worklist)
    b. To order a worklist by loading individual assays:
        i. Select "New" then "Worklist"
8. A worklist can be created by using the barcode scanner or manually by entering Sample IDs. The Sample IDs using barcodes are the laboratory #s in barcode form and is the preferred procedure for casework runs
    a. To create a work list using the barcode scanner:
        i. Select "Scan barcodes using a new sample batch". Click "OK". Click on "Load sample caddy". Load samples in sample rack with barcodes aligned with gaps in sample caddy for proper scanning. Click Enter or green "checkmark". Click on position of last sample and assign. Click "Scan Sample IDs".
        ii. Samples without barcodes, or unreadable barcodes, can be entered manually by clicking on the sample and selecting "Manual Entry" and typing the laboratory #. These numbers can be distinguished as they show up within brackets.
    b. To create a worklist manually:
        i. Uncheck "Scan barcodes using a new sample batch". Click "OK". Type in Sample IDs (laboratory #s).
        ii. The manual worklists should be compared to the position in sample rack to ensure correct sample placement.
    c. Each sample in worklist must have a unique name. If separate aliquots from the same sample are to be analyzed, a different identifier must be used. (Example: add "benzo" to end of sample name)
    d. Control or QC samples run in the batch may be named by the date and type of sample (example: a positive control run on 10/30/09 could be called 091030high)
9. The assays to be run will appear at the top of the grid. Add/Delete assays until all desired assays are present.
10. Select samples for analysis by entering a checkmark beneath the assay (check or highlight box that corresponds to case and assay). Once all samples are assigned to assays, click "OK".

11. Click the green "play" button to build the timeline. The timeline can be viewed by pressing the blue "down arrow" button. The arrow buttons can be used at any time to toggle between the timeline and results. Click the green "fast forward" button to begin loading the instrument immediately.

12. At the prompt for lot numbers, click Enter or green "checkmark".
*Note: Lot numbers are tracked on Session Worksheet.

13. Load sample caddy if work list created manually. Click green "checkmark".

14. Load plate as shown. Enter plate identifier (example: *091030meth-1* for the first plate of Methamphetamine run on October 30, 2009). Click green "checkmark". Repeat with each plate to be loaded.

15. Load fluid and consumables as directed. Click green "checkmark" for each item loaded.

16. Empty waste containers if needed and click "OK". The instrument will begin analysis.

17. Results will appear as each plate is finished. Print results in desired format for archiving. Click the blue "up arrow" if needed to toggle between the timeline and results.

18. After the run has completed, click the red "stop" button to unload plates and fluids

19. After the last run of the day, click "daily wash" button.

    a. Uncheck "Scan barcodes using a new sample batch". Click "OK".

    b. Highlight A1 to A8 for each assay. Enter "1" on "First Auto Sample ID" field. Click "Auto Assign Sample IDs" button. Click "OK".

    c. Click green "play" button. Click green "fast forward" button.

    d. Click green "checkmark" six times. (The daily wash does not require that any well-plates be loaded.)

    e. Load DI water for each bottle and click green "checkmark" for each. Click "OK". After the run has completed, click the red "stop" button.

20. Close "Revelations" program and turn off DSX system.

21. Fill out log in the Dynex binder.

22. A Session Worksheet should be filled out with the relevant traceability information and kept with batch results.

B. Reporting Instructions

1. A copy of the case report for the screening results is included in the case notes. Case reports are not generated from Revelations software, they are generated by an Access database from a text file created by Revelations.

    a. Open the "Dynex Report Database" (Access Database) icon on desktop.

    b. Select "Import Dynex Text File". Select the text file to import. (Text file will have the same name as the plate entered in the Revelations software)

    c. After all files have been imported, select "Reports"

    d. Select appropriate filters. Results can be filtered by "Sample ID", "File Name", "Date", "Operator" or combination. For example: To print results for a 4-panel done by tbw on 12/25/09, select Date and Operator filters. Enter *12/25/09* for start and end dates for Date filter. Select *tbw* from the drop down menu for operator filter.

    e. Click "Combined Filter Report".

    f. Click "File" then "Print". Choose appropriate printer. Reports for electronic transfer should be printed to "JusticeTrax Imaging".

    g. See Case File Images for further instruction

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 06/23/2017	**NUMBER:** TOX.37 - Dynex Maintenance
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3, 5.5.5 c & h, g** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** Dynex Maintenance	

I. Policy: The Dynex DSX instrument will be checked to ensure its reliability. Maintenance will be carried out if needed according to the procedures below.

A. **Daily Maintenance:** The following is performed each day the instrument is used for casework. (ISO/IEC 17025:2005 5.5.3, 5.5.5 c, g)

1. Instrument Self Test
    a. The self test is performed before running any casework.
    b. The instrument automatically performs the self test when the Revelations software is started up.
    c. The instrument will display the results of the self test on the computer.
    d. The self test can be printed out (the self test consists of multiple pages which can be printed on one sheet of paper by selecting printing preferences - 4 pages per sheet).
    e. The analyst performing and or evaluating the self test will initial the log indicating the self test passed.
    f. Copies of the Self Test will be kept in an appropriate format (e.g. printouts may be maintained in the Dynex DSX Binder or electronic copies stored on the network or local computer). See *Care and Maintenance of Equipment* for further information about the maintenance log. (ISO/IEC 17025:2005 5.5.5 h)
2. Daily Wash
    a. The Daily Wash may need to be performed if the instrument has not been used for an extended period of time.
    b. The Daily Wash is performed after the last run of casework for the day.
    c. See *Dynex Operation* for instructions.
    d. If samples are run overnight, the Daily Wash may be performed the next day, but should be performed before any additional work is done.
3. Documentation
    a. Performing the self test and the daily wash will be noted in the Dynex (DSX) Binder. (ISO/IEC 17025:2005 5.5.5 h)

B. **Weekly Maintenance:** The following is performed at the end of the week (ISO/IEC 17025:2005 5.5.3)

1. The maintenance is performed after all casework runs have finished for the week. If the instrument has not been used during the week, the maintenance is not required.
2. Waste containers can be emptied as needed throughout the week.
3. Empty and clean waste tip container.
    a. Some tips are used for biological samples, the contents of the waste tip container should be disposed of in biological waste.
    b. The tip container should be cleaned with an appropriate cleaner, rinsed thoroughly, and dried before returning to instrument.
    c. The waste tip chute that directs the tips into the container should also be cleaned.
4. Empty and clean the liquid waste container
    a. The waste can be bleached and disposed of down the sink.

b. The container should be cleaned with an appropriate cleaner, rinsed thoroughly and returned to the instrument.

5. Empty and rinse the wash containers

   a. Each wash container should emptied and rinsed with DI water.

   b. The container should then be filled up with DI water and returned to instrument.

6. Clean external surfaces

   a. Wipe external surfaces with 70% isopropanol or similar solution.

   b. Wipe pipet tip with 70 % isopropanol or similar solution.

   c. Any items moved during cleaning should be returned to their original positions.

7. Documentation

   a. Performance of the weekly maintenance will be noted in the Dynex Binder. (ISO/IEC 17025:2005 5.5.5 h)

C. Non-Routine Maintenance

1. For non-routine maintenance and ordering parts, see the *Dynex References*. These references may be used for troubleshooting and maintenance procedures.

2. Any additional maintenance will be noted in the Dynex Maintenance Binder. (ISO/IEC 17025:2005 5.5.5 h)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Unit Manual	**REVISION DATE:** 02/26/2019	**NUMBER:** TOX.38 - LIMS Reporting Results
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2017: 5.5**	
CHAPTER: Procedures	**SUBJECT:** LIMS Reporting Results	

I. The following is the procedure for entering results in LIMS.

A. Instructions for entering **screening** results in LIMS:

1. Open the case and right click on the appropriate request number. Select “Edit Findings”.
2. In the “Edit Findings” screen, select appropriate submission/subject.
    a. Additional results may be added to existing result sets, or a new result set can be created by right clicking the submission and selecting “Add Result”.
    b. Only one screen of an analyte name is allowed per result, if additional screens with the same analyte name are needed, an additional result set must be added.
3. Highlight (click on) the word “result” at the top of the window to enable editing of individual results at the bottom of the window.
4. Add the analytes for the screens performed. Choose a panel from the pull-down list at the top to add a predefined panel, or click the screen name to choose an appropriate screen. Multiple screens can be selected at once by shift-clicking or control-clicking in the list. Enter results.
    a. The default result is negative when the screen is added.
    b. Enter a positive result by changing the "Result" selector to the "Positive" radio button. The "Confirmation Required" checkbox will be automatically checked.
    c. A result can be marked as indeterminate by entering “1” in the ratio.
    d. A screen can appear only in the notes (not the report) by adding a “0” in the ratio.
        i. Screens such as “Instructions” and “Comment-Notes” automatically appear only in notes.
    e. The "Confirmation Required" checkbox controls how case results appear in LIMS reports used by lab staff to organize casework (regardless of the result entered).
        i. Cases with screens that have the confirmation box checked will appear on pending lists, cases with screens that do not have the confirmation box checked will not appear on pending lists.
        ii. If a positive screening result is not going to be confirmed by the lab, uncheck the confirmation box.
5. The analyst and date of analysis will also be recorded in the notes.
    a. The date of entry is the date of analysis unless otherwise indicated in the notes.
    b. “Screening Notes” can be used to provide information for multiple screens. The notes entered in the annotation field should indicate the analyst, date (if other than the date entered) and the screens it applies to.
    c. Alternatively the analyst and date (if other than the date entered) can be listed in the annotation portion of the individual screen.
6. If additional screening work is needed, an “Instruction” screen is entered.
    a. In the annotation field, enter the instruction (ie “screen benzo” or “OLA THC”) and analyst’s initials.
    b. The instruction should be marked as positive, the confirmation box must be checked.

B. Instructions for entering **confirmation** results in LIMS:

1. Open the case and right click on the appropriate request number. Select “Edit Findings”.

2. In the “Edit Findings” screen, select appropriate submission/subject.
    a. Results may be added to existing results by clicking the green "+" (Add) button to the right, or a new result set can be created by right clicking the submission and selecting “Add Result”.
    b. Multiple instances of the same analyte can be entered in confirmation results.
3. Highlight the word “result” at the top of the window to enable editing of individual results at the bottom of the window.
4. Add the analytes for the confirmations performed. Enter results for each analyte.
    a. Negative results are entered as "-" in the quant. units field.
    b. Positive quantitative results are entered as the measured value.
        i. For blood samples, the number will appear on the report, as well as in the notes.
        ii. For urine samples, a “positive” will appear on the report and the number will appear in the notes.
    c. Positive qualitative results are entered as "+" in the quant. units field.
    d. For quantitative results include the units of the result (eg. mcg/ml).
        i. To enter a result as greater than the highest standard run, enter the value as "HIGH" in the quantity and “mcg/ml, >” in the units; this will appear on the report as a result of > 2.50 mcg/ml.
        ii. Entering the units as “inconclusive” will appear on the report as Inconclusive Result.
    e. For quantitative results, LIMS has default reporting limits that will print both in the notes and on the report.
        i. To override the default values, enter the new reporting limit in the +/- box as you want it to appear on the report, and enter the corresponding units.
    f. For both quantitative and qualitative results include the confirmation method (eg GCMS-SIM or GCMS-full).
        i. Entering the confirmation method as “Notes” will allow the entered result to appear only in the notes, not the report.
5. The analyst and date of analysis for the confirmation will also be recorded in the notes.
    a. The date of entry is the date of analysis unless otherwise indicated in the notes.
    b. “Extraction Notes” can be used to provide information for multiple analytes. The notes entered in the annotation field should indicate the analyst, date range and the analytes it applies to. “Extraction Notes” automatically appear in the notes only.
    c. Alternatively the analyst and date range can be listed in the annotation portion of the individual analyte.
6. If the entered results complete the analysis initiated by a screen or instruction, uncheck the confirmation box on the related screening analyte.
    a. If further analysis is required (eg a dilution or reanalysis), do not uncheck the confirmation box of the related screen. Add any comments needed to direct further analysis in the annotation box of the screen to(eg, reanalyze with 0.1 ml) and initial and date.

C. The LIMS report requires an entry in both the screening and confirmation sections, regardless of whether analysis was performed.
1. In addition, there cannot be any pending screens (no "Confirmation Required" boxes can be checked) in order to draft complete the case.
2. It is not required to open the evidence and itemize the contents when no work is done (eg. When agency cancels request prior to analysis). It should be recorded in the technical notes when the evidence submission was not opened or examined when a report is issued.
3. If the screening is all negative, or no screens were confirmed, use the confirmation analyte “No confirmation done.”
4. If no screening was done, use the “No screening done.” or “The sample was not screened on-site.” analyte in the screening section.
5. If the sample was sent out for analysis (OLA):

a. The individual who imaged the report into LIMS will enter a “Comment-Notes” analyte in the confirmation section.

i. the annotation should include the notes “imaged report”, the individual’s initials, and the date if other than the date entered.

b. An “OLA” analyte must also be added, which will appear on the report to indicate what the sample was analyzed for. Example “The sample was forwarded to NMS Labs for benzodiazepine analysis. Attached is the result of their examination.”.

6. Both the screening and confirmation sections have “Comment-Notes” and “Comment-report” analytes that can be used to convey information in the notes or the report, respectively.

a. Comment-Notes will appear only in the notes.

b. Comment-Report will appear in the report and notes, therefore initials and abbreviations should not be used.

D. The following supporting documentation related to the results is included in the case notes:

1. A copy of the screening report for the individual case

2. A copy of the GCMS worksheet with the case results

3. A copy of the GCMS data for the case

a. For quantitative procedures, this is a copy of the quantitation report for the case which includes chromatograms for internal standards and analytes.

b. For qualitative procedures, this is a copy of the sample chromatogram compared to a standard and the mass spectrum of any positive analytes compared to a standard.

4. See the following for additional information regarding reports and images:

a. GC/MS Using the Software-Comparative Identification

b. GC/MS Using the Software-Quantitative Identification

c. Case File Images

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.39 - Dynex References
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.5.3** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Equipment	**SUBJECT:** Dynex References	

I. Policy: The following is a list of references in relation to the Immunoassay analysis and the Dynex instrument. Manuals and journal articles can be found in the Toxicology Unit. Books can be found in the Muir library. (ISO/IEC 17025:2005 5.5.3)

A. Operator's Manual for DSX Automated ELISA System © 2000-2005

B. HELP menu on Revelations Software (any version)

C. "Guideline for Forensic Toxicology Using OraSure Micro-Plate Technology" Orasure Technical Bulletin MP-97-019

D. Stewart, M.J., **Immunoassays**, *Clarke's Isolation and Identification of Drugs*, The Pharmaceutical Press, London (1986) 148-159

E. Moore, K.A., et.al., **Screening postmortem blood and tissues for nine cases of drugs of abuse using automated microplate immunoassay**, *Forensic Science International*, 103 (1999) 93-102

F. Ferrara, S.D., et. al., **Drugs-of-Abuse Testing in Urine: Statistical Approach and Experimental Comparison of Immunochemical and Chromatographic Techniques**, *Journal of Analytical Toxicology*, 18 (1994) 278-291

G. Liu, R.H., **Evaluation of Common Immunoassay Kits for Effective Workplace Drug Testing**, *Handbook of Workplace Drug Testing*, Liu, R.H. and Goldberger, B.A., editors, American Association for Clinical Chemistry, Washington, D.C., USA (1995) 67-129

H. Perrigo, B.J., Joynt, B.P., **Use of Elisa for the Detection of Common Drugs of Abuse in Forensic Whole Blood Samples**, *Canadian Society of Forensic Sciences Journal*, 4 (1995) 261-269

I. Spiehler, V.R., et. al., **Validation of an Automated Microplate Enzyme Immunoassay for Screening of Postmortem Blood for Drugs of Abuse**, *Journal of Analytical Toxicology*, 22 (Nov/Dec 1998) 573-579

J. Slagle, K.M., Ghosn, S.J., **Immunoassays: Tools for Sensitive, Specific, and Accurate Test Results**, Laboratory Medicine, v27 n3 (1996) 177-183

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 06/30/2017	**NUMBER:** TOX.40 - Preparation of Calibrators for Immunoassay
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** Preparation of Calibrators for Immunoassay	

I. The following procedures should be used for the preparation of calibrators for immunoassay analysis.

A. Universal safety precautions should be used when handling body fluids. Blood and Urine are bio hazardous substances capable of transmitting disease.

B. All Calibrators will be aliquotted into microcentrifuge tubes and put into the freezer for long term storage.

C. **Blood Calibrators (Drugs of Abuse)**

1. **Blank Blood**: Drug free whole blood must be obtained. The blood used should be blank whole blood. This can be obtained from a Blood Bank or from a company such as *UTAK Laboratories*.
2. **Preparation**: Calibrators may be prepared with combinations of any of the compounds listed below.
3. **Expiration/Labeling**: Blood calibrator solutions may be used for six months or until demonstrated unacceptable and should be labeled with the expiration information. See *Lab Generated Solutions* for more information regarding labeling calibrators and expiration dates.
4. **Stock Standards**: The following stock standards are used to prepare calibrators. Stock standards are typically 100 µg/mL; see respective blood confirmation procedures for preparation of stock standards.
   a. methamphetamine
   b. amphetamine
   c. morphine
   d. benzoylecgonine
5. **Working Standard Solution**: The 100 µg/mL stock standards are diluted 1:10 with deionized water to make 10 µg/mL working standards.
6. **Target Concentrations**: Below lists the desired concentration and volume information for each analyte
   a. **High standard mix:** The following are target concentrations and aliquot volumes to make 10 mL of high calibrator solution for the immunoassays:

Analyte	Working Standard Concentration	Aliquot volume	Target concentration
meth/amphetamine	10 µg/mL	80 µL	80 ng/mL
morphine	10 µg/mL	80 µL	80 ng/mL
benzoylecgonine	10 µg/mL	100 µL	100 ng/mL

   b. **Cut off standard mix:** The following are target concentrations and aliquot volumes to make 10 mL of cutoff calibrator solution for the immunoassays:

Analyte	Working Standard Concentration	Aliquot volume	Target concentration
meth/amphetamine	10 µg/mL	20 µL	20 ng/mL
morphine	10 µg/mL	20 µL	20 ng/mL
benzoylecgonine	10 µg/mL	50 µL	50 ng/mL

c. **Low standard mix:** The following are target concentrations and aliquot volumes to make 10 mL of low calibrator solution for the immunoassays:

Analyte	Working Standard Concentration	Aliquot volume	Target concentration
meth/amphetamine	10 µg/mL	5 µL	5 ng/mL
morphine	10 µg/mL	5 µL	5 ng/mL
benzoylecgonine	10 µg/mL	25 µL	25 ng/mL

7. **Preparation of calibrator solution:** Prepare the calibrator solution as described below.

Step	Action
1	Label three 10 mL volumetric flasks with the following: High, C/O, Low.
2	Add the appropriate aliquots of 10 µg/mL working standards. Refer to the charts above for the appropriate aliquot volume for the High, C/O, and Low calibrators.
3	Fill to mark with blank whole blood.
4	Mix all of the volumetrics by inversion for approximately 30 minutes. Transfer into a clean plastic or glass tube for dispensing. Aliquot approximately 0.5ml to microcentrifuge tubes for storage.

D. **Blood Calibrators (Benzodiazepines/Cannabinoids)**

1. **Blank Blood**: Drug free whole blood must be obtained. The blood used should be blank whole blood. This can be obtained from a Blood Bank or from a company such as *UTAK Laboratories*.
2. **Preparation**: Calibrators may be prepared with combinations of any of the compounds listed below.
3. **Expiration/Labeling**: Blood calibrator solutions may be used for six months or until demonstrated unacceptable and should be labeled with the expiration information. See *Lab Generated Solutions* for more information regarding labeling calibrators and expiration dates.
4. **Stock Standards**: The following stock standards are used to prepare calibrators. Stock standards are 10 µg/mL for COOH-THC and 100 µg/mL for oxazepam; see respective blood confirmation procedures for preparation of stock standards.
   a. oxazepam
   b. (-)11-nor-9-carboxy-delta9-tetrahydrocannabinol (COOH-THC)
5. **Working Standard**: Typically for COOH-THC, a 10 µg/mL stock standard is diluted 1:10 with deionized water to make 1 µg/mL working standards and for oxazepam a 100 µg/mL stock standard is diluted 1:10 with deionized water to make 10 µg/mL working standards.
6. **Target Concentrations**: Below lists the desired concentration and volume information for each analyte
   a. **High Standard Mix:** The following are target concentrations and aliquot volumes to make 10 mL of high calibrator solution for the immunoassays:

Analyte	Working Standard concentration	Aliquot volume	Target concentration
COOH-THC	1 µg/mL	400µL	40 ng/mL
oxazepam	10 µg/mL	200 µL	200 ng/mL

   b. **Cut off Standard Mix:** The following are target concentrations and aliquot volumes to make 10 mL of cut off calibrator solution for the immunoassays:

Analyte	Working Standard concentration	Aliquot volume	Target concentration

COOH-THC	1 µg/mL	200µL	20 ng/mL
oxazepam	10 µg/mL	50 µL	50 ng/mL

c. **Low Standard Mix:** The following are target concentrations and aliquot volumes to make 10 mL of low calibrator solution for the immunoassays:

Analyte	Working Standard concentration	Aliquot volume	Target concentration
COOH-THC	1 µg/mL	100µL	10 ng/mL
oxazepam	10 µg/mL	25 µL	25 ng/mL

7. **Preparation of calibrator solution**: Prepare the calibrator solution as described below.

Step	Action
1	Label three 10 ml volumetric flasks with the following: High, C/O, and Low. Add approximately 1 mL water to each.
2	Add the appropriate aliquots of 10 µg/mL working standards. Refer to the charts above for the appropriate aliquot volume for the High, C/O, and Low calibrators.
3	Fill to the mark with blank blood.
4	Mix all of the volumetrics by inversion for approximately 30 minutes. Transfer into a clean plastic or glass tube for dispensing. Aliquot approximately 0.5ml to microcentrifuge tubes for storage.

E. Urine Calibrators (Drugs of Abuse, Benzodiazepines and Cannabinoids)

1. **Blank Urine**: Drug free urine must be obtained. Sodium fluoride is used as a preservative in urine specimens.
   a. Approximately 4 grams of sodium fluoride per 500 mL urine.
2. **Preparation**: Calibrators may be prepared with combinations of any of the compounds listed below.
3. **Expiration/Labeling**: Urine controls may be used for one year or until demonstrated unacceptable and should be labeled with the expiration information. See *Lab Generated Solutions* for more information regarding labeling calibrators and expiration dates.
4. **Stock Standards**: The following stock standards are used to prepare the urine calibrators. Stock standards are typically 100 µg/mL; see respective urine confirmation procedures for preparation of stock standard
   a. methamphetamine
   b. amphetamine
   c. morphine
   d. benzoylecgonine
   e. oxazepam
   f. (-)11-nor-9-carboxy-delta9-tetrahydrocannabinol (COOH-THC)
5. **Working Standards**: The 100 µg/mL stock standards are diluted 1:10 with deionized water to make 10 µg/mL working standards.
6. **Target Concentrations**: Below lists the desired concentration and volume information for each analyte
   a. **High Control:** The following are target concentrations and aliquot volumes to make 10 mL of high control solution for the immunoassays:

Analyte	Working Standard Concentration	Aliquot volume	Target concentration
meth/amphetamine	10 µg/mL	1000 µL	1000 ng/mL
morphine	10 µg/mL	600 µL	600 ng/mL
benzoylecgonine	10 µg/mL	600 µL	600 ng/mL
oxazepam	10 µg/mL	600 µL	600 ng/mL

COOH-THC	10 µg/mL	100 µL	100 ng/ml

b. **Cut off Control:** The following are target concentrations and aliquot volumes to make 10 mL of cutoff calibrator solution for the immunoassays:

Analyte	Working Standard Concentration	Aliquot volume	Target concentration
meth/amphetamine	10 µg/mL	500 µL	500 ng/mL
morphine	10 µg/mL	300 µL	300 ng/mL
benzoylecgonine	10 µg/mL	300 µL	300 ng/mL
oxazepam	10 µg/mL	300 µL	300 ng/mL
COOH-THC	10 µg/mL	50 µL	50 ng/ml

c. **Low Control:** The following are target concentrations and aliquot volumes to make 10 mL of low control solution for the immunoassays:

Analyte	Working Standard Concentration	Aliquot volume	Target concentration
meth/amphetamine	10 µg/mL	250 µL	250 ng/mL
morphine	10 µg/mL	150 µL	150 ng/mL
benzoylecgonine	10 µg/mL	150 µL	150 ng/mL
oxazepam	10 µg/mL	150 µL	150 ng/mL
COOH-THC	10 µg/mL	25 µL	25 ng/ml

7. **Preparation of control solutions:** Prepare the control solutions as described below.

Step	Action
1	Label three 10 mL volumetric flasks with the following: High, C/O, Low.
2	Add the appropriate aliquots of 10 µg/mL working standards. Refer to the charts above for the appropriate aliquot volume for the High, C/O, and Low calibrators.
3	Fill to the mark with blank urine.
4	Mix all of the volumetrics by inversion for approximately 30 minutes. Transfer into a clean plastic or glass tube for dispensing. Aliquot approximately 0.5ml to microcentrifuge tubes for storage.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 11/21/2019	**NUMBER:** TOX.41 - Performing Extractions
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 7.2**	
CHAPTER: Procedures	**SUBJECT:** Performing Extractions	

I. Policy: The following is general information about performing extractions.

A. Identification of Cases Awaiting Confirmation

1. Refer to LIMS reports that identify cases awaiting confirmation(s).
    a. The reports are sorted by analyte, screening results, and matrix.
    b. The reports contain additional information, such as analyst comments, request date, and number of cases awaiting confirmation.

B. Barcode Scanning

1. Use of the Comparator Barcode Scanner provides documentation of the transfer of samples between vials.
2. Analysts must always visually verify the identifying information on the label of each sample when moving the contents from container to container when performing an extraction to maintain the sample integrity.
3. Scanning will occur at all vial to vial transfers. Due to physical constraints on equipment, scanning between SPE columns and vials will not be required.
    a. Scanning can be with a 1D or 2D barcode.
4. See TOX.65 for more information

C. Sampling Procedure: The following is the sampling procedure for extractions :

1. Homogeneity is assumed among multiple vials within an envelope or kits as long as the vials were collected sequentially, from a single event, into similar containers, and have similar volumes. The reported results pertain to the entire item (all vials), not just the tested amount or the vial analyzed
2. Visually inspect the vials for any clotting or discoloration. The analyst should note any clotting or discoloration.
3. Bring the samples to room temperature before analysis.
4. Gently mix the blood vial to be analyzed before pipetting. This mixing assures homogeneity within the sample.
    a. Typically samples are mixed for a minimum of 20 minutes.

D. The analyst may homogenize samples that cannot be pipetted due to clotting.

1. Any sample alteration or preparation should be documented in the notes.

E. When analyzing hospital vials, the analyst should attempt to analyze a vial (or vials) containing preservative and anticoagulant. The vial(s) selected will be indicated in the notes. It should be indicated in the notes if multiple vials are combined and used for analysis.

F. When Coroner's requests are received containing samples from multiple sources, the analyst shall look for instructions provided on Coroner's request and select the sample for analysis per the instructions.

G. If Coroner's instructions are not provided, the analyst shall choose the sample that has the least potential for postmortem redistribution and also consider the volume of sample available for testing.

1. For blood sample from multiple sources, the preferred order should peripheral blood over the heart blood. Chest cavity fluid should be the last option.
2. If the volume of the peripheral blood is small, screening may be done on the the heart blood or the chest cavity fluid and the confirmation shall be done on the peripheral blood
3. Blood shall be chosen over the urine sample as the former gives the acute load of the drug.

4. If situation presents itself that the above listed logical scheme of sample choices is not feasible then the analyst should stop work and contact the Coroner's office for direction.

H. Any deviations from the published method must be approved by the Supervisor/Manager.

I. Reporting Case Results

1. In order to report results for a case from an extraction, the standard and controls must meet the criteria specified in the procedure
    a. Each analyte can be evaluated independently, an issue with one analyte does not preclude reporting other analytes
2. The internal standard in the case sample must be present and meet the same requirements set in the method for standards
    a. This may include criteria for retention time, ion ratios, peak shape
    b. If the internal standard is not present or does not meet the requirements, no conclusion can be made about the target analyte
3. The target analyte in the case sample must meet the same requirements set in the method for the standards
    a. This may include criteria for retention time, ion ratios, peak shape
    b. If the value is below the reporting threshold specified in the method, the result is reported as not detected
    c. If the value is above the reporting threshold, the result may be reported as positive or as a quantitative value
4. If any criteria are not met, analyst must determine whether to perform further analysis, or report analyte as inconclusive or not detected
    a. Appropriate notes will be added to case notes and report as required.

J. Case Samples above the Quantitative Concentration Range:

1. There are instances in which a specific case sample must be diluted because its concentration is out of quantitative range of the standards used for that analysis.
2. The case sample can be diluted prior to the extraction by a known factor (for example: 10x dilution) to allow for that sample to fall within the quantitative range of the standards used in that analysis.
    a. When this occurs a multiplier (for example: multiplier = 10) should be used to calculate the concentration
3. Each sample should be evaluated on an individual basis. A decision will be made to either re-extract a smaller sample (greater dilution) or to report that the result is greater than the maximum standard value for which the linearity has been established for that particular extraction.
4. For diluted samples, the reporting limits of the standards will be adjusted based on the dilution factor used and reported appropriately.

K. Insufficient Sample Size:

1. When there is insufficient sample size for a particular analysis to be completed, an extraction may be completed with the existing smaller sample size (for example: 0.5 ml instead of 1 ml). In quantitative extractions, a multiplier should be used to calculate the sample concentration (for example: multiplier = 2). A notation will be made in the extraction notes for that sample. Reporting limits will be adjusted based on the dilution factor and reported appropriately.
2. In a case where the sample cannot be analyzed because the sample volume is insufficient, a notation will be placed in the report and notes. A notation will also be placed in the report and notes to indicate if the entire sample was consumed for analysis.

L. GC/MS Sample Dilutions:

1. In qualitative identifications (for example: amphetamine/methamphetamine urine extraction), the need may arise to dilute samples to achieve acceptable chromatography due to the high concentrations of a particular compound.
2. A portion of the extracted sample volume within the gas chromatograph vial insert can be diluted in the same solvent and re-injected along with a standard into the GC/MS. The presence of the internal standard and its appropriate mass spectra in the diluted sample is evidence that the sample dilution is sufficient to identify the compound.

M. Library Matches

1. The mass spectra of an "unknown" compound obtained from the full scan method can be searched against a commercial or user-supplied library. The results may yield a "match" with a numeric "fit".
2. Library matches should be reported as a screen or presumptive positive if no confirmation has been performed, or if the unknown has not been compared to a standard analyzed on the same instrumental method.
3. The analyst should consider the following before deciding to presumptively identify a substance:
    a. For a match to be considered positive, all of the major diagnostic ions in the reference spectrum must be present in the "unknown" and should be in the same relative ratios.
    b. Ions in the reference spectrum may be missing from the "unknown" due to low overall abundance.
    c. If additional ions are present in the unknown, it is suggested to try to determine if these "extra" ions may be due to another co-eluting substance, or "background" such as column bleed. Ion subtraction or background subtraction may be applicable.

N. GC/MS Settings

1. To ensure the highest quality analysis of each compound of interest is achieved, each Gas Chromatograph/Mass Selective Detector has settings which can be changed at the discretion of the Criminalist.
2. Some settings are considered alterable while others are more crucial to the integrity of the method being used. Settings must be changed prior to analysis; alterations must be applied to all of the standards, quality controls, and case samples being analyzed in a batch.
3. **If settings are altered from the validated method parameters it must be documented; this may be accomplished by printing the method parameters and filing with the batch records for that run**. See *TOX.08* for more information.
4. The following are examples of settings that may be altered at the discretion of the Criminalist:
    a. The EM Voltage or Gain Factor
    b. The Injection Size
    c. The Dwell Time
    d. The Split Time & Flow for the inlet
    e. The Final Hold Time
    f. The Window Times for each compound of interest
5. When chromatography is unacceptable in the Selective Ion Monitoring (SIM) mode it may be necessary to run the sample in the Full Scan (FS) mode so as to identify/screen compounds of interest which were inconclusive in the SIM mode. Unacceptable chromatography can occur when a sample is in such high concentration that it overwhelms the Mass Selective Detector and produces poor chromatography in the SIM mode. The same sample may be re-injected in the full scan mode with a similar GC/MS temperature program method and compared to a standard for identification.

O. LCMS settings

A. Some settings are considered alterable while others are more crucial to the integrity of the method being used. Settings must be changed prior to analysis; alterations must be applied to all of the standards, quality controls, and case samples being analyzed in a batch.

B. If settings are altered from the validated method parameters it must be documented; this may be accomplished by printing the method parameters and filing with the batch records for that run. See TOX.08 for more information.

C. The following are examples of settings that may be altered at the discretion of the Criminalist:
    A. Gradient conditions or hold times after the compounds of interest have eluted
    B. Event times for each compound
    C. Injection volume
    D. Valve settings and times - controls when sample is sent to the MS and waste
    E. Initial hold time may be adjusted for changes in dwell time

P. Quality Log

1. Entries in the Toxicology Unit quality log will include, but are not limited to unsuccessful runs, removal of a standard from the calibration curve, or any other unexpected result.

2. An unsuccessful run is a run that was started, however no reportable results were obtained. The run may be unsuccessful for reasons including unacceptable performance of standards or QC's, unacceptable chromatography, instrument failure resulting in sequence termination or being unable to complete .

3. If there is a mechanical issue with the instrument, the mechanical issue should also be recorded in the instrument maintenance log, regardless of the ability to recover a run.

4. The exceptions include:

    a. If the run was re-started and concluded on the same instrument, it does not constitute an unsuccessful run.

    b. If the error is an operator error that can be remedied, it does not constitute an unsuccessful run.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 01/04/2019	**NUMBER:** TOX.42 - B-AMP/METH/MDA/MDMA
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 5.4**	
CHAPTER: Procedures	**SUBJECT:** B-AMP/METH/MDA/MDMA	

I. Title

AMPHETAMINE, METHAMPHETAMINE, MDA, AND MDMA IDENTIFICATION AND QUANTITATION IN BLOOD

A. **Safety**

SAFETY WARNING!

Ammonium hydroxide and **hydrochloric acid** are caustic reagents. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**

Amphetamine, Methamphetamine, MDA, and MDMA are recovered from blood by a liquid/liquid extraction procedure using Amphetamine-D11, Methamphetamine-D11, MDA-D5, and MDMA-D5 as internal standards. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

One milliliter (1 ml) of sample is used for the analysis.

1. Smaller sample sizes may be used if necessary. Additional matrix is not required to make up the volume.

D. **Detection Limit**

The limit of detection for this procedure is 10 ng/ml for all analytes.

E. **Quantitation Limit**

The analytical limit of quantitation for this procedure is 20 ng/ml for both Amphetamine, Methamphetamine, MDA and MDMA.
The reporting limit of quantitation for this procedure is 20 ng/ml for both Amphetamine, Methamphetamine, MDA and MDMA.

F. **Linear Range**

The linear range has also been established from 20-2500 ng/ml for Amphetamine, Methamphetamine, MDA and MDMA.

G. **Carryover**

No significant carryover is present at 5,000 ng/ml for amphetamine and methamphetamine, MDA and MDMA. Carryover can occur at higher concentrations. Solvent blanks are run between each sample in a sequence to prevent carryover. If a sample has a concentration greater than 2500 ng/ml, the subsequent solvent blank will be checked. If carryover is detected in a solvent blank, the subsequent sample will be evaluated and reanalyzed if necessary.

H. **Interference**

Over the counter drugs, prescription drugs and drugs of abuse were evaluated for potential interference in the analysis of amphetamine, methamphetamine, MDA, MDMA.

1. Beta-phenethylamine can cause interference at the amphetamine qualifier ions. If a sample is known to have experienced a period of decomposition, it should not be analyzed by this method.
2. Ephedrine/pseduoephedrine elutes prior to methamphetamine. Concentrations greater than 10 µg/ml may interfere with the methamphetamine-D11 qualifier ion.
3. Propoxyphene can produce an artifact peak that elutes prior to MDMA. Concentrations greater than 5 µg/ml may interfere with MDMA-D5.

I. **Equipment**

This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml (13 x 100 mm) disposable glass tubes with teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. glass Pasteur pipettes
6. 2-20 µL pipettor and disposable pipette tips
7. 100-1000 µL pipettor and disposable pipette tips
8. 20-200 µL pipettor and disposable pipette tips
9. 500-2500 µL pipettor and disposable pipette tips
10. 500-5000 µL pipettor and disposable pipette tips
11. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
12. autosampler vials with volume reducing inserts and crimp caps
13. vortex mixer (Thermolyne or equivalent)
14. specimen rocker (LabQuake Shaker or equivalent)
15. centrifuge (IEC Centra-4B or equivalent)
16. evaporator/heating module
17. gas chromatograph/mass spectrometer

J. **Chemicals**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. n-butyl chloride, spectroquality
3. methanol, reagent grade
4. pentafluoropropionic anhydride (PFPA)
5. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
6. dry nitrogen gas (N_2)
7. ethyl acetate, reagent grade and HPLC grade

K. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks.
Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator

or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule.

1. **Stock standards**:

   Stock standards may be stored in freezer.

   a. stock internal standard: 10 µg/ml amphetamin-D11/methamphetamine-D11/MDA-D5/MDMA-D5 in methanol
   Perform a 1:10 dilution of a 100 µg/ml solution. Example Prep: 1 ml of each 100 µg/ml ampule, dilute to 10 ml with methanol or 0.5 ml of ampule, dilute to 5 ml distilled water.

   b. stock calibration standard: 1 mg/ml ampule

   c. stock QC standard: 1 mg/ml ampule

2. **Working standards**:

   a. working internal standard: 1 µg/ml amphetamine-D11/methamphetamine-D11/MDA-D5/MDMA-D5 in distilled water
   Prepare a 1:10 dilution of stock internal standard. Example Prep: 1 ml of stock internal standard, dilute to 10 ml with distilled water or 0.5 ml stock internal standard, dilute to 5 ml distilled water

   b. working calibration standard: 25 µg/ml amphetamine/methamphetamine/MDA/MDMA in distilled water
   Prep: 0.625 ml of each 1 mg/ml ampule, dilute to 25 ml with distilled water

   c. working QC standard: 50 µg/ml amphetamine/methamphetamine/MDA/MDMA in distilled water
   Prep: 0.5 ml of each 1 mg/ml ampule, dilute to 10 ml with distilled water

3. **Calibrators**: The calibrators used to establish the curve must be prepared at the below concentrations

   a. 0.020 µg/ml calibrator
   Prep: 20 µL working calibration standard, dilute to 25 ml with blank blood

   b. 0.750 µg/ml calibrator
   Prep: 0.750 ml working calibration standard, dilute to 25 ml with blank blood

   c. 1.500 µg/ml calibrator
   Prep: 1.500 ml working calibration standard, dilute to 25 ml with blank blood

   d. 2.500 µg/ml calibrator
   Prep: 2.500 ml working calibration standard, dilute to 25 ml with blank blood

4. **Controls:**

   a. Controls should be prepared throughout the concentration range from 0.06-2.0 µg/ml. It is recommended to prepare at least one concentration in the low, mid and high ranges.
   For a concentration of 0.X µg/ml - Prep: 0.X ml working QC standard, dilute to 50 ml with blank blood

   b. Example: 0.2 µg/ml QC
   Prep: 0.200 ml working QC standard, dilute to 50 ml with blank blood

   Note: It is within the discretion of the Criminalist/Analyst to choose the concentration of the QC. However, when multiple QC samples are required, there must be at least two different concentrations and they should not have significant overlap in their ranges.

5. **Calibrator/Control stability**

   a. Blood standards can be prepared ahead of time, dispensed into freezer vials, and stored in the freezer. Blood standards will be given an expiration date of 3 months from the date of preparation or based on the expiration date of the stock standards, whichever is earliest.

L. **Reagents**

Reagents can be prepared before the extraction day.

1. 1% hydrochloric acid in methanol
   Prep: See Reagent Preparation

M. **Extraction Procedure**

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable culture tubes for each calibrator, quality control, sample, and blank blood.

2. Turn on the heating block to 40°C.
3. Add 1.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
4. Add 300µl of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
5. Add 300 µl of ammonium hydroxide to each tube.
6. Add 4.0 ml of n-butyl chloride to each tube.
7. Cap tubes and rock for 20 minutes. Centrifuge at 3000 rpm for 10-15 minutes. Repeat centrifuge step if necessary.
8. Transfer the n-butyl chloride (top) layer to labeled 5 ml disposable culture tubes.
9. Add 100µL of 1% HCl in methanol to each tube and vortex.
10. Evaporate the samples to dryness under a stream of N_2 at 40°C.
11. Allow the samples to cool to room temperature. Add 100 µl ethyl acetate and 50 µl PFPA to each tube. Cap with teflon lined caps and vortex.
12. Heat tubes at 65-75°C for 15-20 minutes.
13. Evaporate samples to dryness under a stream of N_2 at 40°C (about 5 minutes).
14. Reconstitute samples with 100 µl ethyl acetate.
15. Allow the samples to cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

N. **GC/MS Analysis**

Analyze the batch by GC/MS using the SIM program.

O. **Method Parameters**

Load the following method for this analysis:

1. methods: methsim.m (for amp and meth only)
   blmdmasm.m (amp/meth/mda/mdma)

Ions Monitored	
Amphetamine D11	194, 128
Amphetamine	190, 91, 118
Methamphetamine D11	210, 126
Methamphetamine	204, 118, 160
MDA D5	167, 330
MDA	162, 190, 325
MDMA-D5	208, 344
MDMA	204, 160, 339

P. **Batch Analysis**

Suggested order of analysis:

1. blank blood
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC

If running more than ten case samples, an additional QC should be added for every ten additional case samples.

QC samples can bracket the case samples or be interspersed in the sequence.

Solvent wash and blanks: ethyl acetate, reagent grade

Q. **Processed sample stability**

1. The extracted sample is stable for 5 days at room temperature.

R. **Data Interpretation**

In order for the quantitative values to be reported, the following quality control criteria should be met:

1. curve fit is linear with inverse concentration squared weighting, and "r^2" value of .96 or higher
    a. All four calibrators at the above listed concentrations must be used to establish the curve using a single replicate for each point
2. ion ratios within specified range +/- 20 (absolute)
3. standard and QC quantitation values within +/- 20% of known value
4. retention times +/- 3% of calibration standard retention times
5. sufficient peak shape and resolution
6. blank/negative control has a quantitative value less than LOQ

S. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
    a. ion ratios within specified range +/- 20% (absolute)
    b. retention times +/- 3% of calibration standard retention times
    c. sufficient peak shape and resolution
    d. blank/negative control has a quantitative value less than lowest concentration standard

T. **COMMENTS**

Each lot of PFPA (Sigma) should be verified to check for any contaminants that may interfere with the ions selected for Methamphetamine analysis.

1. The PFPA is verified using an amount of Internal standard that is equivalent to the amount utilized in the sample extraction.
2. The verification can be done directly or by carrying the sample through the extraction procedure.
3. The lot is acceptable if the amount of 160 ion does not interfere with the LOQ standard.
4. The past historical data on the typical area counts obtained in a blank sample should be considered in the verification evaluation.

U. **References**

1. Valtier S, Cody J, Evaluation of Internal Standards for the Analysis of Amphetamine and Methamphetamine. J Analytical Tox 1995, 19:375

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.43 - U-COD/MOR/COC/BE
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** U-COD/MOR/COC/BE	

I. COCAINE, BENZOYLECGONINE, CODEINE, MORPHINE IDENTIFICATION & QUANTITATION IN URINE

A. **Safety - SAFETY WARNING!**
BSTFA with 1% TMS and **methylene chloride** are suspected human carcinogens. **Ammonium hydroxide** and **hydrochloric acid** are caustic reagents. Human urine is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. Safety Data Sheets for more information.

B. **Principle**
Cocaine, Benzoylecgonine, Codeine, and Morphine are recovered from urine by a solid phase extraction procedure using Cocaine-D3, Benzoylecgonine-D3, Codeine-D3, and Morphine-D3 as internal standards. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. One milliliter (1 ml) of sample is used for the analysis.
    a. If a dilution is required based on screening results see TOX.41 - Performing Extractions.

D. **Detection Limit**

1. The limit of detection for this procedure is 200 ng/ml for Cocaine, Benzoylecgonine, Codeine, and Morphine.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 200 ng/ml for Cocaine, Benzoylecgonine, Codeine, and Morphine.
2. The reporting limit of quantitation for this procedure is 200 ng/ml for Cocaine, Benzoylecgonine, Codeine, and Morphine.

F. **Linear Range**

1. The linear range has been established from 200-5000 ng/ml for Cocaine and Benzoylecgonine, 200-1000 ng/ml for Codeine, and 200-3000 ng/ml for Morphine. (Range attempted: 50-5,000 ng/ml for Cocaine, Benzoylecgonine, Codeine, and Morphine)

G. **Carryover**

1. No significant carryover is present at 10,000 ng/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml (13 x 100 mm) disposable glass tubes with teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. 100-1000 µL pipettor and disposable pipette tips

6. 20-200 µL pipettor and disposable pipette tips
7. 500-5000 µL pipettor and disposable pipette tips
8. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
9. autosampler vials with volume reducing inserts and crimp caps
10. vortex mixer (Thermolyne or equivalent)
11. specimen rocker (LabQuake Shaker or equivalent)
12. centrifuge (IEC Centra-4B or equivalent)
13. solid phase extraction columns, Varian Bond Elut
14. solid phase extraction manifold (vac-elut)
15. evaporator/heating module
16. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade CAUTION IRRITANT
2. methylene chloride, reagent grade
3. methanol, reagent grade
4. isopropanol, reagent grade
5. sodium acetate
6. glacial acetic acid, reagent grade
7. bis(trimethylsilyl)trifluoroacetamide with 1% trimethylchlorosilane
8. hydrochloric acid, concentrate, reagent grade CAUTION IRRITANT
9. dry nitrogen gas (N_2)
10. ethyl acetate, reagent and HPLC grade
11. acetonitrile, HPLC grade

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: Stock standards may be stored in freezer.
   a. stock internal standard: 10 µg/ml cocaine-D3/benzoylecgonine-D3/codeine-D3/ morphine-D3 in methanol
      Prep: Draw 1ml of each 100 µg/ml ampule and dilute to 10 ml with methanol.
   b. stock calibration standard: 100 µg/ml cocaine in acetonitrile
      Prep: Draw 1 ml of the 1 mg/ml ampule cocaine standard, dilute to 10 ml with acetonitrile
   c. stock calibration standard: 100 µg/ml benzoylecgonine in methanol
      Prep: Draw 1 ml of the 1 mg/ml benzoylecgonine standard, dilute to 10 ml with methanol
   d. stock calibration standard: 100 µg/ml codeine in methanol
      Prep: Draw 1 ml of the 1 mg/ml codeine standard, dilute to 10 ml with methanol
   e. stock calibration standard: 100 µg/ml morphine in methanol
      Prep: Draw 1 ml of the 1 mg/ml morphine standard, dilute to 10 ml with methanol
   f. stock QC standard: 100 µg/ml cocaine in methanol
      Prep: Draw 1 ml of the 1 mg/ml cocaine standard, dilute to 10 ml with methanol

g. stock QC standard: 100 µg/ml benzoylecgonine in methanol
Prep: Draw 1 ml of the 1 mg/ml benzoylecgonine standard, dilute to 10 ml with methanol

h. stock QC standard: 100 µg/ml codeine in methanol
Prep: Draw 1 ml of the 1 mg/ml codeine standard, dilute to 10 ml with methanol

i. stock QC standard: 100 µg/ml morphine in methanol
Prep: Draw 1 ml of the 1 mg/ml morphine standard, dilute to 10 ml with methanol

2. **Working standards**:

a. working internal standard: 1 µg/ml cocaine-D3/benzoylecgonine-D3/ codeine-D3/ morphine-D3 in distilled water
Prep: 1 ml of each stock internal standard, dilute to 10 ml with distilled water

b. working calibration standard: 10 µg/ml cocaine/benzoylecgonine in distilled water
Prep: 1 ml of cocaine and benzoylecgonine stock calibration standard, dilute to 10 ml with distilled water

c. working calibration standard: 10 µg/ml codeine/morphine in distilled water
Prep: 1 ml of codeine and morphine stock calibration standard, dilute to 10 ml with distilled water

d. working QC standard: 10 µg/ml cocaine/benzoylecgonine/codeine/morphine in distilled water
Prep: 1 ml of each stock QC standard, dilute to 10 ml with distilled water

3. **Calibrators and Quality Controls**: Urine standards can be prepared ahead of time, dispensed into freezer vials, and stored in the freezer.

a. 0.200 µg/ml Cocaine/Benzoylecgonine/Codeine/Morphine calibrator
Prep: 200 µL cocaine/benzoylecgonine and 200 µL working codeine/morphine working calibration standard, dilute to 10 ml with human urine

b. 0.500 µg/ml Cocaine/Benzoylecgonine/Codeine/Morphine calibrator
Prep: 500 µL cocaine/benzoylecgonine and 500 µL working codeine/morphine working calibration standard, dilute to 10 ml with human urine

c. 1.000 µg/ml Cocaine/Benzoylecgonine and 0.750 µg/ml Codeine/Morphine calibrator
Prep: 1.0 ml working cocaine/benzoylecgonine and 750 µL working codeine/morphine calibration standard, dilute to 10 ml with human urine

d. 5.000 µg/ml Cocaine/Benzoylecgonine and 1.000 µg/ml Codeine/Morphine calibrator
Prep: 5.0 ml working cocaine/benzoylecgonine and 1.0 ml working codeine/morphine calibration standard, dilute to 10 ml with human urine

e. low QC: 0.400 µg/ml
Prep: 400 µL working QC standard, dilute to 10 ml with human urine

f. high QC: 0.700 µg/ml
Prep: 700 µL working QC standard, dilute to 10 ml with human urine

Note: It is within the discretion of the analyst to use a high or low QC. A high and a low QC is necessary when analyzing 11-20 case samples.

K. **Reagents**

Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. sodium acetate buffer, pH 6.0
Prep: See Reagent Preparation

2. 0.1M hydrochloric acid in distilled water
Prep: See Reagent Preparation

3. elution solution (8:2) methylene chloride/isopropanol with 2% NH_4OH
Prep: 20 ml isopropanol to a 100 ml volumetric flask and QS with methylene chloride. Invert flask several times to mix. Transfer solution to an appropriate sized container with cap or stopper. Remove 2 ml of the solution. Add 2 ml concentrated ammonium hydroxide. Cover and sonicate for 10-15 minutes.

L. **Extraction Procedure**

The target drugs are extracted from the urine samples using the following procedure:

1. Turn on the heating unit to 40°C.

2. Prepare and label disposable culture tubes for each calibrator, quality control, sample, and blank urine.

3. Add 1.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.

4. Add 300 μl of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
5. Add 6 ml pH 6.0 acetate buffer to each tube.
6. Cap, vortex (5-10 seconds), and centrifuge at 3000 rpm for 10-15 minutes.
7. Prepare the vac-elut by pouring dilute bleach solution into the bottom of the canister. Place the labeled solid phase extraction columns on vac-elut.
8. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):
    a. 3.0 ml methanol (1x)
    b. 3.0 ml pH 6.0 acetate buffer (1x)
9. Turn off vacuum. Add sample to appropriately labeled column. Allow the samples to pass through the column at a rate of 1-2 ml/min or under gravity.
10. Prepare the elution solution.
11. Rinse each column under vacuum of 1-2 mm Hg
    a. 3.0 ml distilled water (1x)
    b. 3.0 ml 0.1 M HCl (1x)
    c. 6.0 ml methanol (1x), under vacuum 10-15 mm Hg
12. Dry columns under full vacuum (10-15 mm Hg) for 5 minutes. It is important that the columns are dry!
13. Remove the top of the vac-elut and wipe the solvent guide needles with a lint-free towel to remove any residual moisture. Be careful not to disturb any columns.
14. Rinse out the canister and dry. Place rack with labeled 5 ml culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in collecting position.
15. Add 3 ml of the elution solution and allow the elution solvent to pass through the column without vacuum.
16. Evaporate the samples to dryness under a stream of N_2 at 40°C.
17. Remove tubes from the heating module and allow samples to cool to room temperature. Add 75 μL ethyl acetate and 75 μL BSTFA 1% TMS to each tube. Cap with teflon lined caps and vortex.
18. Cap tubes with teflon lined caps and vortex 5-10 seconds.
19. Heat at approximately 70°C for 30 minutes. Remove and cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
    a. Method: URCOHESM.M
2. Ions Monitored

Cocaine D3	185, 275
Cocaine	182, 272, 303
Benzoylecgonine D3	243, 259
Benzoylecgonine	240, 256, 361
Codeine D3	181, 374
Codeine	178, 371, 234
Morphine D3	239, 432
Morphine	236, 429, 196

N. **Order of Batch Analysis:**

1. blank urine
2. LOQ
3. LOW

4. MED
5. HIGH
6. case samples
7. QC
    a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples.
    b. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
    a. coefficient of determination, "r^2", of .96 or higher using the following models:
        i. For Cocaine, curve fit is linear with equal weighting
        ii. For Benzoylecgonine, Morphine and Codeine, curve fit is quadratic with equal weighting
    b. ion ratios within specified range +/- 20% (absolute)
    c. standard and QC quantitation values within +/- 20% of known value
    d. retention times +/- 3% of calibration standard retention times
    e. sufficient peak shape and resolution
    f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values are not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the cutoff (lowest concentration standard). The following criteria must also be met:
    a. ion ratios within specified range +/- 20% (absolute)
    b. retention times +/- 3% of calibration standard retention times
    c. sufficient peak shape and resolution
    d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Sacramento County Laboratory of Forensic Services, *Morphine, Codeine, Cocaine, and Benzoylecgonine Quantitation in Biological Fluids and Tissue*

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.44 - U-HYD
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** U-HYD	

I. HYDROCODONE IDENTIFICATION AND QUANTITATION IN URINE

A. **Safety - SAFETY WARNING!**
Methylene chloride is a suspected human carcinogen. **Ammonium hydroxide** is a caustic reagent. Human urine is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Hydrocodone is recovered from urine by a solid phase extraction procedure using Hydrocodone-D3 as an internal standard. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. One milliliter (1 ml) of sample is used for the analysis.
    a. If a dilution is required based on screening results see TOX.41 - Performing Extractions.

D. **Detection Limit**

1. The limit of detection for this procedure is 20 ng/ml for Hydrocodone.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 50 ng/ml for Hydrocodone.
2. The reporting limit of quantitation for this procedure is 50 ng/ml for Hydrocodone.

F. **Linear Range**

1. The linear range has been established from 20-5000 ng/ml for Hydrocodone. (Range attempted: 20-5,000 ng/ml for Hydrocodone)

G. **Carryover**

1. No significant carryover is present at 10,000 ng/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml (13 x 100 mm) disposable glass tubes with Teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. 100-1000 µL pipettor and disposable pipette tips
6. 20-200 µL pipettor and disposable pipette tips
7. 500-5000 µL pipettor and disposable pipette tips
8. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)

9. autosampler vials with volume reducing inserts and crimp caps
10. vortex mixer (Thermolyne or equivalent)
11. specimen rocker (LabQuake Shaker or equivalent)
12. centrifuge (IEC Centra-4B or equivalent)
13. solid phase extraction columns, Varian Bond Elute
14. solid phase extraction manifold (vac-elut)
15. evaporator/heating module
16. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. methanol, reagent grade
2. sodium acetate
3. glacial acetic acid, reagent grade
4. acetone, reagent grade
5. dry nitrogen gas (N_2)
6. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
7. methylene chloride, reagent grade
8. isopropanol, reagent grade

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: Stock standards may be stored in freezer.
   a. stock internal standard: 10 µg/ml hydrocodone-D3 in methanol
      Prep: Draw 1ml of 100 µg/ml ampule hydrocodone-D3 standard, dilute to 10 ml with methanol.
   b. stock calibration standard: 100 µg/ml hydrocodone in methanol
      Prep: Draw 1 ml of 1 mg/ml ampule hydrocodone standard, dilute to 10 ml with methanol
   c. stock QC standard: 100 µg/ml hydrocodone in methanol
      Prep: Draw 1 ml of 1 mg/ml hydrocodone standard, dilute to 10 ml with methanol
2. **Working standards**:
   a. working internal standard: 1 µg/ml hydrocodone-D3 in distilled water
      Prep: 1 ml of stock internal standard, dilute to 10 ml with distilled water
   b. working calibration standard: 10 µg/ml hydrocodone in distilled water
      Prep: 1 ml of stock calibration standard, dilute to 10 ml with distilled water
   c. working QC standard: 10 µg/ml hydrocodone in distilled water
      Prep: 1 ml of stock QC standard, dilute to 10 ml with distilled water
3. **Calibrators and Controls**: Urine standards can be prepared ahead of time, dispensed into freezer vials, and stored in the freezer.
   a. 0.050 µg/ml calibrator
      Prep: 50 µL working calibration standard, dilute to 10 ml with human urine
   b. 0.250 µg/ml calibrator
      Prep: 250 µL working calibration standard, dilute to 10 ml with human urine

c. 1.000 µg/ml calibrator
Prep: 1.00 ml working calibration standard, dilute to 10 ml with human urine

d. 5.000 µg/ml calibrator
Prep: 5.00 ml working calibration standard, dilute to 10 ml with human urine

e. 0.500 µg/ml QC
Prep: 500 µL working QC standard, dilute to 10 ml with human urine

f. 2.000 µg/ml QC
Prep: 2.00 ml working QC standard, dilute to 10 ml with human urine

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and a low QC is necessary when analyzing 11-20 case samples.

K. **Reagents**
Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. sodium acetate buffer, pH 6.0
Prep: See Reagent Preparation

2. 0.1M acetate buffer, pH 4.0
Prep: See Reagent Preparation

3. elution solution (8:2) methylene chloride/isopropanol with 2% NH_4OH
Prep: 20 ml isopropanol to a 100 ml volumetric flask and QS with methylene chloride. Invert flask several times to mix. Transfer solution to an appropriate sized container with cap or stopper. Remove 2 ml of the solution. Add 2 ml concentrated ammonium hydroxide. Cover and sonicate for 10-15 minutes.

L. **Extraction Procedure**
The target drugs are extracted from the urine samples using the following procedure:

1. Prepare and label disposable culture tubes for each calibrator, quality control, sample, and blank urine.
2. Turn on the heating block to 40°C.
3. Add 1.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
4. Add 300 μL of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
5. Add 2.0 ml of pH 6.0 acetate buffer.
6. Cap tubes and vortex for 5-10 seconds.
7. Rotate the tubes for 15-20 minutes
8. Centrifuge the tubes for 15 minutes at 2800-3000 rpm.
9. Prepare the vac-elut by pouring dilute bleach solution into the bottom of the canister. Place the solid phase extraction columns on the vac-elut.
10. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):
    a. 3.0 ml of methanol (1x)
    b. 3.0 ml of distilled water (1x)
    c. 2.0 ml pH 6.0 acetate buffer (1x)
11. Turn off the vacuum. Add 2.0 ml of pH 6.0 acetate buffer in preparation of sample application.
12. Transfer the urine samples to the corresponding solid phase column. Allow the samples to pass through each column at rate of 1-2 ml/minute, preferably without vacuum.
13. Prepare the elution solution.
14. Rinse each column under vacuum of 1-2 mm Hg:
    a. 2.0 ml of distilled water (1x)
    b. 2.0 ml of acetate buffer pH 4.0 (1x)
    c. 3.0 ml methanol (1x), under a vacuum 10-15 mm Hg

15. Dry column at 10-15 mm Hg for 5 minutes.
16. Rinse out canister and dry. Place rack with labeled (13 x 100 mm) culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
17. Add 3.0 ml of the elution solution and allow to pass through the column without vacuum.
18. Evaporate the samples to dryness under a stream of N_2 at 40°C.
19. Remove the samples form the evaporator and allow the samples to cool to room temperature.
20. Add 100μL of acetone to each tube and vortex for 5-10 seconds.
21. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
   a. Method: HYDCDSIM.M
2. Ions Monitored

Hydrocodone D3	302, 287
Hydrocodone	299, 284, 270

N. **Order of Batch Analysis:**

1. blank urine
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC
   a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples.
   b. Solvent wash and blanks: acetone, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
   a. curve fit is quadratic with equal weighting, and "r^2"value of .96 or higher
   b. ion ratios within specified range +/- 20% (absolute)
   c. standard and QC quantitation values within +/- 20% of known value
   d. retention times +/- 3% of calibration standard retention times
   e. sufficient peak shape and resolution
   f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
   a. ion ratios within specified range +/- 20% (absolute)
   b. retention times +/- 3% of calibration standard retention times
   c. sufficient peak shape and resolution

d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Sacramento County Laboratory of Forensic Services, Morphine, Codeine, Cocaine and Benzoylecgonine in Biological Fluids and Tissues (modified for specific ions at Contra Costa County Crime Lab.)

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.45 - B-HYD
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-HYD	

I. HYDROCODONE IDENTIFICATION AND QUANTITATION IN BLOOD

A. **Safety - SAFETY WARNING!**
Methylene chloride is a suspected human carcinogen. **Ammonium hydroxide** is a caustic reagent. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Hydrocodone is recovered from blood by a solid phase extraction procedure using Hydrocodone-D3 as an internal standard. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. Two milliliter (2 ml) of sample is used for the analysis.
    a. If a dilution is required based on screening results see TOX.41 - Performing Extractions.

D. **Detection Limit**

1. The limit of detection for this procedure is 10 ng/ml.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 20 ng/ml.
2. The reporting limit of quantitation for this procedure is 20 ng/ml.

F. **Linear Range**

1. The linear range has been established from 10-1,000 ng/ml. (Range attempted: 10-2,000 ng/ml)

G. **Carryover**

1. No carryover is present at 2,000 ng/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml (13 x 100 mm) disposable glass tubes with Teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. 10-1000 µL pipettor and disposable pipette tips
6. 100-1000 µL pipettor and disposable pipette tips
7. repeat pipettor and disposable tips (2.5 ml, 5 ml, 50 ml)
8. autosampler vials with volume reducing inserts and crimp caps
9. vortex mixer (Thermolyne or equivalent)

10. specimen rocker (LabQuake Shaker or equivalent)
11. centrifuge (IEC Centra-4B or equivalent)
12. solid phase extraction columns, Varian Bond Elute
13. solid phase extraction manifold (vac-elut)
14. evaporator/heating module
15. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. methanol, reagent grade
2. sodium acetate
3. glacial acetic acid, reagent grade
4. acetone, reagent grade
5. dry nitrogen gas (N_2)
6. zinc sulfate hydrate
7. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
8. methylene chloride, reagent grade
9. isopropanol, reagent grade

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: Stock standards may be stored in freezer.
   a. stock internal standard: 10 µg/ml hydrocodone-D3 in methanol
      Prep: Draw 1ml of 100 µg/ml ampule hydrocodone-D3 standard, dilute to 10 ml with methanol.
   b. stock calibration standard: 100 µg/ml hydrocodone in methanol
      Prep: Draw 1 ml of 1 mg/ml hydrocodone standard, dilute to 10 ml with methanol
   c. stock QC standard: 100 µg/ml hydrocodone in methanol
      Prep: Draw 1 ml of 1 mg/ml hydrocodone standard, dilute to 10 ml with methanol
2. **Working standards**:
   a. working internal standard: 1 µg/ml hydrocodone-D3 in distilled water
      Prep: 1 ml of stock internal standard, dilute to 10 ml with distilled water
   b. working calibration standard: 10 µg/ml hydrocodone in distilled water
      Prep: 1 ml of stock calibration standard, dilute to 10 ml with distilled water
   c. working QC standard: 10 µg/ml hydrocodone in distilled water
      Prep: 1 ml of stock QC standard, dilute to 10 ml with distilled water
3. **Calibrators and Controls**: Blood standards can be prepared ahead of time, dispensed into freezer vials, and stored in the freezer.
   a. 0.020 µg/ml calibrator
      Prep: 20 µL working calibration standard, dilute to 10 ml with human blood
   b. 0.250 µg/ml calibrator
      Prep: 250 µL working calibration standard, dilute to 10 ml with human blood
   c. 0.750 µg/ml calibrator
      Prep: 750 µL working calibration standard, dilute to 10 ml with human blood

d. 1.000 µg/ml calibrator
Prep: 1.0 ml working calibration standard, dilute to 10 ml with human blood

e. 0.200 µg/ml QC
Prep: 200 µL working QC standard, dilute to 10 ml with human blood

f. 0.600 µg/ml QC
Prep: 600 µL working QC standard, dilute to 10 ml with human blood

Note: It is within the discretion of the analyst to use a high or low QC. However, a high and low QC is necessary when analyzing a large batch of case samples.

K. **Reagents**
Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. sodium acetate buffer, pH 6.0
Prep: See Reagent Preparation

2. 0.1M acetate buffer, pH 4.0
Prep: See Reagent Preparation

3. 5% zinc sulfate in 50% methanol
Prep: See Reagent Preparation

4. elution solution (8:2) methylene chloride/isopropanol with 2% NH_4OH
Prep: 20 ml isopropanol to a 100 ml volumetric flask and QS with methylene chloride. Invert flask several times to mix. Transfer solution to an appropriate sized container with cap or stopper. Remove 2 ml of the solution. Add 2 ml concentrated ammonium hydroxide. Cover and sonicate for 10-15 minutes.

L. **Extraction Procedure**
The target drugs are extracted from the urine samples using the following procedure:

1. Prepare and label disposable culture tubes for each calibrator, quality control, sample, and blank blood.
2. Turn on the heating block to 40°C.
3. Add 2.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
4. Add 300 μL of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
5. Add 4.0 ml of the 5% zinc sulfate in 50% methanol solution.
6. Cap each tube and shake the tubes vigorously to break up any blood clots.
7. Vortex 5-10 seconds.
8. Rotate the tubes for 15-20 minutes
9. Centrifuge the tubes for 15 minutes at 2800-3000 rpm.
10. Place the solid phase extraction columns on the vac-elut.
11. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):
    a. 3.0 ml of methanol (1x)
    b. 3.0 ml of distilled water (1x)
    c. 2.0 ml pH 6.0 acetate buffer (1x)
12. Turn off the vacuum. Add 2.0 ml of pH 6.0 acetate buffer in preparation of sample application.
13. Transfer the zinc sulfate solution from each tube to the corresponding solid phase column. Allow the samples to pass through each column at rate of 1-2 ml/minute (6-12 minutes), preferably without vacuum.
14. Prepare the elution solution. Rinse each column under vacuum of 1-2 mm Hg:
    a. 2.0 ml of distilled water (1x)
    b. 2.0 ml of acetate buffer pH 4.0 (1x)
    c. 3.0 ml methanol (1x) under a vacuum 10-15mmHg
15. Dry column at 10-15 mm Hg for 5 minutes.

16. Rinse out canister and dry. Place rack with labeled (13 x 100 mm) culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
17. Add 3.0 ml of the elution solution and allow to pass through the column without vacuum.
18. Evaporate the samples to dryness under a stream of N_2 at 40°C.
19. Remove the samples form the evaporator and allow the samples to cool to room temperature.
20. Add 100μL of acetone to each tube and vortex for 5-10 seconds.
21. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
   a. Method: HYDCDBLD.m
2. Ions Monitored

Hydrocodone D3	302, 287
Hydrocodone	299, 284, 270

N. **Order of Batch Analysis**

1. blank blood
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC
   a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing11-20 case samples, one QC can be placed prior to case samples and one placed after the samples
   b. Solvent wash and blanks: acetone, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
   a. curve fit is linear with equal weighting, with "r^2" value of .96 or higher
   b. ion ratios within specified range +/- 20% (absolute)
   c. standard and QC quantitation values within +/- 20% of known value
   d. retention times +/- 3% of calibration standard retention times
   e. sufficient peak shape and resolution
   f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
   a. ion ratios within specified range +/- 20% (absolute)
   b. retention times +/- 3% of calibration standard retention times
   c. sufficient peak shape and resolution
   d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Sacramento County Laboratory of Forensic Services, Morphine, Codeine, Cocaine and Benzoylecgonine in Biological Fluids and Tissues (modified for specific ions at Contra Costa County Crime Lab.)

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 5/17/2018	**NUMBER:** TOX.46 - U-AMP/METH
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Roberts	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** U-AMP/METH	

I. AMPHETAMINE and METHAMPHETAMINE IDENTIFICATION IN URINE

A. Safety - SAFETY WARNING!

Ammonium hydroxide is a caustic reagent. **Sulfuric acid** is a corrosive reagent. Human urine is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. Safety Data Safety Sheets for more information.

B. Principle

Amphetamine and Methamphetamine are recovered from urine by a liquid/liquid extraction procedure using phentermine as internal standards. Identification is by gas chromatography/mass spectrometry.

C. Specimen Requirement

1. Two milliliters (2 ml) of sample is used for the analysis.
    a. If a dilution is required based on screening results see TOX.41 - Performing Extractions.

D. Detection Limit

1. The low standard for this procedure is 2.0 µg/ml for Amphetamine and Methamphetamine. The limit of detection for this procedure can be as low as or lower than 0.5 µg/ml for Amphetamine and Methamphetamine.

E. Equipment

This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml disposable conical, centrifuge tubes with snap caps
3. volumetric flasks
4. glass Pasteur pipettes
5. 10-1000 µL pipettor and disposable pipette tips
6. 500-2500 µL pipettor and disposable pipette tips
7. repeat pipettor and disposable tips (5 ml, 50 ml)
8. pH indicator strips
9. autosampler vials with volume reducing inserts and crimp caps
10. vortex mixer (Thermolyne or equivalent)
11. specimen rocker (LabQuake Shaker or equivalent)
12. centrifuge (IEC Centra-4B or equivalent)
13. balance (mg)
14. gas chromatograph/mass spectrometer

F. **Chemicals**
This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate **CAUTION IRRITANT**
2. n-butyl chloride, spectroquality
3. chloroform, reagent grade
4. sulfuric acid, reagent grade **CAUTION CORROSIVE**

G. **Standards**
Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock Solutions**:
Stock solutions may be stored in the refrigerator.
   a. stock internal standard: 70 µg/ml Phentermine in distilled water
   Prep: 43.5 mg Phentermine HCl standard, dilute to 500 ml with distilled water
   b. stock standard: Amphetamine and Methamphetamine ampules

2. **Working Solutions:**
   a. working standard: 100.0 µg/ml amphetamine/methamphetamine in urine
   Prep: 1 mg/ml ampule each Amphetamine and Methamphetamine, dilute with urine to 10 ml
   b. Resolution Solution (RS): Suggested analytes: ß-Phenethylamine, Amphetamine, Phentermine, Methamphetamine, Mephentermine, Phenylpropanolamine, Pseudoephedrine, Methylenedioxyamphetamine, Methylenedioxymethamphetamine
   Prep: One toothpick full of each standard (powder form) in separately labeled 15 ml disposable screw top culture tubes, add approximately 2 ml distilled water to dissolve the standard. Add approximately 250 µl of concentrated ammonium hydroxide to each tube and vortex 5-10 seconds. Add 2 ml chloroform to each tube, cap and vortex 1 minute. Centrifuge at 3000 rpm for 5 minutes and remove 0.500 ml of chloroform (bottom) layer to a 20 ml screw cap vial. Allow solution to equilibrate. Test on GC/MS and adjust accordingly to attain good resolution. (May need to add more of the chloroform extract for a particular analyte or dilute mix with neat chloroform).

3. **Standards**:
   a. 75.0 µg/ml standard
   Prep: 7.5 ml 100.0 µg/ml calibrator, dilute with urine to 10 ml
   b. 10.0 µg/ml standard
   Prep: 1.0 ml 100.0 µg/ml calibrator, dilute with urine to 10 ml
   c. 2.0 µg/ml standard
   Prep: 0.2 ml 100.0 µg/ml calibrator, dilute with urine to 10 ml

H. **Reagents**
Reagents may be prepared before the extraction day.

1. 1.0 N Sulfuric Acid
   Prep: See Reagent Preparation

I. **Extraction Procedure**

The target drugs are extracted from the urine samples using the following procedure:

1. Prepare and label 15 ml disposable screw top glass culture tubes for each calibrator, quality control, sample, and blank urine.
2. Add 2.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
3. Add 200 µL of stock internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
4. Add 400 µL of ammonium hydroxide to each tube.

5. Add 4 ml of n-butyl chloride to each tube.
6. Cap tubes and rock for 20 minutes. Centrifuge at 3000 rpm for 10-15 minutes.
7. Transfer the n-butyl chloride (top) layer to labeled disposable culture tubes.
8. Add 3.0 ml of 1.0 N sulfuric acid to each tube. Cap tubes and rock for 20 minutes. Centrifuge at 3000 rpm for 10-15 minutes.
9. Transfer the acid (bottom) layer to labeled disposable snap cap conical centrifuge tubes.
10. Add 500 µL of concentrated ammonium hydroxide to each tube. Add 300 µL of chloroform to each tube. Cap tubes and vortex for 1 minute.
11. Centrifuge tubes at 3000 rpm for 5 minutes.
12. Transfer 150 µL of the chloroform (bottom) layer to labeled autosampler vials with volume reducing inserts. Cap vials.

J. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the FULLSCAN program.
    a. Method: AMPFULL.M

K. **Order of Batch Analysis:**

1. Blank urine
2. LOW
3. MED
4. HIGH
5. case samples
6. Resolution Solution Standard
    a. Solvent wash and blanks: chloroform, reagent grade

L. **Data Analysis**

The following quality control criteria should be met for a qualitative identification:

1. Before comparing an unknown sample to a reference standard the following criteria must be met (rejection of data criteria before comparison with a standard):
    a. Sufficient peak shape (symmetrical) and resolution (baseline) of the unknown peaks
    b. There should be sufficient mass fragments for comparison and identification without saturating the detector. Sample may be adjusted by dilution or concentration to achieve these results.
    c. Internal standard is present in both the blank and unknown
    d. Blanks must not include the drug(s) of interest.
2. For comparison of the unknown sample to a known reference material (standard):
    a. The mass spectrum of the sample overall should match the mass spectrum of the reference standard (base ion and other prominent ions).
    b. The overall fragmentation pattern and relative ratios of the ions are compared for consistency.
    c. There should not be any major differences or additional prominent ions that are not explained or noted.
    d. The following ions should be present on chromatograms for an identification:
        i. Amphetamine Ion 134
        ii. Phentermine Ion 146
        iii. Methamphetamine Ion 148
    e. The retention time of the sample and the standard is within +/-5%
    f. Sufficient peak shape and resolution
3. For the Resolution Solution (RS):
    a. all peaks have sufficient peak shape and resolution
    b. all peaks resolve from each other

c. When the RS is used to identify a compound, ions in each compound should be present

i. Beta-Phenethylamine: Ion - 65, 91, 121

ii. Amphetamine: Ion - 44, 65, 91 134

iii. Phentermine: Ion - 58, 91, 146

iv. Methamphetamine: Ion - 58, 91, 148

v. Mephentermine: Ion - 72, 91, 148, 160

vi. Phenylpropanolamine: Ion - 44, 77, 132

vii. Pseudoephedrine: Ion - 58, 77, 146, 160

viii. MDA: Ion - 44, 77, 136, 179

ix. MDMA: Ion - 58, 77, 135, 193

M. **Identification**

1. Identification of amphetamine and/or methamphetamine will be performed by comparison to an extracted standard in the run. The analyst may choose the standard used for comparison.

2. Identification of other compounds in the sample (eg. MDMA) may be performed by comparison to the Resolution Solution (RS) in the run.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.47 - U-CARBOXY-THC
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** U-CARBOXY-THC	

I. CARBOXY-THC IDENTIFICATION AND QUANTITATION IN URINE

A. **Safety - SAFETY WARNING!**
Bis(trimethylsilyl)trifluoroacetamide (BSTFA) with 1% TMCS and is a suspected human carcinogen. **Sodium hydroxide** and **hydrochloric acid** are caustic reagents. Human urine is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. Safety Data Sheets for more information.

B. **Principle**
Carboxy-THC is recovered from urine by a solid phase extraction procedure using Carboxy-THC-D3 as the internal standard. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. Five milliliters (5 ml) of sample is used for the analysis.
    a. If a dilution is required based on screening results see TOX.41 - Performing Extractions.

D. **Detection Limit**

1. The limit of detection for this procedure is 10 ng/ml for Carboxy-THC.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 20 ng/ml for Carboxy-THC.
2. The reporting limit of quantitation for this procedure is 20 ng/ml for Carboxy-THC.

F. **Linear Range**

1. The linear range has been established from 20-2,000 ng/ml for Carboxy-THC. (Range attempted: 10-3,000 ng/ml)

G. **Carryover**

1. No carryover is present at 10,000 ng/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 8 ml (13 x 100 mm) disposable glass tubes with teflon lined caps
2. volumetric flasks
3. plastic transfer pipettes
4. glass Pasteur pipettes
5. 2-20 µL pipettor and disposable pipette tips
6. 100-1000 µL pipettor and disposable pipette tips
7. 20-200 µL pipettor and disposable pipette tips
8. 500-2500 µL pipettor and disposable pipette tips

9. 500-5000 µL pipettor and disposable pipette tips
10. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
11. autosampler vials with volume reducing inserts and crimp caps
12. vortex mixer (Thermolyne or equivalent)
13. specimen rocker (LabQuake Shaker or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. solid phase extraction columns, UCT Clean Screen (ZSTHC020)
16. solid phase extraction manifold (vac-elut)
17. evaporator/heating module
18. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. sodium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. hexane, reagent grade
3. methanol, reagent grade
4. acetonitrile, reagent grade
5. sodium acetate
6. glacial acetic acid, reagent grade
7. bis(trimethylsilyl)trifluoroacetamide (BSTFA) with 1% trimethylchlorosilane
8. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
9. dry nitrogen gas (N_2)
10. ethyl acetate, HPLC grade

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: Stock standards may be stored in the freezer.
   a. stock internal standard: 10 µg/ml Carboxy-THC D3 in methanol
      Prep: Draw 1ml 100 µg/ml ampule Carboxy-THC D3 standard dilute to 10 ml with methanol.
   b. stock glucuronide: 10 mg/ml Carboxy-THC-glucuronide
      Prep: Draw 1 ml of 100 µg/ml ampule Carboxy-THC glucuronide, dilute to 10 ml with distilled water.
2. **Working standards**:
   a. working internal standard: 1.0 µg/ml Carboxy-THC D3 in distilled water
      Prep: Draw 1 ml of stock internal standard, dilute to 10 ml with distilled water
   b. working calibration standard: 10 µg/ml Carboxy-THC in distilled water
      Prep: Draw 1 ml of 100 µg/ml ampule Carboxy-THC standard, dilute to 10 ml with distilled water.
   c. working QC standard: 10 µg/ml Carboxy-THC in distilled water
      Prep: Draw 1 ml of 100 µg/ml ampule Carboxy-THC standard, dilute to 10 ml with distilled water.
3. **Calibrators and Quality Controls**:
   a. 0.020 µg/ml calibrator
      Prep: 20 µL working calibration standard, dilute to 10 ml with human urine

b. 0.250 µg/ml calibrator
Prep: 250 µL working calibration standard, dilute to 10 ml with human urine

c. 0.750 µg/ml calibrator
Prep: 750 µL working calibration standard, dilute to 10 ml with human urine

d. 1.000 µg/ml calibrator
Prep: 1.0 ml working calibration standard, dilute to 10 ml with human urine

e. low QC: 0.200 µg/ml
Prep: 200 µL working QC standard, dilute to 10 ml with human urine

f. high QC: 0.600 µg/ml
Prep: 600 µL working QC standard, dilute to 10 ml with human urine

g. low glucuronide QC: 0.200 Carboxy-THC (0.302 µg/ml glucuronide)
Prep: 302 µL stock glucuronide, dilute to 10 ml with human urine

h. high glucuronide QC: 0.600 Carboxy-THC (0.906 µg/ml glucuronide)
Prep: 906 µL stock glucuronide, dilute to 10 ml with human urine

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and a low QC is necessary when analyzing 11-20 case samples.

K. **Reagents**

Reagents can be prepared before the extraction day. The elution solution and column rinse solution must be made the day of analysis.

1. 10 N sodium hydroxide
Prep: See Reagent Preparation
2. 0.1M hydrochloric acid in distilled water.
Prep: See Reagent Preparation
3. *(10:1) glacial acetic acid/ concentrated hydrochloric acid*
Prep: See Reagent Preparation
4. column rinse solution (70:30) 0.1M hydrochloric acid/ acetonitrile
Prep: 15 ml acetonitrile added to 35 ml of 0.1M hydrochloric acid in a 50 ml graduated cylinder.
5. elution solution (70:30) hexane/ ethyl acetate
Prep: 30 ml ethyl acetate to a 100 ml volumetric flask and QS with hexane. Cover and sonicate for 10 minutes.

L. **Extraction Procedure**

The target drug is extracted from the urine samples using the following procedure:

1. Turn on heating block to 60 °C and use appropriate blocks for 15ml tubes
2. Prepare and label disposable 15 ml (16 x 100) culture tubes for each calibrator, quality control, sample, and blank urine.
3. Add 5.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
4. Add 200 µL of 10 N sodium hydroxide. Cap and vortex for 10 to 15 seconds.
5. Hydrolyze blank, glucuronide QC, and case samples at 60 °C for 30 minutes. **DO NOT HYDROLYZE STANDARDS AND non-glucuronide QC**.
6. Add 200 µL working internal standard to each tube
7. Cool to room temperature and adjust pH with glacial acetic acid/ concentrated hydrochloric acid (10:1). Add 1.5 ml and then adjust pH to 2.0 - 3.0.
8. Cap each tube and vortex for approximately 10 seconds.
9. Rotate the tubes for approximately 5 minutes.
10. Centrifuge at 2800-3000 rpm for 5 minutes.
11. Label and place the solid phase extraction columns on the vac-elut.(UCT column# ZSTHC020)
12. Rinse each column under vacuum of 1-2 mm Hg (**It is important that the columns do not go dry prior to addition of the sample**):
    a. 3.0 ml of methanol (1x)

b. 3.0 ml of DI H_2O (1x)

c. 1.0 ml of 0.1 M hydrochloric acid (1x)

13. Turn off the vacuum. Add 1.0 ml 0.1 M hydrochloric acid in preparation of sample application.

14. Transfer the centrifuged samples to the corresponding solid phase column. Allow the samples to pass through each column at a rate of 1-2ml/ minute (6-12 minutes), preferably without vacuum

15. Prepare the elution solution.

16. Rinse each column under vacuum of 1-2 mm Hg:

a. 3.0 ml of distilled water (1x)

b. 2.0 ml 0.1 M hydrochloric acid/ acetonitrile (70:30) (1x)

17. Dry columns under full vacuum (10-15 mm Hg) for 3 minutes.

18. Rinse with 250 µL hexane; DO NOT use excessive hexane

19. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.

20. Rinse out the canister and dry. Place rack with labeled 8 ml culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.

21. Add 3 ml of the elution solution and allow the elution solvent to pass through the column **without** vacuum.

22. Evaporate the samples to dryness under a stream of N_2 at 40°C.

23. Remove tubes from the heating module and allow samples to cool to room temperature. Add 75 µL ethyl acetate and 75 µL BSTFA 1% TMCS to each tube.

24. Cap tubes with Teflon lined caps and vortex 10 seconds.

25. Heat at approximately 70°C for 30 minutes. Remove and cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.

a. Method: THCSIM.M

2.

Ions Monitored	
11-Nor-9-COOH-THC D3	374, 476, 491
11-Nor-9-COOH-THC	371, 473, 488

N. **Order of Batch Analysis**

1. blank urine
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC or Glucuronide QC

a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples. **There must be <u>at least</u> one glucuronide QC per batch**; all QC sample(s) in the batch may be glucuronide QCs.

b. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
    a. curve fit is quadratic with inverse of concentration weighting, "r^2" value of .96 or higher
    b. ion ratios within specified range +/- 20% (absolute)
    c. standard and QC quantitation values within +/- 20% of known value
    d. retention times +/- 3% of calibration standard retention times
    e. sufficient peak shape and resolution
    f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
    a. ion ratios within specified range +/- 20% (absolute)
    b. retention times +/- 3% of calibration standard retention times
    c. sufficient peak shape and resolution
    d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Leon R. Glass, Donald J. Rynbrandt and Yun S. Kwak, 1995. *Optimization of Urinary 11-Nor-9-Carboxy -delta^9-Tetrahydrocannabinol Recovery Using C_{18} Solid Phase Extraction Columns,* presented at Society of Forensic Toxicologists, Silver Anniversary meeting Baltimore, MD. 1995 (Presentation Number 16).

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.48 - B-DIAZ/NORD/OXA/TEMA
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-DIAZ/NORD/OXA/TEMA	

I. DIAZEPAM, NORDIAZEPAM, OXAZEPAM AND TEMAZEPAM IDENTIFICATION AND QUANTITATION IN BLOOD

A. **Safety - SAFETY WARNING!**
MTBSTFA and **methylene chloride** are suspected human carcinogens. **Ammonium hydroxide** and **hydrochloric acid** are caustic reagents. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Diazepam, Nordiazepam, Oxazepam and Temazepam are recovered from blood by a solid phase extraction procedure using Diazepam-D5, Nordiazepam-D5, Oxazepam-D5, and Temazepam-D5 as internal standards. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. Two milliliters (2 ml) of sample is used for the analysis.
    a. If a smaller sample is required, see TOX.41 - Performing Extractions.

D. **Detection Limit**

1. The limit of detection for this procedure is 50 ng/ml for Diazepam, Nordiazepam, Oxazepam, and Temazepam.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 100 ng/ml for Diazepam, Nordiazepam, Oxazepam, and Temazepam.
2. The reporting limit of quantitation for this procedure is 100 ng/ml for Diazepam, Nordiazepam, Oxazepam, and Temazepam.

F. **Linear Range**

1. The linear range has been established from 50-3000 ng/ml for Diazepam, Nordiazepam, Oxazepam, and Temazepam. (Range attempted: 20-3000 ng/ml)

G. **Carryover**

1. No carryover is present at 10,000 ng/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 16 x 125 mm disposable glass culture tubes with screw caps
2. 13 x 100 mm disposable glass tubes with teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. 10-1000 µL pipettor and disposable pipette tips

6. 20-200 µL pipettor and disposable pipette tips
7. 100-1000 µL pipettor and disposable pipette tips
8. 500-2500 µL pipettor and disposable pipette tips
9. 500-5000 µL pipettor and disposable pipette tips
10. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
11. autosampler vials with volume reducing inserts and crimp caps
12. vortex mixer (Thermolyne or equivalent)
13. specimen rocker (LabQuake Shaker or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. solid phase extraction columns, Varian Bond Elute Certify
16. solid phase extraction manifold (vac-elut)
17. evaporator/heating module
18. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. methanol, reagent grade
3. sodium acetate
4. glacial acetic acid, reagent grade
5. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
6. dry nitrogen gas (N_2)
7. ethyl acetate, HPLC grade
8. ethyl acetate, reagent grade
9. zinc sulfate hydrate
10. methyl(tert-butyldimethylsilyl)trifluoroacetamide (MTBSTFA)

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks.
Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: The remaining standards from the ampules can be stored separately in appropriately labeled vials in the freezer for later use.
    a. stock internal standard: 10 µg/ml Diazepam-D5/Nordiazepam-D5/Oxazepam-D5/Temazepam-D5 in methanol
    Prep: Draw 1ml 100 µg/ml ampule Diazepam-D5 standard, 100 µg/ml ampule Nordiazepam-D5 standard, 100 µg/ml ampule Oxazepam-D5 standard 100 µg/ml ampule Temazepam-D5 standard, dilute to 10 ml with methanol
    b. stock calibration standard:
    Ampules at a concentrations of 1.0 mg/ml
    c. stock QC standard:
    Ampules at a concentrations of 1.0 mg/ml
2. **Working standards**:
    a. working internal standard: 1 µg/ml Diazepam-D5/Nordiazepam- D5/Oxazepam-D5/Temazepam-D5 in distilled water

Prep: 1 ml of stock internal standard, dilute to 10 ml with distilled water

b. working calibration standard: 10 µg/ml Diazepam/Nordiazepam/Oxazepam/Temazepam in distilled water
Prep: 100 µL of each stock calibration standard, dilute to 10 ml with distilled water

c. working QC standard: 10 µg/ml Diazepam/Nordiazepam/Oxazepam/Temazepam in distilled water
Prep: 100 µL of each stock QC standard, dilute to 10 ml with distilled water

3. **Calibrators and Quality Controls**:

a. 0.100 µg/ml calibrator
Prep: 100 µL working calibration standard, dilute to 10 ml with blank blood

b. 0.500 µg/ml calibrator
Prep: 500 µL working calibration standard, dilute to 10 ml with blank blood

c. 1.000 µg/ml calibrator
Prep: 1 ml working calibration standard, dilute to 10 ml with blank blood

d. 3.000 µg/ml calibrator
Prep: 3 ml working calibration standard, dilute to 10 ml with blank blood

e. low QC: 0.250 µg/ml
Prep: 250 µL working QC standard, dilute to 10 ml with blank blood

f. high QC: 0.750 µg/ml
Prep: 750 µL working QC standard, dilute to 10 ml with blank blood

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and a low QC is necessary when analyzing a large batch of case samples.

K. **Reagents**

Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. 5% NH_4OH
Prep: See Reagent Preparation

2. 0.1M acetate buffer, pH 4.0
Prep: See Reagent Preparation

3. 5% zinc sulfate in 50% methanol
Prep: See Reagent Preparation

4. elution solution 3% NH_4OH/ ethyl acetate
Prep: 3 ml concentrated ammonium hydroxide to a 100 ml volumetric flask and QS with ethyl acetate. Cover and sonicate for 10 minutes.

L. **Extraction Procedure**

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable (16 x 125 mm) culture tubes for each calibrator, quality control, sample, and blank blood.

2. Add 2.0 ml of calibrators, quality control, blank and case samples to be analyzed into the corresponding labeled tube.

3. Add 300μL of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).

4. Add 4.0 ml of 5% zinc sulfate in 50% methanol to each tube. Vortex quickly, cap tubes, and rock for 10 minutes.

5. Centrifuge at 3000 rpm for 10-15 minutes.

6. Place the solid phase extraction columns on the vac-elut.

7. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):

a. 3.0 ml methanol (2x)

b. 3.0 ml pH 4.0 acetate buffer (1x)

8. Turn off the vacuum. Add 3.0 ml pH 4.0 acetate buffer in preparation of sample application.

9. Add zinc sulfate solution from each blood tube to the appropriately labeled column. Allow the samples to pass through the column at a rate of 1-2 ml/min or under gravity.

10. Prepare the elution solution.
11. Rinse each column under vacuum of 1-2 mm Hg:
    a. 4.0 ml (10:90) MeOH:distilled water (2x)
12. Dry columns under full vacuum (10-15 mm Hg) for 15 minutes.
13. Rinse each column under vacuum of 1-2 mm Hg:
    a. 1.0 ml 5% NH_4OH (1x)
14. Dry columns under full vacuum (10-15 mm Hg) for 3 minutes.
15. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns
16. Rinse out the canister and dry. Place rack with labeled (13 x 100 mm) culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
17. Add 3 ml of the elution solution (3% NH_4OH/ethyl acetate) and allow the elution solvent to pass through the column **without** vacuum.
18. Evaporate the samples to dryness under a stream of N_2 at 40°C.
19. Remove tubes from the heating module and allow samples to cool to room temperature. Add 75 μL ethyl acetate and 75 μL MTBSTFA to each tube.
20. Cap tubes with Teflon lined caps and vortex 10 seconds.
21. Heat at approximately 75-80°C for 35 minutes. Remove and cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
    a. Method: BENZOBLS. M
2. Ions Monitored

Diazepam D5	261, 288
Diazepam	256, 283, 221
Nordiazepam D5	332, 389
Nordiazepam	327, 329, 383
Oxazepam D5	462, 464
Oxazepam	457, 459, 313
Temazepam D5	362, 288
Temazepam	357, 283, 255

N. **Order of Batch Analysis**
The order of analysis:

1. blank blood
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC
    a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples.
    b. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**
In order for the quantitative values to be reported, the following quality control criteria should be met:

1. ion ratios within specified range +/- 20% (absolute)
2. QC quantitation values within +/- 20% of known value
3. retention times +/- 3% of calibration standard retention times
4. calibration curve with "r^2" value of .96 or higher using the quadratic model with equal weighting
5. sufficient peak shape and resolution
6. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
   a. ion ratios within specified range +/- 20% (absolute)
   b. retention times +/- 3% of calibration standard retention times
   c. sufficient peak shape and resolution
   d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. West, R. E., Ritz, D.P., GC/MS Analysis of Five Common Benzodiazepine Metabolites in Urine as tert-Butyl-dimethylsilyl Derivatives, Journal of Analytical Toxicology, Vol 17, March/April 1993.

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 07/12/2017	**NUMBER:** TOX.49 - U-OXA
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Procedures	**SUBJECT:** U-OXA	

I. OXAZEPAM IDENTIFICATION AND QUANTITATION IN URINE

A. **Safety - SAFETY WARNING!**
Bis (trimethylsilyl) trifluoroacetamide (BSTFA) with 1% TMCS and is a suspected human carcinogen. **Ammonium hydroxide** and **hydrochloric acid** are caustic reagents. Human urine is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Oxazepam is recovered from urine by a solid phase extraction procedure using Oxazepam-D5 as the internal standard. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. Two milliliters (2 ml) of sample is used for the analysis.
    a. If a dilution is required based on screening results see TOX.41 - Performing Extractions.

D. **Detection Limit**

1. The limit of detection for this procedure is 20 ng/ml for Oxazepam.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 50 ng/ml for Oxazepam.
2. The reporting limit of quantitation for this procedure is 50 ng/ml for Oxazepam.

F. **Linear Range**

1. The linear range has been established from 50 - 1,000 ng/ml for Oxazepam.

G. **Carryover**

1. No significant carryover is present at 10,000 ng/ml

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml (13 x 100 mm) disposable glass tubes with Teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. glass Pasteur pipettes
6. 100-1000 µL pipettor and disposable pipette tips
7. 20-200 µL pipettor and disposable pipette tips
8. 500-2500 µL pipettor and disposable pipette tips
9. 500-5000 µL pipettor and disposable pipette tips

10. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
11. autosampler vials with volume reducing inserts and crimp caps
12. vortex mixer (Thermolyne or equivalent)
13. specimen rocker (LabQuake Shaker or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. solid phase extraction columns, Varian Bond Elute
16. solid phase extraction manifold (vac-elut)
17. evaporator/heating module
18. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. methylene chloride, reagent grade
3. methanol, reagent grade
4. isopropanol, reagent grade
5. sodium acetate
6. glacial acetic acid, reagent grade
7. bis (trimethylsilyl) trifluoroacetamide (BSTFA) with 1% trimethylchlorosilane
8. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
9. dry nitrogen gas (N_2)
10. ethyl acetate, HPLC grade

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), will be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control will be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule.

1. **Stock standards**: Stock standards may be stored in freezer.
   a. stock internal standard: 10 µg/ml Oxazepam D5 in methanol
      Prep: Draw 100 µg/ml ampule Oxazepam D5 standard dilute to 10 ml with methanol.
   b. stock calibration standard: 100 µg/ml Oxazepam in methanol
      Prep: Draw 1 ml of 1 mg/ml ampule Oxazepam standard, dilute to 10 ml with methanol.
   c. stock QC standard: 100 µg/ml Oxazepam in methanol
      Prep: Draw 1 ml of 1 mg/ml ampule Oxazepam standard, dilute to 10 ml with methanol.
   d. stock glucuronide: 10 mg/ml Oxazepam-glucuronide in water
      Prep: Draw 1 ml of 100 µg/ml ampule Oxazepam glucuronide, dilute to 10 ml with distilled water.
2. **Working standards**:
   a. working internal standard: 1 µg/ml Oxazepam-D5 in distilled water
      Prep: 1 ml of stock internal standard, dilute to 10 ml with distilled water
   b. working calibration standard: 10 µg/ml Oxazepam in distilled water
      Prep: 1 ml of stock calibration standard, dilute to 10 ml with distilled water
   c. working QC standard: 10 µg/ml Oxazepam in distilled water
      Prep: 1 ml of stock QC standard, dilute to 10 ml with distilled water
3. **Calibrators and Quality Controls**: Urine standards can be prepared ahead of time, dispensed into freezer vials, and stored in the freezer.

a. 0.050 µg/ml calibrator
Prep: 50 µL working calibration standard, dilute to 10 ml with human urine

b. 0.250 µg/ml calibrator
Prep: 250 µL working calibration standard, dilute to 10 ml with human urine

c. 0.750 µg/ml calibrator
Prep: 750 µL working calibration standard, dilute to 10 ml with human urine

d. 1.000 µg/ml calibrator
Prep: 1.0 ml working calibration standard, dilute to 10 ml with human urine

e. low QC: 0.400 µg/ml
Prep: 400 µL working QC standard, dilute to 10 ml with human urine

f. high QC: 800 µg/ml
Prep: 800 µL working QC standard, dilute to 10 ml with human urine

g. low glucuronide QC: 0.400 (0.645 µg/ml glucuronide)
Prep: 645 µL stock glucuronide, dilute to 10 ml with human urine

h. high glucuronide QC: 0.800 (1.290 µg/ml glucuronide)
Prep: 1.290 ml stock glucuronide, dilute to 10 ml with human urine

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and a low QC is necessary when analyzing a large batch of case samples.

K. **Reagents**

Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. 0.1 M sodium acetate buffer, pH 6.0
Prep: See Reagent Preparation

2. 0.1M hydrochloric acid in distilled water.
Prep: See Reagent Preparation

3. 2M sodium acetate buffer, pH 4.5
Prep: See Reagent Preparation

4. elution solution (8:2) methylene chloride/isopropanol with 2% NH_4OH
Prep: 20 ml isopropanol to a 100 ml volumetric flask and QS with methylene chloride. Remove 2 ml of the solution. Add 2 ml concentrated ammonium hydroxide. Cover and sonicate for 10 minutes.

L. **Extraction Procedure**

The target drug is extracted from the urine samples using the following procedure:

1. Turn on heating block to 56 °C with appropriate 15 ml well heating blocks.
2. Prepare and label disposable culture tubes for each calibrator, quality control, sample, and blank urine.
3. Add 2.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
4. Add 80µL ß-Glucuronidase (10,000 units) from Helix pomatia.
5. Add 100µL of 2M sodium acetate buffer pH 4.5.
6. Hydrolyze at 56 °C for 2 hours. Do not hydrolyzed standards and non-glucuronide QC.
7. Cool to room temperature and add 300µL of working internal standard to each tube.
8. Cap and vortex each tube for approximately 5-10 seconds.
9. Rotate the tubes for approximately 5 minutes.
10. Centrifuge at 3000 rpm for 10-15 minutes.
11. Label and place the solid phase extraction columns on the vac-elut.
12. Rinse each column under vacuum of 1-2 mm Hg (**It is important that the columns do not go dry prior to addition of the sample**):
    a. 3.0 ml methanol (1x)
    b. 3.0 ml DI H2O (1x)
    c. 2.0 ml of pH 6.0 sodium acetate buffer (1x)

13. Turn off the vacuum. Add 2.0 ml pH 6.0 acetate buffer in preparation of sample application.
14. Transfer the centrifuged samples to the corresponding solid phase column. Allow the samples to pass through each column at a rate of 1-2ml/ minute (6-12 minutes). Preferably without vacuum.
15. Prepare the elution solution.
16. Rinse each column under vacuum of 1-2 mm Hg:
    a. 3.0 ml distilled water (1x)
    b. 3.0 ml 0.1 M HCl (1x)
    c. 3.0 ml of methanol (1x)
17. Dry columns under full vacuum (10-15 mm Hg) for 5 minutes.
18. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.
19. Rinse out the canister and dry. Place rack with labeled 5 ml culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
20. Add 3 ml of the elution solution and allow the elution solvent to pass through the column **without** vacuum.
21. Evaporate the samples to dryness under a stream of N_2 at 40°C.
22. Remove tubes from the heating module and allow samples to cool to room temperature. Add 50 µL ethyl acetate and 50 µL BSTFA 1% TMCS to each tube.
23. Cap tubes with Teflon lined caps and vortex 10 seconds.
24. Heat at approximately 70°C for 30 minutes. Remove and cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
    a. Method: OXASIM.M oxasim.m
2. Ions Monitored

Oxazepam D5	434, 420
Oxazepam	429, 430, 415

N. **Order of Batch Analysis**

1. blank urine
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC or Glucuronide QC
    a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples. **There must be at least one glucuronide QC per batch**; all QC sample(s) in the batch may be glucuronide QCs.
    b. Placement of case samples and QC's are interchangeable
    c. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
    a. calibration curve with "r^2" value of .96 or higher using the quadratic model with inverse of concentration weighting

b. ion ratios within specified range +/- 20% (absolute)

c. standard and QC quantitation values within +/- 20% of known value

d. retention times +/- 3% of calibration standard retention times

e. sufficient peak shape and resolution

f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:

   a. ion ratios within specified range +/- 20% (absolute)

   b. retention times +/- 3% of calibration standard retention times

   c. sufficient peak shape and resolution

   d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Benzodiazepines in Urine for GC or GC/MS Confirmations using: C8 + Benzenesulfonyl Copolymer (200 mg) Extraction Column - Method I Solid Phase Extraction Application Manual, Radian International

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.50 - U-GHB
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** U-GHB	

I. GAMMA-HYDROXYBUTYRATE IDENTIFICATION AND QUANTITATION IN URINE

A. **Safety - SAFETY WARNING!**
Bis(trimethylsilyl)trifluoroacetamide (BSTFA) with 1% TMCS and is a suspected human carcinogen. **Sulfuric acid** is a caustic reagent. Human urine is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Gamma-Hydroxybutyrate is recovered from urine by a liquid/liquid extraction procedure using Gamma-Hydroxybutyrate D6 as the internal standard. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. One half milliliter (0.5 ml) of sample is used for the analysis.

D. **Detection Limit**

1. The limit of detection for this procedure is 10 µg/ml for Gamma-Hydroxybutyrate.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 15 µg/ml for Gamma-Hydroxybutyrate.
2. The reporting limit of quantitation for this procedure is 15 µg/ml for Gamma-Hydroxybutyrate.

F. **Linear Range**

1. The linear range has been established from 10 - 200 µg/ml for Gamma-Hydroxybutyrate. (Range attempted: 10-500 µg/ml)

G. **Carryover**

1. No significant carryover is present at 500 µg/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 5 ml (13 x 100 mm) disposable glass tubes with Teflon lined caps
2. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
3. volumetric flasks
4. plastic transfer pipettes
5. glass Pasteur pipettes
6. 2-20 µL pipettor and disposable pipette tips
7. 100-1000 µL pipettor and disposable pipette tips
8. 20-200 µL pipettor and disposable pipette tips
9. 500-2500 µL pipettor and disposable pipette tips

10. 500-5000 µL pipettor and disposable pipette tips
11. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
12. autosampler vials with volume reducing inserts and crimp caps
13. vortex mixer (Thermolyne or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. evaporator/heating module
16. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. sulfuric acid, concentrate, reagent grade **CAUTION IRRITANT**
2. dry nitrogen gas (N_2)
3. ethyl acetate, reagent and HPLC grade
4. bis (trimethylsilyl) trifluoroacetamide (BSTFA) with 1% trimethylchlorosilane

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**:
   a. 1.0 mg/ml ampules gamma-hydroxybutyrate and gamma-hydroxybutyrate D6

2. **Working standards**:
   a. working internal standard: 200 µg/ml gamma-hydroxybutyrate D6 in distilled water
   Prep: Draw 1ml of 1 mg/ml ampule and dilute to 5 ml with distilled water
   b. working calibration standard: 400.00 µg/ml gamma-hydroxybutyrate (salt) in distilled water
   Prep: Take 2 ml of 1 mg/ml solution of gamma-hydroxybutyrate, dilute to 5 ml with distilled water
   Note: The calibration standard is the salt form of GHB, the volumes used to prepare the calibrators are adjusted to achieve the final concentration in base equivalents. The equivalent base concentration of the working calibration standard is 330.27 µg/ml.
   c. working QC standard: 400.00 µg/ml gamma-hydroxybutyrate (base) in distilled water
   Prep: Take 2 ml of 1 mg/ml solution of gamma-hydroxybutyrate, dilute to 5 ml with distilled water

3. **Calibrators and Controls**:
   a. 10.0 µg/ml calibrator
   Prep: 151.4 µL working calibration standard, dilute to 5 ml with human urine
   Note: this LOD calibrator is below the LOQ for the procedure. If samples are present between 10 µg/ml and 15µg/ml, the sample should be reported as present but below the LOQ.
   b. 15.0 µg/ml calibrator
   Prep: 227 µL working calibration standard, dilute to 5 ml with human urine
   c. 50.0 µg/ml calibrator
   Prep: 0.757 ml working calibration standard, dilute to 5 ml with human urine
   d. 100.0 µg/ml calibrator
   Prep: 1.514 ml working calibration standard, dilute to 5 ml with human urine
   e. low QC: 25.0 µg/ml
   Prep: 312 µL working QC standard, dilute to 5 ml with human urine
   f. high QC: 75.0 µg/ml
   Prep: 937 µL working QC standard, dilute to 5 ml with human urine

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and a low QC is necessary when when analyzing 11-20 case samples.

K. **Reagents**

Reagents can be prepared before the extraction day.

1. 0.1 N sulfuric acid (cold)
   Prep: See Reagent Preparation
   Storage: Keep in refrigerator

L. **Extraction Procedure**

The target drugs are extracted from the urine samples using the following procedure:

1. Prepare and label disposable 15 ml culture tubes for each calibrator, quality control, sample, and blank urine.
2. Add 0.5 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
3. Add 250µL of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
4. Add 250 µL of cold 0.1N sulfuric acid to each tube. Vortex for 10 -15 seconds.
5. Add 3.0 ml of ethyl acetate to each tube.
6. Cap and rotate tubes for 10 minutes. Centrifuge at 3000 rpm for 5 minutes.
7. Transfer the ethyl acetate (top) layer to labeled 8 ml disposable culture tubes.
8. Re-extract the aqueous layer by adding 3.0 ml of ethyl acetate to the original aqueous layer.
9. Cap and rotate tubes for 10 minutes. Centrifuge at 3000 rpm for 5 minutes. Transfer the ethyl acetate (top) layer to the corresponding 8 ml disposable culture tubes. Start to evaporate the collective samples to dryness under a stream of N_2 at 37°C.
10. Re-extract the aqueous layer a final time by adding 3.0 ml of ethyl acetate to the original aqueous
11. Cap and rotate tubes for 10 minutes. Centrifuge at 3000 rpm for 5 minutes. Transfer the ethyl acetate (top) layer to the corresponding 8 ml disposable culture tubes
12. Finish evaporating the collective samples to dryness under a stream of N_2 at 37°C.
13. Allow the samples to cool to room temperature. Add 75µL ethyl acetate and 75 µL BSTFA with 1% TMCS to each tube.
14. Cap tubes with Teflon lined caps and vortex 10 seconds.
15. Heat at approximately 70°C for 30 minutes. Remove and cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
   a. Method: GHBURSIM.M

2. Ions Monitored

Gamma-Hydroxybutyrate D6	239, 240
Gamma-Hydroxybutyrate	233, 204, 234

N. **Order of Batch Analysis**

The order of analysis:

1. blank urine
2. LOD
3. LOQ
4. MED
5. HIGH
6. case samples

7. QC

    a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to the samples and one placed after the samples.

    b. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:

    a. calibration curve is linear with "r^2" value of .96 or higher, the following models must be used:

        i. Using the RTX-5 column, the quadratic model with equal weighting

        ii. Using the RTX-35 column, the quadratic model with inverse of concentration weighting

    b. ion ratios within specified range +/- 20% (absolute)

    c. standard and QC quantitation values within +/- 20% of known value

    d. retention times +/- 3% of calibration standard retention times

    e. sufficient peak shape and resolution

    f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:

    a. ion ratios within specified range +/- 20% (absolute)

    b. retention times +/- 3% of calibration standard retention times

    c. sufficient peak shape and resolution

    d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Couper, Fiona, J. and Logan, Barry K. Determination of gamma-Hydroxybutyrate (GHB) in Biological Specimens by Gas Chromatography-Mass Spectrometry. Journal of Analytical Toxicology, vol 24, January/ February 2000. Pages 1-7

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.51 - B-GHB
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-GHB	

I. GAMMA-HYDROXYBUTYRATE IDENTIFICATION AND QUANTITATION IN BLOOD

A. **Safety - SAFETY WARNING!**
Bis (trimethylsilyl) trifluoroacetamide (BSTFA) with 1% TMCS and is a suspected human carcinogen. **Sulfuric acid** is a caustic reagent. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Gamma-Hydroxybutyrate is recovered from blood by a liquid/liquid extraction procedure using Gamma-Hydroxybutyrate D6 as the internal standard. Identification and quantitation is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. Two milliliter (2.0 ml) of sample is used for the analysis.

D. **Detection Limit**

1. The limit of detection for this procedure is 10 µg/ml for Gamma-Hydroxybutyrate.

E. **Quantitation Limit**

1. The analytical limit of quantitation for this procedure is 15 µg/ml for Gamma-Hydroxybutyrate.
2. The reporting limit of quantitation for this procedure is 15 µg/ml for Gamma-Hydroxybutyrate.

F. **Linear Range**

1. The linear range has been established from 10 - 200 µg/ml for Gamma-Hydroxybutyrate. (Range attempted: 10-200 µg/ml)

G. **Carryover**

1. No significant carryover is present at 500 µg/ml.

H. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 5 ml (13 x 100 mm) disposable glass tubes with Teflon lined caps
2. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
3. volumetric flasks
4. plastic transfer pipettes
5. glass Pasteur pipettes
6. 2-20 µL pipettor and disposable pipette tips
7. 100-1000 µL pipettor and disposable pipette tips
8. 20-200 µL pipettor and disposable pipette tips
9. 500-2500 µL pipettor and disposable pipette tips

10. 500-5000 µL pipettor and disposable pipette tips
11. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
12. autosampler vials with volume reducing inserts and crimp caps
13. vortex mixer (Thermolyne or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. evaporator/heating module
16. gas chromatograph/mass spectrometer

I. **Chemicals**

This procedure uses the following chemicals:

1. sulfuric acid, concentrate, reagent grade **CAUTION IRRITANT**
2. dry nitrogen gas (N_2)
3. ethyl acetate, reagent and HPLC grade
4. bis (trimethylsilyl) trifluoroacetamide (BSTFA) with 1% trimethylchlorosilane

J. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**:
   a. 1.0 mg/ml ampules gamma-hydroxybutyrate and gamma-hydroxybutyrate D6
2. **Working standards**:
   a. working internal standard: 200 µg/ml gamma-hydroxybutyrate D6 in distilled water
   Prep: Draw 1ml of 1 mg/ml ampule and dilute to 5 ml with distilled water
   b. working calibration standard: 400.00 µg/ml gamma-hydroxybutyrate (salt) in distilled water
   Prep: Take 2 ml of 1 mg/ml solution of gamma-hydroxybutyrate, dilute to 5 ml with distilled water
   Note: the calibration standard is the salt form of GHB, the volumes used to prepare the calibrators are adjusted to achieve the final concentration in base equivalents. The equivalent base concentration of the working calibration standard is 330.27 µg/ml.
   c. working QC standard: 400.00 µg/ml gamma-hydroxybutyrate (base) in distilled water
   Prep: Take 2 ml of 1 mg/ml solution of gamma-hydroxybutyrate, dilute to 5 ml with distilled water
3. **Calibrators and Controls**: Blood standards can be prepared ahead of time, dispensed into freezer vials, and stored in the freezer.
   a. 10.0 µg/ml calibrator
   Prep: 151.4 µL working calibration standard, dilute to 5 ml with human blood
   Note: this LOD calibrator is below the LOQ for the procedure. If samples are present between 10 µg/ml and 15µg/ml, the sample should be reported as present but below the LOQ.
   b. 15.0 µg/ml calibrator
   Prep: 227 µL working calibration standard, dilute to 5 ml with human blood
   c. 50.0 µg/ml calibrator
   Prep: 0.757 ml working calibration standard, dilute to 5 ml with human blood
   d. 100.0 µg/ml calibrator
   Prep: 1.514 ml working calibration standard, dilute to 5 ml with human blood
   e. low QC: 25.0 µg/ml
   Prep: 312 µL working QC standard, dilute to 5 ml with human blood
   f. high QC: 75.0 µg/ml
   Prep: 937 µL working QC standard, dilute to 5 ml with human blood

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and low QC is necessary when analyzing 11-20 case samples.

K. **Reagents**

Reagents can be prepared before the extraction day.

1. 0.1 N sulfuric acid (cold)
   Prep: See Reagent Preparation
   Storage: Keep in refrigerator

L. **Extraction Procedure**

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable 15 ml (16 x 125) culture tubes for each calibrator, quality control, sample, and blank blood.
2. Add 2.0 ml of calibrators, quality control, blank and samples to be analyzed into the corresponding labeled tube.
3. Add 250µL of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
4. Add 250 µL of cold 0.1N sulfuric acid to each tube. Vortex for 10 -15 seconds.
5. Add 3.0 ml of ethyl acetate to each tube.
6. Cap and rotate tubes for 10 minutes. Centrifuge at 3000 rpm for 5 minutes.
7. **Transfer the ethyl acetate (top) layer to labeled 8 ml disposable culture tubes.**
8. Re-extract the aqueous layer by adding 3.0 ml of ethyl acetate to the original aqueous layer.
9. Cap and rotate tubes for 10 minutes. Centrifuge at 3000 rpm for 5 minutes. Transfer the ethyl acetate (top) layer to the corresponding 8 ml disposable culture tubes. Start to evaporate the collective samples to dryness under a stream of N_2 at 37°C.
10. Re-extract the aqueous layer a final time by adding 3.0 ml of ethyl acetate to the original aqueous
11. Cap and rotate tubes for 10 minutes. Centrifuge at 3000 rpm for 5 minutes. Transfer the ethyl acetate (top) layer to the corresponding 8 ml disposable culture tubes
12. Finish evaporating the collective samples to dryness under a stream of N_2 at 37°C.
13. Allow the samples to cool to room temperature. Add 75µL ethyl acetate and 75 µL BSTFA with 1% TMCS to each tube.
14. Cap tubes with Teflon lined caps and vortex 10 seconds.
15. Heat at approximately 70°C for 30 minutes. Remove and cool to room temperature. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the SIM program.
   a. Method: GHBBLSIM.M

2. Ions Monitored

Gamma-Hydroxybutyrate D6	239, 240
Gamma-Hydroxybutyrate	233, 204, 234

N. **Order of Batch Analysis**

The order of analysis:

1. blank blood
2. LOD
3. LOQ
4. MED 100.0 µg/ml calibrator
5. HIGH 200.0 µg/ml calibrator

6. case samples
7. QC
    a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to the case samples and one placed after the samples.
    b. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
    a. calibration curve is linear with "r^2" value of .96 or higher, the following models must be used:
        i. Using the RTX-5 column, the quadratic model with equal weighting
        ii. Using the RTX-35 column, the quadratic model with inverse of concentration weighting
    b. ion ratios within specified range +/- 20% (absolute)
    c. standard and QC quantitation values within +/- 20% of known value
    d. retention times +/- 3% of calibration standard retention times
    e. sufficient peak shape and resolution
    f. blank/negative control has a quantitative value less than LOQ

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
    a. ion ratios within specified range +/- 20% (absolute)
    b. retention times +/- 3% of calibration standard retention times
    c. sufficient peak shape and resolution
    d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **References**

1. Couper, Fiona, J. and Logan, Barry K. Determination of ?-Hydroxybutyrate (GHB) in Biological Specimens by Gas Chromatography-Mass Spectrometry. Journal of Analytical Toxicology, vol 24, January/ 2000. Pages 1-7

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.52 - B-Acid/Neutral and Basic Drugs
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-Acid/Neutral and Basic Drugs	

I. ACID/NEUTRAL AND BASIC DRUG SCREEN IN BLOOD

A. **Safety - SAFETY WARNING!**
Ammonium hydroxide is a caustic reagent. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety hood sash down or use safety glasses
4. consult the Safety Data Sheets for more information

B. **Principle**
Acid/neutral and basic drugs are recovered from blood by a solid phase extraction procedure. Qualitative analysis and identification is by gas chromatography/mass spectrometry.

C. **Specimen Requirement**

1. Four milliliter (4 ml) of sample is used for the analysis.

D. **Detection Limit**

1. The limit of detection for this procedure is 0.250-3.000 µg/ml, however it varies from drug to drug.

E. **Equipment**
This procedure uses the following laboratory equipment and supplies:

1. 15 ml (16 x 125 mm) disposable glass culture tubes with screw caps
2. 5 ml (13 x 100 mm) disposable glass tubes with Teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. glass Pasteur pipettes
6. 2-20 µL pipettor and disposable pipette tips
7. 100-1000 µL pipettor and disposable pipette tips
8. 20-200 µL pipettor and disposable pipette tips
9. 500-2500 µL pipettor and disposable pipette tips
10. 500-5000 µL pipettor and disposable pipette tips
11. repeat pipettor and disposable tips (1.25 ml, 2.5 ml, 5 ml, 50 ml)
12. autosampler vials with volume reducing inserts and crimp caps
13. vortex mixer (Thermolyne or equivalent)
14. specimen rocker (LabQuake Shaker or equivalent)
15. centrifuge (IEC Centra-4B or equivalent)
16. solid phase extraction columns, Varian Bond Elut
17. evaporator/heating module

18. gas chromatograph/mass spectrometer

F. **Chemicals**
This procedure uses the following chemicals:

1. acetic acid
2. zinc-sulfate
3. sodium acetate
4. chloroform (reagent grade)
5. acetone (reagent grade)
6. ethyl acetate (reagent grade)
7. ammonium hydroxide

G. **Standards**
All standards, calibrators, and controls are prepared in appropriate volumetric flasks.
Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: The remaining standards from the ampules can be stored separately in appropriately labeled vials in the freezer for later use.
    a. stock internal standard: 100 µg/ml Mepivacaine in methanol
    Prep: 1 mg/ml ampule mepivacaine hydrochloride standard, dilute to 10 ml with methanol.
    b. stock internal standard: 5.0 mg/ml Barbital in methanol
    Prep: 125.0 mg Barbital standard, dilute to 25 ml with methanol
    c. stock resolution solution: 10 µg/ml of standards in methanol
    Prep: 100 µL of the following suggested 1 mg standards from ampule:
    Amobarbital, Carisoprodol, Diazepam, Amitriptyline, Phencyclidine, Methadone, Lidocaine, Trazodone, Methaqualone, Meprobamate, and Hydrocodone, dilute to 10 ml with methanol.
2. **Working standards**:
    a. working internal standard: 500 µg/ml Barbital/ 5 µg /ml Mepivacaine in distilled water
    Prep: 1 ml of stock barbital and 500 µl of stock mepivacaine internal standard, dilute to 10 ml with distilled water
    b. working resolution solution (SPE test mix) standard:
    Prep: 1 ml of stock resolution solution (SPE test mix) standard, 1 ml of distilled water, dilute to 5 ml with human blood

H. **Reagents**
Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. 0.01M acetic acid
Prep: See Reagent Preparation
2. 5% zinc sulfate in 50% methanol
Prep: See Reagent Preparation
3. Elution solution (50:50) acetone/chloroform (acid/neutral fraction)
Prep: 50 ml acetone to a 100 ml volumetric flask and QS with chloroform. Cover and sonicate for 10 minutes.
4. Elution solution (98:2) ethyl acetate/NH_4OH (basic fraction)
Prep: 1 ml concentrated NH_4OH to a 50 ml volumetric flask and QS with ethyl acetate. Cover and sonicate for 10 minutes.

I. **Extraction Procedure**
The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable (16 x 125 mm) culture tubes quality control (test mix), sample, and blank blood.

2. Add 4.0 ml of quality control, blank and case samples to be analyzed into the corresponding labeled tube.
3. Add 500μL of working internal standard to each tube (note: the internal standard may be added before the calibrators, quality control, samples, and blank).
4. Add 4.0 ml of 5% zinc sulfate in 50% methanol to each tube. Cap and vortex for 10-15 seconds to break up any clots. Rotate for 10 minutes.
5. Centrifuge at 3000 rpm for 10-15 minutes.
6. Place the solid phase extraction columns on the vac-elut.
7. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):
    a. 3.0 ml methanol (1x)
    b. 2.0 ml pH 6.0 acetate buffer (1x)
8. Turn off the vacuum. Add 2.0 ml pH 6.0 acetate buffer in preparation of sample application.
9. Add zinc sulfate solution from each blood tube to the appropriately labeled column. Allow the samples to pass through the column at a rate of 1-2 ml/min or under gravity.
10. Prepare the elution solutions. Rinse each column under vacuum of 1-2 mm Hg:
    a. 2.0 ml distilled water (1x)
    b. 0.5 ml 0.01 M acetic acid (1x)
11. Dry columns under full vacuum (10-15 mm Hg) for 5 minutes. Add 100 µl of methanol. Dry columns under full vacuum (10-15 mm Hg) for 2 minutes.
12. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.
13. Rinse out the canister and dry. Place rack with labeled (13 x 100 mm) acid/neutral fraction tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
14. Add 4 ml of the elution solution (acetone/chloroform) and allow the elution solvent to pass through without vacuum. Aspirate to remove all of the elution solution from the SPE columns.
15. Remove the collected acid/neutral fraction tubes from the canister. Place rack with labeled (13 x 100 mm) basic fraction tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
16. Add 2 ml of the elution solution (ethyl acetate/ NH_4OH) and allow the elution solvent to pass through without vacuum. Aspirate to remove all of the elution solution from the SPE columns.
17. Evaporate the samples to approximately 100 µl under a stream of N_2 at 40°C. If sample dries completely it can be reconstituted in 100 µl of the elution solution.
18. Remove tubes from the heating module and allow samples to cool to room temperature.
19. Vortex tubes for 10-15 seconds.
20. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

J. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by GC/MS using the FULLSCAN program
    a. Method: TOXSCR.M

K. **Order for Batch Analysis**

The order of analysis:

1. blank blood (acid/neutral)
2. blank blood (basic)
3. case samples (acid/neutral) followed by the (basic) fraction
4. SPE test mix (acid/neutral)
5. SPE test mix (basic)
    a. Solvent wash and blanks: acetone

L. **Data Interpretation**

In order for the quantitative values to be reported, the following quality control criteria should be met:

1. Internal standards must be present.
2. There shall be no presence of any significant drug other than the internal standard in the blank blood.
3. All of the compounds in the SPE test mix should be identifiable.
4. At the discretion of the analyst, a library match may be made and reported as a presumptive finding or a positive screen by GC/MS.

M. **References**

1. Varian Bond Elut Certify Instruction Manual. Acid/Neutral Drugs Extraction Procedures and Basic Drug Extraction Procedures

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.54 - B-COC/BE
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-COC/BE	

I. Title

COCAINE AND BENZOYLECGONINE IDENTIFICATION AND QUANTITATION IN BLOOD

A. SAFETY

SAFETY WARNING!

Methylene chloride is a suspected human carcinogen. **Ammonium hydroxide** and **hydrochloric acid** are caustic reagents. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety glasses
4. Safety Data Sheets for more information.

B. PRINCIPLE

Cocaine and Benzoylecgonine are recovered from blood by a solid phase extraction procedure using Cocaine-D3 and Benzoylecgonine-D3 as internal standards. Identification and quantitation is by gas chromatography/mass spectrometry.

C. SPECIMEN REQUIREMENT

Two milliliters (2 mL) of sample is used for the analysis.

D. DETECTION LIMIT

The limit of detection for this procedure is 10 ng/mL for Cocaine and Benzoylecgonine.

E. QUANTITATION LIMIT

The analytical limit of quantitation for this procedure is 20 ng/mL for Cocaine, Benzoylecgonine.

The reporting limit of quantitation for this procedure is 20 ng/mL for Cocaine, Benzoylecgonine. The reporting limit of quantitation for Benzoylecgonine can be raised to 50 ng/mL.

F. LINEAR RANGE

The linear range has been established from 10-5,000 ng/mL for Cocaine and Benzoylecgonine.

G. CARRYOVER

No carryover is present at10,000 ng/mL.

H. EQUIPMENT

This procedure uses the following laboratory equipment and supplies:

1. 16 x 125 mm disposable glass culture tubes with screw caps
2. 13 x 100 mm disposable glass tubes with Teflon lined caps
3. volumetric flasks

4. plastic and glass transfer pipettes
5. 20-200 µL pipettor and disposable pipette tips
6. 2-20 µL pipettor and disposable pipette tips
7. 500-2500 µL pipettor and disposable pipette tips
8. 500-5000 µL pipettor and disposable pipette tips
9. 100-1000 µL pipettor and disposable pipette tips
10. repeat pipettor and disposable tips (1.25 mL, 2.5 mL, 5 mL, 50 mL)
11. autosampler vials with volume reducing inserts and crimp caps
12. vortex mixer (Thermolyne or equivalent)
13. specimen rocker (LabQuake Shaker or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. solid phase extraction columns, Varian Bond Elute Certify
16. solid phase extraction manifold (vac-elut)
17. evaporator/heating module
18. gas chromatograph/mass spectrometer

I. CHEMICALS

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. methylene chloride, reagent grade
3. methanol, reagent grade
4. isopropanol, reagent grade
5. sodium acetate
6. glacial acetic acid, reagent grade
7. PFPA (Pentafluoropropionic anhydride)
8. HFIP (1,1,1,3,3,3-Hexafluro-2-propanol)
9. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
10. dry nitrogen gas (N_2)
11. ethyl acetate, HPLC grade
12. acetonitrile, HPLC grade
13. zinc sulfate hydrate

J. STANDARDS

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule.

1. **Stock standards**:
   a. stock internal standard: 10 µg/mL cocaine-D3/benzoylecgonine-D3 in methanol
   Prep: 100 µg/mL ampule cocaine-D3 standard, 100 µg/mL ampule benzoylecgonine-D3 standard, dilute to 10 mL with methanol
   b. stock calibration standard: 100 µg/mL cocaine in acetonitrile
   Prep: Draw 1 ml of 1 mg/ml ampule cocaine standard, dilute to 10 mL with acentonitrile

c. stock calibration standard: 100 µg/mL benzoylecgonine in methanol
Prep: Draw 1 ml of 1 mg/ml ampule benzoylecgonine standard, dilute to 10 mL with methanol

d. stock QC standard: 100 µg/mL cocaine in methanol
Prep: Draw 1 ml of 1 mg/ml ampule cocaine standard, dilute to 10 mL with methanol

e. stock QC standard: 100 µg/mL benzoylecgonine in methanol
Prep: Draw 1 ml of 1 mg/ml ampule benzoylecgonine standard, dilute to 10 mL with methanol

2. **Working standards**:

a. working internal standard: 1 µg/mL cocaine-D3/benzoylecgonine- D3 in distilled water
Prep: 1 mL of stock internal standard, dilute to 10 mL with distilled water

b. working cocaine calibration standard: 10 µg/mL cocaine in distilled water
Prep: 1 mL of stock calibration standard, dilute to 10 mL with distilled water (note: the cocaine and the benzoylecgonine working standard can be made together if the blood standards are going to be made in the same concentration)

c. working benzoylecgonine calibration standard: 10 µg/mL benzoylecgonine in distilled water
Prep: 1 mL of stock calibration standard, dilute to 10 mL with distilled water(see note above)

d. working QC standard: 10 µg/mL cocaine/benzoylecgonine in distilled water
Prep: 1 mL of each stock QC standard, dilute to 10 mL with distilled water

3. **Calibrators and Quality Controls**:

a. 0.020 COC/0.050 BE µg/mL calibrator
Prep: 20 µL working of cocaine calibration standard, and 50 µL working Benzoylecgonine working calibration standard, dilute to 10 mL with blank blood (if the LOQ for BE is 0.020 µg/mL see note below)

b. 0.250 COC/0.500 BE µg/mL calibrator
Prep: 250 µL working cocaine calibration standard, and 500 µL of Benzoylecgonine working calibration standard, dilute to 10 mL with blank blood

c. 0.500 COC/1.500 BE µg/mL calibrator
Prep: 0.500 mL working cocaine calibration standard, and 1.500 mL of Benzoylecgonine working calibration standard, dilute to 10 mL with blank blood

d. 1.000 COC/2.500 BE µg/mL calibrator
Prep: 1.0 mL working cocaine calibration standard, and 2.500 mL of Benzoylecgonine working calibration standard, dilute to 10 mL with blank blood

e. low QC: 0.200 µg/mL
Prep: 200 µL working QC standard, dilute to 10 mL with blank blood

f. high QC: 0.750 µg/mL
Prep: 750 µL working QC standard, dilute to 10 mL with blank blood
Note: The LOQ for Benzoylecgonine can be run at 0.020 µg/mL as opposed to 0.050 µg/mL

Note: It is within the discretion of the toxicologist of whether to run a high or low QC. However, a high and low QC is necessary when running a large batch of case samples.

K. REAGENTS

Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. sodium acetate buffer, pH 6.0
Prep: See Reagent Preparation

2. 0.1M hydrochloric acid
Prep: See Reagent Preparation

3. 5% zinc sulfate in 50% methanol
Prep: See Reagent Preparation

4. *elution solution (8:2) methylene chloride/isopropanol with 2% NH_4OH*
Prep: 20 mL isopropanol to a 100 mL volumetric flask and QS with methylene chloride. Invert flask several times to mix. Remove 2 mL of the solution. Add 2 mL concentrated ammonium hydroxide. Cover and sonicate for 10 minutes.

L. EXTRACTION

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable (16 x 125 mm) culture tubes for each calibrator, quality control, sample, and blank blood.
2. Add 2.0 mL of calibrators, quality control, blank and case samples to be analyzed into the corresponding labeled tube.
3. Add 300µL of working internal standard to each tube (the internal standard may be added before the calibrators, quality control, samples, and blank blood).
4. Add 4.0 mL of 5% zinc sulfate in 50% methanol to each tube. Vortex quickly, cap tubes, and rock for 10-15 minutes.
5. Centrifuge at 3000 rpm for 10-15 minutes.
6. Place the solid phase extraction columns on the vac-elut.
7. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):
   a. 3.0 mL methanol (1x)
      2.0 mL pH 6.0 acetate buffer (1x)
      Turn off the vacuum. Add 2.0 mL pH 6.0 acetate buffer in preparation of sample application.
8. Add zinc sulfate solution from each blood tube to the appropriately labeled column (let the zinc sulfate equilibrate with the pH 6.0 buffer for a couple minutes).
9. Allow the samples to pass through the column at a rate of 1-2 mL/min or under gravity.
10. Prepare the elution solution.
11. Rinse each column under vacuum of 1-2 mm Hg:
    a. 3.0 mL distilled water (1x)
       3.0 mL 0.1 M HCl (1x)
       Add methanol to just below the top of each column and pass through under vacuum of 10-15 mm Hg.
12. Dry columns under full vacuum (10-15 mm Hg) for 5 minutes. It is important that the columns are dry!
13. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.
14. Rinse out the canister and dry. Place rack with labeled (13 x 100 mm) culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
15. Add 3 mL of the elution solution and allow the elution solvent to pass through the column **without** vacuum.
16. Evaporate the samples to dryness under a stream of N_2 at 40°C.
17. Remove tubes from the heating module and allow samples to cool to room temperature. Add 50 µL PFPA and 50 µL HFIP to each tube.
18. Cap tubes with Teflon lined caps and vortex 10 seconds.
19. Heat at approximately 70-75°C for 25 minutes. Remove and cool to room temperature.
20. Evaporate the samples to dryness under a stream of N_2 at 40°C (do not let the samples bake).
21. Reconstitute with 100 µL of Ethyl Acetate and vortex 10 seconds.
22. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. GC/MS ANALYSIS

Analyze the batch by GC/MS using the SIM program.

N. METHOD PARAMETERS

Load the following method for this analysis:

1. method: cocsim.m

Ions monitored	
Benzoylecgonine	318, 334, 439
Benzoylecgonine D3	321, 337

COCAINE	182, 272, 303
COCAINE D3	185, 275

O. **BATCH ANALYSIS**

The order of analysis:

1. blank blood
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC

If running more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If running 11-20 case samples, one QC should be run before the samples and one after the samples.

Solvent wash and blanks: ethyl acetate, reagent grade

P. **DATA INTERPRETATION**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
   a. coefficient of determination, "r^2", of .96 or higher using the following models:
      i. Cocaine, quadratic with equal weighting
      ii. Benzoylecgonine, quadratic with inverse of concentration weighting
   b. ion ratios within specified range +/- 20% (absolute)
   c. standard and QC quantitaion values within +/- 20% of known value
   d. retention times +/- 3% of calibration standard retention times
   e. sufficient peak shape and resolution
   f. blank/negative control has a quantitative value less than LOQ

Q. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
   a. ion ratios within specified range +/- 20% (absolute)
   b. retention times +/- 3% of calibration standard retention times
   c. sufficient peak shape and resolution
   d. blank/negative control has a quantitative value less than lowest concentration standard

R. **REFERENCES**

1. Sacramento County Laboratory of Forensic Services, Morphine, Codeine, Cocaine, and Benzoylecgonine Quantitation in Biological Fluids and Tissue

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.55 - B-OPI/KETO-OPI
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO/IEC 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-OPI/KETO-OPI	

I. OPIATE AND KETO-OPIATE IDENTIFICATION AND QUANTITATION IN BLOOD

A. SAFETY - SAFETY WARNING!

Methylene chloride is a suspected human carcinogen. **Ammonium hydroxide** is a caustic reagent. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety glasses/hood
4. Safety Data Sheets for more information.

B. PRINCIPLE

Seven opiates are recovered from blood by a solid phase extraction procedure using deuterated internal standards. Identification and quantitation is by gas chromatography/mass spectrometry.

C. SPECIMEN REQUIREMENT

1. Two milliliters (2 mL) of sample is used for the analysis.
    a. If a smaller sample size is required, see TOX.41 - Performing Extractions. For diluted samples, blank blood should be added to give a total volume of 2 mL so the acetonitrile evaporation volume remains the same.

D. DETECTION LIMIT

1. The limit of detection for this procedure is 10 ng/mL for Codeine, Morphine, Hydrocodone, Oxycodone, Hydromorphone and Oxymorphone; 5 ng/ml for 6-acetylmorphine.

E. QUANTITATION LIMIT

1. The analytical limit of quantitation for this procedure is 20 ng/mL for Codeine, Morphine, Hydrocodone, Oxycodone, Hydromorphone and Oxymorphone; 10 ng/ml for 6-acetylmorphine.
2. The reporting limit of quantitation for this procedure is 20 ng/mL for Codeine, Morphine, Hydrocodone, Oxycodone, Hydromorphone and Oxymorphone; 10 ng/ml for 6-acetylmorphine.

F. LINEAR RANGE

1. The linear range has been established from 10-2,000 ng/mL for Codeine, Hydrocodone, Oxycodone, Hydromorphone, 10-1000 ng/ml for Morphine and Oxymorphone, and 5-1000 ng/ml for 6-acetylmorphine. (Range attempted: 5-2,000 ng/mL for six opiates and 2.5-1000 ng/ml for 6-acetylmorphine)

G. CARRYOVER

1. No significant carryover is present at 10,000 ng/mL.

H. EQUIPMENT

This procedure uses the following laboratory equipment and supplies:

1. 16 x 125 mm disposable glass culture tubes with screw caps
2. 13 x 100 mm disposable glass tubes with Teflon lined caps
3. volumetric flasks
4. plastic transfer pipettes
5. 2-20 µL pipettor and disposable pipette tips

6. 20-200 µL pipettor and disposable pipette tips
7. 10-1000 µL pipettor and disposable pipette tips
8. 500-2500 µL pipettor and disposable pipette tips
9. repeat pipettor and disposable tips (1.25 mL, 2.5 mL, 5 mL, 50 mL)
10. autosampler vials with volume reducing inserts and crimp caps
11. vortex mixer (Thermolyne or equivalent)
12. specimen rocker (LabQuake Shaker or equivalent)
13. centrifuge (IEC Centra-4B or equivalent)
14. solid phase extraction columns, Varian Bond Elute Certify
15. solid phase extraction manifold (vac-elut)
16. evaporator/heating module
17. gas chromatograph/mass spectrometer

I. **CHEMICALS**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. methylene chloride, reagent grade
3. methanol, reagent grade
4. isopropanol, reagent grade
5. sodium acetate
6. glacial acetic acid, reagent grade
7. Propionic Anhydride, greater than or equal to 99% (see comment before References)
8. Methoxylamine Hydrochloride
9. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
10. dry nitrogen gas (N_2)
11. ethyl acetate, HPLC grade
12. acetonitrile, HPLC grade
13. pyridine, HPLC grade
14. potassium carbonate
15. potassium bicarbonate

J. **STANDARDS**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes. Stock standards may be made individually or analytes may be combined.

Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.

1. **Stock standards**: Stock standards may be stored in freezer.
   a. stock internal standard: 10 µg/mL hydrocodone-D6/codeine-D6/oxycodone-D6/hydromorphone-D6/6-MAM-D6/morphine-D6/oxymorphone-D3
      Prep: Draw 1ml of each 100 µg/mL ampule and dilute to 10 mL with methanol
   b. stock calibration standard: 100 µg/mL 6-MAM in acetonitrile
      Prep: Draw 1 ml of 1 mg/ml ampule 6-MAM standard, dilute to 10 mL with acetonitrile

c. stock calibration standard: 100 µg/mL codeine/morphine/hydrocodone/oxycodone/hydromorphone/oxymorphone in methanol
Prep: Draw 1 ml of 1 mg/ml ampule of each standard, dilute to 10 mL with methanol

d. stock QC standard: 100 µg/mL codeine/morphine/hydrocodone/6-MAM/oxycodone/hydromorphone/oxymorphone in methanol
Prep: Draw 1 ml of 1 mg/ml ampule of each standard, dilute to 10 mL with methanol

2. **Working standards**:

a. working internal standard: 1 µg/mL hydrocodone-D6/codeine-D6/oxycodone-D6/hydromorphone-D6/6-MAM-D6/morphine-D6/oxymorphone-D3 in distilled water
Prep: 0.5 mL of (each) stock internal standard, dilute to 5 mL with distilled water

b. working calibration standard: 5 µg/mL codeine/morphine/hydrocodone/oxycodone/hydromorphone/oxymorphone, 2.5 µg/mL 6-MAM in distilled water
Prep: 0.50 mL of each stock calibration standard, 0.25 mL 6-MAM and dilute to 10 mL with distilled water

c. working QC standard: 10 µg/mL codeine/morphine/hydrocodone/oxycodone/hydromorphone/oxymorphone, 5 µg/mL 6-MAM in distilled water
Prep: 0.5 mL of each stock QC standard, 0.25 ml 6-MAM and dilute to 5 mL with distilled water

3. **Calibrators and Quality Controls**:

a. 0.020 µg/mL opiate/ 0.010 µg/mL 6-MAM calibrator
Prep: 40 µL working calibration standard, dilute to 10 mL with blank blood

b. 0.250 µg/mL opiate/ 0.125 µg/mL 6-MAM calibrator
Prep: 500 µL working calibration standard, dilute to 10 mL with blank blood

c. 0.500 µg/mL opiate/ 0.250 µg/mL 6-MAM calibrator
Prep: 1.0 mL working calibration standard, dilute to 10 mL with blank blood

d. 1.000 µg/mL opiate calibrator/ 0.500 µg/mL 6-MAM
Prep: 2.0 mL working calibration standard, dilute to 10 mL with blank blood

e. low QC: 0.200 µg/mL / 0.100 µg/mL 6-MAM
Prep: 200 µL working QC standard, dilute to 10 mL with blank blood

f. high QC: 0.400 µg/mL / 0.200 µg/mL 6-MAM
Prep: 400 µL working QC standard, dilute to 10 mL with blank blood

g. high morphine standard: 2.0 µg/mL
Prep: 200 µL of 100 µg/mL morphine standard, add 1 ml DI water, dilute to 10 mL with blank blood (used to verify propionic anhydride)

Note: It is within the discretion of the analyst whether to use a high or low QC. A high and a low QC is necessary when analyzing 11-20 case samples.

K. **Reagents**

Reagents can be prepared before the extraction day. The elution and wash solutions must be made the day of analysis.

1. carbonate buffer, pH 9.0
Prep: See Reagent Preparation

2. 0.1M acetate buffer, pH 4.0
Prep: See Reagent Preparation

3. 10% Methoxylamine Hydrochloride in DI water
Prep: See Reagent Preparation

4. *organic wash solution (8:2) methylene chloride/isopropanol*
Prep: 20 mL isopropanol to a 100 mL volumetric flask and QS with methylene chloride. Invert flask several times to mix.

5. *elution solution (8:2) methylene chloride/isopropanol with 2% NH_4OH*
Prep: 20 mL isopropanol to a 100 mL volumetric flask and QS with methylene chloride. Invert flask several times to mix. Transfer solution to bottle with cap. Remove 2 mL of the solution. Add 2 mL concentrated ammonium hydroxide. Cover and sonicate for 10 minutes.

L. **Extraction Procedure**

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable (16 x 125 mm) culture tubes for each calibrator, quality control, sample, and blank blood.
2. Add 2.0 ml of calibrators, quality control, blank and case samples to be analyzed into the corresponding labeled tube.
3. Add 100 µl of working internal standard to each tube.
4. Add 2.0 mL of acetonitrile. Vortex quickly
5. Add additional 2.0 ml acetonitrile. Vortex.
6. Cap tubes and rotate for 10 minutes
7. Centrifuge at 3000 rpm for 10-15 minutes.
8. Add 100 µl 10 % Methoxylamine solution to labeled 13x100 tubes.
9. Transfer acetonitrile from each tube to corresponding 13x100 tubes. Vortex.
10. Evaporate Acetonitrile under a stream of N_2 at 40-50°C, 20 psi. IMPORTANT: Excess acetonitrile may reduce recovery of analytes. Samples should not dry down completely, but should be less than 2 mL in volume.
11. Add 3 mL pH 9.0 buffer to each sample and vortex.
12. Place the solid phase extraction columns on the vac-elut.
13. Rinse each column under vacuum of 1-2 mm Hg (It is important that the columns do not go dry prior to addition of the sample):
    a. 3.0 ml methanol (1x)
    b. 2.0 ml pH 9.0 carbonate buffer (1x)
14. Add 2.0 ml pH 9.0 carbonate buffer in preparation of sample application.
15. Transfer samples from each blood tube to the appropriately labeled column. Allow the samples to pass through the column under gravity.
16. Prepare the elution solution and wash solution.
17. Rinse each column under vacuum of 1-2 mm Hg:
    a. 2.0 ml distilled water (1x)
    b. 2.0 mL pH 4.0 buffer (1x)
18. Add 3 mL methanol to each column and pass through under vacuum of 10-15 mm Hg.
19. Dry columns under full vacuum (10-15 mm Hg) for 5-10 minutes. It is important that the columns are dry!
20. Add 2 mL organic wash solution. Rinse under vacuum of 1-2 mm Hg.
21. Dry columns under full vacuum 2-5 minutes.
22. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.
23. Rinse out the canister and dry. Place rack with labeled (13 x 100 mm) culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
24. Add 3 ml of the elution solution and allow the elution solvent to pass through the column without vacuum.
25. Evaporate the samples to dryness under a stream of N_2 at 40-50°C.
26. Remove tubes from the heating module and allow samples to cool to room temperature. Add 50 µL pyridine and 50 µL Propionic Anhydride to each tube.
27. Cap tubes with Teflon lined caps and vortex for 10 seconds.
28. Heat at approximately 120°C for 30 minutes.
29. Remove samples and evaporate to dryness under a stream of N_2 at 60°C.
30. Reconstitute with 100 µl ethyl acetate

31. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

M. **GC/MS Method and Parameters for ANALYSIS**

1. Analyze the batch by GC/MS using the SIM program.
   a. Method: BLOPISIM.M

2. Ions Monitored

Hydrocodone-D6	334, 303
Hydrocodone	328, 297, 329
Codeine-D6	288, 361
Codeine	282, 355, 298
Oxycodone-D6	406, 349
Oxycodone	400, 343, 295
Hydromorphone-D6	320, 376
Hydromorphone	314, 370, 283
6-MAM-D6	333, 389
6-MAM	268, 383, 324
Oxymorphone-D3	389, 445
Oxymorphone	386, 442, 369
Morphine-D6	347, 403
Morphine	341, 397, 324

N. **Order of Batch Analysis**

1. blank blood
2. LOQ
3. LOW
4. MED
5. HIGH
6. case samples
7. QC
   a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples.
   b. Solvent wash and blanks: ethyl acetate, reagent grade

O. **Data Interpretation**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
   a. calibration curve with "r^2" value of .96 or higher using the quadratic model with inverse of concentration weighting
   b. ion ratios within specified range +/- 20% (absolute)
   c. standard and QC quantitaion values with +/- 20% of known value
   d. retention times +/- 3% of calibration standard retention times
   e. sufficient peak shape and resolution
   f. blank/negative control has a quantitative value less than LOD

P. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
   a. ion ratios within specified range +/- 20% (absolute)
   b. retention times +/- 3% of calibration standard retention times

c. sufficient peak shape and resolution

d. blank/negative control has a quantitative value less than lowest concentration standard

Q. **Comments**

1. Each lot of Propionic Anhydride should be verified for purity with a high concentration of morphine (conc. higher than the highest standard - 2µg/ml). The morphine standard is verified directly without carrying the standard through the extraction procedure. The lot is acceptable for use if 6-MAM is below LOQ in the presence of the high morphine concentration.

2. In unpreserved blood, heroin will rapidly degrade to 6-MAM. 6-MAM will degrade more slowly to morphine. Sodium fluoride will slow the degradation of these compounds and should be used when making standards.

R. **References**

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4. Kushnir, Crockett, Nelson, Urry; "Comparison of four derivitizing reagents for 6-acetylmorphine GCMS analysis", JAT 23, July/Aug 1999, 262-269

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 07/29/2019	**NUMBER:** TOX.56 - Outside Laboratory Analysis and Discoveries
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 6.4**	
CHAPTER: Procedures	**SUBJECT:** Outside Laboratory Analysis and Discoveries	

I. Occasionally, it is necessary to send samples to laboratories outside the FSD (Forensic Services Division) to perform toxicology analyses. This may occur when the toxicology analysis is requested and the Laboratory cannot perform the analysis (OLA) or at the request of the defense (referee).

A. **Referee Analysis:**

1. Referee analysis is analysis performed by an outside laboratory at the request of the defense or by court order.
    a. Typically, referee samples are those which are taken at the request of the defense to verify the accuracy of the blood/urine testing result; samples are sent to a laboratory designated by the defense.
    b. Occasionally, the laboratory may be asked to send out evidence which was not analyzed by the FSD; then the procedures for Referee Analysis would be followed.
2. Follow the procedure in the Blood Alcohol Technical Unit Manual for *Referee Analysis* (BA.37)

B. **Subcontracting or OLA Analysis**:

1. When analysis is requested that the laboratory is unable to perform, the sample may be sent out to a competent outside laboratory for analysis. This may occur due to the laboratory's inability to perform the analysis, inadequate staffing levels, or other unforeseen reasons. Samples are typically sent to NMS Labs; however, other competent laboratories may be used once their accreditation has been evaluated.
    a. When an outside laboratory is utilized, the report shall reflect that the sample was sent to an outside laboratory for analysis.
    b. The Crime Lab is responsible for selecting an outside laboratory unless the customer specifically requests that the sample be sent to a laboratory of the their choosing.
    c. A list of competent outside laboratories will be maintained along with documentation of competence and checked yearly.
        i. Compliance with ISO 17025 is considered a demonstration of competence.
            1. Scope of testing will be verified with current accreditation.
        ii. Competence may also be determined by evaluation of accreditations, licensure, participation in proficiency testing programs, and participation in professional organizations.

C. **Procedure for Sending OLA Samples**:

1. Materials Needed for Mailing OLA Samples:
    a. NMS box mailer
    b. NMS box seals
    c. Absorbent sheets
    d. NMS Analysis Requisition forms, either electronic or printed copy
    e. NMS ziplock plastic bag
    f. FedEx mailer
    g. FedEx US Airbill form
    h. Bubble-wrap envelopes for containers
    i. Address labels – Small (Avery 5167) (if splitting evidence)
    j. Blank CCSO Blood Sample for Alcohol/Drug Analysis Envelopes (if splitting evidence)
    k. Evidence Tape (if splitting evidence)
    l. CCSO barcodes (if splitting evidence)

m. Vials (if splitting evidence)

2. Identify case sample(s) that require OLA

   a. Samples to be sent out are identified following screening by the Toxicology Unit, or by specific request made by the Agency.

   b. LIMS reports are available to help identify cases

      i. Tox instructions → Admin-Crystal Reports → Generate Reports → Muir Tox Unit → Tox Pending. Print to Screen. Print page with OLA-designated entries.

3. Identify and split samples as required

   a. Collect evidence from storage location (Example: Muir-Refrigerator-Toxicology)

   b. Transfer the evidencee to yourself, in LIMS, from storage location.

   c. For non-split OLA's, proceed to paragraph I.C.4.

   d. For Split Tox OLA, the Toxicology Unit typically removes a vial from a set of vials or removes a portion of blood from a vial into an empty, clean vial

      i. Itemize evidence

         1. If more than one full, sealed vial of blood is available, the sealed vial can be sent to NMS instead of splitting a previously opened vial. When possible, retain one unopened vial of blood for referee purposes.

         2. If splitting a portion of blood from gray top vial into another gray top vial

            1. Split the evidence sample according to the amount needed by NMS (e.g. 2 mL, etc.) from the original container into an empty vial. Tape seal the vial. Date and initial the tape seal.

            2. Date and initial the vial from which the sample was taken.

            3. Tape seal and initial and date the vial containing the split sample.

         3. Open the case in LIMS

            1. Requests Tab → right click toxicology request → edit findings → right click on evidence → itemize evidence

            2. Add the appropriate description.

               1. Blood vial that was separated from evidence envelope and sent out (entire vial sent):

                  1. Split one tape sealed grey top vial with blood

               2. Blood that was split from a grey top vial and put into an empty grey top vial, sealed and sent out:

                  1. Split a portion of grey top vial with blood

               3. Urine that was split from the urine jar and put into a black screw cap vial and sent out:

                  1. Split one tape sealed grey top vial with urine

               4. Liver/Gastric/Other that was split from a jar into a bottle and sent out:

                  1. Split a portion of liver into a white top bottle

               5. Vitreous vial that was separated from evidence envelope and sent out (entire vial sent):

                  1. Split one red top vial with vitreous

            3. Bar Code for sub items numbers → 0

            4. Click on blue barcode icon to register a barcode → scan a barcode → click apply. Exit screen.

            5. Click on 3 ellipses and add number of containers → Click OK → Click Apply → Click Close

            6. Evidence Type: pick appropriate description (eg. blood, Coroner blood, Urine , etc.).

4. Create worklist

   a. Analysis → Create worklist → Divison Section/Unit: Toxicology Unit (optional), Service: Toxicology Analysis (optional), Assigned to: Unit Toxicology → Scan Evidence and/or move cases listed on the printed report to the lower part of the screen → Uncheck Create Sequence File → Create Worklist → Print

5. Print labels (**for split evidence only**)

   a. Print labels: (Avery 5167) Labels are not needed when not opening evidence envelopes

i. Administration → Crystal Reports → Generate Reports → Worklist Labels → Print → Screen → EvidDate (11/20/08), Color (white, white), # of rows to skip, ShowName (true), Worklist Barcode (scan barcode from worklist)

b. Initial labels

c. Affix laboratory label to split samples; place tape over label

6. NMS Testing Request Forms

a. Online Request Submission (Full instructions are available in Appendix INSDAT.01)

i. Log into NMS web portal at portal.nmslabs.com.

1. The NMS web portal will lock the account after (3) incorrect attempts to logon. Contact the NMS Help Desk to unlock the account.

2. Do not use the web browser's back and forward buttons to navigate between application windows. Instead, use the tabs and links provided within the application.

ii. From the Orders Screen, click the New Case button

iii. The Case Info window opens with a Requisition Type option.

1. The Requisition Type will default to the type of work our account typically sends for testing.

2. If changing the Requisition Type is necessary, select the appropriate designation from the drop-down menu. Requisition Type options include: Postmortem, Police, or Other.

iv. The Demographic section contains the patient identifying information related to the case. Complete the fields using the information available to you from LIMS or the evidence envelope.

1. Incident Number - Enter the laboratory case number with the request number.

2. First Name - Enter the first name of the decedent, subject, or patient.

3. Middle Initial (optional) - Enter the middle initial of the decedent, subject, or patient.

4. Last Name - Enter the last name of the decedent, subject, or patient.

5. Decedent Name - This field is a concatenation of the First Name, Middle Initial, and Last Name field. If no entry is given then it is defaulted to NP (Not Provided).

v. The Case Questions section

1. Leave the Do Not Consume and Do Not Micro boxes unchecked.

2. Click the Return Samples box.

vi. The Requisition section contains questions specific to the type of requisition. The fields will vary between Postmortem and Police requisitions.

1. Officer's Name (required) - Enter the name of the requesting officer.

2. Department Jurisdiction (County) (required) - Enter Contra Costa County.

3. Enter Special Instructions, as necessary.

4. When all information on the page is correct, click the Next button.

vii. Sample details section

1. Select the sample matrix (required).

2. Select the matrix/specimen source as necessary.

1. Identify source indicated on evidence envelope, if indicated.

2. If submitting hospital vials, indicate source as "Hospital"

3. Enter the Collection Date/Time if available.

viii. Selected Tests section

1. Add Favorite Test - This is a quick selection of frequently ordered tests. (Note: if you would like additional tests added to this quick link, contact NMS Client Support.)

1. As applicable, select favorite/most requested tests from the drop down.

2. If necessary, search the catalog by entering the test code or analyte.

1. The search will return a list of matching tests. Select the desired test by clicking the + button.

1. Additional information related to the tests is available by clicking the i button.
2. To remove a test, click the x located to the right of the Test Description.

2. When all desired tests have been selected, click the Next button.
    1. If the Label Auto Print setting in the NMS portal is set to Sample Complete, the labels will print after the Next button is clicked.

ix. After clicking Next, the Samples window will open.
1. Click the Add New Samples option to add additional samples for the same decedent, subject, or patient. (Example: blood and urine both submitted from the same subject in a drug facilitated crime case.)
2. If a modification to the sample or the associated test code is required, click the edit button.
3. To remove a sample click the x button.
4. To duplicate a sample, click the clipboard button.
5. Click the Add to Cart button to add the Case to the Order.

x. You may have many cases on an order, or you may have one case per order.
1. After clicking Next from the Samples page, the Orders window will open.
    1. The Cart reflects how many cases are on the order.
2. Click the New Case button to add another case to the order.
    1. The New Case button will begin a new workflow for the second case's Patient Demographic, Samples and Test Codes.

xi. When all case and sample information has been entered and added to the Cart, click the Review button at the bottom of the Orders/Cart Tab screen to open the Order Review window. (Note: the Order Review is the last opportunity to make modifications to an order.)
1. To edit the information on the case, click the Edit Case button.

xii. Click the Submit for Testing button to send the order electronically to NMS Labs.
1. The Analysis Requisition and Chain of Custody form will auto-generate.
2. If modifications are necessary after the Submit for Testing button has been clicked, contact the NMS Client Services Department.

xiii. Labels will be auto-printed if the Label Auto Print setting is set to Order Complete. (See Account Settings to configure printer.)
1. An option to reprint the Requisition, Labels, or view the Order History is available.

xiv. Print the Analysis Requisition and Chain of Custody form.
1. Complete the chain of custody portion of the form as you would on an envelope; see section I.C.8.c.
2. Make a copy of the Analysis Requisition and Chain of Custody form. The original copy is sent to NMS. The copy is retained with the laboratory's records.

b. Manual NMS Requisition forms (Non-online submission)

i. **Antemortem:** Analysis Requisition and Property Receipt/Chain of Custody form. An electronic requisition form with instructions is stored on the Laboratory's shared drive.
1. Provide subject name and lab number
2. Provide additional information if known.
3. Indicate desired analysis in the Test Request(s) section, include test code and analysis (example: 0960B-Cannabinoids Panel). Refer to NMS website (www.nmslabs.com) for codes of unknown/unusual tests. Requested analyses may be handwritten in the space marked "Other".
    1. Check lab notes for special instructions for requested analyses
4. Indicate item number, quantity, and/or description of items in Specimen Type field
5. Complete chain of custody on the NMS form.
    1. Indicate the item number
    2. Indicate date

3. Under Relinquished By: *Split (1) grey top vial with blood. Initial OR split portion from (1) grey top vial. Initials*
4. Under Received By: *Via fed ex* → *NMS*

6. Attach a copy of NMS form to worklist.

ii. **Postmortem:** Analysis Requisition and Property Receipt/Chain of Custody form. An electronic requisition form with instructions is stored on the Laboratory's shared drive.

1. Provide decedent name.
2. Provide additional information if known.
3. Indicate Specimen Collection Date & Time (if known). Identify Specimen Type and Specimen Source submitted (peripheral, liver, etc.).
4. Indicate item number, quantity, and/or description of items in "Container Labeled as" field
5. Indicate the desired analysis from the list provided on the form. If the desired test is not included on the list, refer to NMS website (www.nmslabs.com) for codes of unknown/unusual tests. Requested analyses may be handwritten in the space marked "Other". Include any special instructions such as Screen heart, Quant peripheral.
6. Complete chain of custody
    1. Indicate date
    2. Under Relinquished By: *Sent entire ziplock bag and contents. Initial OR Split (1) grey top vial with blood. Initials*
    3. Under Received By: *Via FedEx* → *NMS*
7. Attach a copy of NMS Requisition form to worklist

7. Enter OLA information in LIMS:

a. For Non-Split Tox OLA, the Toxicology Unit does not open the evidence i.e. DFSA, Coroner's

i. **Ensure that a legible image of all envelopes being sent is captured in LIMS**

ii. If entering information online and printing labels, affix NMS generated labels to the following:

1. Evidence Envelope
2. NMS ziplock plastic bag
3. OLA Worklist

iii. Open the case in LIMS

iv. Evidence Tab → Click on the evidence → Click on the 3 ellipses, indicate in the Toxicology Notes: “mm/dd/yy Evidence was not opened. Initials”. Indicate in the Toxicology Requested Drugs the type of test requested by the Coroner (e.g. “Acid/Neutral/Basic Drug Screen per the Coroner. initials”). Also include any special instructions (e.g. “Screen heart, quant peripheral”). Indicate the number of containers: enter number of vials and/or jars → Apply → OK.

v. Request Tab → Right click on the Tox Analysis → Click on Edit Findings → Right click on evidence → Add result → In the Screens box, scroll to OLA → Click on the move right arrow → Click on Positive (ensure the confirmation box is checked) → Click on the 3 ellipses indicate: “mm/dd/yy Sent entire envelope to NMS for tttt (nnnnxx), initials. NMS Accession Number NMSxxnnnn and FedEx tracking number nnnn-nnnn-nnnn. → Close → Apply → OK.

vi. Log time spent on OLA preparation in LIMS: Request Tab → Right click on the Tox Analysis →Activities → Click "+" button → Service: Toxicology Outside Lab Analysis → Activity: Tox OLA → Enter time spent on OLA → change quantity to "1" → Notes: OLA to NMS → Click OK → Click Close → Click Apply → Click OK.

vii. Complete the chain of custody on the envelope.

Received From:	Received By:	Date:
EVID	Your Name	11/06/08
Sent entire envelope. initials	Via → NMS FedEx	11/06/08

viii. In LIMS, transfer the evidence from yourself to NMS, Via FedEx

1. Agency Representative:
    1. Agency: National Medical Services
    2. Representative: National Medical Services

ix. Place the envelope into the NMS plastic bag and place the copy of the NMS Analysis Requisition and Chain of Custody form (if filling electronically) in the pocket of the NMS bag.

x. Place NMS bag into an NMS box mailer. Seal the box with seals if the box is full or if there are no other non-split evidence to go to NMS.

xi. Skip to Step 10 "Fill-out the FedEx US Airbill Form".

b. For Split Tox OLA

i. Ensure the following labels are affixed to the vial containing the split sample.
    1. The laboratory label printed from LIMS; tape over label
    2. The NMS label (if submitting information electronically)

ii. Place split vial into bubble wrap.

iii. Complete the chain of custody on the parent evidence envelope.

1.

Received From:	Received By:	Date:
EVID	Your name	11/06/08
Split (1) grey top vial Initials OR Split a portion of grey top vial Initials	Via NMS FedEx	11/06/08
Analyst name	EVID	11/06/08

iv. Affix the NMS labels with Accession Number on the following:
    1. OLA Worklist
    2. Split sample
    3. Blank CCSO Blood Sample for Alcohol/Drug Analysis Envelope (**Print envelope before applying label**)
    4. NMS ziplock plastic bag

v. Right click on itemized evidence → add result → In screens box, select OLA → Click on move right arrow →check positive (ensure the confirmation box is checked) → click on 3 ellipses

vi. Add the appropriate annotation; all information may not be applicable.
    1. Blood vial that was separated from evidence and sent out: mm/dd/yy - Split one tape sealed grey top vial with blood from envelope (or ziplock plastic bag) and sent to NMS for Drug Facilitated Crime Panel (8030B). NMS Accession Number NMSxxnnnn and FedEx Tracking Number nnnn-nnnn-nnnn. initial.
    2. Blood that was split from a grey top vial and put into another grey top vial and sent out: mm/dd/yy - Split portion from one grey top vial with blood and sealed, sent to NMS for Drug Facilitated Crime Panel (8030B),. NMS Accession Number NMSxxnnnn and FedEx Tracking Number nnnn-nnnn-nnnn. initial.
    3. Urine that was split from the urine jar and put into a black screw cap vial and sent out: mm/dd/yy - Split urine sample from urine jar into a black screw cap vial and sealed, sent to NMS for Drug Facilitated Crime Panel (8030U). NMS Accession Number NMSxxnnnn and FedEx Tracking Number nnnn-nnnn-nnnn. initial.

vii. Click Apply → Close → OK

viii. On the original request for the parent evidence, Click on Results → uncheck the confirm box for Instructions → Apply → Close

ix. Log time spent on OLA preparation in LIMS: Request Tab → Right click on the Tox Analysis →Activities → Click "+" button → Service: Toxicology Outside Lab Analysis → Activity: Tox OLA → Enter time spent on OLA → change quantity to "1" → Notes: OLA to NMS → Click OK → Click Close → Click Apply → Click OK.

8. Prepare the envelope (For split Case only):

a. Load blank CCSO Blood Sample for Alcohol/Drug Analysis Envelopes into the printer auxiliary feeder.

b. Administration → Crystal Reports → Generate Reports → Muir Tox Unit → Tox OLA → Print-scan assigned bar code. Print the envelope.

i. Add the following data from the original evidence envelope to the newly printed envelope:

1. Expiration Date, Date of Sample, and Time of Sample

c. Complete the chain of custody on the new evidence envelope

Received From:	Received By:	Date:
Split (1) grey top vial Initials OR Split portion from (1) grey top vial Initials	Via FedEx → NMS	11/06/08

d. Insert bubble wrapped vial so that it lies flat on the bottom, seal the envelope with evidence tape, date & initial the tape.

e. In LIMS, transfer the new evidence envelope from yourself to NMS, **Via** Split Chain of Custody, **Note:** via FedEx

i. Agency Representative

1. Agency: National Medical Services

2. Representative: National Medical Services

f. Place envelope into NMS plastic bag (roll or fold) and seal bag

g. Place the copy of the NMS Analysis Requisition and Chain of Custody form (if filling electronically) in the pocket of the NMS plastic bag.

h. In LIMS, transfer the original evidence envelope from yourself to the Muir Toxicology Refrigerator.

9. Complete the FedEx US Airbill:

a. Write PU#CCRA at the top of the form.

b. Complete Date & Sender's Name fields

c. Provide Laboratory Account Number 2184-7421-7 (if not pre-printed)

d. Write Lab Numbers of the evidence being sent in the FedEx mailer at the bottom of the form (e.g. 12-1234-1 12-1255-2)

e. Select FedEx Priority Overnight in section 4

f. Select Other in section 5

g. In section 6, select Saturday Delivery if the FedEx mailer is being sent on a Friday. Answer "No" (Does this shipment contain dangerous goods?)

h. Select by Recipient in section 7. ALSO put the NMS billing account number (currently 0191-58-38-1) in the FedEx Acct. No. field.

i. Enter "1" in the Total Packages field & estimate the envelope weight in the Total Weight field.

10. Call FedEx to schedule an Express Pick-up

a. Provide the Lab account number

b. Confirm the Lab address(Including Floor 2)

c. Confirm the number of mailers to pick-up and that the mailer does not weigh over 150 lbs.

d. Record the pick-up number on the top of the form.

e. Retain the top copy of the FedEx US Airbill form for tracking purposes.

f. Place sealed NMS box(es) in mailer and seal mailer.

g. Affix FedEx form to mailer.

h. Place the FedEx mailer in the Muir Incoming Evidence Refrigerator to keep the shipment cool.

i. Clip the FedEx Pick-Up sign to the vertical files on the right side of the front counter.

11. Paperwork Follow-up

a. Attach the worklist to the NMS Analysis Requisition and Chain of Custody form. Initial by the date at the bottom of the worklist.

i. If the worklist is printed on a different day, date and initial with the date of completion.

b. The paperwork and LIMS entries may be reviewed by another Criminalist in the Toxicology Unit; if reviewed, the reviewer should date and initial the paperwork

c. Once reviewed the paperwork shall be filed in the OLA drawer in the store room.

d. On the next business day, go to the FedEx website and track the package via the FedEx Tracking Number on the FedEx US Airbill form. If the package has been delivered, print the shipping/receipt details.

e. Staple the top page of the Airbill to the front of the tracking print-out and file it in the OLA Receipts FedEx drawer in the store room.

II. The Toxicology Unit Staff shall comply with all reasonable and legitimate Discovery Requests.

A. All discovery requests are routed to the Forensic Services Division via the District Attorney's Office. These requests typically pertain to documents related to the analysis of samples or records kept in the normal course of Laboratory business. Please see FSD.45 for more information on discoveries.

B. The Toxicology Unit provides "basic discovery" or "extensive discovery" records.

C. A "basic discovery" is a preset document package that consists of only:

1. Copy of laboratory report and notes
2. Screening Run Packet
3. Confirmation Run Packet(s)
4. Chain of Custody

D. An extensive discovery is not a preset package. It may be a request for more detailed documentation to include, but not limited to the Examination Records, Instrument Records, Equipment used and their Calibration Records, Standard Operating Procedures, Proficiency Records, etc.

1. If the discovery information sought appears to be unreasonable or irrelevant, a Supervisor or designee may contact the District Attorney's office for assistance in obtaining a modification or quashing the discovery. The District Attorney's office should review the discoveries for relevance, before sending the request to the laboratory.

E. Discovery Procedures

1. The Clerical staff will create a discovery request in LIMS and image the request, report with notes, and chain of custody (CLER.DAT.12)
2. The analyst within the unit will review the discovery request and determine if further information is needed.
3. The discovery requests may be completed electronically and posted via ARIES.
   a. The electronic files of the records requested will be gathered and uploaded into LIMS. If concatenation is desired, detailed procedures on how to concatenate .pdf documents can be found in "Electronic Batch Documents" (TOX.10).
   b. The Affidavit of Custodian of Records Form (TOXF.04) must be completed, digitally signed, and included in the electronic files
   c. In the LIMS imaging module, right-click each image to be released as part of the discovery, and select "Send to iResults". A check mark will appear next to the "Send to iResults" menu. Right click "Read Only" and a check mark will appear next to the "Read Only" on the menu.
   d. The discovery request will be marked as "Draft Complete" by the analyst completing the discovery.
   e. The completed discovery will be checked and marked "Admin Reviewed" by a Supervisor or designee.
   f. The electronic discovery records will be accessible via ARIES for the District Attorney's office to retrieve. There is a 24 hour lag from the time the case has been Admin Reviewed before the records will be accessible to the DA's office.
4. Any records not able to be uploaded into LIMS will be provided outside of ARIES.
   a. The Affidavit of Custodian of Records Form (TOXF.04) must be completed, signed, and included with the discovery
5. Any "RUSH" discoveries may need to be provided via paper, mail, email or fax. The "RUSH" discoveries need to be approved by the Supervisor to access the exigency of the circumstances (FSD.45).
6. See FSD.45 and CLER.DAT.12 for handing Civil Discoveries and Subpoena Duces Tecum.
   a. The Affidavit of Custodian of Records Form (TOXF.04) must be completed, signed, and included with the discovery

b. The Notification and Compliance Form must be completed and returned to the Technical Services Records Unit for recording and audit/tracking

7. Subpoena Duces Tecum (SDT) for DMV Hearings

a. Refer to BA.36, FSD.45 , and CCCSO 1.05.68 for instructions to complete discovery requests for DMV hearings.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 3/26/2012	**NUMBER:** TOX.57
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: 5.1.1, 5.1.2, 5.4.6.2, 5.4.6.3, ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Uncertainty	**SUBJECT:** Uncertainty	

I. Policy: The Toxicology Unit has assessed estimated uncertainty for quantitative analysis of blood and urine samples. (ISO/IEC 17025:2005 5.4.6.2)

A. Reporting quantitative amounts of drugs in blood and urine is considered to be a measurement that requires uncertainty.

B. The Toxicology Unit has attempted to identify all components of uncertainty, for quantification of drugs in blood and urine samples, which are of importance to make a reasonable estimation of uncertainty. (ISO/IEC 17025:2005 5.4.6.3). Refer to the detailed write-up of the budget for specific information including the sources contributing to the uncertainty.

1. All quantitative reported results of drugs in biological samples will have an associated uncertainty reported.
2. Uncertainty will be reported in the report annex. See *Reports* for more information.
3. The uncertainty will be reported in the same units as the result and will not give the wrong impression of uncertainty. (ISO/IEC 17025:2005 5.4.6.2)

C. Definitions and Terms:

1. **Uncertainty** of a measured value is an interval around that value such that any repetition of the measurement will produce a new result that lies within this interval. This uncertainty interval is assigned by the experimenter following established principles of uncertainty estimation. Both type A and type B uncertainties exist.
   a. Type A uncertainty is data from your laboratory (the lab generated based on control charts, etc)
   b. Type B uncertainty is based on manufacturer's specifications, data from calibration reports, etc.
2. The word "uncertainty" will reflect the result with an associated confidence level.
3. The laboratory has attempted to take into account, in the uncertainty budget, the extent to which the following factors contribute to the total uncertainty of measurement of drugs in blood and urine samples: (ISO/IEC 17025:2005 5.1.1, 5.1.2)
   a. Human Factors
   b. Accommodation and Environmental Conditions
   c. Test and Calibration Methods and Validation
   d. Equipment
   e. Sampling
   f. Handling of Test and Calibration Items
4. **Traceability** refers to an unbroken chain of comparisons using acceptable and documented methods to national or international standards (SI) with each comparison having stated uncertainties. The measurement, or result, is traceable.
5. **Elements of traceability**:
   a. An unbroken chain of comparisons: an unbroken chain of comparisons going back to national (eg. NIST) or international (SI) standards.
   b. Measurement uncertainty: the measurement uncertainty for each step of the traceability chain must be calculated and reported so that an overall uncertainty may be estimated.
   c. Documentation: each step of the chain must be performed according to documented procedures, and the results must be documented.

d. Competence: laboratory performing steps in the chain must supply evidence of technical competence (eg. ISO 17025 accredited)

e. Reference to SI units: where possible the chain of comparisons must end at the primary standards for the realization of the SI units (eg. BIPM)

f. Recalibration at appropriate intervals: calibration must be repeated at appropriate intervals depending on the uncertainty required.

g. Measurement Assurance: validates and verifies steps above

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 01/18/2019	**NUMBER:** TOX.58 - Uncertainty Budget
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.1, 5.4**	
CHAPTER: Uncertainty	**SUBJECT:** Uncertainty Budget	

I. The following is a detailed explanation of the estimated uncertainty for reported quantitative values in blood and urine samples.

A. For the toxicology quantitative analysis uncertainty budget the laboratory's approach was to:

1. Create a budget for each of the analytes analyzed quantitatively in the Laboratory.
   a. Urine results are typically reported as qualitative. Qualitative results will NOT have a reported uncertainty.
   b. ALL reported quantitative values will also be reported with an associated estimation of uncertainty.
2. The Laboratory has administrative criteria that must be fulfilled for the results of analyses of standards and/or samples to be considered valid and reportable.
3. The calculated uncertainty is only applied to samples that have met all the reporting criteria.

B. **The Laboratory has utilized the NIST 8-step approach to estimating uncertainty**

1. **Specify the measurement process**
   a. $y = ax^2 + bx + c$
      where:
      i. y is the response ratio of the analyte area to the internal standard area
      ii. a, b, and c are the coefficients of the curve
      iii. x is the amount ratio of the analyte concentration to the internal standard concentration
2. **Identify and characterize the uncertainty sources**
   a. The Laboratory used "fishbone diagrams" and used brainstorming techniques to identify possible sources of error.
   b. See "Fishbone Diagram" at the end of the document.
3. **Quantify uncertainty measurements**
   a. The Laboratory uses "µg / ml" micrograms per milliliter as well as "ng/ml" nanograms per milliliter of the biological fluid result for the estimated measurement uncertainty SI units.
4. **Convert factors to standard uncertainties**
   a. The Laboratory converted factors to standard uncertainties, one standard deviation equivalents, based on the distribution (normal or rectangular distribution) and the source of the data.
5. **Calculate combined standard uncertainties**
   a. The Laboratory uses the "root sum square" equation.
6. **Expand the uncertainty by "k"**
   a. The coverage factor is the multiplier used to establish the confidence level reported.
   b. The Laboratory uses a coverage factor of k=2 or the equivalent of approximately 95%.
   c. For QC reproducibility degrees of freedom less than 30, a student t-table should be consulted.
7. **Evaluate the expanded uncertainty**
   a. The Laboratory evaluated the data and used Pareto charts to help visualize the significance of the contributing sources of uncertainty. The Laboratory plans to reevaluate the budget on an annual basis. If there is a change in the measurement process or the measurement instruments, the quarterly measurement assurance will be evaluated to determine if the changes are significant enough to require a full budget reevaluation.
8. **Report the uncertainty**
   a. No separate calculation for diluted samples is deemed necessary. No additional equipment is used when diluting samples, potential matrix effects are addressed in individual extraction procedures and mathematically it is equivalent if the dilution factor or multiplier is applied before or after data analysis (see example below).

ChemStation DOES account for the dilution	ChemStation DOES NOT account for the dilution
Concentration=1.00 µg/ml (dilution factor 1:2) ChemStation multiplies to conc.=2.00 µg/ml If uncertainty is 20% Reported result=2.00 µg/ml +/- 0.40 µg/ml	Concentration=1.00 µg/ml (dilution factor 1:2) If uncertainty is 20%, then uncertainty of result is +/- 0.20 µg/ml Apply the dilution factor (or multiplier of 2) Reported result=2.00 µg/ml +/- 0.40 µg/ml

b. The final reported uncertainty will be rounded to no more than two significant figures.

Blood Analytes	Uncertainty (% of the result)
Amphetamine	14.73355684
Benzoylecognine	14.37078013
Carboxy-Tetrahydrocannabinol (COOH-THC)	16.71540311
Cocaine	16.54036918
Codeine	27.88026447
Diazepam	15.66657985
Gamma-Hydroxy Butyrate (GHB)	19.97490292
Hydrocodone (keto-opiate extraction)	23.76952753
Hydrocodone (solo extraction)	14.71316702
Hydromorphone	30.44982341
Hydroxy-Tetrahydrocannabinol (OH-THC)	17.71802690
Methamphetamine	15.52652543
Methylenedioxyamphetamine (MDA)	14.65255009
Methylenedioxymethamphetamine (MDMA)	15.24005224
6-monoacetylmorphine	26.29789254
Morphine	30.52538871
Nordiazepam	17.22458404
Oxazepam	17.45917970
Oxycodone	15.57946770
Oxymorphone	14.35132971
Temazepam	15.12272490
Tetrahydrocannabinol (THC)	18.63854198

Urine Analytes	Uncertainty (% of the result)
Benzoylecognine	13.90629736
Carboxy-Tetrahydrocannabinol (COOH-THC)	26.18590546
Cocaine	17.10625176
Codeine	19.21974028
Gamma-Hydroxy Butyrate (GHB)	15.16847026
Hydrocodone	17.91619662
Morphine	17.45827275
Oxazepam	16.63199549

C. **Explanation of Line Items in the Budgets**

1. **Line 1:** Purity of Reference Material (Calibration Standards)

   a. The purity of the reference material is obtained from the manufacturer's certificate.

   b. The uncertainty is expressed as %. The data is derived from a certificate therefore it is a Type B uncertainty and the Expanded Multiplier = 2 (as indicated on the certificate) and the distribution is normal (Divisor = 1).

2. **Line 2:** Pipettes used to prepare the working solution

   a. The uncertainty associated with dilution to prepare a working solution is included. The dilution may be from an ampule or a stock solution (accounted for in line item #10) depending on the extraction.

   b. There are multiple pipettes in the Toxicology Unit. The largest manufacturer's imprecision was included in the budget.

c. The uncertainty is expressed as %. The data is derived from a certificate therefore it is a Type B uncertainty and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor = √3).

3. **Line #3:** Volumetric glassware used to prepare the working solutions

   a. The uncertainty associated with dilution to prepare a working solution is included. The dilution may be from an ampule or stock solution (accounted for in line item #11) depending on the extraction.

   b. There are multiple sizes of volumetric glassware in the Toxicology Unit. The customer specified tolerance is 0.1 ml for a 5 ml flask (2%). The largest imprecision was selected from the serialized volumetric glassware available in the unit (5-50 ml).

   c. The uncertainty is expressed as %. The data is derived from a specification therefore it is a Type B uncertainty and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor = √3).

4. **Line #4:** Volumetric glassware used to prepare matrix standards

   a. See Line 3.

5. **Line #5:** Pipettes used to prepare matrix standards

   a. See Line 2.

6. **Line #6:** Pipettes used to dispense standards

   a. See Line 2.

7. **Line #7:** Pipettes used to dispense samples

   a. See Line 2.

8. **Line #8:** Ripettes used to dispense Internal Standard

   a. The uncertainty associated with dispensing an internal standard is included.

   b. There are multiple Ripettes in the Toxicology Unit. The manufacturer's imprecision is 0.8% for all settings, based on the Heusser-Neweigh certificate. The Ripettes used have a measured imprecision less than the manufacturer's imprecision that was included in the budget.

   c. The uncertainty is expressed as %. The data is derived from a certificate therefore it is a Type B uncertainty and the Expanded Multiplier = 1, and the distribution is rectangular (Divisor = √3).

9. **Line #9:** QC Reproducibility

   a. QC solutions are evaluated for each extraction and analyte. The QC data includes variations due to instrumentation, analyst, and environmental conditions. Each extraction includes at least one QC for every 10 case samples. The Laboratory subtracts the value obtained during analysis from the target value. The differences are converted to a % so that different QC solutions can be evaluated.

   b. The uncertainty is expressed as %. The data is laboratory generated therefore it is a Type A uncertainty and the Expanded Multiplier = 1, and the distribution is normal (Divisor = 1).

   c. Values outside of 20% QC criteria may be evaluated statistically by quartile boxplot analysis. If a point is determined to be an outlier it is excluded from the data used to determine the QC Reproducibility.

   NOTE: Extractions that require an additional dilution step to create a stock solution between the ampule and the working solution include the following line items:

10. **Line #10:** Pipettes used to prepare the stock solution

    a. See Line 2.

11. **Line #11:** Volumetric glassware used to prepare the stock solution

    a. See Line 3.

D. **Explanation of Fishbone Diagram**

1. **Design**:

   a. GC/MS variability is addressed with QC Reproducibility data and method validation.

   b. Pipette and glassware variability is addressed with QC Reproducibility data and the calibration information (from the certificate) included in the budget.

   c. Dean-switch time windows are addressed with QC Reproducibility data.

   d. GC/MS drift is addressed with QC reproducibility data and SOP criteria for running QCs.

   e. Reproducibility is addressed with QC reproducibility data.

2. **Installation**:

   a. External/internal validations are addressed with performance verification, reproducibility data, and method validation.

   b. Software validation (data transfer/ manipulation) is addressed with method validation.

c. Location of equipment is addressed with QC reproducibility data and method validation.

3. **Staff and Procedures:**

   a. Training/experience/variability with staff: is addressed with SOP (competency testing) and QC Reproducibility data.

   b. Clarity of method/procedures is addressed with SOP (competency testing) and QC reproducibility data.

   c. Technique for aliquoting (air bubbles, clots, etc.) is addressed with SOP (competency testing) and QC reproducibility data.

   d. Contamination between samples is addressed in SOP.

   e. Interfering substances are addressed in method criteria for identifying substances and method validation.

   f. Equipment calibration is addressed in SOP.

4. **Standards**:

   a. Standard requirements (traceability, uncertainty, purity) are addressed in SOP. Uncertainty is addressed in the budget through the manufacturer's certificate.

   b. Internal standard variability is addressed in the budget through the ripette calibration.

   c. QC reproducibility is addressed in the budget with QC reproducibility data.

   d. Stability of solutions is addressed in the budget with QC reproducibility data, addressed in the SOP and in method validation.

5. **Facility**:

   a. Temperature stability is addressed in SOP and with QC reproducibility data.

   b. Back-up power is not addressed in SOP.

   c. Humidity is addressed in SOP and with QC reproducibility data.

   d. Gas supply to the GC/MS is addressed with QC reproducibility data.

   e. Security is addressed in SOP.

6. **Method of Use:**

   a. Extraction recovery (derivitization, elution, hydrolysis, reagent preparation, etc.) is addressed with QC reproducibility data and in supply ordering process.

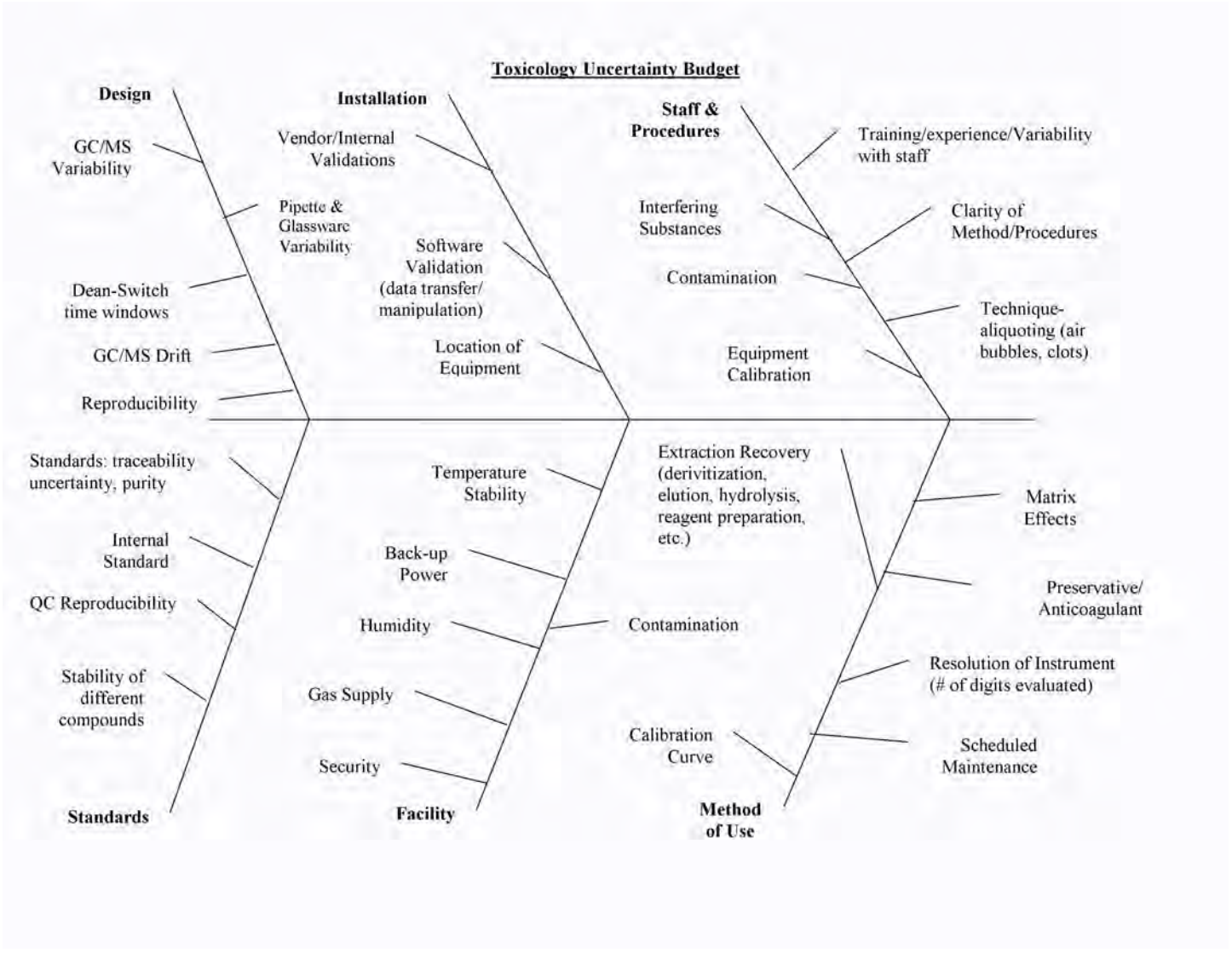
   b. Matrix effects are addressed with QC reproducibility data and in SOP (matrix matched standards and QCs).

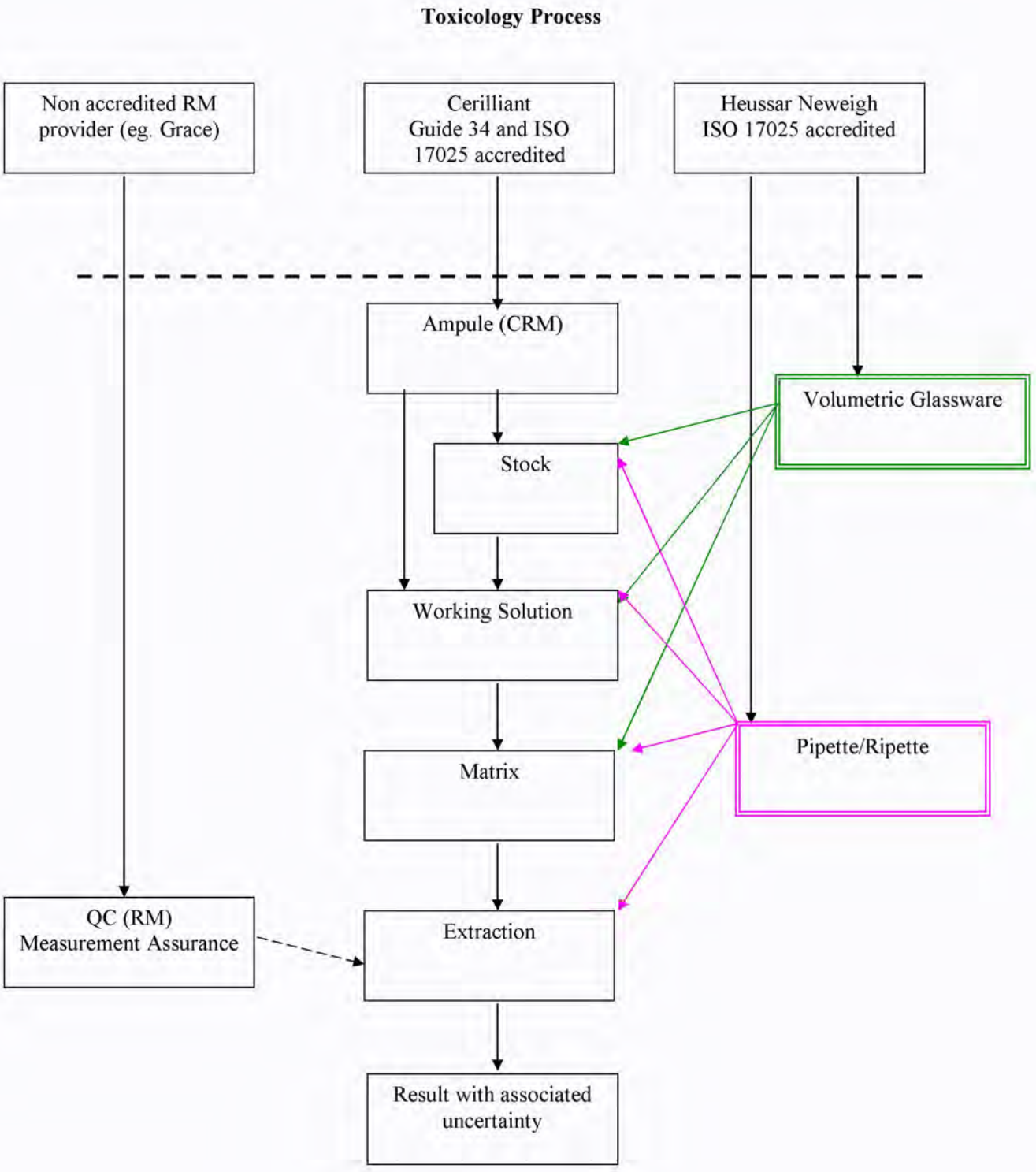
   c. Effect of preservative/anticoagulant is addressed with QC reproducibility data and in SOP. Preservative is typically in blood and urine standards and QCs. Anticoagulant is typically in blood standards and QCs.

   d. Resolution of instrument (# of digits evaluated) is addressed with QC reproducibility data.

   e. Scheduled maintenance is addressed with QC reproducibility data and in SOP.

   f. Calibration curve criteria are addressed with QC reproducibility data, in SOP, and in method validation.


Toxicology Uncertainty Budget
Design
GC/MS Variability
Pipette & Glassware Variability
Dean-Switch time windows
GC/MS Drift
Reproducibility
Standards
Standards: traceability uncertainty, purity
Internal Standard
QC Reproducibility
Stability of different compounds
Installation
Vendor/Internal Validations
Software Validation (data transfer/ manipulation)
Location of Equipment
Facility
Temperature Stability
Back-up Power
Humidity
Gas Supply
Security
Staff & Procedures
Training/experience/Variability with staff
Interfering Substances
Contamination
Equipment Calibration
Method of Use
Extraction Recovery (derivitization, elution, hydrolysis, reagent preparation, etc.)
Contamination
Calibration Curve
Clarity of Method/Procedures
Technique-aliquoting (air bubbles, clots)
Matrix Effects
Preservative/ Anticoagulant
Resolution of Instrument (# of digits evaluated)
Scheduled Maintenance



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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE: 03/21/2012**	**NUMBER:** TOX.59 - Health and Safety
	RELATED ORDERS:	
APPROVED BY: Nivan Gill	**ASCLD-LAB ISO/IEC 17025:2005: none** **ASCLD-LAB International Supplemental 2011: 5.3.6**	
CHAPTER: Health and Safety	**SUBJECT:** Health and Safety	

I. Policy: These guidelines in conjunction with the Forensic Services Division Safety Manual will be followed to ensure employee safety within the laboratory (Supplemental 5.3.6).

A. Wear appropriate personal protective equipment when handling chemical and bio-hazardous materials. Consult the Forensic Services Division Safety Manual for further information. Safety Data Sheets (SDS), located in the laboratory technical units, should be consulted whenever using an unfamiliar chemical.

B. The following personal protection equipment should be worn at all times when working with or near hazardous substances or activities:

1. Laboratory coat
2. Latex or nitrile gloves
3. Safety glasses when mixing and preparing reagents
4. Safety glasses with side shields that conform to the American National Standards Institute (ANSI) standards (prescription glasses with safety lenses and side shields are allowed).
5. No safety glasses are necessary while working within the fume hoods with the sash closed below the adequate ventilation line.

C. It is the responsibility of the analysts working within the lab to be familiar with the Division's Safety Manual and to comply with all safety requirements.

D. When using "Sharps" or "Sharps Biohazard" bins for disposing of glassware or other "sharps", the bin should not be filled past the "fill line" indicated on the bin.

E. All bins need to be labeled appropriately (regardless of any markings on the bags inside the bins). This includes: "Biohazard", "Chemical Waste" and "Debris Waste".

1. Typically, "chemical waste" consists of large amounts of chemicals like:
   a. corrosive acid inorganic waste or "acid waste"
   b. flammable organic waste or "organic waste"
   c. corrosive basic inorganic waste or "basic waste"
2. Typically, hazardous waste solids or "debris waste" contains items with chemical residue (eg. slides, pipettes, spot plates etc).
3. Biohazard waste consists of biohazard materials (eg. blood soaked gloves).
   a. gloves or "wipes" with small amounts of blood may be placed in the trash cans

F. Any larger container (e.g. 50 gallon drum) used to temporarily hold the bags of waste should also be labeled appropriately. This includes: "Biohazard", "Chemical Waste" and "Debris Waste".

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 05/17/2018	**NUMBER:** TOX.60 - Training
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ISO/IEC 17025:2005: 5.2. 5.5** **ANAB International Supplemental 2011: 5.2. 5.3, 5.9**	
CHAPTER: Training	**SUBJECT:** Training	

I. Policy: The training protocol for forensic toxicology analysis (blood and urine) will be used to train Criminalists in knowledge, skills, and abilities prior to being authorized to perform casework analysis.

A. **Toxicology Training - Introduction**

1. Intent and Purpose of Training Program: The goals of the Blood and Urine Toxicology Training Program are:
    a. To develop knowledge, skills, and abilities in the area of toxicology analysis culminating in the ability to perform casework independently in accordance with approved policies and procedures
    b. To understand and implement the policies and procedures in the Toxicology Technical Unit Manual and Division Manual to perform casework
    c. To gain expertise and knowledge in the usage and best practices of instrumentation culminating in the ability to troubleshoot and perform routine maintenance on instrumentation.
    d. To gain expertise in courtroom testimony and drug impairment through training and experience.
2. Educational Requirements:
    a. Analysts working in the toxicology sub-discipline shall possess a baccalaureate or an advanced degree in a natural science, criminalistics or a closely related field.
3. Expectations of the Trainee:
    a. The trainee is expected to do the following
        i. Abide by the training modules and any modifications, if applicable
        ii. Maintain a Training Binder (electronic or hard copy)
        iii. Maintain a reading list
        iv. Maintain documentation of each module
        v. Maintain documentation of practice runs completed
        vi. Communicate concerns about training with the Supervisor
4. Competency Test: The training program may be abbreviated for analysts with previous experience in toxicology analysis
    a. It is at the discretion of the Supervisor or Manager to abbreviate the training program based on previous experience. If the program is abbreviated, the following shall be documented
        i. Previous experience
        ii. Pertinent training from this procedure that is omitted, abbreviated, and/or completed
    b. Successful completion of the competency test is required before assuming casework responsibilities
    c. The competency may be divided among the sections below, allowing the analyst to begin casework in one type of analysis while training in the others.
    d. Competency exams may be divided into the following categories. Each extraction competency is comprised of a combination of an extraction type (SPE or L/L) and a data analysis type (SIM or FULL scan)
        i. Screening by immunoassay
        ii. A liquid/liquid extraction

iii. A solid phase extraction

iv. SIM analysis

v. FULL scan analysis

vi. 2D-GC/MS

e. Extractions types can be further divided into groups based on related extraction steps. It is recommended, but not required, that a competency includes extractions from the different categories.

i. Underivatized

ii. Derivatized

iii. Hydrolysis

f. At minimum, each competency will include:

i. Test of knowledge - a written closed book test administered after the assessment. The supervisor may require this to be completed successfully before providing samples for analysis.

ii. Ability to analyze samples by the selected method

1. Previously analyzed proficiency or competency samples will not be reused as proficiency or competency samples

2. Competency samples may be internal or external

1. See TOX.15 Court Testimony and Proficiency Testing for additional information on preparation of internal samples

iii. Ability to generate written reports to properly convey results

iv. Practical exercise for courtroom testimony (mock court or oral exam).

g. Criteria for a successful analysis of samples

i. Screening (spiked samples)

1. The results for each sample must correctly identify the spiked samples as positive or negative.

ii. Confirmations (spiked samples)

1. Chromatography and any other criteria used to evaluate extraction packets and casework must be acceptable within unit procedures and best practices (including retention times, ion ratios, peak shape and resolution, negative control, r^2 value)

2. Each quantitative result obtained must fall within +/- 20% of the expected target (spiked) value

3. Each qualitative result must correctly identify the spiked samples

iii. When the criteria is not met, remedial training will occur and it will be documented with a QA Action.

h. The trainee will work under the supervision of the Supervisor or designated trainer

i. Documentation for the results of the competency will be kept in LIMS

j. Copies of the competency documentation should be kept in the training binder of each trainee.

5. Training Records

a. The appropriate training records and assessments will be placed in the employee's Training Binder, maintained by the employee, and reviewed by the Manager, Supervisor, or Trainer upon completion of the training

b. Assessments will be placed in the employee's Training Binder

c. Additional training such as seminars, workshops, conferences, and classes will be documented in the employee's Statement of Qualifications

d. Authorizations for casework analysis are found in the Toxicology Authorization Checklist

i. During training, the authorization checklist will be kept and maintained by the trainee. After completion of training, the original checklist is kept by the Supervisor/Manager.

e. The trainee's Training Binder will minimally include:
    i. Practice run information
    ii. Copy of Toxicology Authorization checklist
    iii. Reading list
    iv. Competency and Proficiency documentation
    v. Documentation from modules (practical exercises and questions)
    vi. Any written feedback
    vii. Mock court assessments
f. The Training binder may also include:
    i. Notes on lectures, webinars, training, readings

6. Timeline and Progress Expectations
    a. The training program for toxicology analysis should take approximately 1-1.5 years
    b. The expected duration per section are guidelines and may be adjusted by Supervisor:
        i. Modules I - VII (1-2 months): orientation, job-shadowing, review of safety, ethics, evidence handling, unit and FSD policies and procedures, and preparation of solutions
        ii. Module VIII - Screening (1-2 months): analysis of case-like samples by immunoassay screening, instrument theory and operation. The analyst should be assessed for readiness by the Supervisor prior to being given the competency test
        iii. Module IX - X - Introduction to Gas Chromatograph/Mass Spectrometer and Liquid-Liquid Extractions (2-3 months): analysis of case-like samples, solution, instrument theory and operation. The analyst should be assessed for readiness by the Supervisor prior to being given the competency test
        iv. Module XI - Solid Phase Extractions (3-4 months): analysis of case-like samples, instrument theory and operation. The analyst should be assessed for readiness by the Supervisor prior to being given the competency test
        v. Module XII - Two Dimensional Gas Chromatograph (1-2 months): analysis of case-like samples, instrument theory and operation. The analyst should be assessed for readiness by the Supervisor prior to being given the competency test
        vi. Module XII - Court Testimony for Analysis (1 month): mock court for toxicology analysis
    c. The toxicology training program consists of modules
        i. Each module is designed to be accumulative in knowledge, however each module does not necessarily need to be completed in order
            1. When modules are done out of order or worked on concurrently, the Supervisor or trainer will determine what portions of previous modules are critical to the completion of the current module
            2. Select modules that have technical requirements (such as instrument data packets) that must be reviewed by a Supervisor or trainer prior to being given a competency
            3. Abbreviated training for a module is at the discretion of a Manager or Supervisor
            4. If a module is abbreviated or adjusted, documentation in the Toxicology Authorization Checklist or a memo will be maintained in the trainee's Training Binder
            5. Changes to a module may occur due to uncontrollable circumstances (a drug is not available, extraction temporarily taken off line)
                1. The Supervisor or Manager will evaluate if this requires adjustment to the administration of training, assessments, or competency of a module
                2. Adjusted module training assessment and/or competency will be documented in the Toxicology Authorization Checklist or a memo
        ii. Select modules have questions to be completed

1. Trainee will answer questions in their own words. Policies, procedures, and references will not be extensively quoted or referenced verbatim.
2. The Supervisor is not limited by these questions and may use additional questions during a competency or evaluation if deemed necessary
3. Questions will be reviewed and written feedback will be given
4. Questions will be filed in the trainee's Training Binder

7. Effectiveness of Training:
   a. The following are training actions and can be used to evaluate the effectiveness of initial training:
      i. Communication with the Supervisor/Technical Lead throughout the training program, which may include
         1. Verbal feedback
         2. Written feedback
         3. Annual performance Evaluation (Supervisor)
      ii. Written feedback will be provided for practical exercises and written questions/answers as indicated in the documented training program
      iii. Competency testing prior to assuming casework responsibilities
      iv. Mock court exercises
      v. Assessments at the end of each module
         1. Select modules require documentation of practical exercises and will be used as assessments
   b. The following are training actions and can be used to evaluate the effectiveness of on-going training:
      i. 100% technical and administrative review of casework
      ii. Proficiency testing
      iii. Court critiques
      iv. Oral or written feedback provided to Supervisor upon completion of
         1. Training classes
         2. Webinars
         3. Journal articles and other pertinent readings
      v. Yearly performance evaluation that includes setting goals for the analyst, review of SOQ, and training binder. This assessment reviews analyst goals for development and evaluates the effectiveness of training actions and if further training actions are needed
8. Maintenance of skills and re-training:
   a. Annually, a proficiency is required when performing case work analysis in the toxicology unit; this is a demonstration of maintenance of skills
   b. If technical issues arise from a proficiency test, courtroom testimony monitoring, or 100% technical review of casework the Manager or Supervisor may require re-training in any of the areas listed below. The re-training will be documented.
   c. Staff will be encouraged to attend on-going training by attending courses, meetings, and workshops.
   d. Presentation of evidence in court (eg. CCI class, courtroom monitoring, etc.).
9. New Equipment and/or Methodologies
   a. Training will be provided on any new equipment or methodology.
   b. A competency will be given when new equipment and/or methodologies are introduced to the laboratory that are significantly different from equipment and/or methodologies that the analyst was previously deemed competent and authorized to use for casework.
   c. The need and extent of a competency will be evaluated by the Supervisor or Manager
10. Scope of Training: Training will address all of the following:

a. Knowledge
    i. Basic scientific principles upon which are the foundation of forensic toxicology analysis
    ii. Reviewing relevant literature
    iii. Reviewing procedures generally accepted in the discipline
    iv. Attending courses, meetings and workshops, if possible
b. Procedures
    i. Proper evidence handling procedures including:
        1. opening evidence
        2. selection of items to examine
        3. marking of items
        4. storage of evidence
        5. disposition of evidence
    ii. Proper note-taking and recordation of examination records: recording handwritten and/or electronic notes (use of LIMS)
    iii. Proper report writing: entering results into LIMS
    iv. Presentation of Evidence in Court
    v. Application of Ethics in Forensic Science
c. Theory and Use of Equipment and Software Used
    i. The use and limitations of instruments
    ii. Possible sources of error
    iii. Interpreting results
d. Practice
    i. Performing tasks under direct supervision
    ii. Performing practical toxicological exercises using known samples which mimic casework samples (spiked samples)
    iii. Reanalyzing standards, quality controls, or other samples from previous casework if applicable and available
    iv. Independently perform practice casework runs(s) within a test case.
e. Reporting
    i. Receiving instruction from experienced analysts and observing reporting practices
    ii. Reviewing other laboratory reports
    iii. Independently write and complete practice reports(s) within a test case.

11. Authorization for Blood and Urine Toxicology Analysis

a. The use of the Toxicology Authorization Checklist in conjunction with the documented training program is the manner in which management can ensure the competence of all who operate specific equipment, perform tests, and sign reports.
    i. Initials in the "Analyst" column indicates that the analyst has completed training in the area indicated. Initials in the "Trainer" column indicates who provided and supervised the training.
    ii. When a module that requires a competency is complete, the Supervisor is sign the Casework Authorizations, allowing the Criminalist to perform casework
        1. Other casework related duties must also be authorized, such as business records and technical review

12. Further Information

a. Refer to the Division Manual for further information regarding training (FSD.21)

B. **Toxicology Training - Literature Review**

1. A reading list comprising of all literature reviewed during training will be maintained by the trainee and maintained in the Training Binder
2. Literature Collection: The trainee will read extensively from the Toxicology literature collection. Subjects will include, but are not limited to, the following:
    a. Blood, urine, and other fluid and tissue specimens for drug analysis
    b. Immunoassay
    c. Gas chromatography/mass spectrometery
    d. Sample preparation techniques
    e. Preservatives/anticoagulants
    f. Collection, storage, and stability of specimens for analysis
    g. Physiology and pharmacology of drugs
    h. Quality assurance
    i. Expert testimony
3. Selected References: The following are suggested readings and reference materials for the toxicology program. Textbooks are located in the Laboratory library. Journal articles are found in PowerDMS as well as through the laboratory's online subscriptions. Online courses may also be available:
    a. Toxicology Literature Binders (see Literature Collection)
    b. Saferstein, Richard, "Forensic Toxicology," Criminalistics An Introduction to Forensic Science, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, USA, pp. 294-296 (1995).
    c. Principles of Forensic Toxicology, Barry Levine, AACC Press, 2003.
    d. Karch's Pathology of Drug Abuse, Steven B. Karch, M.D., CRC Press, 2002.
    e. A Primer of Drug Action, Robert M. Julien, M.D., Henry Holt and Company LLC, 2001.
    f. Clarke's Analytical Forensic Toxicology, Sue Jickells and Adam Negrusz, editors, Pharmaceutical Press, 2008.
    g. Medical-Legal Aspects of Drugs, Marcelline Burns, editor, Lawyers and Judges Publishing Company Inc., 2003.
    h. Disposition of Toxic Drugs and Chemicals in Man, Baselt, Cravey editors, Chemical Toxicology Institute, 1995.

II. Modules: The toxicology training program includes the following modules

A. **Module I: General Forensic Knowledge (1 week)**

1. Objectives and Topics of Study:
    a. The trainee will learn general information about forensic science
    b. The trainee will study the following topics regarding forensic science
        i. Brief history of forensic science
        ii. Disciplines of forensic science
2. References:
    a. Chapter 1: Fundamentals of Forensic Science, 3rd ed; Houck and Siegel
    b. Chapters 1 and 2: Forensic Science Handbook, Volume II, 2nd ed; Saferstein
3. Practical Exercises/Questions:
    a. Define Forensic Science.
    b. Define the term "evidence"
    c. Why is this field of work important in our community?
    d. What is the scientific method?

e. Is a forensic scientist required to know anything about the rules of the law? Explain

f. What is the role of a forensic scientist expert witness in court?

4. Assessment:

a. The trainer will review the questions and provide written feedback to the trainee.

5. Documentation:

a. The completed questions and written feedback will be kept in the trainee's Training Binder

b. The requirements of this module may also be met by documentation of:

i. Completion of another unit's General Forensic Knowledge Module

ii. Formal education in Forensic Science

iii. Certification that includes a general knowledge component

B. **Module II: Basic Principles of Toxicology (1 week)**

1. Objectives and Topics of Study:

a. The trainee will learn the role of toxicology in forensic science

b. The trainee will study the following topics regarding Forensic Toxicology

i. Human Performance Toxicology

ii. Pharmacokinetics and Pharmacodynamics

iii. Postmortem Toxicology and Postmortem Redistribution

iv. Testing Methodologies

v. Validation

vi. Stability

2. References to Review:

a. Chapters 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 30, and 31: Principles of Forensic Toxicology, 4th ed; Levine

b. Chapter 2: Handbook of Forensic Drug Analysis, Smith and Siegel

3. Practical Exercises/Questions:

a. Define Forensic Toxicology

b. What is presumptive testing?

c. What is confirmation analysis?

d. Who said, "Solely the dose determines that a thing is not a poison"?

e. Why is the statement so important to forensic toxicology? Explain

f. Name three different individuals who made significant contributions to the field of toxicology and describe their contributions.

4. Assessment:

a. The trainee will complete the questions and the Supervisor or designee will review and provide written feedback

5. Documentation:

a. The completed questions and written feedback will be kept in the trainee's Training Binder

C. **Module III: Code of Ethics (1 week)**

1. Objectives and Topics of Study:

a. The trainee will learn the role of ethics in forensic science

b. The trainee will study the following topics regarding ethics

i. The meaning of ethics

ii. The meaning of bias

iii. Code of Ethics and how it applies to Forensic Science

2. References to Review:

a. California Association of Criminalist Code of Ethics

b. Competency, Training, Authorizations, and Ethics (FSD.21)

c. Chapter 25: Fundamentals of Forensic Science, 3rd ed, Houck and Siegel

3. Practical Exercises/Questions:

a. What are ethics?

b. Why are ethics important in Forensic Science?

c. What is bias? Is it good or bad? Describe and give examples.

d. How can bias affect your work in toxicology?

4. Assessment:

a. The trainee will answer the Code of Ethics questions and the Supervisor or designee will review and provide written feedback

5. Documentation:

a. The completed questions and written feedback will be kept in the trainee's Training Binder

D. **Module IV: Specimen and Handling Safety (1 week)**

1. Objectives and Topics of Study:

a. The trainee will learn how to properly handle and preserve evidence in the laboratory

b. The trainee will study the following topics regarding evidence

i. Safe handling of specimens

ii. Proper documentation of specimens

iii. Chain-of-custody documentation

iv. Verification and marking of evidence

v. Note taking

vi. Aliquoting requirements (sampling)

vii. Sample storage

viii. Evidence sealing

ix. Sending out OLA/referee samples

x. Additional safety training, if deemed necessary by Safety Officer and Supervisor

2. References:

a. FSD Safety Manual (SAF.01 to SAF.34, as applicable)

b. Evidence Handling (TOX.07)

c. Performing Immunoassay (TOX.35)

d. Performing Extractions (TOX.41)

e. Outside Laboratory Analysis (TOX.56)

f. Technical Records (TOX.08)

g. List of Abbreviations (TOX.04)

h. LIMS Reporting Results (TOX.38)

i. Health and Safety (TOX.59)

j. Evidence Handling (FSD.35)

k. California Vehicle Code Handbook

l. California Health and Safety Handbook

m. California Penal Code Handbook

3. Practical Exercises/Questions:

a. Exercises:

i. The trainee will observe the trainer or an experienced analyst performing the tasks listed above which include:

1. Proper evidence handling techniques when opening/closing cases, analyzing samples, and/or sending samples to an outside laboratory

2. Proper chain of custody documentation

3. LIMS note taking

b. Questions:

i. Case Examination/Evidence Handling/SOPs

1. Describe how the laboratory accepts evidence for alcohol and tox analysis from Contra Costa County agencies.

2. Describe how to determine the extent of analysis that will be performed.

3. Describe how the evidence is handled after it has been analyzed and a report has been generated and reviewed.

4. Assessments:

a. The trainee will complete the Case Examination/Evidence Handling/SOPs questions and the Supervisor or designee will review and provide written feedback

5. Documentation:

a. The completed questions and written feedback will be kept in the trainee's Training Binder

E. **Module V: Computer Software and Worksheets (1 week)**

1. Objectives and Topics of Study:

a. The trainee will learn the LIMS system and other software used in the laboratory

b. The trainee will study the following topics regarding the use of software and LIMS

i. Entering notes in JusticeTrax, the Laboratory Information Management System (LIMS),

ii. Generating worklists

iii. Generating reports

iv. General laboratory generated paperwork organization and filing

v. Generating Crystal Reports to assist the Toxicology Unit in casework workflow

vi. Toxicology Unit database

2. References:

a. Technical Records (TOX.08)

b. Lims Reporting Results (TOX.38)

c. Reports (TOX.09)

d. Uncertainty (TOX.57)

e. Case File Images (TOX.10)

f. List of Forms (TOX.05)

g. Toxicology Tracking Database (TOX.64)

h. Laboratory Number (QA.02)

i. Amending Reports (QA.04)

j. Adding, Itemizing, and Transferring Evidence in LIMS (QA.09)

k. LIMS Training Module and Procedure (QA.12)

l. Laboratory Information Management System (FSD.10)

m. Evidence Itemization (FSD.38)

n. Case Record (FSD.42)

3. Practical Exercises/Questions:

a. Exercises:

i. The trainee will be introduced on general laboratory work flow by a Supervisor, trainer, or designee

ii. The trainee will observe the trainer or an experienced analyst in proper note taking practices with LIMS

iii. The trainee will observe the trainer or experienced analyst perform an evidence split for an outside laboratory analysis, including documentation in LIMS

iv. The trainee will observe the trainer or an experienced analyst on how to use the toxicology database

1. Only a general understanding of the database is necessary and more training on database entries will be on going

v. The trainee will have the opportunity to use LIMS and the tracking database and can make entries under the supervision of a qualified analyst

1. A LIMS test case may be used for practicing LIMS entries (Laboratory #18-26 is a test case that can be used, check with LIMS administrator for other test cases)

4. Assessment:

a. The trainee will demonstrate unit practices and the use of LIMS by entering notes when opening casework under observation by an experienced analyst

5. Documentation:

a. Trainer will document observation of opening casework in the training binder

b. After the assessment the trainee is qualified to open casework and perform evidence splits independently

F. **Module VI: Traceability and Uncertainty of Measurement (1 week)**

1. Objectives and Topics of Study:

a. The trainee will learn about traceability and uncertainty of measurement in forensic toxicology

b. The trainee will study the following topics regarding traceability

i. Uncertainty of Measurement

ii. Measurement Assurance

iii. Traceability

2. References:

a. Uncertainty (TOX.57)

b. Uncertainty Budget (TOX.58)

c. Toxicology Uncertanty of Measurement Budgets (UM.05)

d. Test Quality, Measurement Assurance, and Corrections (TOX.62)

e. Measurement Traceability (FSD.28)

f. Software (TOX.18)

g. Toxicology Tracking Database (TOX.64)

3. Practical Exercises/Questions:

a. The trainee will be introduced to traceability, uncertainty, and the fish bone diagram

b. If possible, the trainee will observe the LIMS update of Uncertainty of Measurement and the Report Validation process

c. The trainee will observe the Quarterly Measurement Assurance (MA) plots

d. The trainee will observe the use of the Toxicology Tracking Database and review functions and reports available in the database

e. The trainee will review the following

i. Certificate of Analysis - received when purchasing reference materials

ii. Completed Toxicology report(s) and notes - Qualitative and Quantitative analysis

4. Assessment:

a. The trainee will perform the Quarterly MA plots and the Report Validation

i. These tasks are done quarterly and annually respectively and the trainee may proceed with training prior to completing these tasks

5. Documentation:

a. Observation and/or participation in Uncertainty Report Validation and MA plots will be documented

G. **Module VII: Preparation of Lab Generated Solutions and General Laboratory Equipment (1 week)**

1. Objectives and Topics of Study:

a. The trainee will learn how to use general laboratory equipment and prepare solutions used in the toxicology unit

b. The trainee will study the following topics regarding the equipment and solutions used in the toxicology unit

i. Reagents

ii. Reference solutions

iii. Verification of solutions

iv. Resolution check solution.

v. Volumetric flasks; Class A: serialized vs. non-serialized

vi. Pipettor, Eppendorf or equivalent, variable volumes

vii. pH meter

viii. Balance

ix. Thermometer

2. References:

a. FSD Safety Manual (SAF.01 to SAF.34, as applicable)

b. Reagents Preparation (TOX.13)

c. Reference Materials (TOX.11)

d. Lab Generated Solutions (TOX.12)

e. Preparation of Calibrators for the Immunoassay (TOX.40)

f. U-AMP/METH (TOX.46)

g. B-AMP/METH/MDA/MDMA (TOX.42)

h. U-CARBOXY-THC (TOX.47)

i. List of Forms (TOX.05)

j. pH meter (TOX.22)

k. AMP/METH in urine (TOX.46)

l. Care and Maintenance of Equipment (TOX.17)

m. Glassware (TOX.21)

n. Diluters and Pipettes (TOX.20)

o. Balances (TOX.19)

p. Glassware and Thermometers (BA.27)

q. Toxicology Tracking Database (TOX.64)

r. 10 tips to improve pipetting technique - Artel-USA, Inc.; posted throughout laboratory

3. Practical Exercises/Questions:

a. Exercises

i. The trainee will successfully determine the calculations necessary for modifying existing recipes.

1. Preparing a reagent at a larger or smaller volume specified in the recipes

2. Preparing a standard of a different volume than specified in a procedure

3. Preparing a standard when starting from a different concentration than stated in the procedure

ii. The trainee can practice pipetting the following

1. Blood

2. Water

3. Methanol

iii. The trainee may practice making solutions using volumetric flasks of various sizes

iv. The trainer or designee will review proper use of the equipment listed above, including

1. Proper pipetting technique

2. When to use calibrated or non-calibrated glassware

4. Assessment:

a. The trainee may practice pipetting by performing gravimetric checks

i. Volumes should include those commonly found in standard preparation or extraction procedures

b. The trainee will make at least one of each of the following and document according the the unit's procedures

i. Matrix solution

1. This includes extraction standards, QC and/or immunoassay calibrators

ii. Lab generated reagent

iii. Lab generated buffers

5. Documentation:

a. Copies of the traceability forms from the assessments will be kept in the trainee's Training Binder

i. Each reagent and matrix solution prepared by the trainee must be verified and within the acceptable criteria for casework

b. The results of any gravimetric checks will be kept in the trainee's Training Binder

H. **Module VIII: Performing Immunoassay Screening (1-2 months)**

1. If the following have not been covered prior to beginning this Module, they must be addressed during this module

a. Understanding of proper use and maintenance of equipment in Module VII

b. Understanding reference solution, reagent preparation, and usage in Module VII

i. Immunoassay calibrator preparation and verification may be performed by trainee

2. Objectives and Topics of Study:

a. The trainee will learn how to perform immunoassay screening on samples

b. The trainee will study the following topics regarding immunoassay screening:

i. Equipment:

1. Dynex DSX
2. Hamilton digital dilutor with hand probe, Model 500, or equivalent
3. Pipettor, Eppendorf or equivalent, or variable volumes
4. Dynex Software Interface
5. Barcode Scanner
6. Sampling

3. References:

a. General Information (TOX.01)
b. Evidence Handling (TOX.07)
c. Performing Immunoassay (TOX.35)
d. Dynex Operation (TOX.36)
e. Dynex Maintenance (TOX.37)
f. Dynex References (TOX.39)
g. Diluters, and Pipettes (TOX.20)
h. Care and Maintenance of Equipment (TOX.17)
i. Software (TOX.18)
j. Case File Images (TOX.10)
k. LIMS Reporting Results (TOX.38)
l. Evidence-Barcode Scanner (TOX.65)
m. Toxicology Tracking Database (TOX.64)
n. California Vehicle Code Handbook
o. California Health and Safety Handbook
p. California Penal Code Handbook
q. Toxicology Literature Binders
r. Chapter 10: Principles of Forensic Toxicology, 4th ed, Levine
s. Chapter 2: Handbook of Forensic Drug Analysis, Smith and Siegel

4. Practical Exercises:

a. Exercises:

i. The trainee will observe the use and maintenance of the Dynex DSX and the Hamilton Dilutor by a competent analyst

ii. The trainer will review with the trainee the following as it relates to immunoassay screening:

1. Dynex Maintenance and Usage Logs
2. Hamilton Diluter Logs
3. Validation Binder
4. Dynex Manual
5. Plate (Manufacturer) information
6. California Vehicle Code Handbook
7. California Health and Safety Code Handbook
8. California Penal Code Handbook

iii. The trainee will practice screening non-casework samples which will encompass the use and maintenance of the Dynex DSX and Hamilton Dilutor

1. Samples may include matrix spiked samples that are subject to high cross reactivity vs. low cross reactivity

2. Screening packets must be created for all sessions, regardless of results, according to the unit's procedures

b. Study Questions:

i. Immunoassay

1. Explain the advantages and disadvantages of screening for the presence of drugs.

2. What type of immunoassay is used in the Toxicology Unit?

3. Explain the following terms as they apply to ELISA: antigen, antibody, microplate, substrate, horseradish peroxidase, cross-reactivity, cutoff, true positive, false-positive, sensitivity, false-negative and specificity.

4. Is ELISA a homogeneous or heterogeneous immunoassay? Explain the difference between the two.

5. Name the analyte of interest that is the primary target of the antibody for each of the ELISA assays.

6. Explain the advantage and disadvantages of cross-reactivity.

7. Describe the components of the ELISA kits and explain the purpose of each.

5. Assessment:

a. The trainee will complete the Immunoassay questions and the Supervisor or designee will review and provide written feedback

i. The questions and practical exercises may be expanded upon by the Supervisor/Trainer or designee.

ii. The criminalist will receive written feedback from their trainer.

b. Screening packets will be compiled for all practice runs and reviewed by the Supervisor, trainer or designee

i. The Screening Traceability Worksheet will be completed and included in the run packet

ii. The Barcode Scanner sheet may be included but is not required due to restraints of non-casework samples

6. Competency:

a. The Test of knowledge is a closed book test.

b. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 10 questions = 10 points per question). Trainee must receive $\geq$ 80% score on the Test of Knowledge to pass the written exam. Scores between 70-80% can be remediated with follow up clarification. Scores below 70% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.

c. The trainee will be given a competency consisting of unknown samples and will be completed according to unit procedures

d. The trainee will be given a practical exercise for courtroom testimony covering immunoassay screening

e. The trainee may begin performing immunoassay screening of casework after successful completion of competency and upon authorization from the Manager/Supervisor.

7. Documentation:

a. The following will be kept in the trainee's Training Binder

i. Immunoassay questions with written feedback from Supervisor, trainer, or designee

ii. Toxicology Electronic Signature Form and Screening Traceability Worksheet from all practice screenings

iii. Copy of competency paperwork

I. **Module IX: Performing Extractions Part I: Equipment (1-2 months)**

1. Objectives and Topics of Study:
    a. The trainee will learn how to use and maintain a Gas Chromatograph Mass Spectrometer
    b. The trainee will study the following topics regarding an Agilent Gas Chromatograph/Mass Spectrometer:
        i. Equipment
            1. Agilent Gas Chromatograph/Mass spectrometer
                1. Only a general overview of the Dean Switch is necessary for this module as 2D-GCMS will be covered in another module
            2. Repeating Pipettors, Ripette or equivalent
            3. Volumetric flasks, Class A: serialized and non-serialized
            4. General Test Equipment - centrifuge, heating block, evaporator, vortex mixer
            5. Barcode Scanner
2. References:
    a. FSD Safety Manual (SAF.01 to SAF.34, as applicable)
    b. Performing Extractions (TOX.41)
    c. LIMS Reporting Results (TOX.38)
    d. Care and Maintenance of Equipment (TOX.17)
    e. GC/MS maintenance procedures (TOX.23-TOX.34)
    f. GC/MS References (TOX.34)
    g. individual extraction methods located in the validation binder
    h. Software (TOX.18)
    i. Diluters and Pipettes (TOX.20)
    j. Glassware (TOX.21)
    k. Chapters 10-12: Principles of Forensic Toxicology, 4th ed, Levine
    l. Evidence-Barcode Scanner (TOX.65)
3. Additional Resources:
    a. Webinars (content may differ based on availability at the time of training of each trainee)
    b. Agilent resources are available through the Agilent website and Agilent University
        i. Published papers and videos for similar GCMS modules are useful tools
        ii. Agilent technical notes and white papers
        iii. Agilent University (content may differ based on availability at the time of training of each trainee)
    c. Mass Spectrometry courses are available through
        i. California Criminalistics Institute
        ii. West Virginia University
    d. Vendor training can be considered upon Supervisor and trainer assessment
4. Practical Exercises:
    a. Exercises:
        i. The trainee will observe the use and routine maintenance of a GCMS
        ii. The trainer will review the following with the trainee:
            1. GCMS Maintenance Binders (Instrument Logs)
            2. GCMS troubleshooting diagrams

3. Standard Tune Reports

iii. The trainee will observe routine maintenance such as: cleaning the source, changing the gold seal, installing a column. The trainee can then perform routine maintenance under supervision

iv. Not all GCMS maintenance is routine and the trainee may not have the opportunity to observe performance prior to completion of the module; examples of non-routine maintenance are:

1. Merlin MicroSeal replacement
2. Weldment Assembly replacement
3. Injector needle maintenance

v. The trainee will observe the basic use of ChemStation software as it relates to the Toxicology Unit's procedures

b. Study questions:

i. Gas Chromatography

1. What is gas chromatography?
2. What is/are the stationary phases used in the Toxicology Unit?
3. What is an injection port liner? What is it made of? Why is it used?
4. Why is it necessary to regulate carrier gas flow? Are the GC methods typically constant flow or constant pressure?
5. What is column bleed?
6. When and why are columns conditioned? Describe the process.

ii. Mass Spectrometry

1. What is mass spectrometry?
2. What is the mode of ionization used in the Toxicology Unit?
3. Are the ions formed positive or negative?
4. Describe the difference between full mass scans and selective ion monitoring. Provide the advantages and disadvantages of each one.
5. Describe the importance of autotuning and explain the STune report. What criteria are considered to ensure a proper STune report? How is it different from an ATune?
6. Explain the following MS terms: mass to charge ratio, molecular ion, parent ion, base peak, total ion chromatogram, SIM, relative abundance and resolution.

iii. Instrument Maintenance and Troubleshooting

1. When should you cut the column and why?
2. What conditions would increase the frequency that a column would require cutting?
3. How much of the column should you cut? Is there a limit to how much you should cut and why?
4. What other maintenance could be performed if cutting the column doesn't improve the chromatography?
5. What is the gain factor?
6. Why are EM Volts adjusted when analyzing samples?
7. List the different ways of adjusting the EM Volts used to analyze samples. Describe advantages and disadvantages of each.
8. What is the purpose of the test shot? What standard should be used?
9. What parameters are checked in a test shot? How are they adjusted?
10. Please define, list possible causes, and remedies for the following:
    1. Split peak

2. Co-eluting peak
3. Flat-topped peak
4. Peak fronting
5. Peak tailing
6. No peaks
7. Baseline drift

5. Assessment:
   a. The trainee must complete the Gas Chromatography and Mass Spectrometry, and Instrument Maintenance and Troubleshooting questions and the Supervisor or designee will review and provide written feedback
6. Documentation:
   a. The completed questions and written feedback will be kept in the trainee's Training Binder
   b. A copy of the maintenance log(s) with a proper entry will be kept by the trainee after successful demonstration of routine maintenance
      i. Successful routine maintenance for the trainee is minimally defined as acceptable standard tune and analysis of samples after maintenance
      ii. The copy of the maintenance log must include the entry of the successful analysis of samples after maintenance

J. **Module X: Performing Extractions Part II: Liquid-Liquid Extractions (1-2 months)**

1. Topics of Study:
   a. The trainee will learn how to perform liquid-liquid extractions to analyze case samples
   b. The trainee will study the following topics
      i. Liquid-Liquid Extractions
      ii. Reagents
      iii. Reference solutions
      iv. GC/MS
      v. Software
2. References:
   a. FSD Safety Manual (SAF.01 to SAF.34, as applicable)
   b. Reference Materials (TOX.11)
   c. Lab Generated Solutions (TOX.12)
   d. Reagent Preparation (TOX.13)
   e. B-AMP/METH/MDA/MDMA (TOX.42)
   f. U-AMP/METH (TOX.46)
   g. U-GHB (TOX.50)
   h. B-GHB (TOX.51)
   i. GC/MS maintenance procedures (TOX.23 - TOX.34)
   j. Using the Software-Comparative Identifications (TOX.30)
   k. Using the Software-Quantitative Identifications (TOX.31)
   l. Using the Software-Sequences (TOX.32)
   m. LIMS Reporting Results (TOX.38)
   n. Chapter 7: Principles of Forensic Toxicology, 4th ed, Levine
   o. The Analysis of Drugs in Biological Fluids, 2nd ed, Chamberlain, pp.213-218; Chapter 12

3. Additional Resources:
    a. Agilent resources are available through the Agilent University
        i. Agilent University sample preparation (content may differ based on availability at the time of the training of each trainee)
4. Practical Exercises:
    a. Exercises:
        i. The trainee will observe the analysis of the samples using liquid-liquid extractions by a qualified analyst
        ii. The trainee will perform practice Liquid-Liquid extractions using non-casework samples
            1. Samples with unknown drug concentrations may be prepared by the trainer or designee
            2. Select extraction methods will observed when possible at the discretion of the Supervisor or designee
            3. All extractions routinely in use by the unit will be required to be successfully performed by the trainee
                1. The supervisor will evaluate whether trainee should perform less common extractions based on the reason the extraction is not routinely performed and availability of standards, equipment and consumables required for the extraction
            4. All practice extractions must be entered in the Toxicology Database
            5. Extraction packets, regardless of results, must be created for all extractions according to the unit's procedures
            6. A successful extraction is defined as the following
                1. Chromatography and any other criteria used to evaluate extraction packets and casework must be acceptable within unit procedures (including retention times, ion ratios, peak shape and resolution, negative control, r^2 value)
                2. Each quantitative result obtained must fall within +/- 20% of the expected target value
                3. Each qualitative result must be the same as the spiked samples
        iii. The trainee will analyze data using the ChemStation software and report macros
        iv. The trainer will review with the trainee:
            1. Liquid-Liquid Extraction procedures, techniques and theory
            2. Validation Binders
            3. ChemStation software and report macros
        v. At the discretion of the Supervisor or trainer, the trainee may be asked to make standards and QCs as part of the practice extraction practice process
    b. Liquid-Liquid Extraction Assessement Questions:
        i. List and describe chemical forces which drive the movement of solute between aqueous and organic phases.
        ii. Explain the effects of pH on each step in the Methamphetamine Urine liquid/liquid extraction.
        iii. Define the following terms: matrix, functional group, polarity, extraction solvents, internal standard.
        iv. Describe or draw the derivative formed using the Toxicology Procedures for methamphetamine in blood
        v. Why is there a need to derivatize the compound being analyzed?
5. Assessment :
    a. The trainee will complete the Liquid-Liquid Extraction questions and the Supervisor or designee will review and provide written feedback.
        i. The questions and practical exercises may be expanded upon by the Supervisor/Trainer or designee.

b. All extraction packets, regardless of results, must be compiled and reviewed by the Supervisor, trainer, or designee

c. A copy of all Toxicology GCMS Worksheets and Traceability Worksheets, generated by the Toxicology Database, will be kept in the trainee's Training Binder

d. The criminalist will receive written feedback from their trainer.

6. **Competency**:

a. The Test of Knowledge is an closed book test.

i. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 10 questions = 10 points per question). Trainee must receive ≥ 80% score on the Test of Knowledge to pass the written exam. Scores between 70-80% can be remediated with follow up clarification. Scores below 70% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.

b. The Criminalist will be given a competency that consist of samples and must be completed according the unit's procedures

c. The Criminalist will be given a practical exercise for courtroom testimony covering liquid-liquid extractions

d. The Criminalist may begin performing liquid-liquid extraction casework after successful completion of competency and upon authorization from the Manager/Supervisor.

7. Documentation:

a. The following will be kept in the trainee's Training Binder

i. A copy of all Toxicology Electronic Signature Form, Toxicology GCMS Worksheet, and Traceability Worksheet from each practice extraction

ii. Copy of competency paperwork

K. **Module XI: Performing Extractions Part III: Solid Phase Extractions (3-4 months)**

1. Assessments and approval by the Supervisor and trainer must be obtained prior to the start of the module

a. The trainee must have a strong understanding and demonstration of the following:

i. GCMS routine maintenance and troubleshooting

ii. Matrix standard preparation

iii. Reagent preparation

iv. Other equipment use, including pipetting

v. Immunoassay cross reactivity

2. Objectives and Topics of Study:

a. The trainee will learn how to use solid phase extractions to analyze samples

b. The trainee will study the following topics regarding solid phase extractions

i. Solid Phase Extraction Procedures

ii. GC/MS

iii. Software

3. References:

a. GC/MS maintenance procedures (TOX.23 - TOX.34)

b. Individual methods/validation binders for Solid Phase Extractions

c. Individual Solid Phase Extraction procedures

d. Using the Software-Comparative Identifications (TOX.30)

e. Using the Software-Quantitative Identifications (TOX.31)

f. Using the Software-Sequences (TOX.32)

g. Software (TOX.18)

h. Case File Images (TOX.10)

i. LIMS Reporting Results (TOX.38)

j. California Vehicle Code Handbook

k. California Health and Safety Handbook

l. California Penal Code Handbook

m. Chapter 9: Principles of Forensic Toxicology, 4th ed, Levine

n. The Analysis of Drugs in Biological Fluids, 2nd ed, Chamberlain, pp.213-218; Chapter 12

o. Chapter 9: Advances in Analytical Toxicology Volume 1, Baselt

4. Additional Resources:

a. Agilent resources are available through the Agilent University

i. Agilent University sample preparation (content may differ based on availability at the time of training of each trainee)

5. Practical Exercises:

a. Exercises:

i. The trainee will observe solid phase extractions and analysis of samples by an analyst

ii. The trainee will perform practice Solid Phase extractions using non-casework samples

1. In most extractions, freshly prepared standards and QCs are necessary

2. Samples with unknown drug concentrations may be prepared by the trainer or designated person

3. Select extraction methods will observed when possible at the discretion of the Supervisor or designee

4. All extractions routinely in use by the unit will be required to be successfully performed by the trainee

1. The supervisor will evaluate whether trainee should perform less common extractions based on the reason the extraction is not routinely performed and availability of standards, equipment and consumables required for the extraction

5. All practice extractions must be entered in the Toxicology Database

6. Extraction packets, regardless of results, must be created for all extractions according to the unit's procedures

iii. A successful extraction is defined as the following

1. Chromatography and any other criteria used to evaluate extraction packets and casework must be acceptable within unit procedures (including retention times, ion ratios, peak shape and resolution, negative control, r^2 value)

2. Each quantitative result obtained must fall within +/- 20% of the expected target value

3. Each qualitative result must be the same as the spiked samples

iv. The trainee will analyze data using the ChemStation sofware and report macros

v. At the discretion of the Supervisor or trainer, the trainee's depth of knowledge regarding the ChemStation software may be assessed. Such knowledge may include but is not limited to:

1. data collection times

2. integration parameters and windows

3. EM voltage adjustments

b. Solid-Phase Extraction Questions:

i. Solid Phase Extraction and Sample Preparation

1. Compare liquid-liquid and solid phase extractions stating the advantages and disadvantages of each type.
2. List and describe chemical forces (including pH) which effect the ability of the compound to interact with the SPE column.
3. List and explain the typical steps in an SPE extraction.
4. What is a mixed-mode SPE column?
5. Describe silylation and acylation.
6. Describe or draw the derivative formed using the Toxicology Procedures for benzoylecgonine in blood, morphine in urine, morphine and hydrocodone in blood (keto-opi extraction).
7. Why is there a need to use multiple derivatizing agents in the keto-opi extraction?

6. Assessment:
   a. The trainee will complete the Solid-Phase Extraction questions and the Supervisor or designee will review and provide written feedback
      i. The questions and practical exercises may be expanded upon by the Supervisor/Trainer or designee.
      ii. The criminalist will receive written feedback from their trainer.
   b. The trainer will again review GCMS troubleshooting and the use of ChemStation after the trainee has experience with solid phase extractions
   c. The trainer will review the LIMS software and toxicology module, utilizing designated test cases for the trainee's practice
   d. The trainee must complete all required practice runs successfully
   e. All extraction packets, regardless of results, must be compiled and reviewed by the Supervisor, trainer, or designee
7. **Competency**:
   a. The Test of Knowledge is an closed book test.
      i. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 10 questions = 10 points per question). Trainee must receive $\geq$ 80% score on the Test of Knowledge to pass the written exam. Scores between 70-80% can be remediated with follow up clarification. Scores below 70% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.
   b. The Criminalist will be given a competency that consists of samples and must be completed according to the unit's procedures
   c. The Criminalist will be given a competency in the form a mock court exercise covering solid phase extractions in this module
   d. The Criminalist may begin performing designated solid phase casework after successful completion of competency and upon authorization from the Manager/Supervisor.
8. Documentation:
   a. The following will be kept in the trainee's Training Binder
      i. Questions with written feedback from Supervisor, trainer, or designee
      ii. A copy of all Toxicology GCMS Worksheets and Traceability Worksheets, generated by the Toxicology Database from each practice extraction
      iii. Copy of competency paperwork

L. **Module XII: Performing Extractions Part IV: Two Dimensional GCMS (1-2 months)**

1. Assessments and approval by the Supervisor and trainee must be completed prior to the start of the module
   a. The trainee must have a strong understanding and demonstration of the following
      i. GCMS routine maintenance and troubleshooting
      ii. Solid phase extractions

2. Objectives and Topics of Study:
    a. The trainee will learn how to use two dimensional GCMS to analyze case samples
    b. The trainee will study the following topics regarding 2D-GCMS
        i. LTM
        ii. Dean Switch
        iii. Solid Phase Extraction
        iv. Software
3. References:
    a. GC/MS maintenance procedures (TOX.23 - TOX.34)
    b. Solid Phase Extractions procedure for THC and metabolites (TOX.61)
    c. Using the Software-Quantitative Identifications (TOX.31)
    d. Using the Software-Sequences (TOX.32)
    e. Software (TOX.18)
    f. Case File Images (TOX.10)
    g. LIMS Reporting Results (TOX.38)
4. Practical Exercises:
    a. Exercises:
        i. The trainee will observe the THC and metabolite extraction by a qualified analyst
        ii. The trainee will observe 2D-GCMS maintenance and troubleshooting, if possible
        iii. The trainee will perform practice extraction(s) using non-casework samples
            1. Samples with unknown drug concentrations may be prepared by the trainer or designee
            2. All practice extractions must be entered in the Toxicology Database
            3. Extraction packets, regardless of results, must be created for all extractions according to the unit's procedures
        iv. A successful extraction is defined as the following
            1. Chromatography and any other criteria used to evaluate extraction packets and casework must be acceptable within unit procedures (including retention times, ion ratios, peak shape and resolution, negative control, r^2 value)
            2. Each quantitative result obtained must fall within +/- 20% of the expected target value
            3. Each qualitative result must be the same as the spiked samples
    b. 2D-GCMS Questions:
        i. 2D-GCMS
            1. Define the following:
                1. LTM
                2. Dean Switch
                3. 2D-GCMS
                4. FID
            2. What are some advantages using an LTM system with the 2D-GCMS Dean Switch?
            3. What is the purpose of the FID (in respect to our method)?
            4. What is the purpose of the Dean Switch?
            5. What is back-flushing? What are the advantages of back-flushing?

5. Assessment:
    a. The trainee will complete the 2D-GCMS questions and the Supervisor or designee will review and provide written feedback
        i. The questions and practical exercises may be expanded upon by the Supervisor/Trainer or designee.
        ii. The criminalist will receive written feedback from their trainer.
    b. The trainee must complete the 2D-GCMS questions and the Supervisor or designee will review and provide written feedback
    c. All extraction packets, regardless of results, must be compiled and reviewed by the Supervisor, trainer, or designee
6. **Competency**:
    a. The Test of Knowledge is an closed book test.
        i. The criteria for evaluation will be a percentage of the total number of questions provided (i.e. 10 questions = 10 points per question). Trainee must receive ≥ 90% score on the Test of Knowledge to pass the written exam. Scores between 80-90% can be remediated with follow up clarification. Scores below 80% will be marked unsuccessful and will require documentation through a QA Action as well as further remedial training.
    b. The Criminalist will be given a competency that consists of samples and must be completed according to the unit's procedures
    c. The Criminalist will be given a competency in the form of a mock court exercise covering 2D-GCMS
    d. The Criminalist may begin performing case work after successful completion of competency and upon authorization from the Manager/Supervisor.
7. Documentation:
    a. The following will be kept in the trainee's Training Binder
        i. Questions with feedback from Supervisor, trainer, or designee
        ii. A copy of all Toxicology Electronic Signature Form, Toxicology GCMS Worksheet, and Traceability Worksheets
        iii. Copy of competency paperwork

M. **Module XIII: Court Testimony (1 month)**

1. After completion of a module that requires competency testing, a trainee can perform casework in that respective area of analysis. Once a trainee begins casework, they are subject to testify on toxicology analysis. Each competency requires a practical exam for testimony/mock court.
    a. The Supervisor will determine the scope of each mock court
        i. Each mock court will be documented by the Supervisor in writing; signed and reviewed with the trainee
        ii. Each individual mock court will cover the subject of the competency, but may include subject matter from previously completed modules
    b. The trainee will keep a copy of the mock court results
2. Objectives and Topics of Study:
    a. The trainee will learn how to present their analysis in court and important court decisions regarding forensic science
    b. The trainee will study the following topics regarding courtroom testimony for toxicology analysis:
        i. Toxicology Unit and Forensics Services Division Court Practices
        ii. Legal Aspects in Forensic Science
        iii. Legal Proceedings
3. References:
    a. Court Testimony Monitoring (FSD.26)

b. Case Record (FSD.42)

c. Discovery Request for Records (FSD.45)

d. Court Testimony and Proficiency Testing (TOX.15)

e. Outside Laboratory Analysis and Discoveries (TOX.56)

f. Chapter 24: Fundamentals of Forensic Science, 3rd ed, Houck and Siegel

g. Chapter 1: Forensic Science Handbook, Volume III, Saferstein

h. Chapter 23: Garriott's Medicolegal Aspects of Alcohol, 6th ed, Caplan and Goldberger

i. Journal of Forensic Sciences, Vol. 23, No. 1, 1978, Kogan

i. Chapter 19: Introduction to Forensic Toxicology, Crave and Baselt; reprint of original Kogan article with modifications

4. Additional Resources:

a. The California Criminalistics Institute offers a course on the Courtroom Presentation of Evidence

i. Equivalent courses may be available

b. Additional public speaking forums as also useful for court testimony

i. Toastmasters

ii. Presentations on Forensic Science

iii. Teaching other topics of Forensic Science

5. Court Decisions: Summaries and basic applications of select court decisions are covered in the above reading. For further, in-depth knowledge the trainee may need to seek additional references and resources

a. United States v. Frye

b. Daubert v. Merrell-Dow

c. Kumho Tire Co v. Carmichael

d. General Electric v Joiner

e. Melendez Diaz v. Massachusetts

f. Brady v. Maryland

g. Missouri v. McNeely

6. Practical exercises:

a. Exercises:

i. The trainee should observe relevant testimony by Forensic Services Division Criminalists

1. The trainee may also complete Court Critiques

ii. Review all question sets completed in prior modules

iii. The trainee should review pertinent sections of the following

1. California Vehicle Code Handbook

2. California Health and Safety Handbook

3. Immunoassay Plate (Manufacturer) information

b. Court Testimony Questions:

i. Write a brief summary of each court decision and how it applied to Forensic Science and Forensic Toxicology

1. United States v. Frye

2. Daubert v. Merrell-Dow

3. Kumho Tire Co v. Carmichael

4. General Electric v Joiner

5. Melendez Diaz v. Massachusetts
6. Brady v. Maryland
7. Missouri v. McNeely

7. Assessment:
    a. The trainee will complete the questions and the Supervisor or designee will review and provide written feedback
        i. The questions and practical exercises may be expanded upon by the Supervisor/Trainer or designee.
        ii. The criminalist will receive written feedback from their trainer.
8. Documentation:
    a. The following will be signed and dated by a Supervisor and kept in the trainee's Training Binder, if applicable
        i. Mock court evaluations after feedback has been given
        ii. Questions with feedback from the Supervisor, trainer, or designee

III. Use of OneNote as an Electronic Binder (Optional)

A. Microsoft OneNote is available through Microsoft 365 login. There is a desktop app and a browser based version. Appearance and functionality differs slightly between the versions.

1. Information is organized by tabs and pages, much like a traditional binder.
2. The creator of the binder can invite others to view the binder. Anyone who will need to add comments or other content to the binder (including the trainer, trainee and supervisor) must have edit rights.
    a. When first invited to a binder, it will usually open through OneNote Online (requiring password login to Microsoft 365).
        i. The toolbar near the top of the webpage has a button: "Open in OneNote". This will enable use of the desktop app.
    b. The binder should automatically sync new information regardless of which version is used. If information appears to be missing, check the "Sync Status" from the file menu. This also allows the user to initiate a sync manually.
3. In addition to adding text, OneNote can add files, images and screen clippings from the Insert toolbar.
    a. If a file is inserted as a printout, the text within the file will be searchable.
    b. If a file is added, it is inserted as a copy of the file at the time of attachment. It will not be updated if the original file is changed.
4. OneNote automatically tracks who enters what information and when. This is based on the Microsoft 365 login identity.
    a. Information can be found by right clicking on the text within a page. At the bottom of the box that pops up is the identity of the person who added the text and when.
    b. The authorship of items added can also be displayed by every entry. This is enabled through the History toolbar: Show/Hide Authors. (The items for the logged in author may not be marked).
    c. Tabs and Pages that have changed will appear in bold. New text will be highlighted on pages.
        i. This will return to normal once the page has been viewed.
    d. The History Toolbar can also be used to find changes within a specified period or by a specific author and to jump directly to new (unread) items.
5. Items can be tagged to highlight or categorize them. (This functionality may be more limited in the browser based version).
    a. Default tags include "To Do" or "Discuss with" check-boxes
    b. Default flags include Important, Question, Critical
    c. Tags can be added from the Home toolbar or by right-clicking on a page and selecting the tag icon

d. Search for Tags by going to the Home menu and selecting "Find Tags"

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 05/17/2018	**NUMBER:** TOX.61 - B-THC
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ISO/IEC 17025:2005: 5.4.1** **ANAB: none**	
CHAPTER: Procedures	**SUBJECT:** B-THC	

I. THC and METABOLITES IDENTIFICATION AND QUANTITATION IN BLOOD

A. SAFETY - SAFETY WARNING!

1. **Bis (trimethylsilyltrifluoroacetamide (BSTFA) w/ 1% TMCS** is a suspected human carcinogen. Ammonium hydroxide and Acetic Acid are caustic reagents. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:
    a. lab coat/protective clothing
    b. protective gloves
    c. safety glasses/hood
    d. Safety Data Sheets for more information.

B. PRINCIPLE

1. Delta-9-tetrahydrocannabinol (THC) and two metabolites, 11-hydroxy-THC (OH-THC) and 11-carboxy-THC (C-THC), are recovered from blood by a solid phase extraction procedure using deuterated internal standards. Identification and quantitation is by two dimensional gas chromatography/mass spectrometry.

C. SPECIMEN REQUIREMENT

1. 1.5 milliliters of sample is used for the analysis.

D. DETECTION LIMIT

1. The limit of detection for this procedure is 1 ng/ml for THC and 3 ng/mL for OH-THC and C-THC.

E. QUANTITATION LIMIT

1. The analytical limit of quantitation for this procedure 2 ng/mL for THC, 5 ng/mL for OH-THC and 10 ng/mL for C-THC.
2. The reporting limit for this procedure is 2 ng/mL for THC, 5 ng/mL for OH-THC and 10 ng/mL for C-THC.

F. LINEAR RANGE

1. The linear range has been established from 2-44 ng/mL for THC, 5-110 ng/mL for OH-THC and 10-220 ng/mL for C-THC.

G. CARRYOVER

1. No significant carryover is present at 1000 ng/mL for all analytes.

H. EQUIPMENT

This procedure uses the following laboratory equipment and supplies:

1. 16 x 100 mm disposable silanized glass culture tubes with screw caps
2. 13 x 100 mm disposable silanized glass tubes with teflon lined caps
3. volumetric flasks
4. glass transfer pipettes
5. 2-20 mL pipettor and disposable pipette tips
6. 20-200 mL pipettor and disposable pipette tips
7. 10-1000 mL pipettor and disposable pipette tips

8. 500-2500 mL pipettor and disposable pipette tips
9. 500-5000 mL pipettor and disposable pipette tips
10. repeat pipettor and disposable tips (0.5 mL, 1.25 mL, 2.5 mL, 5 mL, 50 mL)
11. autosampler vials with deactivated volume reducing inserts and crimp caps
12. vortex mixer (Thermolyne or equivalent)
13. specimen rocker (LabQuake Shaker or equivalent)
14. centrifuge (IEC Centra-4B or equivalent)
15. solid phase extraction columns, SPEware PolyCrom THC
16. solid phase extraction manifold (vac-elut)
17. evaporator/heating module
18. gas chromatograph/mass spectrometer with Dean Switch and LTM

I. **CHEMICALS**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrated, reagent grade CAUTION IRRITANT
2. hexane, reagent grade
3. methanol, reagent grade
4. bis(trimethylsilyl)trifluoroacetamide (BSTFA) w/ 1% trimethylchlorosilane
5. glacial acetic acid, reagent grade CAUTION IRRITANT
6. dry nitrogen gas (N2)
7. ethyl acetate, HPLC grade
8. acetonitrile, reagent grade
9. ethyl acetate, reagent grade

J. **STANDARDS**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks, utilizing calibrated pipettes.
Directions and volumes used for preparation of calibrators are given for an assumed concentration (e.g. listed in catalog). The certified concentration, provided by the manufacturer on the certificate of analysis (COA), should be used in the preparation of solutions from an ampule. The volumes needed to achieve the final concentration of the calibrator or control should be calculated using the certified concentration from the certificate, not an assumed concentration for the ampule. Ampule concentrations may also change due to vendor availability or laboratory preference and a stock solution may not need to be prepared.
Standards should be made in blood that does not have an interfering plasticizer (see COMMENT).

1. **Stock standards**: Stock standards may be stored in freezer. The remaining standards from the ampules can be stored separately in appropriately labeled vials in the freezer for later use.
   a. stock internal standard: 5 µg/ml THC-D3/OH-THC-D3
      Prep: Draw 0.5 mL of 100 µg/mL of each ampule and dilute to 10 mL with methanol
   b. stock internal standard: 5µg/mL C-THC-D9
      Prep: Draw 0.5 mL of 100 µg/ml ampule and dilute to 10 mL with methanol
   c. stock calibration standard: 100 µg/mL THC in methanol
      Prep: Draw 0.5 mL of 1 mg/mL ampule THC standard and dilute to 5 mL with methanol
   d. stock calibration standard: 100 µg/mL C-THC, OH-THC
      Prep: 100 µg/mL ampule each standard
   e. stock QC standard: 100 µg/mL THC, OH-THC, C-THC
      Prep: 100 µg/mL ampule each standard, if available. If a 100µg/mL ampule is unavailable, draw 0.5 mL of a 1 mg/mL ampule for each analyte needed and dilute to 5 mL with methanol
2. **Working standards**:
   a. working internal standard: 0.125 µg/mL THC-D3/OH-THC-D3, 0.250 mg/mL C-THC-D9 in distilled water

Prep: 0.25 mL of THC-D3/OH-THC-D3 stock internal standard and 0.5 mL C-THC-D9 stock internal standard, dilute to 10 mL with distilled water

b. working calibration standard: 1 µg/mL THC, 2.5 µg/ml OH-THC, 5 µg/mL C-THC in methanol
Prep: 0.1 mL of THC stock, 0.25 mL of OH-THC stock and 0.5 mL of C-THC stock calibration standard, dilute to 10 mL with methanol

c. working QC standard: 1 µg/mL THC, 2 µg/ml OH-THC, 5 µg/mL C-THC in methanol
Prep: 0.1 mL of THC stock, 0.2 mL of OH-THC stock and 0.5 mL of C-THC stock QC standard, dilute to 10 mL with methanol

3. **Calibrators and Controls**:

a. LOQ - 2 ng/ml THC, 5 ng/ml OH-THC, 10 ng/ml C-THC calibrator
Prep: 20 µL working calibration standard, add 1 ml DI water, dilute to 10 mL with blank blood

b. LOW - 10 ng/ml THC, 25 ng/ml OH-THC, 50 ng/ml C-THC calibrator
Prep: 100 µL working calibration standard, add 1 ml DI water, dilute to 10 mL with blank blood

c. MED - 20 ng/ml THC, 50 ng/ml OH-THC, 100 ng/ml C-THC calibrator
Prep: 200 µL working calibration standard, add 1 ml DI water, dilute to 10 mL with blank blood

d. HIGH - 30 ng/ml THC, 75 ng/ml OH-THC, 150 ng/ml C-THC calibrator
Prep: 300 µL working calibration standard, add 1 ml DI water, dilute to 10 mL with blank blood

e. QC 1 : 5 ng/ml THC, 10 ng/ml OH-THC, 25 ng/ml C-THC
Prep: 50 µL working QC standard, add 1 ml DI water, dilute to 10 mL with blank blood

f. QC 2 : 15 ng/ml THC, 30 ng/ml OH-THC, 75 ng/ml C-THC
Prep: 150 µL working QC standard, add 1 ml DI water, dilute to 10 mL with blank blood

g. QC 3 : 25 ng/ml THC, 50 ng/ml OH-THC, 125 ng/ml C-THC
Prep: 250 µL working QC standard, add 1 ml DI water, dilute to 10 mL with blank blood

Note: It is within the discretion of the analyst whether to use a high, medium, or low QC. Two different QC concentrations are necessary when analyzing 11-20 case samples.

K. **REAGENTS**

Reagents can be prepared before the extraction day. The elution solution and wash solution must be made the day of analysis.

1. cold acetonitrile
Prep: acetonitrile below 0°C. Acetonitrile can be stored in a freezer. Acetonitrile can also be placed in -70°C freezer approximately one hour before use (acetonitrile cannot be stored in the -70°C freezer as it will freeze solid)

2. wash solution: basic water/acetonitrile
Prep: 15 mL acetonitrile and 1 ml ammonium hydroxide to a 100 mL volumetric flask, QS with DI water. Invert flask several times to mix.

3. elution solution: acidic hexane/ethyl acetate (90:10)
Prep: 10 mL ethyl acetate (reagent grade) to a 100 mL volumetric flask and QS with hexane. Invert flask several times to mix. Transfer solution to bottle with cap. Add 3 mL glacial acetic acid. Cover and sonicate for 10 minutes.

L. **FID CHECK**

1. Prior to sample analysis using the SIM method, retention times for dean switch parameters can be checked using the FID method. The FID check may be performed concurrently with the extraction procedure.

a. Add 0.5 ml of working calibration standard to a silanized 13x100 vial.

b. Evaporate the sample to dryness under a stream of N2 at 40°C.

c. Remove tubes from the heating module. Add 50 µL ethyl acetate (HPLC grade) and 50 µL BSTFA (w/ 1% TCMS).

d. Cap tube with teflon lined caps and vortex for 10 seconds. Heat at approximately 70°C for 30 minutes.

e. Remove sample and allow to cool to room temperature. Transfer to labeled autosampler vial with deactivated volume reducing inserts. Cap vial.

f. Run on the FID method, BLTHCFID.M and compare retention times to previous analysis.

g. Save a copy of the chromatogram in the FID folder. (This can be done by printing through Justice Trax Imaging). Name the file by the date of sample.

M. **EXTRACTION PROCEDURE**

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable (16 x 100 mm) silanized culture tubes for each calibrator, quality control, sample, and blank blood.
2. Add 200 µL of working internal standard to each tube.
3. Add 1.5 ml of calibrators, quality control, blank and case samples to be analyzed into the corresponding labeled tube.
4. While vortexing, add 3 ml cold acetonitrile dropwise.
5. Vortex for an additional minute.
6. Centrifuge at approximately 3000 rpm for 5 minutes.
7. Add 3 ml DI water to labeled 16x100 silanized tubes.
8. Transfer acetonitrile from each tube to corresponding 16x100 tubes. Vortex.
9. Centrifuge at approximately 3000 rpm for 5 minutes.
10. Place the solid phase extraction columns (Cerex PolyCrom-THC) on the vac-elut.
11. Transfer samples from each tube to the appropriately labeled column. Allow the samples to pass through the column under gravity.
12. Rinse each column under vacuum of 1-2 mm Hg: 1.0 ml wash solution (1x)
13. Dry columns under full vacuum (10-15 mm Hg) for at least 15 minutes. Make sure that the columns and the fluid path are dry.
14. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.
15. Rinse out the canister and dry. Place rack with labeled (13 x 100 mm) silanized culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
16. Add 3 ml of the elution solution and allow the elution solvent to pass through the column without vacuum.
17. Evaporate the samples to dryness under a stream of N2 at 40°C.
18. Remove tubes from the heating module and allow samples to cool to room temperature. Add 30 μL ethyl acetate (HPLC grade) and 30 μL BSTFA (w/ 1% TCMS) to each tube.
19. Cap tubes with teflon lined caps and vortex for 10 seconds.
20. Heat at approximately 70°C for 30 minutes.
21. Remove samples and allow to cool to room temperature.
22. Transfer to labeled autosampler vials with deactivated volume reducing inserts. Cap vials.

N. **GC/MS Method and Parameters for Analysis**

1. Analyze the batch by 2D-GC/MS (dean switch instrument) using the SIM method.
   a. Method: BLTHCSIM
2. Ions Monitored:

THC-D3	374, 389
THC	371, 386, 343
OH-THC-D3	374, 375
OH-THC	371, 474, 459
C-THC-D9	380, 479
C-THC	371, 473, 488

O. **Order of Batch Analysis**

The order of analysis:

1. blank blood

2. LOQ calibrator
3. LOW calibrator
4. MED calibrator
5. HIGH calibrator
6. QC
    a. If analyzing more than ten case samples, an additional QC should be added for every ten additional case samples. For example: If analyzing 11-20 case samples, one QC can be placed prior to case samples and one placed after the samples.
    b. Solvent wash and blanks: ethyl acetate, reagent grade

P. **DATA INTERPRETATION**

1. In order for the quantitative values to be reported, the following quality control criteria should be met:
    a. curve fit is quadratic with inverse of concentration weighting, with “r2” value of .96 or higher
    b. ion ratios within specified range +/- 20% (absolute)
    c. standard and QC quantitation values within +/- 20% of known value
    d. retention times +/- 3% of calibration standard retention times
    e. sufficient peak shape and resolution
    f. blank/negative control has a quantitative value less than LOQ

Q. **Qualitative Reporting**

1. If any of the QC quantitative values is not within +/- 20% of known value, the sample may be reported qualitatively. To report a sample as positive (+) the calculated concentration from Chemstation for the sample must be greater than the run cutoff (lowest concentration standard). The following criteria must also be met:
    a. ion ratios within specified range +/- 20% (absolute)
    b. retention times +/- 3% of calibration standard retention times
    c. sufficient peak shape and resolution
    d. blank/negative control has a quantitative value less than lowest concentration standard

R. **COMMENTS**

1. Blood collected into plastic bags (as for blood bank collection) may contain an interfering compound for OH-THC. Blood collected with the laboratory’s blood collection kit will not have this interfering substance. Blood used for the extraction should come from a known source or have been checked for the presence of an interferent.
2. Cannabinoids can bind to glass or plastic surfaces. Care should be taken to minimize unnecessary transfers or prolonged contact with plastic surfaces.
3. If hospital vials are submitted, it is recommended to avoid using samples from wax separator tubes. The wax plug may adsorb cannabinoids.
4. Due to the low solubility of THC in water, it is important that stock and working solutions are made in methanol until added to matrix.
5. For diluted samples, blank blood should be added to give a total volume of 1.5 ml.
6. Room temperature can effect the retention time of peaks through the transfer lines on the second column in the 2D GC analysis. When samples are to be run during off-hours, environmental controls should be initiated or maintained.
    a. Samples will be evaluated after analysis to ensure method criteria has been met for reference standards and case samples.

S. **REFERENCES**

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2. Crockett, David; Nelson, Gordon; Dimson, Philip; Urry, Francis “Solid-Phase Extraction of 1-Nor-9-Tetrahydrocannabinol-9-carboxylic acid from Urine Drug-testing Specimen with the Cerex PolyCrom-THC

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 09/12/2019	**NUMBER:** TOX.62 - Test Quality, Measurement Assurance, and Corrections
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ANAB: 5.9**	
CHAPTER: Quality Assurance	**SUBJECT:** Test Quality, Measurement Assurance, and Corrections	

I. The Toxicology Unit has quality procedures in place to ensure the reliability of test results.

A. Assuring the Quality of Test Results

1. The procedure for monitoring the validity and quality of test results are ensured using the following:
    a. Regular use of reference materials water-ethanol quality control samples, with defined tolerance limits for quantitative purposes. See TOX.11
    b. Periodic use of quality control samples, with defined tolerance limits. See individual extraction procedures and TOX.08
    c. Functional check(s) of measuring and testing equipment. See individual extraction procedures and TOX.24 through TOX.31
    d. Use of check or working standards and controls with control charts. See TOX.62 measurement assurance
    e. Intermediate checks on measuring equipment. See TOX.17, TOX.19, TOX.20
    f. Replicate tests or calibration using the same or different methods. See individual extraction methods and TOX.40
    g. Review of reported results. See FSD.17 and TOX.14
    h. Intralaboratory comparisons. See TOX.15
    i. Technical and administrative review. See TOX.14
2. Procedures and Test Methods
    a. All test methods for toxicology analysis are within each individual extraction method and the screening immunoassay method in TOX.35
    b. Data interpretation procedures are located in individual extraction methods and TOX.35
    c. All methods, procedures, software and equipment are validated prior to performing casework. See TOX.16
    d. Instructions for the use and proper operation of equipment is located in (TOX.30, TOX.31, TOX.32, and TOX.35) and handling of evidence TOX.07
    e. Sampling procedures are located in TOX.41
    f. The comparison of an unknown to a known require the evaluation of the unknowns items to identify characteristics suitable for comparison. Requirements for comparisons can be found in each individual extraction methods, TOX.35 , and TOX.41
3. Environmental Conditions
    a. Environmental factors that may influence results can be found in TOX.24 due to the sensitivity in temperature of the GC/MS equipped with the Dean Switch
    b. Other items are as follows:
        i. For access to and use of areas affecting laboratory activities, see FSD.32
        ii. Prevention of contamination, interference, or adverse influences on laboratory activities, see TOX.07 and TOX.58
        iii. Effective separation of work areas with incompatible laboratory activities

1. There is an effective separation between the Drug Unit that deals with solid dosage quantities of drugs and the Toxicology Unit which measures minute quantities in blood/urine samples. Both work areas are at opposite ends of the laboratory

2. There are separate air conditioning units and vents that control air flow through each of these work areas.

iv. Incorporating good housekeeping measures within the laboratory, see TOX.07

v. Other than what is mentioned above, there are no other environmental conditions in the technical requirements for toxicology testing that need to be documented or monitored.

4. Regular use of certified reference materials for quantitation purposes, if available

a. Regular use of quality control samples with tolerance limits

b. Participation in proficiency tests

c. 100% technical review of casework

5. If any issues arise from monitoring the quality control procedures listed above, the Supervisor or Manager will make a determination of the extent of the problem and take planned action. The following includes some, but not all, planned actions to correct any significant technical problems:

a. If reference materials are found to be unacceptable due to deterioration or contamination they will not be used for casework.

b. If a significant technical issue arises from the results of proficiency testing, the Supervisor or Manager will determine the extent of the issue, and if necessary open a corrective action to ensure incorrect results are not reported in casework.

c. If a significant technical issue arises from 100% technical review of casework, the Supervisor or Manager will determine the extent of the issue and may open a corrective action that may entail: halting casework, retraining of an analyst, or rewriting of procedures. If the issue is not technically significant, the analyst will be given back the case for correction to ensure the correctness of test results.

6. The use of Quality Control and Standards are specified in the procedure, and their use is recorded in the case record. See individual extraction procedures and TOX.08 respectively.

7. Quality Control samples will be recorded in a manner where trends are detectable and the data will be reviewed statistically. See Measurement Assurance below for the procedures.

B. Measurement Assurance

1. **General Information**:

a. Measurement Assurance should be performed quarterly.

b. The evaluation should include the previous three months of data. Longer or shorter time periods may be evaluated depending on the number of data points available or in an attempt to identify trends.

c. Excel software may be used to perform an automated retrieval and charting of data, however statistical analysis may be performed using other software as well (eg. Minitab). The instructions included are for using Excel.

d. The measurement assurance should be documented and maintained within the unit.

e. If there is a change in the measurement process or the measurement instruments, the quarterly measurement assurance will be evaluated to determine if the changes are significant enough to require a full budget reevaluation.

2. **Instructions**:

a. The template for the excel workbook is located in the Toxicology Unit network share folder (MA archive). Make a copy of the “autoMA template.xls” file. Rename as desired (eg. Tox MA Jan-Mar 2012). Workbooks may be archived in folders by year.

b. Open the new workbook.

i. At startup, there should be a security warning. Select “Enable Macros”. Macros must be enabled for the buttons to work.

ii. If the security has been set to high, you may not have the option to Enable Macros. Go to Tools > Options>Security to change the Macro Security to Medium. Reopen the file, if necessary.

c. A dialog box will then ask about linked data sources. Select update to get the current historical standard deviation

d. There are worksheets for each analyte and extraction. In addition, there is the "Main" worksheet and a "Charts" worksheet.

e. To get data for all analytes, select the "Main" worksheet:

i. Enter the desired date range in the Start and End Date cells. Click "update all"

ii. The macro will copy the date range from the "Main" sheet to the date range on the individual worksheet, delete old data, query the traceability database, import the QC results into the excel worksheet and plot the data points on a chart. This will be done for all worksheets

f. To work with a single analyte, select that worksheet (eg. Amp-blood). There are two buttons on each worksheet:

i. "Import Data" will delete old data, query the traceability database using the date range on that sheet, import QC results into the excel worksheet and plot the data points on a chart. The date range used here effects only that worksheet, but will be overwritten if the "Update All" button is used.

ii. "New Plot" will create a new chart without reimporting data from access.

g. The chart has lines at intervals of the historical standard deviation.

h. Additional information can be included on the individual worksheets. General information can also be included on the "charts" worksheet.

i. A worksheet without any data means there was no data available from the database. Leave the blank worksheet to document that no analysis was performed during the time period.

j. When opening archived workbooks for review, do not update links.

3. **Evaluation**:

a. Evaluate the % difference of the QC samples from the target value against the historical standard deviation of the QC's for that analyte and method. The limit lines correspond to intervals of the standard deviation (±1, 2, 3). This evaluation should be performed for each analyte of each extraction procedure.

b. If no analysis was performed for a specific analyte during the time period, that should be documented.

4. **Criteria**:

a. If points fall beyond the 3rd limit line, then a written explanation should be included with the measurement assurance documentation. The written explanation should address potential sources of variation and actions taken, if necessary.

b. The run criteria for QC is ±20%, however the SD varies for different analytes. The 3 SD limit may be above or below this criteria. If a single QC value exceeds the 3 SD limit, but is within 20% criteria, no action may be required.

c. If multiple points are outside of 3 SD, then evaluation of additional data (longer time period, comparisons between lots) may be performed to evaluate if it is part of trend or due to changes in variation.

d. Possible sources of variation that may be evaluated include:

i. Typographical errors

ii. Potential issues with the QC or standards related to the stability pf different lots, etc.)

iii. Recent calibrations or repairs to equipment or instruments

iv. New solutions (eg. chemicals, reagent, stock, matrix – QC or standards)

v. Issues with one analyst or a specific method/analyte

vi. Certified concentration of original ampule

e. Possible actions to be taken:

i. Discard remaining solution from a lot

ii. Notify Supervisor/Manager that the uncertainty budget may need to be evaluated

iii. Calibrate related equipment

C. **QA Action-Correction (QAC)**

1. **Non-conformity**: Any aspect of testing or work product that does not conform to laboratory policies, procedures or the agreed requirements of the customer.
    a. See FSD.15 for reporting instances of non-conforming work and elements of QA Action-Corrections
2. **QA Correction-1 (QAC-1, Level 1):** QAC-1 is an action taken to correct a problem or error resulting in erroneous results or conclusions issued for casework, proficiency testing or court testimony, when evidence is compromised or if the problem or error could recur. Examples of non-conformities that would likely immediately rise to a QAC-1:
    a. Result reported incorrectly to a customer
    b. Proficiency test results reported incorrectly
    c. Courtroom testimony is misleading
        i. These issues must be documented immediately by a Supervisor/Manager through the Corrective Action Procedure that must be followed; the correction should be made as soon as possible. The action may involve stopping casework, re-training, competency testing, re-writing procedures, etc.
3. **QA Correction-2 (QAC-2, Level 2)**: QAC-2 is an action taken to correct a non-conformity that does not rise to the level of a QAC-1, but that is more significant than a simple correction (QAC-3). QAC-2 are actions made to prevent non-conformities in casework from being reported.
    a. See FSD.15 for examples as well as:
        i. Quality controls not giving expected results
        ii. Standards not giving expected results (e.g. the STD's not passing criteria)
        iii. Inappropriate storage of reagents or controls (e.g. left unrefrigerated) when it is subsequently demonstrated its use did not affect the validity and accuracy of the test result.
        iv. Persistent problems identified during checking of reports (this would be documented by Tech Review)
        v. Unsuccessful runs
    b. QAC-2 will be documented, and maintained in the Toxicology Unit (may be electronic). The documentation will be evaluated by a Supervisor/Manager periodically. The supervisor will evaluate for issues or patterns of problems that may need to be elevated to Corrective Actions. The analyst is responsible for documenting:
        i. a brief description of the problem or issue (define or state the problem)
        ii. any troubleshooting or evaluation undertaken to solve the problem or issue (or to prevent the problem or issue from happening again). Troubleshooting is a form of problem solving; it is a logical, systematic search for the potential source of a problem in order to solve it. Determining the most likely cause is a process of elimination—eliminating potential causes of a problem (determine the most likely cause of the problem)
        iii. a brief description of the resolution (or actions taken) to remedy the problem or issue (take appropriate action to prevent its recurrence)
4. **QA Correction-3 (QAC, Level 3)**: QAC-3 is an action taken to correct a non-conformity when the significance of the non-conforming work is minimal and is unlikely to reoccur. The action may or may not be documented. Examples may include:
    a. Typographical error or data entry error that can be fixed before released
    b. Inadvertently screening for analytes

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Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/31/2017	**NUMBER:** TOX.63 - B-Benzo
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB ISO 17025:2005: 5.4.1** **ASCLD-LAB International Supplemental 2011: none**	
CHAPTER: Procedures	**SUBJECT:** B-Benzo	

I. Title

Benzodiazepine Qualitative IDENTIFICATION IN BLOOD

A. Safety

Bis (trimethylsilyltrifluoroacetamide (BSTFA) w/ 1% TMCS is a suspected human carcinogen. **Ammonium hydroxide** is a caustic reagent. Human blood is a biohazardous material capable of transmitting disease. Confine work to a biological safety hood. The following items are required while using this procedure:

1. lab coat/protective clothing
2. protective gloves
3. safety glasses/hood
4. Consult the Safety Data Sheets for more information.

B. Principle

Seventeen benzodiazepine compounds are recovered from blood by a solid phase extraction procedure using deuterated internal standards. Identification is by gas chromatography/mass spectrometry.

C. Specimen Requirement

Two milliliters (2 mL) of sample is used for the analysis.

D. Detection Limit

The limit of detection for this procedure is:

analyte	cutoff (µg/ml)
OH-alprazolam	0.005
desalkylflurazepam	0.005
OH-midazolam	0.005
OH-triazolam	0.005
flunitrazepam	0.01
desmethylflunitrazepam	0.01
7-aminoflunitrazepam	0.01
alprazolam	0.01
clonazepam	0.01
lorazepam	0.01
midazolam	0.01
7-aminoclonazepam	0.01
estazolam	0.05
nordiazepam	0.05

diazepam	0.05
oxazepam	0.05
temazepam	0.05

E. **Carryover**

No significant carryover is present at the concentrations tested.

Analyte	Concentration (µg/ml)
OH-alprazolam	1.0
desalkylflurazepam	1.0
flunitrazepam	2.0
desmethylflunitrazepam	2.0
estazolam	10.0
nordiazepam	10.0
OH-midazolam	1.0
OH-triazolam	1.0
7-aminoflunitrazepam	2.0
alprazolam	2.0
clonazepam	2.0
lorazepam	2.0
midazolam	2.0
7-aminoclonazepam	2.0
diazepam	10.0
oxazepam	10.0
temazepam	10.0

F. **Equipment**

This procedure uses the following laboratory equipment and supplies:

1. 16 x 125 mm disposable glass culture tubes with screw caps
2. 13 x 100 mm disposable glass tubes with teflon lined caps
3. various volumetric flasks
4. plastic transfer pipettes
5. 2-20 mL pipettor and disposable pipette tips
6. 20-200 mL pipettor and disposable pipette tips
7. 10-1000 mL pipettor and disposable pipette tips
8. 500-2500 mL pipettor and disposable pipette tips
9. repeat pipettor and disposable tips (1.25 mL, 2.5 mL, 5 mL, 50 mL)
10. autosampler vials with volume reducing inserts and crimp caps
11. vortex mixer (Thermolyne or equivalent)
12. specimen rocker (LabQuake Shaker or equivalent)
13. centrifuge (IEC Centra-4B or equivalent)
14. solid phase extraction columns, SPEware Polycrom Clin II
15. solid phase extraction manifold (vac-elut)

16. evaporator/heating module
17. gas chromatograph/mass spectrometer

G. **Chemicals**

This procedure uses the following chemicals:

1. ammonium hydroxide, concentrate, reagent grade **CAUTION IRRITANT**
2. methanol, reagent grade
3. isopropanol, reagent grade
4. sodium acetate
5. glacial acetic acid, reagent grade
6. hydrochloric acid, concentrate, reagent grade **CAUTION IRRITANT**
7. dry nitrogen gas (N2)
8. ethyl acetate, HPLC grade
9. potassium carbonate
10. potassium bicarbonate
11. hexane, reagent grade
12. bis(trimethylsilyl)trifluoroacetamide (BSTFA) w/ 1% trimethylchlorosilane
13. ethyl acetate, reagent grade

H. **Standards**

All standards, calibrators, and controls are prepared in appropriate volumetric flasks. Stock standards may be made individually or analytes may be combined.

1. Stock standards:
   a. stock standards: 100 µg/mL or 1 mg/ml ampules of each analyte concentration and solvent varies with analyte
   b. stock internal standard:
   Prep: take specified volume from 100 µg/mL ampule for each analyte, dilute to 10 mL with methanol

analyte	volume (µL)	final conc (µg/ml)
OH-alprazolam-D5	200	2
desalkylflurazepam-D4	200	2
OH-midazolam-D4	200	2
OH-triazolam-D4	200	2
flunitrazepam-D7	400	4
desmethylflunitrazepam-D4	400	4
7-aminoflunitrazepam-D7	200	2
alprazolam-D5	200	2
clonazepam-D4	400	4
lorazepam-D4	200	2
midazolam-D4	200	2
7-aminoclonazepam-D4	200	2
estazolam-D5	400	4
nordiazepam-D5	200	2
diazepam-D5	200	2
oxazepam-D5	200	2

temazepam-D5	200	2

2. Working standards:

   a. working standard:

      i. Confirm ampule (stock) concentrations and volumes to dispense against table below.

      ii. In the event the stock concentration varies from the concentration indicated in the table, the volume dispensed will need to be adjusted accordingly to obtain the desired final concentration (A ten-fold decrease in the concentration will require a ten-fold increase in volume dispensed to deliver the same amount of analyte).
      Prep: add specified volume of each stock standard to approximately 3 ml methanol, and dilute to 10 mL with distilled water

analyte	cutoff (µg/ml)	ampule conc	volume (µL)	final conc (µg/ml)
OH-alprazolam	0.005	100 µg/ml	125	1.25
desalkylflurazepam	0.005	1 mg/ml	12.5	1.25
OH-midazolam	0.005	1 mg/ml	12.5	1.25
OH-triazolam	0.005	100 µg/ml	125	1.25
flunitrazepam	0.01	1 mg/ml	25	2.5
desmethylflunitrazepam	0.01	1 mg/ml	25	2.5
7-aminoflunitrazepam	0.01	1 mg/ml	25	2.5
alprazolam	0.01	1 mg/ml	25	2.5
clonazepam	0.01	1 mg/ml	25	2.5
lorazepam	0.01	1 mg/ml	25	2.5
midazolam	0.01	1 mg/ml	25	2.5
7-aminoclonazepam	0.01	100 µg/ml	250	2.5
estazolam	0.05	1 mg/ml	125	12.5
nordiazepam	0.05	1 mg/ml	125	12.5
diazepam	0.05	1 mg/ml	125	12.5
oxazepam	0.05	1 mg/ml	125	12.5
temazepam	0.05	1 mg/ml	125	12.5

Note: The remaining standards from the ampules can be stored separately in appropriately labeled vials in the freezer for later use.

3. Calibrators and Controls:

   a. cutoff calibrator
   Prep: Add 1 ml DI water, 40 µL working standard, then dilute to 10 mL with blank blood

   b. positive control
   Prep: Add 1 ml DI water, 800 µL working standard, dilute to 10 mL with blank blood

analyte	cutoff (µg/ml)	high (µg/ml)
OH-alprazolam	0.005	0.1
desalkylflurazepam	0.005	0.1
OH-midazolam	0.005	0.1
OH-triazolam	0.005	0.1
flunitrazepam	0.01	0.2
desmethylflunitrazepam	0.01	0.2
7-aminoflunitrazepam	0.01	0.2

alprazolam	0.01	0.2
clonazepam	0.01	0.2
lorazepam	0.01	0.2
midazolam	0.01	0.2
7-aminoclonazepam	0.01	0.2
estazolam	0.05	1
nordiazepam	0.05	1
diazepam	0.05	1
oxazepam	0.05	1
temazepam	0.05	1

I. **Reagents**

Reagents can be prepared before the extraction day. The elution solution must be made the day of analysis.

1. carbonate buffer, pH 9.0
   see reagent recipes
2. elution solution ethyl acetate with 3% NH4OH
   Prep: Add 3 mL concentrated ammonium hydroxide to a 100 mL volumetric flask and QS with ethyl acetate. Invert flask several times to mix. Transfer solution to bottle with cap. Cover and sonicate for 10 minutes.
3. organic wash solution (97.5:2.5) hexane/isopropanol
   Prep: 2.5 mL isopropanol to a 100 mL volumetric flask and QS with hexane. Invert flask several times to mix.
4. 0.1M acetate buffer, pH 4.0
   see reagent recipes

J. **Extraction Procedure**

The target drugs are extracted from the blood samples using the following procedure:

1. Prepare and label disposable (16 x 125 mm) culture tubes for each calibrator, quality control, sample, and blank blood.
2. Add 25 µl of stock internal standard to each tube.
3. Add 1.0 mL of DI water.
4. Add 3.0 ml pH 4 buffer. Vortex.
5. Add 2.0 ml of controls, blank and case samples to be analyzed into the corresponding labeled tube.
6. Cap tubes and vortex
7. Centrifuge at approximately 3000 rpm for 5-10 minutes.
   a. It may be necessary to repeat centrifugation. If desired, transfer supernatant to an appropriately labeled (16 x 125 mm) culture tube and centrifuge at approximately 3000 rpm for an additional 5-10 minutes.
8. Place the solid phase extraction columns on the vac-elut.
9. Transfer samples from each blood tube to the appropriately labeled column. Allow the samples to pass through the column under gravity, if possible. Vacuum may be required for slow moving samples.
10. Prepare the elution solution and wash solution.
11. Rinse each column under vacuum of 1-2 mm Hg:
    a. 3.0 ml pH 9.0 buffer (1x)
    b. 3.0 mL distilled water (1x)
12. Dry columns under full vacuum (10-15 mm Hg) for at least 15 minutes. It is important that the columns are dry!
13. Add 3 mL organic wash solution.
14. Dry columns under full vacuum, approximately 5 minutes.
15. Remove the top of the vac-elut and set aside. Be careful not to disturb any columns.

16. Rinse out the canister and dry. Place rack with labeled (13 x 100 mm) culture tubes into vac-elut. Place the top back on vac-elut ensuring that the tubes are in the collecting position.
17. Add 3 ml of the elution solution and allow the elution solvent to pass through the column **without** vacuum.
18. Evaporate the samples to dryness under a stream of N2 at approximately 40°C.
19. Remove tubes from the heating module and allow samples to cool to room temperature. Add 50 mL ethyl acetate (HPLC grade) and 50 mL BSTFA to each tube.
20. Cap tubes with teflon lined caps and vortex for 10 seconds.
21. Heat at approximately 70°C for 30 minutes.
22. Transfer to labeled autosampler vials with volume reducing inserts. Cap vials.

K. **GC/MS Analysis**

Analyze the batch by GC/MS using the SIM program.

L. **Method Parameters**

Load the following method for this analysis:

1. method: BLBENQSM.M

analyte	ions monitored
desalkylflurazepam-D4	364, 349
desalkylflurazepam	359, 360, 341
nordiazepam-D5	347, 332
nordiazepam	341, 342, 327
oxazepam-D5	435, 318
oxazepam	429, 430, 313
diazepam-D5	261, 289
diazepam	256, 283, 221
lorazepam-D4	433, 435
lorazepam	429, 431, 430
desmethylflunitrazepam-D4	375, 360
desmethylflunitrazepam	371, 352, 370
temazepam-D5	348, 377
temazepam	343, 357, 372
midazolam-D4	314, 316
midazolam	310, 312, 325
flunitrazepam-D7	292, 318
flunitrazepam	285, 266, 286
aminoclonazepam-D4	398, 435
aminoclonazepam	429, 394, 414
clonazepam-D4	356, 310
clonazepam	387, 352, 306
aminoflunitrazepam-D7	362, 333
aminofluntrazepam	355, 354, 326
OH-midazolam-D4	314, 404
OH-midazolam	310, 398, 413
estazolam-D5	264, 210

estazolam	259, 294, 239
alprazolam-D5	284, 313
alprazolam	308, 307, 273
OH-alprazolam-D5	386, 401
OH-alprazolam	381, 383, 396
OH-triazolam-D4	421, 436
OH-triazolam	415, 417, 430

M. **Batch Analysis**

The order of analysis:

1. blank blood
2. cutoff calibrator
3. case samples
4. positive control

Solvent wash and blanks: ethyl acetate, reagent grade

N. **Data Interpretation**

In order for the results to be reported, the following quality control criteria should be met:

1. ion ratios within specified range +/- 20% (absolute)
2. retention times +/- 3% of calibration standard retention times
3. sufficient peak shape and resolution
4. The response of the cutoff calibrator is used as the decision criteria
5. positive control has value greater than the cutoff
6. blank/negative control has a value less than the cutoff

O. **Comments**

1. Whole blood is passed directly through the columns. Bleach will be added to the SPE **waste** container of the vacuum manifold. **Do not add bleach to the vac-elut manifold prior to eluting samples.**
2. To clean the fluid path of the flow control valves after completion of extraction, pass 2-3 ml bleach through each column followed by at least 2 washes of 2-3 ml DI water. Alternatively, the flow control valves can be disassembled and sonicated in dilute bleach solution followed by sonication in DI water.

P. **References**

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END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 10/26/2017	**NUMBER:** TOX.64 - Toxicology Tracking Database
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APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: General Information	**SUBJECT:** Toxicology Tracking Database	

I. The toxicology traceability database is an Access database used to prepare logs and reports of supplies, consumables and equipment that may effect the test results, such as chemicals, as wells as supplies, equipment and services that are critical to the quality of tests, such as reference materials, equipment that requires calibration.

A. General Information

1. The database is split into a front end and a back end. The back end resides on a network server and contains the data.The front end resides on an individual's computer and contains forms and reports for use. Multiple interfaces of the front end may exist to meet the needs of the various users.

    a. The front end is provided to users by placing a copy on the network server. For use of the database, the user should copy the front end to their computer from the 'front end database' folder on the network share. The user should neither use the copy on the server nor create a shortcut to the copy on the server.

    b. Changes can be made to forms or reports in the individual front ends without affecting other users. This allows the user to address issues with printer margins and labels.

2. The forms and reports are designed to provide the information required by the SOP. The appearance and location of forms and reports within the database as well as those produced by the database may change from the description here as long as it supplies the required information.

3. The Access database does not provide electronic audit trails of the information entered, therefore log records are printed from the database and maintained by the section. Changes made after the record is created must be made on the saved copy. The database should also be updated.

4. The database has been designed to include warnings to the analyst about expired and archived equipment and consumables. However it is the responsibility of the analyst to ensure the equipment and consumables they are using are appropriate for analysis, they should not rely solely on the database.

B. Main Database

1. Inventory: The primary consumables must be entered in order to be tracked in extractions or preparation of laboratory generated solutions. These include:

    a. Chemicals

    b. Reference materials or ampules

    c. Matrix blanks

    d. SPE columns

2. The primary inventory menu opens directly with the Inventory front end or from the "Physical Inventory" button on the main menu of the Main front end

3. For each of the four categories above, there is a Find and an Add button.

    a. The Add button opens a blank form for data entry. The find button opens a form listing all entries in the database. The form includes some filter fields to narrow down the records. Basic Access filters and sorts can also be used

4. Adding Consumables to the database

    a. In each of the categories, the lot # is the primary key. This means the database will not allow the user to enter multiple records with the same lot.

        i. If the "duplicate record" error is received, check the existing record to ensure the information previously entered is the same. Make sure the "archive" box is not checked

    b. Chemicals: Enter the chemical name, manufacturer, manufacturer lot #, grade and expiration date

i. The grade of the chemical may be found on the label (i.e. reagent, HPLC, 99%)

ii. Many chemicals do not have expiration dates. If no expiration date is listed, leave blank

iii. Print Labels: 1/2 x 1-3/4 labels (avery 5167), label includes lot # and barcode

1. These labels can be placed on the bottles to mark receipt by the lab, or be used to label secondary containers

2. Enter the number of labels to skip. Note, this is the total number of labels to skip, not the number of rows. Then enter the number of copies needed. At the prompt for date, enter the date received.

3. Initial the sticker and place on bottles.

c. SPE columns

i. enter lot and manufacturer info, include expiration date if provided by manufacturer and include the type of column

d. Blank Matrix

i. This includes blood and urine obtained from lab staff or from an outside vendor

ii. Enter the type of matrix, lot #, source and expiration date

1. If an outside vendor provides a lot number, that should be used

2. Matrix from lab staff can be named based on the date obtained and the initials of the individual providing the sample

3. Matrix from an outside vendor may have an expiration date, matrix from lab staff do not

iii. There is a box to indicate that the matrix has been verified or screened for drugs.

1. Matrix from lab staff or certified by vendor does not require verification

2. Blood obtained from a blood blank usually requires screening before use

iv. There is a comment box that can be used to list anything important about the matrix. This may include any drugs detected during the verification process or if preservative was added.

v. Print Labels: 3/4 x 2-1/4 labels (avery 6870), label includes lot # and barcode as well as any comments entered and a bio-hazard warning

1. Enter the number of labels to skip. Note, this is the total number of labels to skip, not the number of rows. Then enter the number of copies needed. At the prompt for date, enter the date received.

2. The label may be initialed and dated if required.

e. Ampules or Reference Materials

i. Most of the reference materials used in the toxicology unit are ampules of drug in a solvent and are received with a certificate of analysis (COA)

ii. Enter the source, typically the manufacturer, and lot number

1. If a lot number is entered that is already in the database, a dialog box will open. Clicking yes will delete the duplicate record created.

iii. Enter the name of the analyte. This does not have the be the exact name listed by the manufacturer but should include isomer information, such as (+/-), (+), d-, R-, if important, for example: amphetamine, methamphetamine or carboxy-THC which may used for screening

1. The name used should be linked to manufacturer catalog numbers. See ordering.

iv. The concentration field is for the nominal concentration and solvent.

v. Enter the expiration date or retest date if provided. Retest dates may be updated by the manufacturer and should be changed in the database as necessary.

vi. The COA info box is for information taken directly from the COA.

1. The “Link” field allows the user to link this record to a saved copy of the Certificate of Analysis. Right click on the field, select the hyperlink menu, and then select “Edit Hyperlink”. A navigation window will open – navigate to the desired file and click OK. The

link can also be created by dragging the icon of the file to be linked from the Explorer window to the hyperlink field. Once saved, clicking on this field will open the file. COAs provided as print copies can be scanned to an electronic format for linking.

2. Enter the certified concentration and uncertainty with units, if available. This applies primarily to ampules from Cerilliant

3. Enter the certified concentration. This can be entered without trailing zeros (i.e. 1.000 will appear as 1).

4. If the certified concentration or the uncertainty is different than expected, the user will receive a warning. If the uncertainty is different the user will also receive a report which indicates the expected uncertainty and the new lot uncertainty.

vii. Enter the number of ampules received as a transaction

1. The date field is automatically filled in

2. If additional ampules are received of a previously entered lot, add another "received transaction"

viii. If a powder is going to be used, enter the information as for an ampule, but type in "powder" for the concentration. No transactions should be entered.

f. A report of consumables entered can be generated by entering the desired date in the field and clicking on the "Report" button. This allows the user or another analyst to review the entries for completeness.

5. Ordering reports

a. The Orders menu is accessible from the main menu from either the inventory database or the main database and is used only for ampules

b. Manufacturer Information

i. The manufacturer catalog number and related information can be entered on this form. The minimum number is used to calculate the number of ampules to be ordered.

ii. Ampules of analytes that are not normally kept in stock can be added here without a minimum number.

iii. To create an order beyond the minimum, use the order button and add an "order" transaction for the number of ampules desired

1. This transaction must be deleted once the ampules are received or it will continue to show up in the next months order.

iv. In the footer of the form are synonyms for the analyte name. If a name is used for the ampule entry, it must be linked to the name entered for the manufacturer information.

c. Current Inventory

i. This prints a report of all ampules that have not been marked as archived and the number of ampules calculated to be present.

ii. It will list the total number present as well as the number for each individual lot

d. Ordering Report

i. This prints a report of ampules with the catalog numbers that need to be ordered

ii. The report lists the number currently in stock based on the entries in the database, the minimum number in stock and any additional orders requested

iii. The report can be exported to a text file in G:\LAB\MUIR\Lab Aide\Lists\ folder by using the "Export Order" button. The text file can be imported into an excel spreadsheet.

e. For the ordering report to work, it is important the ampules are tracked accurately. Ampules used in the making of standards are logged in stock or matrix forms. Ampules that are not used directly (ie discarded due to expiration) must be logged in the database. This is done by adding a used transaction. It is recommended to do this from the record of the lot number of the ampule.

6. Equipment

a. Pipettes and volumetric flasks are tracked within the database for calibrations and use in solutions and extractions

b. Pipettes and volumetric flasks cannot be added from the forms, nor can the names/serial numbers be edited. This must be done from the tables (tpipettes or t_volumetric) by a knowledgeable user.

c. The Flask or Pipette form will display the records for all equipment in the database. The top of the form allows for filtering by status or calibration due date

i. The status (active/ archived) and comment field can be edited

1. To appear in drop-down menus in forms, the equipment must be marked as active

2. Inactive equipment means the pipette/flask is still within the lab may not be sent for regular calibrations

3. Equipment should be marked as archived if it has been discarded or broken and cannot be used under any circumstances

4. The comment box can be used to enter any needed information such the date the equipment was removed from service.

ii. The calibration subform will show the last calibration entered

1. All active pipettes should have a record listing the last calibration and the next calibration due.

2. Inactive pipettes should have a record with the last calibration, but not a calibration due date.

iii. When a calibration is performed, the information should be entered here.

1. Select the correct record.

2. For the calibration record showing, check the “recalibration complete” button.

3. In the subform enter a new record with the information from the new certificate. The date of the last calibration will be printed on the certificate or the calibration sticker. Enter the date the next calibration should be done by.

4. If this is the last calibration performed before a pipette is moved to inactive status or archived, do not enter a due date

5. There is also a field that can link to the calibration certificate if it has been converted/received in electronic format

iv. The “view history” button at the bottom of the form will print a report listing all past calibrations

d. There are additional reports to keep track of equipment

i. Calibrations Due

1. Enter the month as a number, and the four-digit year to get a report for all equipment that has a calibration due in that month

ii. Current List

1. Lists the equipment in the lab not marked as archived and whether it is active, the last calibration date and the next calibration due (for active equipment)

iii. History

1. Lists all equipment in the lab, including archived, and each calibration history

iv. Tracking

1. Opens a form where the user can select the equipment ID, enter a date range, and print a report detailing its use

2. Extraction report – lists the equipment used by extraction. Includes equipment used directly in extraction but only includes standards that have been used in an extraction. An additional report opens that lists the cases associated with each extraction

3. Standard report – lists the standards, stock or matrix, that the selected equipment was used to prepare and any extractions that the standard was used in. Includes standards that have not yet been used in an extraction

7. Solutions Solution Inventory

a. Laboratory generated solutions include reagents, stock standards and matrix standards

b. For each of the four categories above, there is a Find and an Add button.

   i. The Add button opens a blank form for data entry

   ii. The Find button opens a form listing all entries in the database. The form includes some filter fields to narrow down the records. Basic Access filters and sorts can also be used

c. Reagents

   i. The assigned lot # must be unique, it is typically based on the date prepared

   ii. Enter reagent name and fill in the date, initials, and volume prepared.

   iii. Enter the lot # of the chemicals used in the subform. If the lot is already in the database, the chemical information should automatically fill in when exiting the field.

   iv. If another reagent was used in the preparation of this reagent, enter the CCC reagent lot # in the labeled subform.

   v. An expiration date is only required if one of the chemicals used had an expiration date

   vi. To add verification information, click the "Add Verification" button and enter information in the form. Enter initials, date and method of verification.

   vii. To print labels, click the "Print Label" Button - Use Avery labels 6870 (3/4 x 2-1/4 inches). A Form will open with the current reagent lot number displayed. Click on Reagent Labels button and enter the number of labels to skip. This is the total number of labels, not the number of rows and the number of copies desired. The label will print with name, lot #, initials, date, and a barcode. Place labels on the primary container and any secondary containers.

   viii. The "Print Record" button will allow printing of the official copy of the record. Ensure that all the information on the record is complete and correct, initial and date, then file in the appropriate location.

d. Stock Solutions

   i. There are two forms for adding solutions – stock and stock IS

      1. The forms have different default values and drop-down menus. The IS form does not have a subform for flasks

      2. The main stock form can be used to make any stock solution

   ii. The assigned lot # must be unique and is typically based on the type of solution and the date prepared (i.e. S042313-1), the following conventions may be used:

      1. I – internal standard

      2. Q – stock QC standard

      3. S – stock standard

   iii. The box on the right side will list the lot numbers of recent stock solutions. Solutions can be iterated (-1, -2) as needed to ensure each solution has a unique identifier.

   iv. The analyte(s) can list the full name or use abbreviations. The name should be relatively short to fit on a label. The individual components will be listed from the standards used.

   v. The concentration and volume should be entered with the units (i.e. enter 100 mcg/ml; 5 ml).

   vi. The solvent lot # and the ampule lot # should be in the inventory. If the lot has not been entered, a message box will appear.

      1. If the ampule has been linked to a saved COA, click on the link to view it.

      2. If the certified concentration is different from the nominal, a warning will display. Check the COA for the actual concentration to be used to prepare standards

      3. Enter the number of ampules used. The default number is 1. If a previously opened ampule is used, set the number to 0. The database will calculate the number of ampules left for that analyte. If that was the last ampule, a warning should display.

      4. The button on the right of the subform will print labels for the ampule lot. Use this if the remaining contents of the ampule are going to be stored. At the date prompt, enter the date opened.

vii. Enter pipette and flask information. All stock solutions should list the pipettes used. Only quantitative standards, from Cerilliant, are required to have a volumetric flask. QC and IS solutions do not require a calibrated flask.

viii. The expiration date should be entered based on procedures or the earliest expiration date of the components. If there is no expiration date, leave blank.

ix. The "Print Labels" button will open the Label Form with the current lot # entered. Stock labels can be printed in 3 sizes:

1. Small – 1/2 x 1-3/4 (Avery 5167)
2. Medium – 2/3 x 1-3/4 (Avery 5155)
3. Large – 3/4 x 2-3/4 (Avery 6870)
4. Large with Title – provides option to enter a short name that will print on one side of the label
5. Place labels on containers. Labels include lot #, identity and concentration, initials, date, expiration date, barcode, the name of the solvent and a flammable sign.
6. The "Print Record" button will allow printing of the official copy of the record. Ensure that all the information on the record is complete and correct, initial and date, then file in the appropriate location

e. Matrix Standards

i. The assigned lot # should be unique and typically based on the date prepared. Blood standards usually start with B, urine with U (i.e. B042313-1). The box to the right of the lot field will list the lot numbers of recent standards.

ii. The blank lot # and stock lot # must be in the inventory or an error will display. Check the lot # and try using the pick list to find the right number. If the lot is not in the database use esc or delete record to delete entry and enter the required consumables/solutions. The lot numbers for all components must be entered into the database in order to link the records.

iii. Enter the lot # for all stock standards used in the stock standards subform.

iv. Enter the ampule lot # in the ampule standard subform if the standard is being made directly from an ampule.

1. If a COA has been linked to an ampule, an address will be present in the COA field – click to view.
2. Enter the number of ampules used. The default number is 1. If a previously opened ampule is used, enter 0. The database will calculate the number of ampules left for that analyte. If that was the last ampule, there should be a warning.
3. The button on the right of the subform will print labels for the ampule lot. Use this if the remaining contents of the ampule are going to be stored. At the date prompt, enter the date opened.

v. Enter all pipettes used to make the working standard. For quantitative standards, the volumetric flask used needs to be entered. Flasks are not required for QCs or qualitative standards.

vi. The expiration date should be entered based on procedures or the earliest expiration date of the components. If there is no expiration date, leave blank.

vii. A record in the Levels subform must be made for each level made, and the concentrations listed for each analyte in the standard.

1. Levels can be named as desired (such as LOQ, LOW, MED, HIGH)
2. The description for the level will appear on labels and on GCMS worksheets, so this is good place to indicate general information about the concentration – i.e. "0.02/0.05 mcg/ml". The exact concentration for each analyte is indicated separately. On labels it will appear in front of the analytes chosen from the pick list at the top of the form, on GCMS worksheets it will appear next to the level – so it should not be too long.
3. The button "add defaults" will add preassigned levels for the standard. The default values must already be entered and must match exactly the analytes and type on the current form. Once added, the level can be edited (i.e. concentration, analytes, name of level) and additional levels can be added. Levels cannot be easily deleted, so do not use this button if making

fewer levels than are in the defaults. To see or edit defaults, see the button on the Solutions Menu.

4. Each level must also have the pipette(s) used to make it. Quantitative standards also require the volumetric flask to be entered.

viii. The "print labels" button will open the print label form with the current lot # filled in. The matrix std labels print on 2/3 x 1-3/4 labels. They include the lot #, description and analytes, exp date, matrix, type, initials and date and a bio-hazard label.

ix. Enter the number of copies desired– it will print that number for each level.

x. The "Print Record" button allows printing the official copy of the record. Ensure that all the information on the record is complete and correct, initial and date, then file in the appropriate location.

f. Matrix Standard Defaults

i. This forms allows for editing/adding the default matrix levels

ii. The analytes, matrix and type must match what is entered by the analyst preparing a new solution

iii. Level names, descriptions, and the individual analytes and their concentrations will automatically be entered when someone presses the "add default" button on the Matrix Std form. Information changed here will effect all future standards made using the button on the matrix standard form, it will not effect standards already entered

iv. Analysts are not required to use the concentration or levels, it is provided to simplify data entry

g. Verify

i. Laboratory generated solutions must be verified.

ii. Solutions such as buffers may be verified by independent methods such as a pH meter.

iii. Most solutions are verified by using successfully in an extraction. Independent verification prior to use in casework is not required.

iv. Verification must be recorded on the official record

1. The purpose of marking in the database is to keep track of solutions that need to be verified.

2. If a solution is not successfully verified, but will not be used or discarded, the verified box should be checked in the database so that it will not appear in forms/reports. A comment can be added to the method field.

v. The Verify button opens a form that lists all solutions that have not been marked as verified and if the solution has been used in a standard or extraction

vi. Individual forms also contain a button to add verification

vii. See extractions for how to check whether a solution used needs to be marked as verified.

8. Archive – Consumables and Solutions

a. Archiving consumables and solutions is important to minimize the size of drop-down lists and prevent inadvertent use of old lots

b. The Archive button is accessible from the Inventory or Solution menu

i. The form contains tabs for each of the different consumables/solutions

ii. It lists all unarchived solutions. Only the archive box can be edited here.

c. Archiving should be done once a lot has been consumed, discarded or expired

d. If additional supplies of a consumable that has been archived is received, the archive box should be unchecked

9. Extractions

a. The traceability form allows data entry of all the lot/serial numbers used in an extraction

i. The Extraction number must be unique. It typically starts with an E and is based on the date analysis begins (i.e. E042313-1). A list of the most recent extractions will appear to the right. Extraction numbers can be iterated (-1, -2) as needed to ensure each extraction has a unique identifier.

ii. Lot numbers for consumables and solutions must already be in the database.

iii. There are tabs for each of the different categories. Enter only the lot number, the other fields will fill in automatically from the database. Barcodes can be scanned where available

iv. "Print Form" will print the traceability form that will be filed with the batch records

b. Results Form

i. Enter any additional information needed that was not entered on the traceability form (i.e. sample volume, inst #, method, units).

1. The units field will determine how quantitative reports print numbers "mcg/ml" uses 3 digits, "ng/ml" uses 2 digits

ii. If the extraction was successful, press the "Check Verification" button – this will open a form that lists all the standards/ reagents used in the extraction that have not been marked as verified. They can now be marked as verified with the initials, date, and method of verification. There is also a reminder that can be printed to ensure the official records are marked as required. This must be printed prior to marking solutions as verified.

1. If the standard is not going to be used again, it can be marked as archived

iii. There are 2 tabs – one for standards and one for curve results.

iv. The Curve results must be entered manually. There must be a record for the matrix blank results and an additional record for the curve r-squared results (for quantitative analysis). For the blank, enter 0 (this will appear as (-) on worksheets). For the r-squared, enter the values listed by chemstation for each analyte.

v. Before standard results can be entered, the levels must be defined – this will assign the levels from the matrix standards to the levels for the extraction.

1. The levels should be named as they will appear on the GCMS worksheet (i.e. LOQ, LOW, MED, HIGH). For QCs, be sure to include QC in the name and number them so that they will appear on the worksheet in the order in which they were run (i.e. QC 1, QC 2 etc). Each extraction level should have a different name, **it does not need to match the matrix level name**.

2. To enter individually: Enter the level name for the extraction, then chose from the pick list the matrix lot #, limited to the lot number listed on traceability form, and then choose the matrix level, limited to the levels listed when standard made. To check what the matrix level is – click the "check level" button, a form will open listing the analyte concentrations for the chosen lot # and level. Once the correct matrix level has been chosen click the "add level" button. The analyte and target concentrations will appear in the subform with blank fields to add results.

3. The "Add Multiple Levels" button opens a form to add all of the extraction levels, and correlate them to the matrix levels. Once completed, click the "Add all Levels" button to add levels and return to original form. Enter a blank record before doing so, this ensures all records will be updated – if not, exit out of form and reopen. If the "Return to results" button is clicked, the fields will be added, but not reflected in the form.

vi. Results can be entered manually or imported.

1. To enter manually, simply type in the results for each standard.

2. To import, the data must be in a matching format and the levels and analyte names must match. See Formatting for Import into database section under **Result Formatting** on how to get the data from chemstation. Click the "import results" button. Once imported, check that all data is present and correct.

vii. Case results must be imported from an excel workbook - See Formatting for Import into database section under **Results Formatting**. Click the "import cases" button. After importing, a screen will show up with the results for viewing – The information cannot be edited here. Close the window.

viii. To edit results or add comments to any cases, click the "edit case results" button. A form will open to show each individual case.

1. The case number, the results, or comment field can be edited. Further explanations can be made in the comment box. These comments will appear just below the case number on the worksheet. For example, indicate the volume used if different from the extraction procedure (i.e. dilutions)

ix. **Results Formatting** - The following numbers can be used to have characters or comments automatically appear in the GCMS worksheet.

1. For standards and cases:
    1. 0 will appear as (-) on worksheets
    2. 111 will appear as (+) on worksheets
    3. -999 will appear as "--" on worksheets and have the comment "-- = not evaluated"
    4. -X (any negative number not already assigned) will appear as "*". There is no default comment, the analyst must add one to either the extraction comment or the case comment for explanation. Entering the result as a negative will prevent the number from being seen on reports but will allow the result to be tracked in the database.
2. For case results:
    1. -111 will appear as "int" and have the comment "int - inconclusive due to interference"
    2. -222 will appear is "qual" and have the comment "qual-qualifier out of range"
    3. -888 will appear as "**" and have the comment "**see other analysis"

x. **Qualitative extractions**

1. Negative results are entered as "0", positive results as "111" for standards as well as case results. When the GCMS worksheet is printed, it will list the target concentrations of the standards, but the criteria should simply be "(+)". This requires the correct method to have been chosen on the traceability form.
2. **AMP/METH urine** extraction
    1. The result of the RS is not reported in the body of the worksheet. Use the comment field to indicate that the RS was acceptable (eg "resolution solution acceptable" or "RS-OK").
       Any incidental findings for a case can be reported in the comment field for that case (e.g. "screen (+) methadone").
3. **A/N/B screening extractions**
    1. The SPE mix must be made as a matrix standard. Do not add individual analytes for each component. Add one level called "SPE mix" with two analytes: "A/N" and "basic" for the two separate elutions. Enter 2 mcg/ml for the target concentration. This is the concentration of each analyte in the SPE mix. The analytes for the extraction are "A/N/B"
    2. After the extraction, enter results for the SPE mix and the matrix blank. If all analytes are detected in the appropriate fractions, the SPE mix can be called "(+)" (enter "111"). When the worksheet is printed, the criteria listed will be (-) for the blank and (+) for each fraction of the SPE mix
    3. If nothing is detected in a fraction for the case, enter "0" for negative. If a compound of interest was detected enter "111" for the (+) result and list the drugs detected in the comment field for the case

xi. The "Problem Log" button will open a form to fill out additional information on problem runs.

1. **All failed runs must have a log entry. It is important to use this button to create logs for extractions in order to ensure the record is linked to the extraction**.
2. The log allows for additional information to be added but will not appear on GCMS worksheets. This may include information such as running on a different instrument or changes in instrument parameters. If the run was completely unrecoverable, check the "Failed" box. This may be used to track any other "non-conformities. See SOP – Test Quality and Corrections for the types of issues that require a log entry

xii. Print Worksheet – prints GCMS worksheet with just standard information (is filed with the batch records)

1. Any standards of type "MA" will appear after the standard criteria. The concentration and the result will print without any "acceptable range" information
2. Use the Landscape button for extractions with more than 7 analytes

xiii. Case Results – prints GCMS worksheets with case results. Results for any standard of type "MA" will not appear on this worksheet. These worksheets are include in the case notes

1. A dialog box will appear to prompt if a batch file is desired. Selecting yes will create a text file in the temp folder – see Batch Imaging for more information.
2. Use the Landscape button if there are more than 7 analytes

xiv. Chemstation Automation

1. The use of a macro in chemstation helps automate the printing of quantitation reports and creation of the text file for importing into the database. The following conditions must be set:
    1. The quant method is loaded in data anlaysis.
    2. The method has been updated, including responses and qualifiers, and saved.
    3. The printers in data analysis are set to "batch record" printers (default and runmethod)
    4. Data files were collected with the following conventions:
        1. File names: x…x##.d
        2. Samples collected in every other data file
        3. All data files are in the same folder
        4. All data files have the same prefix before the iterating number
2. Do the following:
    1. In the data analysis CCC Reports menu, select Export Quant
    2. A dialog box should open asking for the starting folder
    3. Select the starting folder (the first file in the sequence to be printed out, ie the matrix blank or xxxxxx02.d)
       Select the ending folder (the last datafile in the sequence to be printed out, ie. the last QC xxxxxx44.d)
    4. A dialog box will then open for hard copies- enter the numbers of the files to be printed out (ie for file xxxxxxx10.d enter 10) – up to 12 files may be printed
        1. The first dialog box has numbers filled out assuming the blank started at file 02 and standards were run every other file (this should print blank to first QC). Numbers can be deleted or changed.
        2. If more than 6 files will be printed, select the more button and enter any additional numbers, such as the last QC.
    5. The dialog box for the calibration curve will open. Select the curves to be printed. Using the cancel button will not cancel the macro, it only cancels the printing of the curves.
3. What is produced:
    1. Every other file from the selected start to end will be processed
    2. The calibration curves and selected files will print to the selected printer
    3. All other files will print through JusticeTrax Imaging
        1. A text file called imagebatch.txt is created in the temp folder
        2. These should be ready for imaging into LIMS. Images can be processed individually or by batch – see Imaging.
    4. A file called "results.txt" will be created in the temp folder and contains the results of all the files processed
4. Formatting for Import into database
    1. Transfer the results file from the instrument computer. Data can also be typed into the individual excel worksheets.
    2. Open the excel file "import-db" (**macros must be enabled**). A copy is available in the database folder. The file should be copied to the individual's computer.

3. On the first tab “data” select the cell just below “lab no”.
4. Right click and select refresh data. Navigate to the results text file transferred from the instrument computer. The results will be imported into cells. It should skip the analyte name; if it does not, delete the column. If any data from a previous import remains, delete it to avoid confusion.
5. Select the standard results. Use control-click to select QC results separated from the other data, and Copy.
6. Move to the “std” tab and paste just below “level”. Again, if extra data remains from previous imports, delete it.
7. Rename any levels to **match exactly** as they are in the traceability database.
8. Add the analyte names at the top, again it must **match exactly** the names in the database.
9. Be sure a cell inside the result grid is selected and click on the “Reorganize Data” button. The data will be created in the necessary format on the “std-import” worksheet.
10. Return to the data worksheet and select the case results. Use control-click if needed to select only case results.
11. Copy to the “case” worksheet, just below “lab no”, delete any old data. Each name should be different. If there are multiple dilutions, this should be reflected in the name but the name should be short enough to fit on worksheet.
12. Correctly label the analytes as was done for the standards. Results can be changed here (ie any result to be reported as negative should be changed to 0), or from the database after being imported.
13. Make sure a cell within the results is selected and click on the “Reorganize Data” button. The data will be created in the necessary format on the “case-import” worksheet.
14. Save the excel file and exit – data is ready to be imported using the buttons on the results form.

10. Quality Log
    a. The database is used to log quality issues per SOP – Test Quality and Corrections
    b. The main categories for issues include confirmation or extractions, screening and general
    c. Log entries related to a specific extraction should be made from the results page of that extraction
    d. There is a “Quality Log” button on the main menu for the Inventory front end and the main front end
        i. This opens a form containing all the Log records – they can be searched and viewed/edited
        ii. There is a button at the bottom of the form to create a new Log entry
            1. Enter analyst, date and category
            2. There are memo fields to enter explanations of the problem and any actions taken
    e. Reports of the quality log are accessed from the Report menu in the Main database
        i. Reports can be printed for each of the individual categories, for example: Extraction, Screening, General or all together-Quality Log.
        ii. The Quality Log can printed for a selected date range for review and filed in the toxicology unit.
11. Uncertainty
    a. The uncertainties for certified reference materials used in budgets have been entered into the database
        i. This is entered directly into a table by a knowledgeable user
    b. Uncertainties for each individual lot is entered when it is first received. If the uncertainty is different from what has been entered into the database, a report can be printed and provided to appropriate personnel
    c. There are reports available from the Report Menu listing all of the ampules with their uncertainties or compared to the budget uncertainties

12. Reports
    a. Listed here are only examples of some of the reports that may be available from the database
    b. There is a Report menu in the main database, however some reports may be accessed from other menus
    c. Expired solutions/consumables
        i. Reports are available that list solutions/consumables which have expired or will expire within the month
    d. Lists
        i. Reports are available listing all of the entries for various categories such as solutions, reagents, extractions
    e. Chemical Tracking
        i. The reports lists all of the extractions, reagents and solutions where a specific lot of chemical was used
    f. QC reports
        i. Periodic Measurement Assurance analysis is performed on data from the access database, but this accessed through the Excel file. See Quality Test and Corrections.
        ii. Export– exports all QC results after the entered date to an excel file called “New QC Data” in the “Tox Section Archived Run” file
        iii. Reports – various reports that show QC results from extractions
            1. Select the analyte and then choose “List Report” or “Matrix Sorted”.
            2. The “List report” lists all QC results for the analyte grouped by target and listed in date order. It also provides the matrix and stock lots for QC and standards.
            3. The “Matrix Report” groups the QC results by Matrix lot, and lists in date order. It also lists curve information.
            4. The “Lot Report” shows the results for the matrix lot selected. It groups results by analyte and target. The report also lists curve information
    g. Extraction Stats – reports for the number of cases and extractions. Enter the date range desired for a complete report. Reports can be printed for everyone or for a single analyst
        i. Extraction Report – prints list of extractions performed in the date range
        ii. Calendar Report – prints extractions performed in the date range in monthly calendar format
        iii. Method Stats – prints report with the frequency of each extraction by year
        iv. Type/Analyst – prints report that lists the different extractions performed and the number of analysts by year
    h. Reagent Stats – lists each reagent and the number of extractions performed per lot and the number of cases
13. Batch Records
    a. Batch records stored electronically can be linked to the related record in the database
    b. The “Review” button opens a form that displays all extraction records which have not been marked as reviewed
        i. Click on the link to open the saved file
        ii. Check the “Reviewed” box to mark that the extraction has been checked
    c. “By Case” opens a form to find all extraction records related to a case number
        i. Enter the case number at the field at the top, the related records will appear below
        ii. The case number must be exactly as it appears on the GCMS worksheet
    d. “All Records” opens a form that lists all extractions

C. Screening Database

1. The primary consumables must be entered in order to be tracked. Labels can be printed for the different consumables. These include:

a. Plate kits
    i. Kits are provided by the manufacturer
    ii. The Kit lot number is entered as well as the individual plate lot number and conjugate lot number
    iii. Kits typically include reagents as well as plates and conjugate, but only the plate and conjugate are considered a set for laboratory use. Reagents such as substrate and stop may be used interchangeably.
    iv. The type of kit is entered based on what is provided by the manufacturer. The kit type may be the manufacturer (Immunalysis), or based on the type sent by the manufacturer, for example: oral fluid or serum for Orasure kits.
    v. The kit calibrator type is often the same as the kit type, but it can be different. Not all kits may require the use of a kit calibrator. The type entered is the type that will be used in the assay on the Dynex.
    vi. The substrate type is based on the manufacturer of the kit (Immunalysis or Orasure)
    vii. The kit expiration date provided by the manufacturer is based on all of the components sent in the kit. Because not all components are used by the laboratory, only the plate expiration date and conjugate expiration date are entered here.
    viii. Labels are size Avery 6870
b. Kit Calibrators (from manufacturer)
    i. The name is the standard type, for example: negative calibrator or cutoff calibrator.
    ii. The type is the manufacturer (Immunalysis) or the fluid type (oral fluid or serum for Orasure)
    iii. Expiration date and lot number from manufacturer
    iv. Labels are size Avery 8167
c. Reagents-These are purchased reagents, not made in-house
    i. The name is the type of reagent
        1. Substrate should be differentiated based on manufacturer
    ii. Expiration date and lot number from manufacturer
    iii. Labels are size Avery 8167
d. Matrix blanks and Matrix standards have been linked to the main database
    i. Matrix standards must be entered from the main database
    ii. Matrix blanks can be entered here or the main database
        1. Because the databases are linked, adding from either database will include it in both. Also, archiving from one database will archive it in both
        2. Labels are size Avery 6870

2. Sessions
    a. Each group of assays performed by an analyst on a single date is considered a session
    b. Each session has a unique ID generated by the database
    c. The analyst enters the necessary information: date, analyst, dilutor, standards and consumables. There are separate tabs for:
        i. Plates (kits – plate/conjugate combinations)
        ii. Reagents
            1. Reagents are not linked to the plate they are used on.
            2. The substrate used for the assay is entered with the plate kit information as the “substrate type” (Immunalysis or Orasure)
            3. The same stop is generally used on all plates.
            4. Additional reagents will depend on the assay.

iii. Kit calibrators

1. The kit calibrators are not linked directly to the plate they are used on, that is determined by the type

2. The type of kit calibrator used for the assay is entered with the plate kit information as the "kit cal type" (serum, oral fluid, Immunalysis).

iv. Blank matrix

v. Standards-Identified by lot number and individual level

vi. Dynex Plates

1. Results are imported into the database by clicking the "Import Data" button and selecting the text file. This must be done for each plate run.

2. The plate name and read date comes from the text file that was automatically generated by the instrument and then imported.

3. If the failed box is checked, the data will not show up on the case reports

d. There is a field to hyperlink saved electronic copies of the selftest from the instrument as well as the batch records

e. There is comment field to enter any explanations for failed plates. If multiple lots of a consumable are used, describe which lots are related to which plates.

3. Reports

a. Case reports are included in the case notes in LIMS

i. Case reports may be selected by case number, plate name, date and/or operator

ii. Each case report has the assay name, text file name, optical densities of the sample and the optical density of the cutoff

b. Additional reports may be available summarizing plate use or frequency of analysis

4. Quality Log

a. The button links to the quality log of the main database

5. Review

a. Batch records stored electronically can be linked to the related record in the database

b. The "Review" button opens a form that displays all extraction records which have not been marked as reviewed

i. Click on the link to open the saved file

ii. Check the "Reviewed" box to mark that the extraction has been checked

c. "By Case" opens a form to find all extraction records related to a case number

i. Enter the case number at the field at the top, the related records will appear below

ii. The case number must be exactly as it appears on the screening report

d. "All Records" opens a form that lists all sessions

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION	**REVISION DATE:** 11/21/2019	**NUMBER:** TOX.65 - Evidence-Barcode Scanner and Labels
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB:** none	
CHAPTER: Equipment	**SUBJECT:** Evidence-Barcode Scanner and Labels	

I. The following is the procedure for using the Handheld Barcode Scanner (Motorola/Zebra MC 2180 or equivalent).

A. Procedure for Using the Scanner

1. Turn on barcode scanner. If it is in sleep mode, press any key to wake up. If it has been turned off, press the small power button at the bottom of the scanner.
2. Start the SSE Comparator software if it is not already open. There is a shortcut on the desktop.
3. Make sure the “Erase after compare” button is checked.
4. Scan the first barcode, this fills in the box for Bar Code.
    a. Aim the scanner at the barcode and press the yellow button just beneath the display. The scanner does not have to be in the same orientation as the barcode (it can read the barcode vertically or horizontally).
5. Scan the second barcode, this fills in the box for Bar Code B.
    a. If the two barcodes match, the boxes on the display will be green, there will be an audible “good” beep.
    b. If the two barcodes do not match, the boxes on the display will be red and there will be an audible “bad” beep.
6. The scanner is automatically ready for the next set of barcodes. The boxes do not need to be cleared. The next scan will automatically populate Bar Code A.
7. Each comparison is automatically logged on the scanner.
8. The barcode for the sample must be the same for it to match. This means if the analyst created dynex labels with an additional name (e.g. benzo), the scanner will flag it as not matching. Also if the sample is subitemized, and the barcode is for parent/child or different subitem, it will be flagged as not matching.

B. Retrieving Log File

1. The computer must have Microsoft ActiveSync software installed.
2. Place the scanner in the charging cradle and attach the USB cable to the cradle and the computer.
3. The scanner should automatically be detected and ActiveSync will start up.
4. At start, a dialog box will ask about setting up a relationship – select “No”.
5. ActiveSync will open up – it should say connected.
6. Follow the path Windows CE\\My Documents
    a. Click on the Windows CE icon in explorer
    b. Open the "\" folder
    c. Open the “My Documents” folder:
        i. The log file is the “ScanHistory.csv” file
        ii. Copy to analyst's computer
    d. If analyst has completed the batch of samples, delete the “ScanHistory.csv” file from the scanner.
7. Open the copied file on a computer with excel.
8. Adjust any column widths as needed so all data is visible. Delete any old data not related to the current batch.
9. Add any comments as necessary.

10. Print to an appropriate format for archiving with the regular batch records.

C. Clearing Log File/Reset Counter

1. The Log file should be cleared and the counter reset after batch data has been successfully downloaded or prior to starting a new batch (if older data is no longer needed).
2. From the SSE comparator main screen, click the “Log” button.
3. Enter the password at the prompt.
4. Select the “Clear Counters” button to reset the pass/fail count to 0.
5. Select the “Clear Upload File” to erase all past data.
6. The Password is on the scanner. It may be changed if deemed necessary.

D. Exiting Software on device

1. User may need to exit the SSE Comparator software to change settings on the device, such as sleep mode.
2. SSE Comparator software may have security to prevent user from inadvertently altering settings on the scanner.
   a. The password to exit the software may be different from the Log password.
   b. The password is on the scanner. It may be changed if deemed necessary.

II. Instructions for printing labels

A. 1D barcodes can be printed from a crystal report in LIMS.

B. 2D barcodes are printed by the following process.

1. The "2D barcode" folder must be copied to the analyst's computer before printing.
   a. It can be found on the G:Drive: 1-Tox\Tox Inst\mail merge documents\2D barcode.
2. The analyst should create a worklist for desired labels.
   a. When the worklist is created, the "Create Sequence File" checkbox should be checked and the instrument selected should be "Tox labels." Click the "Save" button.
      i. A pop-up will open, save the text file as "import.txt" in a folder. For example, the "Temp" folder may be used.
      ii. Add QCs for the run and make any necessary changes. If any sub-items not being analyzed are included in the worklist, they should be removed from the text file. After all changes are complete, save the file.
   b. In the "2D barcode" folder, open the "sequence transform" excel file.
      i. At the top, select the "Data" tab and select "Refresh All," which will update the data in the table.
      ii. Verify that the information in the "final" column is correct. If any sub-items not being analyzed were not deleted from the text folder, the row for that item should be deleted from the excel sheet. After all changes are complete, save the file.
   c. In the "2D barcode" folder, open the "extraction vial labels barcode 2D" file.
      i. A prompt will open, select "Yes." Navigate to the "2D barcode" folder, and select the "sequence transform" excel file.
      ii. At the top, select the "Mailings" tab. Select "Finish and Merge," "Edit Individual Documents...," then in the pop-up, make sure "All" is selected and click "OK." A new window will open with the labels for the worklist.
      iii. Any labels without relevant data should be deleted. Labels can be moved around on the sheet or duplicated if more than one set of labels is needed. Once all changes have been made, print labels.
   d. Repeat the process for the "GC labels barcode 2D" file in the "2D barcode" folder.

C. Labels are then placed on appropriate vials and the scanner is used according to this procedure.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 05/17/2018	**NUMBER:** TOX.66 - Drug Impairment Training
	RELATED ORDERS:	
APPROVED BY: Joaquin Jimenez & Danielle Adams	**ASCLD-LAB:**	
CHAPTER: Training	**SUBJECT:** Drug Impairment Training	

I. Policy: The training protocol for drug impairment will be used to train Criminalists in knowledge, skills and abilities prior to being authorized to testify on drug impairment cases.

A. **Impairment Training** - Introduction

1. Intent and Purpose of Training Program: The goals of the Toxicology Impairment Training Program are:
    a. To develop knowledge, skills, and abilities in the area of toxicology impairment culminating in the ability to perform toxicology impairment testimony.
    b. To understand and implement the policies and procedures in the Toxicology Technical Unit Manual and Division Manual in order to
        i. Review reports and testify to the analyses performed
        ii. Discuss the impairing nature of the drug(s)
        iii. Render an opinion regarding the effects of a drug at a different point in time, if applicable
    c. To gain expertise in courtroom testimony and drug impairment through training and experience
2. Educational Requirements**:**
    a. Analysts working in the toxicology sub-discipline shall possess a baccalaureate or an advanced degree in a natural science, criminalistics or a closely related field.
3. Expectations of the Trainee:
    a. Abide by the training module and any modifications, if applicable
    b. Maintain a Training Binder
    c. Maintain a Reading list
    d. Communicate any questions about training with the Supervisor or Trainer
4. Competency Test: The training program may be abbreviated for analysts with previous experience in toxicology impairment testimony
    a. It is at the discretion of the Supervisor or Manager to abbreviate the impairment training program based on previous experience. If the program is abbreviated, the following will be documented
        i. Previous experience
        ii. Pertinent training from this procedure that is omitted, abbreviated, and/or completed
    b. At minimum, the competency test will include :
        i. A written or oral examination to assess the individual's knowledge of drug impairment and human performance on the body
        ii. A mock court where the trainee will be given hypotheticals and the trainee must render an opinion regarding the human performance of a drug
    c. The trainee will work under the supervision of a Supervisor or designated trainer, however drug impairment is the consummation of toxicology training and best achieved by independent study
5. Timeline and Progress Expectations
    a. The training program for drug impairment should take approximately 6 months

i. Training for drug impairment need not be directly after completion of toxicology analysis training and may be completed at a later time

ii. Drug impairment training will commence upon a decision of the Manager or Supervisor

b. The training program is one module but can be assessed by the Supervisor or trainer regularly after the following categories:

i. Pharmacology

ii. Drug Recognition and Evaluation

iii. Stimulants - Amphetamine/Methamphetamine

iv. Stimulants - Cocaine

v. Opiates, Opioids, Narcotics

vi. Cannabinoids

vii. CNS Depressants

viii. Hallucinogens, Dissociative Anesthetics, Inhalants

ix. Hypothetical Scenarios

6. Effectiveness of Training

a. The following are training actions and can be used to evaluate the effectiveness of initial training:

i. Communication with the Supervisor throughout the training program, which may include

1. Oral feedback

2. Written feedback

3. Annual performance Evaluation

ii. Practical and written exercises as indicated in the documented training program

1. Written feedback by the Supervisor on question sets especially in regards to the depth of technical knowledge

iii. Mock court exercises

iv. Assessments at the end of each drug category

b. The following are training actions and can be used to evaluate the effectiveness of on-going training:

i. Court critiques

ii. Oral or written feedback provided to Supervisor upon completion of

1. Drug categories

2. Training classes

3. Webinars

4. Journal articles and other pertinent readings

iii. Yearly performance evaluation that includes setting goals for the analyst, review of SOQ, and training binder. This assessment reviews analyst goals for development and evaluates the effectiveness of training actions and if further training actions are needed

7. Maintenance of skills and re-training:

a. Demonstration that knowledge, skills, and abilities have been maintained is apparent in the ability to explain how drugs interact in the body and opinions of human performance from drugs

i. Due to the breadth of knowledge of drug effects, it is common that a brief review of drug information is necessary

b. If technical issues arise from courtroom testimony monitoring, the Manager or Supervisor may require re-training in any of the areas listed below. The re-training will be documented.

8. New Equipment and/or Methodologies

a. When the analysis of a new drug is introduced to the laboratory, the Manager or Supervisor will assess whether a written or oral examination on the effects of that drug is warranted

b. The need and extent of a competency or mock court will be evaluated by the Supervisor/Manager

9. Scope of Training:

a. The field of Forensic Toxicology covers a wide range of topics, drugs, and other analytes. The Toxicology Unit of the Forensic Services Division is limited in scope of analysis resulting in a limited scope of drug impairment testimony.

i. See FSD.14 for more information regarding courtroom testimony

b. The literature and references listed in this document are the Laboratory's best guidance to prepare a trainee for drug impairment testimony for the drugs tested in the Toxicology Unit

i. The limitation should not restrict the analyst in having a general understanding of other drugs, especially those in the same drug category or of similar pharmacological nature

ii. Not all references need to be reviewed, however the Supervisor will assess the trainee's reading list to ensure a comprehensive amount of literature is reviewed

1. The trainee should review all Toxicology Literature Binders

2. The trainee should have a thorough understanding of each drug tested in the unit in order to quickly reference and review a drugs pharmacological properties for court purposes

c. Training may address any of the following issues as it relates to the effects of drugs and rendering an opinion on human performance from drug interactions:

i. Knowledge

1. Reviewing relevant literature

2. Reviewing opinions accepted in the discipline

3. Attending courses, webinars, meetings, and workshops, if possible

ii. Procedures

1. Proper court procedures according to Toxicology Unit, Forensic Services Division, and Sheriff's Department policies

iii. Presentation of Evidence in Court

d. General Knowledge of forensic science and ethical practices in forensic science will be covered in TOX.60

10. Authorization for Drug Impairment Testimony:

a. The use of the authorization checklist in conjunction with the documented training program is will aid in the documentation of competence of all who testify on drug impairment.

i. Upon completion of the Drug Impairment module, the Supervisor or Manager will sign the Impairment Testimony Authorization section, allowing the Criminalist to testify to the effects of drugs

11. Training Records

a. The appropriate training records and assessments will be placed in the employee's Training Binder, maintained by the employee, and reviewed by the Manager/Supervisor upon completion of the training

b. Additional training such as seminars, workshops, conferences, and classes will be documented in the employee's Statement of Qualifications and/or Training Binder

i. Copies of certificates from meetings will be placed in the Training Binder and electronically uploaded into LIMS

12. Further Information

a. Refer to the Division Manual for further information regarding training (FSD.21)

B. **Toxicology Drug Impairment Training - Literature Review**

1. A reading list comprising of all literature reviewed during training will be maintained by the trainee and stored in the Training Binder

2. Literature Collection: The trainee will read extensively from the Toxicology literature collection. Subjects will include, but are not limited to, the following:
    a. Blood, urine, and other fluid and tissue specimens for drug analysis
    b. Immunoassay
    c. Antemortem and post-mortem samples
    d. Gas chromatography/mass spectrometery
    e. Sample preparation techniques
    f. Preservatives/anticoagulants
    g. Collection, storage, and stability of specimens for analysis
    h. Physiology and pharmacology of drugs
    i. Quality assurance
    j. Expert testimony
3. Selected References: The following are suggested readings and reference materials for the toxicology drug impairment testimony training:
    a. Toxicology Literature Binders (see Literature Collection)
    b. Saferstein, Richard, "Forensic Toxicology," Criminalistics An Introduction to Forensic Science, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, USA, pp. 294-296 (1995).
    c. Principles of Forensic Toxicology, Barry Levine, AACC Press, 2003.
    d. Karch's Pathology of Drug Abuse, Steven B. Karch, M.D., CRC Press, 2002.
    e. A Primer of Drug Action, Robert M. Julien, M.D., Henry Holt and Company LLC, 2001.
    f. Clarke's Analytical Forensic Toxicology, Sue Jickells and Adam Negrusz, editors, Pharmaceutical Press, 2008.
    g. Medical-Legal Aspects of Drugs, Marcelline Burns, editor, Lawyers and Judges Publishing Company Inc., 2003.
    h. Disposition of Toxic Drugs and Chemicals in Man, Baselt, Cravey editors, Chemical Toxicology Institute, 1995.

II. Module: The Toxicology Drug Impairment Training Module

A. Toxicology Drug Impairment Module

1. Objectives and Topics of Study: The trainee will study the following regarding drug impairment:
    a. Pharmacology
    b. Drug Recognition and Evaluation
    c. Stimulants - Amphetamine/Methamphetamine
    d. Stimulants - Cocaine
    e. Opiates, Opioids, Narcotics
    f. Cannabinoids
    g. CNS Depressants
    h. Hallucinogens, Dissociative Anesthetics, Inhalants
    i. Hypothetical Scenarios
2. References: Below are references and resources available to assist the trainee. The Laboratory's collection is constantly updated and expanding
    a. Policies
        i. Literature References (TOX.06)
        ii. Court Testimony and Proficiency testing (TOX.15)

iii. Outside Laboratory Analysis and Discoveries (TOX.56)
iv. Courtroom Testimony Monitoring (FSD.26)
v. Case Record (FSD.42)
vi. Control of Records (FSD.44)
vii. Discovery Request for Records (FSD.45)
viii. Customer Service and Complaints (FSD.14)

b. Literature
i. Literature Binders (see Literature Collection)
ii. Journal of Analytical Toxicology (historical and on-going collection)
iii. Principles of Forensic Toxicology, 4th ed, Levine
iv. Karch's Pathology of Drug Abuse, Karch.
v. A Primer of Drug Action, Julien.
vi. Clarke's Analytical Forensic Toxicology, Jickells and Negrusz.
vii. Medical-Legal Aspects of Drugs, Marcelline Burns
viii. Disposition of Toxic Drugs and Chemicals in Man, 10th ed, Baselt
ix. Drug Effects on Psychomotor Performance, Baselt
x. Fundamentals of Forensic Science, 3rd ed, Houck and Siegel
xi. Chapter 24: Fundamentals of Forensic Science, 3rd ed, Houck and Siegel
xii. Chapter 1: Forensic Science Handbook, Volume III, Saferstein
xiii. Chapter 23: Garriott's Medicolegal Aspects of Alcohol, 6th ed, Caplan and Goldberger
xiv. Journal of Forensic Sciences, Vol. 23, No. 1, 1978, Kogan
1. Chapter 19: Introduction to Forensic Toxicology, Crave and Baselt; reprint of original Kogan article with modifications

c. Required Courses:
i. The Robert F. Borkenstein Course on the Effects of Drugs on Human Performance and Behavior
ii. Drug Recognition Evaluator Program, California Highway Patrol
1. Including attendance to certification sites

d. Additional Resources:
i. The California Criminalistics Institute offers courses on courtroom testimony and pharmacology, subject to availability
ii. Standard Field Sobriety Test - Class, California Highway Patrol
iii. Drug Abuse Recognition - Class, Contra Costa County Office of the Sheriff
iv. California Vehicle Code Handbook
v. California Health and Safety Handbook
vi. California Penal Code Handbook
vii. California Association of Toxicologists meetings
viii. Society of Forensic Toxicologists workshops and meetings

3. Practical Exercises:
a. Exercises:
i. The trainee should observe relevant testimony by Forensic Services Division Criminalists
1. The trainee may also complete Internal Court Critiques

2. The trainee should attempt to observe testimony regarding drug impairment, if possible
    1. Alcohol impairment testimony and opinion may also be observed

ii. The trainee should review all pertinent literature, including literature listed in TOX.06
    1. A reading list will be maintained by the trainee

iii. Attend the required courses including DRE certification sites
    1. Observation notes will be collected and added to training binder.

b. Questions:

i. Write a brief summary of each court decision and how it applied to Forensic Science and Forensic Toxicology (may use answers from TOX.60) (~1 Week)
    1. United States v. Frye
    2. Daubert v. Merrell-Dow
    3. Kumho Tire Co. v. Carmichael
    4. General Electric v. Joiner
    5. Melendez Diaz v. Massachusetts
    6. Brady v. Maryland
    7. Missouri v. McNeely

ii. Pharmacology (Pharmacodynamics and Pharmacokinetics) (~3 weeks)
    1. What is pharmacodynamics? What is pharmacokinetics?
    2. What is efficacy?
    3. Describe five factors that affect absorption?
    4. What is an agonist, Antagonist?
    5. What are the potential mechanisms for tolerance?
    6. What are the potential mechanisms for drug interactions?
    7. What is hysteris? Why does it occur? What are the two types?
    8. What is "volume of distribution"? What factors determine the volume of distribution for a given drug type.
    9. What factors must be considered in predicting drug usage from drug levels?
    10. Describe how postmortem actions can influence drug levels?
    11. Describe zero and first order elimination.
    12. Define first pass effect.
    13. Define the term half-life? In general, how many half-lives will it take for a drug to be no longer detectable in the blood.
    14. Give 5 examples of different routes of administration and describe how each route of administration would affect onset of drug action and possibly peak blood concentration.

iii. Field Sobriety Tests/Drug Recognition and Evaluations (~2 weeks)
    1. What are the DRE drug categories?
    2. List the steps in the DRE process and briefly explain each step in the process.
    3. What are the standardized field sobriety tests? List and describe the clues for each.
    4. What is the expected pupil size for an individual who is under the influence of a stimulant? A narcotic analgesic?
    5. What would be the expected vital signs for an individual who is under the influence of a depressant? Of Cannabinoids?

6. If not all of the steps for the DRE is followed, how does it or does it not change your opinion regarding drug influence or drug impairment?

iv. Effects of Drugs

1. Effects of Drugs

1. Stimulants (amphetamines) (~2 weeks)

1. What are the metabolites of methamphetamine and MDMA? Are they active/inactive?
2. What are the common neurotransmitters that are affected by the usage of methamphetamine?
3. What is the common structure of these neurotransmitters? How are they different or similar to methamphetamines?
4. What is the mechanism of action for methamphetamine?
5. Methamphetamine may be present in racemic mixtures, describe the different properties and effects associated with d- vs. l- methamphetamine.
6. If a person is consuming methamphetamine only, what is the typical ratio that between the amphetamine and methamphetamine concentrations in blood can one expect
7. What is the half-life, therapeutic level, detection time window in blood and urine for methamphetamine.
8. What are the signs and symptoms you would expect to see from using amphetamine, methamphetamine, MDA, and MDMA?
9. Discuss the effects of methamphetamine and MDMA on driving

2. Stimulants (cocaine) (~2 weeks)

1. What are the metabolites of cocaine? Are they active/inactive?
2. Compare and contrast the effects of cocaine and methamphetamine on catecholamines.
3. What is the mechanism of action of cocaine?
4. Why do cocaine users typically smoke cocaine base and not smoke cocaine salt?
5. Explain the situation where in which the cocaine blood concentration is greater that the benzoylecgonine blood concentration.
6. What is the half-life of cocaine and benzoylecgonine?
7. What are the signs and symptoms you would expect to see from using cocaine?
8. Discuss the effects of cocaine on driving.

3. Opiates, Opioids, Narcotics (~2 weeks)

1. Define the terms: opiates, opioids and narcotics
2. Discuss the absorption, distribution, metabolism and elimination of heroin.
3. What is the mechanism of action of opiates?
4. Discuss why heroin is more potent than morphine.
5. What are the metabolites of heroin, oxycodone, codeine, and hydrocodone? Are they active/inactive?
6. What are the half-lives, therapeutic levels, and detection window times in blood and urine for morphine, hydrocodone and oxycodone?
7. What are some common signs and symptoms you would expect to see from using opiates/opiods?
8. What are the CNS effects of opiates that would be relevant to a driving under the influence case?

4. Cannabinoids (~2 weeks)
    1. What are the major metabolites of THC? Are they active/inactive?
    2. What is the mechanism of action of THC?
    3. How long after the cessation of marijuana use can COOH-THC be detected in urine?
    4. Explain how THC may no longer be detected in blood after recent usage.
    5. What are other cannabinoids found in marijuana? Are they active/inactive?
    6. What is the half-life of THC and the major metabolites?
    7. What are some common signs and symptoms you would expect to see from using marijuana or THC?
    8. THC has a broad spectrum of pharmacological effects, describe each and how they may or may not affect the ability to operate a motor vehicle safely.
5. CNS depressants (~2 weeks)
    1. Make a list of the following drugs (diazepam, oxazepam, clonazepam, lorazepam, flunitrazepam, chlordiazepoxide, carisoprodol, zolpidem, GHB, barbital, phenobarbital and secobarbital) Include the following: dosage form, therapeutic usage, therapeutic ranges, half-life, toxic concentrations, typical adverse side effects.
    2. What is the general mechanism of action for CNS depressants?
    3. List the expected range of values, in blood and urine, for endogenous and exogenous GHB in antemortem and postmortem cases. What considerations should be made in interpretation of a low-level GHB result?
    4. What, if any, is the potential in-vitro change in the concentration of GHB, collection and storage of the sample?
    5. What are some common signs and symptoms you would expect from using CNS depressants?
    6. What are the CNS effects of the benzodiazepines that would be relevant to driving? How do these effects compare with the effects caused by alcohol?
6. Hallucinogens, Dissociative Anesthetics, Inhalants (~2 weeks)
    1. List and describe the common adverse effects of LSD.
    2. List and describe the common adverse effects of PCP and Ketamine.
    3. Explain why it may be difficult to detect inhalants in blood. What factors may support that an individual is abusing inhalants that may only be present during the investigation?
    4. Discuss the significant adverse effects of hallucinogenic drugs on driving.
    5. What is Serotonin Syndrome? Describe some of the signs and symptoms.

v. Hypothetical Scenarios and Miscellaneous Topics (~1 month)

1. The information given by the Deputy District Attorney is limited to the concentration of drug in blood determine by the laboratory. What is your opinion with regards to drug influence or drug impairment? Is there a difference?
2. Laboratory results indicated the presence of alcohol and methamphetamine in the person's blood. What poly-drug effects can one expect from the individual? Discuss how the presence of the above mentioned drugs may or may not interact with each other.
3. Discuss the factors that should be taken into consideration when forming an opinion about whether a person is under the influence of a drug.
4. Discuss the factors that should be taken into consideration when forming an opinion about whether a person is impaired by a drug.
5. Explain how you may go about researching information on a drug that is not commonly encountered.

6. The signs and symptoms observed for an individual are: low pulse and blood pressure, constricted pupil size, and the individual is nodding off. The urine results are positive for amphetamine and methamphetamine. What is your explanation for this type of situation?

7. For an individual suspected of being under the influence of stimulants, what is the typical effect on the individuals pulse? Explain why during the DRE process, 3 pulses are taken after a substantial time has elapsed between each pulse reading? If only one elevated pulse is acquired for the same above mentioned individual, explain how it may or may not changed your opinion regarding influence due to stimulants.

4. Assessment:
   a. The trainee will complete the Impairment/Effects of Drugs question sets
      i. The questions will be reviewed by the Supervisor or designee and written feedback will be provided
      ii. The Supervisor or trainee may review the questions after each topic set is complete
5. Competency:
   a. The Supervisor will administer a mock court to the trainee in any area of drug impairment within the realm of analysis of the toxicology unit
      i. The Supervisor will document the mock court through a written evaluation
   b. The Criminalist may begin drug impairment testimony after successful completion of the mock court module and upon authorization from the Manager/Supervisor.
6. Documentation:
   a. The following will be signed and dated by a Supervisor
      i. Mock court evaluation after feedback has been given
      ii. Questions with feedback of Supervisor, trainee, or designee

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 12/18/2018	**NUMBER:** TOX.67 - LCMSMS Using the software
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: none**	
CHAPTER: Equipment	**SUBJECT:** LCMSMS Using the Software	

I. Policy: The following is the procedure for using Lab Solutions Software for running the LC-MS/MS instrument

A. These suggestions are intended to be a guide for usage and slight variations may be made for file names, names of folders, etc.

B. Start Lab Solutions - the user is "Admin", there is no password

1. From Instruments select "LC1"
2. The method parameters are not applied to the instrument on start up.
    a. If a method is active but not in use, it will still consume mobile phase and gas
3. Pumps, column oven and MS can be turned on individually from Data Acquisition if needed
4. It is recommended to close the method currently loaded before loading a new method (File> Close Method)
5. When a method is loaded, the edit method screen will appear
    a. To apply the instrument parameters, select download and close
    b. To return to the main page without applying parameters, select close
6. The instrument should be shut down when not in use. This can be set automatically within a sequence or manually by choosing Shutdown from the Data Acquisition screen.

C. Running Samples: Samples are run using Realtime Batch

1. Realtime batch is accessible from the tab or from the Window menu in the Realtime Analysis Lab Solutions software
2. Previous batches can be used as a template (analyst may have to copy an existing batch into their folder using Explorer). (File >Open Batch) Analyst should create a new sequence for each batch of samples run on the instrument (typically the batch is named by date)
    a. Using a sequence of the same type of extraction as a template will minimize alterations required to prepare a sequence
3. If the analyst uses a past batch, they must ensure that the standards and concentrations listed match the concentrations used.
4. Make changes to the batch by editing the table
    a. The field in one sample can be edited and then applied to the entire batch by right clicking and selecting Fill Down (copy field) or Fill Series (increments number in the field)
5. The table can contain different fields. Ensure the the following fields are present and populated as needed below. Fields can be added or deleted by right clicking on the table and selecting "Table Style"
    a. **Tray Name** - the 10 position tray is Tray 0, the 105 position tray is Tray 1
    b. **Vial** - indicate the location of the sample vial on the autosampler tray
        i. Entering "-1" will run the method without injecting any sample
    c. **Sample Name** - enter a sample description; the description should be either blank, Std or QC with concentration, or the specimen lab number including request.
    d. **Sample ID** - additional sample information
    e. **Sample Type** - standard, unknown

f. **Method** - enter the method to be used for data acquisition. This includes the file location.

i. Note: The Method can be edited for individual samples

g. **Data File** - enter the name of the data file. This includes the file location

i. The sample in line 1 of the sequence table should be named using a date format, such AS MMDDYY01 or YYMMDD01, each subsequent line should be identified similarly, with only the two digit number at the end of the name changing to correspond with the sample line.

ii. For example, in a sequence with 18 lines, the sample in line 1 will be identified as YYMMDD01, while that in line 18 will be YYMMDD18. To fill in this data automatically, enter the correct name in line 1, highlight/select the entire column, then right click and select Fill series.

h. **Injection Volume** - The volume that will be injected onto the instrument. This should be the same for all standards and case samples within the batch

The following fields may also be present:

i. **Level** - calibration level

j. **Analysis Type** - quantitation, library search

6. Save the batch

a. Select File > Save Batch As

b. The batch file can be saved in the same folder as the data files

c. Name the sequence using a date format, such as MMDDYY## or YYMMDD##, where the ## is a two digit number indicating the sequence number. For the first sequence of a particular day, the sequence would be named YYMMDD01, each subsequent sequence would be numbered 02, 03…as appropriate.

d. Ensure the sequence is saved with the appropriate file extension (.lcb).

7. Print the Sequence

a. Select File > Print Batch Table

i. The appearance of the printout can be edited using File>Print Batch Table>Edit format

1. The batch report should have at least the tray and vial position, sample name, method name, data file name and injection volume

b. The printed sequence can be used to ensure that vials are placed in the correct positions on the autosampler.

c. The sequence will be archived with the batch results

8. Select Start from the Batch menu or select Start Realtime Batch from the side toolbar

a. If no samples are selected, it will automatically run from the beginning

b. If one or more samples are selected, a dialog box will open with the option to start from the beginning or run only specific lines from the table

D. Mobile Phase Usage

1. The software can keep track of mobile phase usage and provide warnings if the volume gets low, preventing air from entering the system.

2. From the Acquisition window, click on Mobile Phase Settings

a. Enter the volume in the reservoir (A, B and rinse) and click OK

i. This is the volume of solution, not the total capacity of the reservoir

b. Select desired warnings for each reservoir

3. As the instrument runs it will calculate the amount of mobile phase used and give a warning if it reaches a set level

4. When the reservoirs are refilled, the values must be reset

II. The Lab Solutions software can help with optimizing method parameters

A. Precursor ions, product ions and MRM transitions are chosen during method development. The optimization parameters used depend on the tune of the instrument. Over time, it may be required to reevaluate the parameters. The nominal values of precursor and product ions cannot be changed without additional validation, but the optimization parameters can be updated.

B. The optimization should only be done with a single standard at a concentration of around 1 µg/ml. The sample is run on a flow injection method (an LC method which uses the autosampler but bypasses the installed column).

C. Product ion scan

1. On the MS tab of the method parameters, there should be one event for a "Product Ion Scan"
    a. Enter the mass range to scan and the mass of the precursor ion (this will typically be the molecular weight of the compound +1)
    b. Generally a collision energy of -30 is acceptable
2. When the sample is run it will produce the fragmentation pattern of the selected precursor ion

D. MRM optimization

1. Once the precursor/product ions are chosen, the MRM parameters for each transition can be optimized. This includes the Q1 bias, collision energy and Q3 bias.
2. This uses a flow injection method (no column) for a single standard
3. In the MS tab of method parameters, there should be one event for MRM
4. In the MRM settings, enter each transition. It is okay to enter the nominal mass value. A dwell time of 100 is acceptable
    a. Download and close. Save the method
5. From the Acquisition tab, select "Optimization for method"
    a. Select Optimize Voltage
    b. Select the values to be optimized: adjust precursor m/z, optimize voltage, adjust product m/z
    c. Select and output folder and select "Apply to Method File"
    d. The instrument will run through a series of optimizations. The parameters will be save in the method settings.
6. To update an existing method with the new optimization parameters:
    a. Load the complete method
    b. Select Method>Add MRM event and select the method with the optimized parameters for the single compound
    c. The transitions and optimized settings will be added to the method.

E. Loop time/Dwell time

1. Once all the transitions have been added to a method, or if the number of transitions has changed due to overlap of events, the Dwell time should be updated.
2. From the MS tab of the method editor click on "Loop time"
3. Enter the target value for maximum loop time. This depends on the peak widths in the method, but around 0.5 min is typical. Use the narrowest peak in the method to determine loop time.
4. Click on "Calculate Dwell time" and then "Apply to Method"
5. This will update the method parameters with an appropriate dwell time for each transition

F. The optimization parameters are geared toward maximizing sensitivity, based on the use of a single neat standard. Method parameters may be adjusted as needed from the optimized parameters based on desired response within the method as well as the presence of other compounds.

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 12/18/2018	**NUMBER:** TOX.68 - LCMSMS Maintenance
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: 5.5**	
CHAPTER: Equipment	**SUBJECT:** LCMSMS Maintenance	

I. Policy: The Liquid Chromatograph/Tandem Mass Spectrometer (LCMSMS) instrument will be checked to ensure its reliability. Maintenance will be carried out if needed according to the procedures below.

A. The LC system is composed of multiple units

1. System Controller
    a. The controller unit functions to coordinate the individual units of the system
    b. The controller must be turned on
    c. There is no routine maintenance for the controller
2. Degassing Unit
    a. The Degassing unit removes dissolved gasses from the mobile phase. This prevents bubbles in the system which can impact the functioning of the pumps and produce noise or fluctuations in the chromatography.
    b. When running, the degasser pressure is typically around -95 kPA
    c. The unit has filters that may need to be replaced if they become dirty. This can be performed by service personnel or refer to DGU-20A3R manual. Maintenance will be recorded in the maintenance log.
    d. If the unit will not be used for an extended period of time, the unit should be turned off, solvent removed and in/out ports capped.
    e. The system can be used without the degassing unit if an alternate method of degassing the mobile phase is employed.
3. Solvent Delivery Module (Pump)
    a. The Solvent Delivery Module pumps the mobile phase through the system. There are two units to provide mobile phases A and B.
    b. The pumps have a pressure limit of 9500 psi. Pump pressure depends on solvent composition, column size and composition, and flow rate. The unit will abort if the pressure limit is exceeded.
        i. A higher than normal pressure for a method may indicate a clog
        ii. The most likely location of a clog would be in-line filter/guard column/column
        iii. If present the in-line filter or guard column should be changed. If necessary, the column can be changed.
    c. The unit should be purged if new mobile phase is installed or if the instrument has not been used recently. The purge can be performed automatically as part of a batch, initiated from the software or performed manually.
    d. To perform a manual purge:
        i. Open the drain valve by turning the drain knob counterclockwise
        ii. Press the purge button
        iii. The purge time and flow can be changed from the keypad if needed
        iv. Once purging is complete, return the drain valve to the closed position
    e. Plunger, seals, diaphragms, valves and filters may require cleaning or replacement if they become worn or damaged

i. Maintenance may be performed by Service personnel or refer to the instruction manual for LC-20AD. Maintenance will be recorded in the maintenance log.

4. Autosampler
   a. The autosampler holds the samples to be analyzed and injects samples onto the column.
   b. There are two trays. Tray 0 holds 10 vials and Tray 1 holds 105 vials. The trays can be cooled to prolong stability of samples. This can be set in the method parameters.
   c. The needle is cleaned by a rinse solution. The rinse solution is chosen based on the properties of the sample being analyzed. Rinse parameters are set in the method.
   d. The autosampler should be purged if a new rinse solution is installed or the instrument has not been used recently. The purging can be performed through the software or manually.
      i. To perform the purge manually: Press purge on the front keypad.
   e. The needle, seals, valves and filters may require cleaning or replacement if they become worn or damaged.
      i. Maintenance may be performed by Service personnel or refer the instruction manual for SIL-30AC. Maintenance will be recorded in the maintenance log.
   f. If the unit is not going to be used for an extended period of time, the needle should be raised to its highest position
      i. On the front keypad, press the up arrow button. When "ZHOME" is displayed on the display, press enter. The unit can then be turned off.
5. Column Oven
   a. The column oven containers the mixer, switching valve and column. The oven controls the temperature of the column.
   b. The switching valve allows for multiple flow configurations
      i. The flow path can bypass the column for method optimization experiments
   c. The flow out of the column oven can be directed to the mass spectrometer or to waste
      i. Sending the flow to waste when possible will minimize contamination of the mass spectrometer
      ii. The flow is controlled by the method
   d. There is a leak sensor in the oven
      i. If a leak is detected, correct the source of the leak, completely clean up the leak and allow the vapor to dissipate before continuing
      ii. The sensitivity of the leak Sensor can be adjusted, see instruction manual for CTO-20AC
   e. Installing the column
      i. The column should be placed in the column clamps.
      ii. Check the direction of flow marked on the column
      iii. The stainless steel tubing attaches at the inlet end and the PEEK tubing attaches to the outlet
      iv. Fittings should be finger tight
      v. The type and serial number of the column will be recorded with each batch
   f. Storing the column
      i. The column can be stored outside of the column oven when not in use
      ii. The column should be flushed with organic solution (without any additives)
      iii. Remove from fittings and cap both ends, the column can be stored at room temperature
   g. Guard column
      i. The guard column is optional, but will help prolong the life of the column
      ii. The guard column in composed of the same material as the column
      iii. The guard column is installed on the inlet side of the column and requires a cartridge holder

h. In Line Filter

i. The in line filter is optional, but can help protect the instrument from particulates

ii. The in line filter is installed prior to the column and guard column (if installed)

B. The mass spectrometer removes the liquid flowing out of the LC system, ionizes the sample and filters ions based on the mass/charge ratio. The mass spectrometer has a quadropole (Q1), a collision cell and another quadropole (Q3).

1. Tuning

a. The tune of the instrument is stable and only needs to be done after maintenance has been performed on the detector

i. It is important that tuning not be performed if the instrument has lost sensitivity and needs to be cleaned

ii. When a tune is performed, it will be recorded in the maintenance log. A copy of the printout will be included in the maintenance binder.

b. The tuning solution is contained in the Standard Sample Introduction Unit, below the ESI unit

i. When using Auto-tuning, pressurization and introduction of tuning solution is automatically controlled

ii. The bottle should contain 40-80 mL (the tubing must be submerged in solution)

iii. Each auto-tune will use about 1 mL of solution

c. From LabSolutions Main menu, select tuning

i. Connect the tubing from the standard sample to the ESI probe

ii. Auto-tune will adjust detector for sensitivity, resolution and mass calibration

iii. The tune will take about 40 minutes

iv. When tuning is complete, save the file and select yes to save as the default tuning file

v. Interpretation

1. Detector voltage should be around -1.6 to -3.0 kV

1. Voltage around -2.7 kV indicates the detector may need to be replaced

2. Pressure of the interface unit should be around 130 Pa (PG)

1. If the pressure is < 40 Pa, the desolvation line may be clogged

3. The tune report has three different acquisition modes: Q1 scan, Q3 scan, and Product Scan

1. Q1 and Q3 scan modes evaluate each quadropole independently

1. Positive mode uses ions of the nominal value: 48, 168, 256, 300, 652, 1004, 1224, 1603

2. Negative mode uses ions of the nominal value 503, 1007

2. Product scan uses both quadropoles and evaluates transitions

1. Positive mode uses transitions from 388 > 45, 89, 133, 177

2. Negative modes uses transitions from 503 > 89, 179

3. FWHM (peak width) is 0.7, values must be between 0.51-0.8

4. Actual m/z must be within 0.15 of target m/z

5. For Q1 and Q3 scans in positive mode, m/z of 1224 should be greater than 200,000

2. The instrument is equipped with an electrospray ionization unit (ESI) to take the sample from the LC system and introduce it into the mass spectrometer

a. The desolvation line heats the sample to help remove solvent and introduce ions into the vacuum

i. PG vacuum around 60-70 Pa indicates the line may require cleaning or replacing

ii. It is not necessary to stop the vacuum to clean the line

iii. Remove the ESI unit

1. Important: Turn the high-voltage off in the LabSolutions Software and turn all temperatures down
2. Turn the LC pump and gas off from LabSolutions Software
3. Disconnect LC tubing
4. Unlock the ESI unit (slide knob on the bottom right side to the left), lift the unit upward to remove it

iv. To access the DL:

1. Loosen the two screws with the hex wrench
2. Insert the drawing tool under the heated block to remove the heater flange
3. Disconnect the connector
4. Loosen the DL locking screws with the hex wrench (about 3 turns)
5. Turn the notched sections so the DL can be drawn out

v. The DL line can be cleaned with acetonitrile or isopropanol

1. Blow clean air to evaporate the solvent before reinstalling
2. If the clog cannot be cleaned, replace the line

vi. Reinstall the DL line

1. Insert the line and turn the notched sections counterclockwise
2. Connect the connector
3. Secure the DL locking screws
4. Insert the heating block using the drawing tool and tighten the screws
5. Re mount the ESI unit and secure the lock by sliding the knob to the right

vii. Replacing or cleaning of the line will be recorded in the maintenance log.

b. The lens system focuses the ions and introduces them into the quadropole

i. The lens system consists of the Qarray, skimmer, multipole and entrance lens

ii. The lens system is accessed through the Multipole maintenance cover on the top of the instrument

iii. The vacuum must be stopped to access the lens system

iv. To be cleaned, the parts can be sonicated in methanol and allowed to air dry before reinstalling

1. See LCMS 8050 manual "Maintenance of the Lens System" for further information

v. Maintenance will be recorded in the maintenance log.

3. The vacuum system is composed of a rough pump and turbo pump. There are four vacuum chambers.

a. The rough pump evacuates the first vacuum chamber (Qarray section) and the rear part of the triple inlet turbo pump

b. The turbo pump evacuates the remaining vacuum chambers (multipoles and detector)

c. Only the first chamber (PG) and fourth chamber (IG) have vacuum gauges

d. To stop the vacuum system: from system control, select Auto Shutdown

e. Rough pump maintenance (scroll pump)

i. Ballast the pump

1. The ballast has three positions: 0, I, II

1. 0 provides the strongest vacuum, the pump should be in this position when the instrument is running
2. I and II provide increasing levels of flow that can help clear out condensable vapors

2. The pump should be ballasted weekly by allowing the pump to run in position I for about 20 minutes
    1. This helps clear out vapors that may condense and contaminate the pump
    2. The frequency of ballast can be adjusted based on use
3. If a large amount of vapor has been introduced the ballast can be run on position II
    1. Running on position II increases the wear on the tip seals
4. If the pump will be shutdown for storage, ballast the pump on position II for one hour before shutting down

ii. Replacing the tip seals (approximately 9000 hours)

1. The vacuum system must be shut down
2. Follow directions provided by Edwards kit A731-01-801
3. This will be recorded in the maintenance log.

f. There is no routine maintenance for the turbo pump

4. For additional maintenance, see the LCMS 8050 manual.

C. The moisture trap for the gas line(s) shall be checked quarterly. **The check will be logged in the Sheriff Specialist Safety Checks. See SAFF.04.04** . The LC-MS/MS uses the argon gas line. The nitrogen and clean air lines from the generator do not have filters.

1. A change in the color of the indicator beads is a sign of moisture or oxygen present and the trap/filter kit needs to be replaced.
    a. Moisture Trap, the original color is yellow originally and turns clear when saturated
    b. Oxygen Filter, the original color is green originally and turns grey when saturated
2. Procedure for changing moisture traps:
    a. Turn off the main gas line.
    b. Refer to manufacturer's instruction for replacing the trap/filter kit.
    c. **REMEMBER: Changing the filters on the carrier gas line means that the mass spectrometer should be in shutdown mode, unless the procedure is performed rapidly. If proper shut down is not performed, the mass spectrometer may be damaged.**
    d. Changing the trap/filter will be logged in the Sheriff Specialist Safety Checks. See SAFF.04.04.

D. References

1. LCMS-8050 Instruction Manual (225-19336)
2. Solvent Delivery Module, LC-20ADXR Instruction Manual (228-90577)
3. System Controller CBM-20A/20Alite Instruction Manual (228-30847)
4. Autosampler SIL-30AC Instruction Manual (228-90775)
5. Degasser DGU-20A3R Instruction Manual (228-90933)
6. Column Oven CTO-20A/20AC Instruction Manual (228-90075)
7. Edwards XDS46i Scroll Pump Instruction Manual (A731-01-880)

END OF DOCUMENT

Contra Costa County Office of the Sheriff FORENSIC SERVICES DIVISION Toxicology Technical Unit Manual	**REVISION DATE:** 12/18/2018	**NUMBER:** TOX.69 - LCMSMS Nitrogen Generator and Peripheral Equipment
	RELATED ORDERS:	
APPROVED BY: Danielle Adams	**ANAB: None**	
CHAPTER: Equipment	**SUBJECT:** TOX.69 - LCMSMS Nitrogen Generator and Peripheral Equipment	

I. Policy: The following equipment supports the use of the LC-MS/MS

A. **Nitrogen Generator**

1. The Nitrogen generator can supply both nitrogen and clean, dry air to the instrument instead of using compressed gas cylinders
    a. The generator must be on while the LC-MS/MS instrument is running
    b. The generator can be turned off if not needed for an extended period of time
        i. When turning back on, allow at least 10 minutes for the generator to pressurize before activating the instrument
2. While running, the compressor output gauge will read around 115 psi
3. During operation, water is drained into a container next to the generator
    a. The water container must be emptied as needed
4. If the high temperature light is lit, stop the generator and call for service
5. Routine Maintenance
    a. Every 8700 hours, filters and tip seal should be replaced. This can be done by service personnel or refer to the NitroFlow60 manual.
    b. Maintenance will be recorded in the nitrogen generator maintenance log.

B. Power Converter

1. The power converter reduces noise in the electrical system. If using, all components of the LC system should be plugged into the power converter.
2. The Power Converter does not require routine maintenance.

C. Glassware

1. The LCMS system is sensitive to undissolved solids which can cause blockages in the system. This includes dust and bacterial growth that may not be easily visible.
2. Glassware used to hold or prepare mobile phases or other samples should receive extra care.
3. To ensure cleanliness, it is recommended to rinse all glassware with a small amount of LCMS grade solvent prior to use. Mobile phase storage bottles should emptied and rinsed even if the same solution is being added.
4. If the glassware stored an aqueous solution, rinse with an organic solvent to disrupt any growth that may have occurred. Rinse again with clean water prior to filling.

D. References

1. Parker Balston NitroFlow60 manual 08/2016

END OF DOCUMENT

Contra Costa County

Office of the Sheriff

Field Operations Bureau

Investigation Division
Policy and Procedure Manual

Updated December 2019



Contra Costa County Office of the Sheriff
Investigation Division Policy and Procedure

Mission Statement

The Office of the Sheriff exists to serve the community. The protection of people and their property is our primary responsibility. Honor, Courage, Commitment, Leadership, and Teamwork shall be the core values employed as we serve the citizens of Contra Costa County.

The responsibility of the Investigation Division is to conduct follow-up investigations of all reported felony offenses and certain misdemeanor offenses that occur in the unincorporated areas of Contra Costa County. Detectives also follow up on the same crime types committed in the contract cities and special districts.

Detectives are dedicated to efficient, timely and thorough criminal investigations to determine facts as they relate to the innocence or guilt of those suspected of criminal activity. The objectives of such investigations are the identification and prosecution of those individuals responsible for the crime.

Preface

This Manual is, and shall be, a composite of the current practices, objectives, principles, policies and administrative procedures governing the operation of the Sheriff's Office and the Field Operations Bureau, Investigation Division.

This Manual has been designed to provide a clear understanding of the constraints under which members of this Office operate, and the expectations that they are to fulfill.

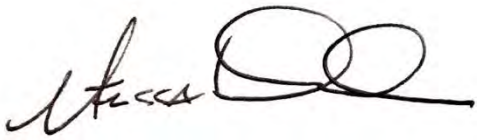
The policies and procedures listed herein are meant to serve as positive guidelines for actions by members of this Office. They are meant to be "attitude forming," to set limits of discretion, and to provide a method to achieve an objective. This Office assumes responsibility for official conduct or acts that are directed by, or in compliance with this manual.

This Manual supersedes all previously issued Investigation Division Manuals and procedural memorandums. It does not supersede any applicable State or Federal laws.

Infractions in policies, and the practice of poor procedures, decrease the public's confidence in law enforcement and this Office. It is the responsibility of all employees to thoroughly acquaint themselves with this Manual and use it as a guide in the performance of their daily operations.

Many of the directives contained within this Manual must change as the need for change occurs. In that regard, it is my hope that members of this Office will put forth their ideas so that the manual may be kept up-to-date and progress with time.

Suggestions for corrections or additions to this manual may be submitted via your chain of command.



Melissa Klawuhn
Investigation Division Commander
December 2019

Contra Costa County Office of the Sheriff
Investigation Division Policy and Procedure

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Chapter One -Administration

Chapter One - **Administration**

3.1.1 Investigations Division Organizational Chart
3.1.2 Personnel Duties and Responsibilities
3.1.3 Equipment and Vehicles

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.01.01
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 06-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Administration	**SUBJECT:** Organizational Chart	

Investigations Division Organization

Staffing Breakdown:

Investigations:

- Managers: [redacted]
- Sergeants: [redacted]
- Detectives: [redacted]
- Sheriff's Crime Analysts: [redacted]
- Sheriff's Specialists: [redacted]
- Investigations Clerk [redacted]

Civil:

- Manager: [redacted]
- Sergeants: [redacted]
- Deputies/Detective: [redacted]
- Clerk Supervisor: [redacted]
- Civil/Warrants Clerks: [redacted]

Investigations Division Organizational Chart

Investigation Division Commander (Captain)					
Investigation Division Assistant Commander (Lieutenant)					Civil Unit Lieutenant
Homicide Unit Sergeant	General Investigations Sergeant	Special Victims Unit Sergeant	Special Investigations Sergeant	Community Services Sergeant	Civil Unit Sergeant
[redacted] Homicide Detectives	[redacted] GIT Detectives	[redacted] Sexual Assault Detectives	[redacted] SIU Detectives	[redacted] Sheriff's Crime Analysts	[redacted] Civil Deputies
	10851 Detective	290 Detective	Vice Detective	[redacted] Sheriff's Specialists	Warrant Service Detective
	Misdemeanor Complaints Detective	[redacted] High-Tech Crimes Detective	CASE Team Detective		Clerical Supervisor
		Elder Abuse Detective	FBI Safe Streets Task Force Detective		[redacted] Civil Unit Clerks
		Domestic Violence Detective			Warrant Service Clerk

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.01.02
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 06-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Administration	**SUBJECT:** Supervision and Case Management	

I. POLICY

A. The Contra Costa County Office of the Sheriff's Investigation Unit will ensure assigned personnel are familiar with their assigned duties and responsibilities.

II. GENERAL INFORMATION

A. Division Commander Responsibilities

1. The Investigation Division Commander, a Sheriff's Captain, is responsible to the Field Operations Bureau Commander for the management and direction of the operations in the Division. The Division Commander plans, advises, counsels, and directs major Divisional activities; formulates special orders, policies, and procedures, and ensures compliance with same; coordinates major staff and line functions, and ensures the functions are discharged effectively. In addition, the Division Commander may supervise major and/or sensitive crime scenes and investigations, officer-involved shootings, media contacts, and coordination with various agencies.

B. Division Assistant Commander Responsibilities

1. The Division Assistant Commander, a Sheriff's Lieutenant, is responsible to the Division Commander for assisting in the management and direction of the operations of the Investigation Division. The Division Assistant Commander advises, counsels, and assists in major Divisional activities; reviews and approves operational plans; prepares homicide call-out schedule; performs press releases when necessary; coordinates administrative staff functions; coordinates in-service training for staff and line personnel; coordinates the replacement and assignment of the Division's vehicles; reviews the Division Manual on a yearly basis; adds/incorporates any memorandums addressing the content therein; and assumes command of the Division in the Division Commander's absence.

2. Conducts audits of Investigations Units to ensure reports are assigned and completed in a timely and efficient manner.

3. Will ensure each unit supervisor provides monthly updates on status of open and active cases.

4. Issues equipment and maintains an up-to-date equipment inventory.

C. Unit Supervisors

1. Unit Supervisors, Sheriff's Sergeants, are responsible to the Division Assistant Commander for the complete and proper disposition of all duties assigned to their respective units; inspect personnel and equipment; monitor the functions of the Unit, including ensuring close adherence to policies and procedures; collect and review all reports, assign cases to Unit personnel; prepares and reviews operational plans; conducts field briefings; review investigative progress and final dispositions; approve cases for submission to the District Attorney; provide direction and assistance for Detectives as necessary; evaluate and report personnel performance; perform supervisory functions for personnel assigned to the Unit; review CLETS, NCIC, and all pertinent data entries, and complete a monthly statistical report. Unit Supervisors will review all search warrants prior to submitting to a judge for consideration. A Unit Supervisor shall be present at the service of all search warrants, probation and parole searches.

D. Detective

1. Detectives are responsible to their Unit Sergeant and, in his/her absence, the Division Assistant Commander, for the effective and efficient disposition of cases assigned; investigation of crimes; identification and apprehension of criminals; recovery of stolen property; preparation of case reports; testimony in court; and performance of other duties, as required.

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.01.03
	RELATED ORDERS: CCCSO 1.07.11	
ISSUE DATE: 05-01-07 **REVISION DATE:** 06-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Administration	**SUBJECT:** Equipment and Vehicles	

I. POLICY

A. Detectives assigned to the Investigation Division shall be issued the items on the Investigation Division Equipment List.

B. It is the responsibility of each Detective to ensure the proper care and maintenance of the issued equipment.

C. The loss, damage, or unserviceable condition of any County equipment shall be reported to the Unit Supervisor or Division Assistant Commander. Each of these scenarios will be documented utilizing official memo format, and directed via the chain of command to the Division Commander.

D. Any Sheriff's Office Policies and Procedures Manual sections that apply shall be adhered to in conjunction with this section.

Chapter Two – Unit Duties and Responsibilities

Chapter Two **- Unit Duties and Responsibilities**

3.2.1 Homicide Unit
3.2.2 Special Victims Unit
3.2.3 General Investigation Teams
3.2.4 Misdemeanor Complaints
3.2.5 Special Investigations Unit
3.2.6 Vice Investigations and Asset Forfeiture
3.2.7 Civil Unit
3.2.8 Community Services Unit

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.01
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Homicide Unit	

I. POLICY

A. The Office of the Sheriff's Homicide Unit will:

1. Follow-up on all homicide, manslaughter, officer-involved fatal and non-fatal incidents where the force used resulted in major injury or death.

2. Investigate in-custody deaths that fall within the fatal incident protocol policy.

II. PROCEDURE

A. The Homicide Unit is responsible for the following offenses:

1. All homicides

2. Deaths involving suspicious circumstances

3. Criminally related or suspicious deaths occurring within the Contra Costa County Detention Facilities

4. In-custody prisoner deaths

5. Officer-involved fatal incidents resulting in injury or death within the unincorporated areas of Contra Costa County or any jurisdiction that provides contract law enforcement services.

6. Homicide Detectives may be dispatched to the scene of a CCCSO officer-involved shooting in another jurisdiction if such response is deemed appropriate by the Homicide Unit Supervisor, the Division Assistant Commander or the Watch Commander.

   a. The role of the responding CCCSO Homicide Detective in such cases shall be to offer assistance to the venue agency having investigative responsibility.

b. No CCCSO Detective shall play an active role in the investigation, nor initiate an investigative function, unless the investigative venue has been relinquished by the venue agency in accordance with the County O.I.F.I. and CCCSO O.I.F.I. policies.

7. Deaths of children wherein the cause of death appears to be associated with homicide, child neglect, abuse, or molestation shall be investigated by the Homicide Unit.

8. Case responsibility in cases deemed to be abduction only shall rest with the Special Victims Unit.

9. Homicide Detectives will not be responsible for conducting administrative investigations related to the investigation of any offenses, as described in this section, without authorization from the Division Commander.

10. Any investigation as directed by the Division Commander or Division Assistant Commander.

B. Homicide/Major Felony Call Out Procedure

[redacted]

C. Major Incident/Officer Involved Fatal Incidents

1. If a fatality has occurred as a result of a police action, where there is direct involvement by a Deputy Sheriff, the current call-out procedure will be invoked (Officer-Involved Fatal Incident Protocol).

2. If an incident occurs involving an officer's use of deadly force, where no fatality or life-threatening injury occurred:

a. The on-call sergeant will use his or her discretion regarding response and will make the following notifications:

- Division Assistant Commander
- The on-call District Attorney

D. Press Release Information

1. Telephone messages or press calls will be referred to the Division Assistant Commander or the Public Information Officer.

2. Press calls should not be referred to Investigators in the field who are actively working a death investigation.

E. Major Incident/Officer Involved Fatal Incidents

1. Refer to Sheriff's Office Policy regarding Police-Involved Fatal or Serious Injury Incidents.

F. Review of all Death reports

1. The Homicide Unit Supervisor will review patrol reports of all suicides, non-criminal, and deaths of unknown cause within the unincorporated jurisdiction of the Sheriff's Office.

G. Autopsy Room Protocol

1. Coroner's Office policy requires all those present in the autopsy room to wear protective clothing.

   a. This requirement is part of our continuing effort to maintain a safe and secure environment during an autopsy and as a means to lessen the possibility of any airborne and/or blood-borne pathogens from coming in contact with observers during an autopsy.

2. Refer to the Office of the Sheriff Coroner's Division Manual for details regarding autopsy protocol and procedures.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.02
	RELATED ORDERS: Patrol Manual 3.04.04	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Special Victims Unit	

I. POLICY

A. The Special Victims Unit is comprised of four elements; Sexual Assault/Child Abuse, High Tech Crimes, Domestic Violence/Elder Abuse, and Sex/Arson Registration.

B. The Special Victims Unit is responsible for the following:

1. All felony sexual assaults
2. All felony child abuse/neglect cases, including:
    a. Child Interview Center (CIC) scheduling, observation and documentation
3. All kidnapping cases
4. Child pornography cases, including Internet child pornography
5. All child abductions
6. High Tech computer crimes
7. Elder and Domestic Abuse
8. Sex/Arson Registration, which duties include:
    a. Register offenders who are required to do so, per P.C. 290
    b. Monitor registrants
    c. Investigate non-compliant registrants
    d. Conduct public and individual “Megan’s Law”

disclosures/notifications, when required by law, about P.C. 290 registrants, as deemed necessary for public safety

e. Provide information, upon request, to Child Family Services and the courts concerning registered sex offenders for the safety of children

f. Provide additional assistance and expertise, as directed by the Special Victims Unit Supervisor, Division Commander or Assistant Division Commander.

II. PROCEDURE

A. Sexual Assaults Resulting in Abortion or Live Birth

1. The aborted remains are considered criminal evidence. A search warrant should not be necessary for the collection of the fetal remains.

2. The following procedure is recommended for handling cases where a sexual assault results in pregnancy and abortion.

[redacted]

[redacted]

D. Live Births

1. A Buccal Swab should be obtained from the infant and the suspected father. Processing is the same as any other DNA case.

2. The Sheriff's Criminalistics Lab can be contacted for questions concerning the handling of these cases.

E. SART exams

1. SART procedures will be followed as outlined in Appendix 2

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.03
	RELATED ORDERS: 3.02.04 Misdemeanor Complaints	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** General Investigation Teams	

I. POLICY

A. The General Investigation Unit (GIT) is divided into two teams, General Investigations Team (GIT) and Misdemeanor Complaints.

1. **GIT**: Team will handle investigative responsibilities for cases generated out of the unincorporated county area.

2. **Misdemeanor Complaints**. Team will handle all misdemeanor crimes and all missing persons, both Juveniles and Adults.

B. The General Investigation Team shall be responsible for the investigation of the following types of crimes:

1 Felony Assaults

2. Robberies

3. Felony Weapons Violations

4. Burglary

5. All Felony Thefts

6. Receiving Stolen Property

7. Forgery

8. Counterfeiting

9. False Personation

10. Arson

11. Fraud

II. GENERAL INFORMATION

A. All crime reports are reviewed by the Unit Supervisor.

B. All cases are assigned to an investigator by the area of occurrence for follow-up investigation.

III. PROCEDURE

A. Follow-up investigation includes, but is not limited to the following tasks:

1. Thorough and complete collection of physical evidence, either at the scene or in some other location

2. Continuation of development of witnesses

3. Necessary re-interviewing of witnesses

4. Assessment of information and evidence obtained

5. Liaison with Criminalistics Laboratory and assessment of Criminalistics Laboratory analysis

6. Determine and conduct appropriate surveillance, interrogation, and identification processes

7. Preparation of wanted notices and effecting the dissemination of information to other police agencies

8. Coordination of tasks when the investigation extends beyond jurisdictional boundaries

9. Locating and arresting the perpetrator and accomplices

10. Presentation of evidence and statements to the District Attorney for the purposes of reviewing the case for filing of criminal charges.

11. Development of exhibits for presentation in court

12. Preparation and submission of required reports

14. Provide additional assistance and support to crime specific units as needed or directed by Division Command Staff

15. When a "DOJ Audit" request is received from the Records Division, the Detective receiving the request will complete the Validation Checklist and document the completion in a supplemental report, which will include any new information, and a copy of the checklist.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.04
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Misdemeanor Complaints	

16. **POLICY**

- Personnel assigned to Misdemeanor Complaints will ensure that all requests for complaint are processed in a timely manner.

17. **PROCEDURE**

- Filing Complaints with the District Attorney's Office

  - Personnel will process misdemeanor reports for a D.A. Complaint in the following manner:

    - Retrieve reports routed to Misdemeanor Complaints.

    - Read all reports routed to Misdemeanor Complaints and review for the following:

- Make sure suspect is an adult, and all identifying information is listed in report.

- Make sure the elements of the crime are met in the narrative of report.

- Make sure all witnesses were interviewed by patrol.

- If the suspect is not present on scene, make sure the beat deputy has made a reasonable attempt to make contact (three attempts spread out over time).

- If suspect was cited, make sure citation is attached to report.

- If the report is a restraining order violation, make sure a copy of the order and proof of service is attached to report (if not, request one from Services).

- If any supplements, or other report numbers, are mentioned in the report, a copy must be printed up and attached for the D.A. to review.

- Make sure investigation by the beat deputy is complete, and report is ready to be sent to District Attorney's Office.

- Enter status of case into Records Management System, i.e.: "Ready for DA," "Waiting for Lab Results," "Waiting for TRO," "Waiting Accident Report"

- Run a criminal history (RAP), driver's license history, and vehicle registration for each suspect named in the report. Attach printout to report.

- Fill out a Booking Fee Reimbursement Form and attach to report.

- Fill out a Department of Justice Form (8715) and attach to report.

- Log report on list of outgoing reports to D.A.'s Office in Records Management System.

- If the D.A. decides to file a complaint:

  - Check for complaints at both the Richmond Superior Court and 10 Douglas in Martinez.

  - Sign the complaint and forward it to the appropriate court.

  - Enter charges filed by D.A. (Disposition of case) into Record Management System.

- If the D.A. does not file a complaint (NCF):

  - Enter decision not to file into the Records Management System.

  - Review report for any property taken as evidence. Enter the disposition of evidence with specific instructions for return or destruction into the Records Management System.

  - Via email, send a copy of the RTA to the reporting deputy.

- Driver's License Violations

  - All drivers' license citations written in the Patrol Division are sent to Misdemeanor Complaints for review to determine if they can be charged as a misdemeanor crime.

    - This is done by reviewing the suspect's driver's license history and comparing it to the criteria established by the D.A.'s Office for filing as a misdemeanor.

- If they don't meet the criteria, they are sent directly to the court to be processed as an infraction.

- If a misdemeanor citation has a report number written on it, a copy of the report must accompany the citation to the D.A.'s Office.

- All missing persons, including adults and juveniles.

  a. The unit will ensure all appropriate entries are made in CLETS, and will conduct follow-up investigation and monitoring until the person is no longer missing.

- Additional Responsibilities:

  - Personnel assigned to Misdemeanor Complaints may also be responsible for the following:

    - Training

      - Providing instruction during the Re-entry class for Patrol.

      - Providing instruction to other divisions (i.e.: new dispatcher orientation, MDF line-up training, etc.)

    - Receiving and reviewing yellow copies of citations issued at the MDF.

      - Check the Record Management System to ensure Misdemeanor Complaints was routed copies of the reports by the Patrol Sergeant.

      - When a report was not routed to misdemeanor complaints, personnel will retrieve and process the citation.

    - Ensuring photos accompany the original report or are properly included through supplemental reports.

    - Gun Confiscations

      - All reports that are written by Patrol regarding guns being confiscated pursuant to Welfare and Institutions Code 8102, or Penal Code Section 18250 are forwarded to Misdemeanor Complaints.

      - Misdemeanor Complaint personnel will ensure the following occurs:

        - Fax the report to the Administrative Lieutenant the same

day. They have a limited period of time in which they can file a petition with the court (as is required by law.)

- Keep a copy of the report on file for future reference.

- If the respondent (or suspect) files for a hearing, the County Counsel Attorney will advise which deputies are needed to appear as witnesses.

- Departmental "subpoenas" (actually an administrative order) advise the deputy of the hearing date and time.

- The service of the "subpoena" will be tracked and a County Counsel Attorney will be advised when the deputy is served.

- Once the hearing is held, if the weapon is ordered returned by the judge, the respondent is referred back to this Office to get the weapon back.

- The Property Services Unit is responsible for releasing the weapon to the respondent after completing appropriate checks to ensure the person is legally eligible to own a firearm, then fax a release form to Property.

- When a "DOJ Audit" request is received from the Records Division, the Detective receiving the request will complete the Validation Checklist and document the completion in a supplemental report, which will include any new information, and a copy of the checklist.

- Exigent Pings:

  When records are obtained by patrol under exigent circumstances, the Misdemeanor Complaints detective is responsible for notifying the Court. This will include a written statement about the facts of the emergency. Once signed by a judge, the Target of the seizure will be notified by certified mail. This notice will occur within 3 calendar days of the seizure.

Contra Costa County Office of the Sheriff Patrol Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.05
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Special Investigations Unit	

I. POLICY

A. The Special Investigations Unit (SIU) shall be responsible for the investigation of suspected drug dealers, users and manufacturers of illicit drugs. The Unit is also responsible for identifying and apprehending major/minor drug traffickers and for conducting surveillance and undercover support for the other Investigations Units.

II. PROCEDURE

A. **The Special Investigations Unit is responsible for the following:**

1. Conduct follow-up investigations on drug arrests.

2. Obtain criminal complaints on all felony drug arrest cases and appear in court as an expert witness.

3. Respond to community complaints of suspected drug activity and initiate an appropriate response.

4. Respond to Patrol-requested call-outs for clandestine labs or drug investigations, as deemed necessary by the SIU Supervisor.

5. Work as a liaison for the dissemination of drug and/or criminal intelligence information to city narcotic units, Task Forces and government agencies upon request.

6. The Unit Supervisor shall be the custodian of all funds allocated to the Unit and will be responsible for the expenditure of such funds.

7. Work in conjunction with State / Federal Task Forces when necessary in multi-jurisdictional investigations of high level drug trafficking.

8. Conduct surveillance and undercover operations for other Investigations Units as requested.

B. **Call-Out Procedure for the Special Investigations Unit**

1. Requests for a call-out shall be made by a Patrol Supervisor or Watch Commander.

2. After hours, requests for a call-out shall be made to the SIU Supervisor via the Department-issued cell phone or home telephone number.

3. The SIU Supervisor will make telephone contact with the Patrol Supervisor to gather information and then determine the level of response.

4. An SIU Detective will generally not respond to cases that can be handled during the normal course of duty for Patrol personnel or to take over scenes as standby personnel awaiting the response of the Crime Lab, Health Department, etc.

C. **Controlled Substance Evidence Lockers**

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Patrol Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.06
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Vice Investigations and Asset Forfeiture	

I. POLICY

A. Vice Investigations shall be responsible for the investigation of gambling, prostitution, and Alcoholic Beverage Control violations. Personnel assigned to Vice also conduct background investigations for licenses and permits issued by the Sheriff's Office. The SIU Supervisor is responsible for all asset forfeiture investigations.

II. PROCEDURE

A. VICE

1. Personnel assigned to Vice are responsible for the following:

a. Conduct follow-up investigations on all vice-related crimes.

b. Respond to community complaints concerning suspected vice-related crimes and initiate an appropriate response.

c. Monitoring of pawn shops.

d. Special projects.

e. Establish a professional working relationship with local, State and Federal agencies.

f. Conduct thorough background investigations and forward recommendations concerning the issuance of the following licenses/permits; one-day liquor licenses, card room employee permits, card room licenses, fortune telling licenses, massage permits and peddler permits.

g. The SIU Supervisor conducts all asset forfeiture investigations and submits a report to the District Attorney's Office for filing, in conjunction with the criminal complaint.

h. The SIU Supervisor is also responsible for maintaining and preparing comprehensive financial records.

[redacted]

j. The SIU Supervisor will review activity and assign cases to Task Force Detectives under his/her command.

B. **Asset Forfeiture Procedures**

1. On a weekly basis, the SIU Supervisor is responsible for the processing and security of seized assets [redacted]

2. Procedure 1: Processing and Security of Seized Assets

[redacted]

b. The SIU Sergeant will ensure an entry on the asset forfeiture log has been made for each case. He or she will then sign the log upon removing the property.

c. The asset seized will be noted on the asset forfeiture tracking document. This document will document all assets that are seized as well as their ultimate disposition. The SIU supervisor will ensure the document is maintained and reflects current assets.

d. The SIU Sergeant will count the currency to verify an accurate count was made. In the case of property other than currency, verification will be made to ensure the property matches the description on the evidence card.

[redacted]

f. In cases involving property other than currency or vehicles, the property will be transferred to the property room within the same time period.

3. Procedure 2: Cases Pending Proper Notice of Seized Assets

a. In cases where the SIU Sergeant has determined there has not been a valid service for the assets seized, the SIU Sergeant or Detective will attempt to locate and serve the individual the property was seized from. In cases where the individual cannot be located, the SIU Sergeant will document his attempts to locate the individual and forward the case to the District Attorney for review and processing.

b. The following constitutes an invalid service:

- Improper documentation or failure to serve the individual with a notice of seizure for the currency or property seized.
- Where the SIU Sergeant determines that the currency count is inaccurate or the property does not match the description on the evidence card.

c. In the event the seizure needs to be returned due to one of the below listed reasons, the SIU Sergeant will attempt to locate the individual the property was seized from and arrange for its return.

- Where the SIU Sergeant determines the seizure does not meet the requirements of the civil code governing asset forfeiture seizures.
- When the District Attorney advises the SIU Sergeant they do not intend to pursue the seizure.

d. When directed by the Division or Division Assistant Commander.

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.07
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 06-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Civil Unit	

I. POLICY

A. The Civil Unit shall be responsible for serving the process of the Civil Court. Providing a rendition service to the cities with in the county and conducting extraditions as an agent of the State of California.

II. PROCEDURE

A. Civil Unit

1. The Civil Unit is responsible for the following:

a. Serve all process and notices in the manner prescribed by law.

- The Civil Unit shall execute all process and orders regular on their face and issued by competent authority, presented to the Civil Unit and appropriate fee paid or waived.
- Conduct all process and notices within the guidelines established by the Code of Civil Procedure and Civil Procedure Manual.
- No less than three attempts will be made to serve process and notices.

b. Provide rendition services for those cities in which a rendition contract has been entered.

- Deputies will seek a waiver of extradition from the fugitive subject.
- Deputies are responsible for soliciting an identity packet from the demand state, and representing the demanding state at an identity hearing, if needed.
- Deputies will file a felony criminal complaint (PC1551.1) against the fugitive and appear in court as a witness for the prosecution.

- Deputies will monitor communications for 90 days following Identification hearing, for receipt of a Governor's Warrant from the demand state.

- Upon receipt of the Governor's Warrant the Deputies will present the fugitive with the Warrant informing the fugitive they will be extradited to the demand state within a 30 day period.

- Deputies will monitor the extradition on a regular basis until the fugitive is removed from the state.

- Deputies will create a billing/invoice to the arresting agency for the contracted amount for our services.

c. Conduct extradition services for the District Attorney and any other contracted agency.

- The extradition of a fugitive from an asylum state will be governed by the Extradition Clause of the U.S. Constitution, The Federal Extradition Act of 1793 and the Uniform Criminal Extradition Act of 1936.

- Monitor phone, fax and e-mail for notification from asylum state of the arrest of a fugitive.

- Communicate to the District Attorney's Office the arrest of a fugitive in the asylum state. Confirm with the District Attorney's Office their desire to have the fugitive extradited. Notify the asylum state of the District Attorney's desire to extradite the fugitive.

- Create and forward to the asylum state an identification packet within ten days for presentation by asylum state in an identification hearing.

- Create and forward to the California Attorney General an application for a Governor's warrant department.

- Schedule the physical extradition from the asylum state.

- Provide demand to the Auditor/Controller for advanced travel funds.

- Transport and book fugitive at the Main Detention Facility

- Complete extradition file and present to Supervisor for state reimbursement.

2. Civil Unit Supervisor is responsible for the following:

a. The administrate the processing and reconciliation of the Civil Subpoena program.

- Receive civil Subpoenas and related deposit from the clerical staff.

- Complete Electronic Deposit Permit for the deposited funds and have funds delivered to the Treasurer.

- Provide the subpoenaed party with the "Civil Subpoena Information/Disposition" form.

- Solicit the return of the "Civil Subpoena Information/Disposition" form from the subpoenaed party following the date.

- Distribute the deposited funds accordingly based on the information provided on "Civil Subpoena Information/Disposition" form. Invoice requesting party for any expenses in excess of the deposited amount.

- Bi-Monthly, reconcile the "MTD Subsidiary Detail by SWPC" report to all open Subpoena files.

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.02.08
	RELATED ORDERS:	
ISSUE DATE: 09-01-15 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Unit Duties and Responsibilities	**SUBJECT:** Community Services Unit	

I. POLICY

A The Community Services Unit promotes and provides specialized crime prevention services, products and expertise to support the safety and wellbeing of the populace (public and private) throughout unincorporated Contra Costa County. The Unit personnel are responsible for the crime prevention and crime analysis needs of the communities served by the Office of the Sheriff. Central to its concern is the public interest and building goodwill through active community outreach and dialogue with members of the public.

II. DEFINITIONS

A. COMMUNITY RELATIONS. The effective communication and collaboration with stakeholders including the public, Office of the Sheriff personnel, other County departments and government agencies, special districts, community-based organizations, businesses, industry and others. The development of outreach programs that enhance goodwill and meet the crime prevention needs of the communities served by the Office of the Sheriff.

B. CRIME PREVENTION. The pro-active anticipation, recognition and appraisal of a crime risk combined with the initiation of some action to remove or reduce it.

C. NEIGHBORHOOD WATCH. Community Action and Problem Solving crime prevention program designed to help neighbors work together to reduce or remove crime from areas where Neighborhood Watch programs exist.

D. BLOCK CAPTAIN. Serves as liaison between the residents and the Office of the Sheriff.

E. BUSINESS WATCH. Collaboration between law enforcement and local businesses and industry. Seeks to reduce and prevent criminal activity in and around commercial areas.

F. OPERATION I.D. The marking of valuable possessions with an identifying number as an effective method for preventing theft and identifying stolen property.

G. SPECIAL EVENT COORDINATION. This Unit coordinates the Office of the Sheriff personnel and resources for events in which it participates.

H. TRAINING & PRESENTATIONS. This Unit provides a variety of subject specific trainings, to include Crime Prevention, Neighborhood Watch, Workplace Violence, Identity Theft, Personal Security and other crime prevention topics for County employees, the public and businesses.

I. PUBLICITY. The goal of this Unit is to inform, encourage and remind the public of crime prevention strategies that will reduce crime in their communities, a crucial function in promoting and maintaining the safety and wellbeing of county residents.

J. CRIME ANALYSIS. The systematic study of crime and disorder problems as well as other police-related issues—including socio-demographic, spatial, and temporal factors—to assist the police in criminal apprehension, crime and disorder reduction, crime prevention and evaluation.

III. GENERAL

A. PROGRAM. The Community Services Unit provides crime prevention and community outreach services to County residents, frequently in collaboration with other County departments and government agencies, community-based and service organizations, businesses and industry, neighborhood associations, schools, churches and others. The Unit consists of Crime Prevention Specialists and Crime Analysts.

1. Crime Prevention Specialists:

a. Crime Prevention Specialists are committed to increasing the number of Neighborhood Watch groups in the County. In Neighborhood Watch meetings, Specialists educate the public about Operation ID, recognizing suspicious activity, persons and vehicles, and reporting incidents to the Office of the Sheriff.

b. Unit employees deliver a variety of services designed to convey CPTED (Crime Prevention Through Environmental Design) and safety and security strategies to the public.

c. Crime Prevention Specialists run [redacted] crime reports for each of their area of responsibility. The specialists gather relevant statistical information needed to develop area-specific crime prevention strategies in response to crime trends and patterns.

- Business Watch: Business owners and operators learn techniques to help make their businesses less vulnerable to crime. They learn how to report suspicious activity, thus promoting and maintaining the safety and wellbeing of their business and community.

- Municipal Advisory Committees: MAC's, Boards and Community Leadership can be informed in the types of quality of life issues that may be affecting their districts/communities to assist in developing ordinances and/or local laws to combat those issues.

d. Crime Prevention Specialists constructively and positively influence the attitudes of the public through services delivered and relationships established.

e. The Unit strives to meet the expectations of residents by participating responsibly in community affairs.

f. Unit personnel coordinate and participate in special events working with other county departments, agencies, non-profits, service organizations and businesses.

g. Unit personnel serve as liaisons to MACs, special districts, professional organizations, community advisory panels and special committees.

h. Through practical application, Unit personnel engage in community outreach working with other stakeholders, such as schools, parks and recreation services, etc.

i. The Unit develops awareness of its services, activities, community events and personnel through all external communications and community outreach.

j. Unit personnel host events that bring residents, agencies, non-profits, and businesses together for the common good.

2. <u>Crime Analysts</u>:

a. Crime Analysts are responsible for the collection, compilation and analysis of criminal and/or intelligence data, to include legal and public documents and intelligence reports. Crime Analysts also play an active role in resource deployment and major case development.

b. Crime Analysts work closely with the Patrol Division staff using statistical data to develop Predictive Patrol strategies. Analysts can also provide statistical data to support other units and divisions within the Office of the Sheriff.

c. Crime Analysts communicate with other agencies to examine current crime trends and strategies to combat crime.

d. The tasks of Crime Analysts include:

- Identify trends in criminal activity and/or calls for service and analyze crime patterns to identify possible suspects or leads

- Organize and compile criminal intelligence data from internal and external computer databases, and produce and distribute crime trend reports and crime and officer safety bulletins

- Conduct predictive analysis through the use of regression and other statistical method.

- Using geospatial techniques, produce maps to aid in the visualization of criminal activity

- Perform workload analysis and make recommendations for the deployment of resources

- Respond to citizen and other agency requests (through the unit supervisor) for statistical information.

- Maintain gang and criminal databases in accordance with federal guidelines, and identify/validate gang members via analysis of qualitative data
- Collaborate with and assist investigators in case development
- Provide investigative research using multiple databases and sources, to include the production of link analysis and timeline/event flow diagrams
- [redacted]
- Utilize criminal investigative analysis to aid in the investigation of homicide and other major cases and to provide analytical support for major operations
- Write police reports to clearly articulate actions when assisting in major cases and testify in court as needed
- Create court visualization materials to support the prosecutorial process
- Fulfill requests from prosecutors and other partner agencies
- Review current and cold cases for possible leads or evidence and make recommendations as appropriate

B. AUTHORITY AND RESPONSIBILITY

1. The Community Services Unit gathers and disseminates crime prevention information, crime analysis to both the internal and external customers it serves.

2. The duties and efforts made by personnel are significant to the goals and objectives of the Unit and the Office of the Sheriff. Employees adhere to the Policies and Procedures and Division Manuals of the Office of the Sheriff.

3. The Community Services Unit Supervisor is responsible for the overall day-to-day management of the Unit.

4. Each employee of this Unit shall be aware of the responsibilities of his or her position. Employees shall be given the necessary training to effectively execute the responsibilities of their positions.

5. Employees shall bear in mind the best interests of the Office of the Sheriff when exercising their responsibilities.

IV. PROCEDURE 1

A. EMPLOYEE RESPONSIBILITY

1. Under the supervision and general direction of the Community Services Supervisor, Crime Prevention Specialists and Crime Analysts are assigned to serve the communities in each of the Sheriff Office's four station areas, performing a variety of crime prevention and crime analyst activities.

2. Through effective community relations and crime prevention services, including training and presentations, communications and community events, public awareness is enhanced and crime in our communities is reduced.

3. Unit personnel maintain a collection of crime prevention materials for distribution to the public.

4. Unit personnel build good will by day-to-day communication with residents and other stakeholders, providing crime prevention training, crime analyst information, conflict resolution, presentations and actively participate in community events.

V. PROCEDURE 2

A. SPECIALIZED SERVICES

1. Neighborhood Watch programs are initiated and maintained by Unit personnel. The Unit provides training and support to Neighborhood Watch Captains county-wide to help establish and maintain the Neighborhood Watch groups.

2. Via internal request, Crime Analysts assist the public by providing public reports which outline specific crime trends, patterns and other areas of concern.

3. Crime Prevention Specialists offer periodic presentations to schools, youth groups and other community entities as needed in the County.

4. The Community Services Unit promotes its services through a variety of external communications.

5. Unit personnel pursue all opportunities to publicly address crime prevention issues and strategies. Through various communications – speeches, newspapers, news releases, interviews, broadcast reports, social media and face-to-face meetings, personnel promote the services of the Unit.

    a. Unit personnel develop opportunities to promote crime prevention services via media outlets.

        - Personnel explore all opportunities to positively showcase the Unit and its services.

        - Personnel competently shape public perception with the content of the messages they convey.

b. Unit personnel ensure Community Relations and Crime Prevention services are deliverable.

- Personnel offer expertise, resources and responsiveness that match the needs of the communities they serve.

Chapter Three -Operations

Chapter Three - **Operations**

3.3.1	Assignment of Cases
3.3.2	Interviews and Interrogations
3.3.3	Search Warrants
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Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.01
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE**: 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJE** Case Management	

I. POLICY

A. Individual cases will be assigned based upon the nature of the crime. When an investigator's team is carrying an excessive case load or handling a critical case, another unit may be asked to assist. Cases will be assigned by the supervisor, immediately upon receiving them.

B. All cases forwarded to the Investigations Division will be reviewed on a daily basis by the appropriate Unit Supervisor. Cases where a suspect has been arrested and remains in custody will receive priority in being assigned to a detective.

C. All cases will be entered into the Department's RMS Computer/Case Management System by the Unit Supervisor upon being assigned to a detective.

D. Unit supervisors shall utilize an Investigation Division case management log to track cases that are assigned to detectives within their unit.

II. PROCEDURE

A. Assignment of Cases

1. Cases will be assigned by the following categories:

a. "A" Cases

- Those cases considered primary in importance that contain information in the original report which would dictate a follow-up is in order.
- All "A" cases require personal contact when appropriate.
- Any case with any of the following is an "A" case:
  - Likely identification of a suspect

- Likely location of a suspect
- Suspect is in custody
- Evidence that would likely identify a suspect
- Likely identification of a suspect vehicle.
- Major injury or sex crime involved
- Significant M.O. present

b. "B" Cases

- The second category of case assignments is the "B Case," which consists of felony cases that have little information with which to proceed with an investigation.
- Cases with identifiable property, which must be entered into CLETS are "B" cases.
- "B" Cases require contact with the victim to discuss the cases in an effort to determine any additional facts which may result in the case being reclassified to "A" status and to have the victim know which detective he/she should contact in the event further information becomes available.
- A supplement will be written, detailing the action taken on each case.

c. "C" Cases

- The third category of case assignments is the "C Case."
- These are cases which contain no information with which to proceed with an investigation.
- Examples of the cases are:
  - Auto burglaries with no witnesses.
  - Open garage burglaries with no witnesses.
- "C Cases" will be assigned to a detective by the Unit Supervisor.
  - Telephone contact will be attempted by either the assigned Detective or a volunteer.
  - A victim information pamphlet will be sent to all C case

victims.

d. With the exception of the Special Investigations Unit, on cases where the investigation lasts longer than 30 days and remains an active, open investigation, investigators will make note of the case status in CAD/RMS within an every 60 day cycle. Notes will be made every 90 days for narcotics cases. Notes will also be made in CAD/RMS if there is ANY activity involving the case (i.e.: supplement, interviews).

e. With the exception of misdemeanor complaints and SIU, all cases will be closed or suspended when appropriate, upon the conclusion of the investigation by the assigned Detective. This will be documented in a supplemental report and noted in CAD/RMS. Otherwise, any cases other than misdemeanor complaints and narcotics will be closed by the unit supervisor.

f. In an effort to establish a uniform system free of ambiguity, the following guidelines have been established for detectives to use in closing cases in the CAD/RMS system.

- SU – Case Suspended – Use this code when you have a **property crime** where the investigation has stalled. There are no active leads or investigation to conduct. This case is suspended pending the discovery of new evidence. This case will be considered closed.

- SC – Suspended Not Closed – Use this code when you have a **crime against person** where the investigation has stalled. There are no active leads or investigation to conduct. This case is suspended pending the discovery of new evidence. This case will be considered closed.

- CP – Closed Prosecution – The case has been presented to the District Attorney and is being prosecuted. This case will be considered closed.

- DR – DA Refusal – The case has been presented to the District Attorney and charges were declined / refused. This case will be considered closed.

- UF – Closed/Cleared unfounded - Case has been determined to be unfounded. This case will be considered closed.

- VR – Victim Refusal – Victim refuses to cooperate in prosecution or investigation. This case will be considered closed. Except in Domestic Violence cases or cases we do not need victim cooperation.

- CO – Closed Other – Investigation is complete and it has been determined that no criminal act has occurred or any other closure not listed above. These cases will be considered closed.

B. Routine Investigative Steps

1. Contact of Victims, Witnesses and Suspects

a. Personal Contact with victims and witnesses is recommended in as many cases as possible and required in “A” cases.

b. Suspects will be contacted when the investigator determines it is in the best interest of the case.

c. Suspects will be interviewed at the Field Operations Building whenever possible.

2. Determination of Value (Loss-Recovery)

a. Determining the appropriate value of loss and/or recovery will be the responsibility of the investigator and not that of the Deputy taking original report.

b. Frequently, original reports reflect replacement cost of new items rather than a consideration of a depreciation factor or the actual value of the item taken.

c. Dealers, internet sites, and used property locations, are sources of factual estimates.

3. Neighborhood Canvasses

a. A Neighborhood Canvass is essential and not always accomplished prior to the investigator being assigned the case.

b. In that event, the investigator assigned will see that a neighborhood canvass is conducted when appropriate.

4. Evidence Handling

a. Requests for Criminalistics Laboratory evaluation of evidence shall be the responsibility of the investigator handling the case.

b. Fingerprint evaluation is routinely done directly from the Patrol Division, but comparison information is the responsibility of the investigator.

c. All property obtained in an assigned case will be disposed of as prescribed by policy by the assigned investigator.

d. When any question arises regarding the release of property in a case referred to the court for prosecution, the investigator should be guided by the decision of the Deputy District Attorney handling the matter.

e. Teletypes and CLETS entries will be entered as soon after receipt of a

case as is possible.

- Property not placed in CLETS immediately may be run by another agency and released back to a suspect because of a delay in entering it into the system.

- Arrest and M.O. information should be placed on Area II teletypes/Critical Reach fliers, to provide information for the receiving agencies.

- CLETS printouts or teletypes must be submitted on a supplemental form, via Tiburon.

5. Release of Information

   a. Information on current, pending or closed cases will not be discussed at any time with unauthorized persons.

   b. The Division Commander or designee will determine who and when persons under his command may conduct media interviews.

   c. No spontaneous release of information shall be permitted without prior authorization of the Division Assistant Commander or designee.

C. Unit Supervisor Responsibilities

1. Unit Supervisors will be responsible for obtaining the case list from CAD/RMS daily. Unit Supervisors will review the cases on a daily basis, with emphasis being placed on assigning "in-custody" cases.

2. Upon the case being assigned to an investigator, the Unit Supervisor will enter the case assignment into CAD/RMS.

3. The Unit Supervisor will document the case assignments on the unit's case management log. The case will then be tracked by the Unit Supervisor until it is closed.

4. Supervisors will ensure that an entry note is made in the case management system if there has not been an update within 60 days. The exception will be the Special Investigations Unit, which will be 90 days. Notes will also be made in CAD/RMS if there is ANY activity involving the case (i.e. supplement, interviews).

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.02
	RELATED ORDERS:	
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CHAPTER: Operations	**SUBJECT:** Interviews and Interrogations	

I. POLICY

A. Detectives will remain alert to gathering information from witnesses, suspects, or arrestees which will help in the solution of crime.

B. Detectives will interview, interrogate or otherwise question persons in accordance with the law and established policies and procedures.

II. GENERAL INFORMATION

A. Interviews and Interrogations

1. Interviews: The process by which a Detective seeks, obtains, and evaluates information given to him/her by persons having personal knowledge of the events or circumstances of a crime.

    a. An interview is conducted in order to collect any facts relating to an incident, to substantiate information obtained from other sources, or to provide additional information pertaining to the incident under investigation.

2. Interrogations: The process by which a Detective obtains information from an individual who is a suspect of the incident under investigation.

    a. An interrogation is conducted in order to establish the extent of involvement of a particular person suspected of committing a crime and/or to obtain information from individuals who have knowledge of the incident under investigation.

3. The determining factor between an interview or interrogation is based on the subjects direct involvement.

4. Interviews should be conducted as soon as possible after the incident.

5. Physical comfort and emotional condition are two primary factors to consider

when interviewing a subject:

6. Location of interview

    a. A proper setting is most important, as it enables the Detective to better control the interview.

    b. The ideal location for an interview or the most important factor to consider is privacy.

B. Legal restrictions and Miranda

1. When a subject has not been arrested or their freedom restricted, the Detective may ask whatever questions are necessary and pertinent to the investigation.

2. The key in this circumstance is custody - where there is "no custody," the law places no restrictions on questioning.

3. When a suspect is in custody, a Miranda admonishment must be given and a knowing waiver obtained prior to questioning.

    a. A suspect is considered in custody when they have been deprived of their freedom, must be aware of their lack of freedom or reasonably believe that a lack of freedom exists.

C. Waiver of Constitutional Rights

1. Before statements made by suspects become admissible in court, the prosecution must offer evidence to prove that suspects were not only advised of their rights, but also that they understood the advisement and, having been so advised, knowingly and intelligently waived those rights.

2. To secure a waiver, the following question may be asked:

    a. Do you understand each of these rights I have explained to you?

3. An affirmative reply will be obtained from suspects before questioning begins.

    a. Circumstances which establish an "affirmative reply" include, but are not limited to, the following:

        - Formal waiver:

            - When suspects state orally and unequivocally that they understand their rights and wish to talk.

        - Waiver followed by statement:

- An acknowledgment by a suspect that such suspect understands, followed closely by a statement, is held to be a waiver.

- Non-verbal waivers:

  - Nods and shrugs may be insufficient.

    Deputies should strive for a verbal response. Gestures are subject to different interpretations and leave too much room for interpretation. In these circumstances clarification should be sought.

- Written waivers:

  - The signing of a written waiver is a good waiver if the suspect is literate.

- Request to talk to attorney later:

  - A desire to talk to an attorney in the future, while manifesting a willingness to answer questions now without counsel, is a waiver.

b. If suspect indicates a desire to remain silent and/or see a lawyer before answering questions, the interrogation will cease.

c. Deputies may question a suspect who originally refused to "waive" whenever the suspect initiates a request to talk.

- Deputies will re-advise such suspects of their Constitutional Rights and obtain a waiver before questioning.

III. PROCEDURE

[redacted]

[redacted]

[redacted]

[redacted]

5. Conversations between a suspect and their attorney are privileged and do not have to be revealed by either party.

   a. Penal Code Section 636 makes it a felony to eavesdrop or record any privileged conversation.

   b. It is the responsibility of the investigator to ensure that all video or audio recordings are legally proper.

   c. It is the responsibility of each investigator using recording equipment to ensure that no recording is made in violation of 636 P.C.

   d. If an interview is conducted by an investigating officer with the suspect and their attorney, the investigator must ensure that whenever he or she leaves the interview room and if a privileged communication situation is created, all video and audio equipment must be turned off immediately.

B. Prisoner Control and Officer Safety

1. Prisoners in custody within the Field Operations Building shall be:

[redacted]

[redacted]

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.03
	RELATED ORDERS:	
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CHAPTER: Operations	**SUBJECT:** Search Warrants	

I. POLICY

A. Investigation Division personnel will be familiar with preparing, presenting and obtaining search warrants.

II. PROCEDURE

A. Obtaining a Search Warrant

1. During court hours, the investigator shall:

   a. Compile all necessary reports, documents, and supportive paperwork, along with the affidavit in support of issuance of a Search Warrant and affiant's expert opinion into the affidavit for search warrant package, making sure the preprinted affidavit face sheets are attached and properly completed.

   b. Prepare the search warrant package to be signed, making sure all necessary areas are complete and that all pages have been numbered.

   c. Take the completed search warrant package to a Superior Court Judge for signature.

2. After court hours, the investigator shall:

   a. Compile all necessary reports, documents, and supportive paperwork, along with the Affidavit in Support of Issuance of a Search Warrant and the Affiant's Expertise into the affidavit for the search warrant package, making sure the preprinted affidavit face sheets are attached and properly completed.

   b. Prepare the search warrant package to be signed, making sure all necessary areas are completed and all pages are numbered.

c. Deliver the completed affidavit, along with the original search warrant package, to the on-call Judge for approval and signature.

d. When the situation dictates for the immediate exigency for a search warrant, a telephonic search warrant is a viable option.

- Detectives are encouraged to utilize any and all resources available to them, particularly those skills learned from recommended search warrant preparation courses.

B. Serving the Search Warrant

1. The investigator shall:

2. Execute the search warrant within ten (10) days of issuance, pursuant to section 1534 of the Penal Code.

3. Comply with the knock and notice requirements pursuant to Penal Code Section 844.

4. Verbally advise the occupant(s) of the building to be searched of the contents of the search warrants.

5. Leave a copy of the search warrant at the location, or with the occupant, along with a signed inventory list of the property taken from the premises.

a. If the details of the search warrant will jeopardize the safety of other search warrants, a redacted copy may be left at the location.

C. Search Warrant Return

1. Pursuant to Section 1534 of the Penal Code, a warrant shall be executed and returned within ten (10) days of issuance.

a. Electronic Devices may take longer due to processing time.

2. The investigator shall:

a. Take the original search warrant, the return of search warrant and the recovered property list to the issuing Judge, whenever possible.

b. If the originating Judge is not available, obtain the signature of another Superior Court Judge and then file with Clerk's Office with original search warrant.

c. Upon the issuance of a Search Warrant number by the clerk's office, the search warrant number will be documented in a supplemental report.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.04
	RELATED ORDERS:	
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CHAPTER: Operations	**SUBJECT:** Arrest Warrants	

I. POLICY

A. Investigation Division personnel will be familiar with the process involved in preparing and obtaining arrest warrants.

II. GENERAL INFORMATION

A. Arrest Warrants vs. Ramey Warrants

1. Arrest warrants are complaints based on probable cause and presented to the District Attorney's Office, which result in the issuance of an arrest warrant.

2. Ramey warrants are based on probable cause and presented to a Superior Court Judge.

a. Ramey warrants are utilized for exigent circumstances and for the immediate arrest of suspect(s), prior to formal charges by the District Attorney's office.

III. PROCEDURE

A. Obtaining an Arrest Warrant

1. Investigations personnel attempting to obtain an arrest warrant will:

a. Compile all necessary reports, documents, and supportive paperwork, along with the Affidavit in support of an Arrest Warrant.

b. Make an appointment with the District Attorney's Office and the appropriate Filing Deputy.

- The completed Arrest Warrant Package will be sent to the Superior Court for the authorization of the Arrest Warrant

c. The Detective may elect, depending on exigency of the case, to take the completed Arrest Warrant package to a Superior Court Judge and seek authorization at that time for the Arrest Warrant.

B. Service of the Arrest Warrant

1. The warrant may be served by the Detective.

2. The warrant may be placed into the CLETS Systems and served by any Peace Officer.

3. The warrant may be served in conjunction with a search warrant.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.05
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Ramey Warrants	

I. POLICY

A. Investigation Division personnel will be familiar with the process in obtaining a Ramey Warrant.

II. GENERAL INFORMATION

A. Ramey Warrants are arrest warrants based on probable cause.

1. They can be issued at any time, day or night

2. They can be entered in the N.C.I.C. System under an agency case number.

3. The use of a Ramey Warrant is presumed lawful.

B. Ramey Warrants must be prepared in writing for each defendant

a. A probable cause declaration in support of arrest warrant ("Ramey" warrant) must be completed and signed by investigators, along with attachments to establish probable cause.

- Oral affidavits may be used.
- Telephonic affidavits may be used.
- Existing crime reports may be used.
- A written statement may be used.
- A combination of all of the above may be used.

2. Once signed by the Judge, the Ramey Warrant can be served immediately.

a. It does not initiate a criminal proceeding.

b. It does not have to be recorded with the court before the arrest.

c. It is the responsibility of the Investigator to submit the signed Ramey Warrant to the Records/Warrant Unit for entry into CLETS/NCIC.

C. Search warrants and Ramey warrants may be obtained at the same time.

1. The search warrant affidavit should establish probable cause to both search and arrest

D. A certificate of service must be completed by the arresting officer after arrest on a Ramey Warrant and filed with Records and the Court.

1. Once a suspect is in custody on the Ramey Warrant, filing time limits are the same as for on view arrests.

E. If a Ramey warrant is not served immediately it should be forwarded to the Records Unit where they will enter it into CLETS.

1. If after-hours the case file number may be used on the warrant, but a warrant number should be obtained via the court as soon as possible.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.06
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Service of Search Warrants and Arrest Warrants	

I. POLICY

A. It is the policy of the Investigation Division that the obtaining and service of search warrants and arrest warrants shall be done in a professional manner, with adherence to legal procedures and requirements.

II. PROCEDURE

A. Service of Search Warrants and Arrest Warrants

1. An Operational Plan is required for all search or arrest warrant service, undercover operations and Parole/Probation searches.

2. The Unit Supervisor shall, except under exigent circumstances, ensure that an operation plan is completed and distributed to all participating personnel.

- The unit supervisor will also ensure that Dispatch is advised.

b. Prior to the operation, the operational plan will be reviewed and approved by the Unit Supervisor.

- Prior approval by the Investigation Division Assistant Commander will be obtained when discretion allows.

c. Prior to the operation, the case agent will ensure that the location has been physically verified. This will include visiting the location, taking photos and noting the physical address.

- If it is not operationally or logistically feasible to do this, the Unit Supervisor must be made aware of the circumstances prior to service.

d. The Unit Supervisor shall be on-scene at the service of all search warrants and approve forced entry.

e. A signed copy of the search/arrest/Ramey warrant will be attached to the operations plan.

f. The operational plan will be filled out in its entirety prior to the operation.

- This is to include being signed off by a supervisor.

g. All operations orders will be kept on file for 1 year in the Division Assistant Commander's Office for future reference.

h. Whenever possible and appropriate, a uniformed officer from the local jurisdiction should be present during the arrest/search warrant operation for liaison purposes.

i. All Search and Arrest warrant services will be documented in a crime report, either as a supplement from the original crime being investigated, or an original report.

[redacted]

[redacted]

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C. Debriefing

1. At the conclusion of the field enforcement operation, such as an undercover buy, a surveillance operation or the execution of an arrest or search warrant, a debriefing will be conducted.

2. All personnel who participated in the operation should be present during the debriefing.

D. Dress and Identification

1. Investigations personnel effecting arrests, serving arrest or search warrants shall wear ballistic body armor, raid jackets and ballistic helmets during the initial stage of the enforcement action (building entry, etc.), unless prior supervisory permission has been obtained. This attire will clearly identify participates as Sheriff's Office employees.

2. Once the enforcement area has been secured, Investigation personnel may remove their body armor and ballistic helmets; however, a raid jacket, or other suitable clothing with identification, must be worn to clearly identify the individuals as Sheriff's Office personnel.

[redacted]

F. Local Agency Notification

1. It is Departmental policy that local law enforcement agencies be notified when Sheriff's Office personnel are conducting operations within their perspective jurisdictions.

2. The notification shall be made by the Unit Supervisor or their designee prior to the planned event.

[redacted]

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.07
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Call Out Procedures	

I. POLICY

A. It is the responsibility of the Investigation Division to provide investigative support to all Divisions, when requested, for the response to serious criminal incidents occurring outside normal business hours. It will be the responsibility of the Division Assistant Commander (or designee) to generate and maintain a current call-out schedule.

II. PROCEDURE

A. Call Out Procedures

1. In all cases involving homicides, or potential homicides (victim not expected to survive), the on-call detective and sergeant will be called and will respond to the request (homicide call out). If the on-call sergeant is not also the Homicide sergeant, the Homicide sergeant will be notified as well.

2. In those cases involving child abductions, the on-call sergeant and detective will be notified, and it will be his/her responsibility to notify the Supervisor of the Special Victims Unit. All available detectives will respond on all child abductions.

3. In those cases, as a result of a criminal act, where a serious injury has occurred, and the victim is hospitalized, but expected to survive, the on-call sergeant and detective will be notified. It will be the Officer of the Day's (OD) decision, in consultation with the on-call sergeant, whether or not investigators will respond.

4. In those cases involving take-over robbery, home invasions, etc., the on-call detective will be notified. It will be the OD's decision, in consultation with the on-call sergeant, whether or not investigators will respond.

    a. This will also include those situations where victims are bound or taken hostage.

5. The on-call sergeant or detective will be notified whenever the incident has the likelihood of generating extraordinary media interest.

    a. The on-call sergeant or detective will notify the Assistant Division Commander or Division Commander as soon as possible.

    b. At the discretion of the OD, a detective or sergeant from the Investigation Division will respond to the scene within a reasonable amount of time and without undue delay.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.08
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Felony Case Filing	

I. POLICY

A. Investigation Division personnel will ensure that all felony cases for filing are complete and delivered to the Contra Costa District Attorney's Office in a timely manner.

II. PROCEDURE

A. Felony Case Filing Package

1. Felony cases for complaint and felony arrest packages will be complete prior to making an appointment with the District Attorney Filing Deputy.

    a. All efforts will be made to file an in-custody case when possible.

2. The following information will be included and required for the filing packet:

    a. D.A. Request for Prosecution form

    b. Defendant Information Sheet - One per defendant

    c. Criminal History and/or D.M.V. Information, if no criminal history exists

    d. Booking Fee Form

    e. Witness Roster – include Forensic Services Division personnel involved in the case

    f. Bail Sheet - One per defendant

    g. Correct number of reports per defendant - Copy of all Lab reports - All supplemental reports

    h. Search Warrant copy, if applicable - including Search Warrant # and Affidavit

i. Any and all Laboratory reports, including chemical analysis, fingerprint reports and Crime Lab photos and reports

j. All documents and information requested in the Contra Costa District Attorney's Office Felony Filing Protocol, appendix 1.

B. In Custody Felony Filings

1. For subjects that are in-custody, the above-listed procedures must be followed, as well as the following additional steps:

a. Contact the D.A. Filing Deputy and advise him/her of the in-custody filing and make an appointment.

b. The case must be filed within 48 hours of a juvenile subject's arrest, or 72 hours of an adult subject's arrest.

c. Notify the jail of the impending in-custody filing to assure the subject is not released.

- After acquiring the court docket number, immediately contact the Detention Facility with the docket information, so the subject will be transported to the proper court.

- The jail must be notified by 11 a.m. on the last day of the 72-hour arrest.

d. After the D.A. Filing Deputy reviews and approves the case, file the case with the appropriate court clerk where the defendant is to appear.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.09
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 6-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Identification and Lineups	

I. POLICY

A. All members of the Investigation Division have a responsibility to identify individuals responsible for criminal acts.

B. Such identifications will be accomplished in a manner which ensures due process of the law, eliminates suggestiveness, and documents the process for use in court prosecution.

II. PROCEDURE

A. Identifications

1. Integrity of Identification

a. Officers conducting an identification process will do so in a manner which ensures that individual witnesses are not influenced by any other witnesses or incident. The following guidelines should be employed whenever applicable:

- Each witness will view the suspect out of the presence of other witnesses;

- Witnesses will not be allowed to discuss their observations with other persons who are to participate in a future identification process.

2. Maintenance of Neutrality

a. When presenting a suspect to an eyewitness for identification, officers will remain as neutral as possible, consistent with the continued secure custody of the suspect.

b. Officers will not suggest the correct identity of the suspect or make any suggestion, either verbal, through gesturing, or any other means which would influence a witness to identify a particular suspect.

3. Recording Circumstances

   a. The Officer will record the following circumstances when conducting an identification:

      - Time and location
      - Persons present
      - How conducted
      - Duration
      - Statements of witnesses attempting the identification
      - Other circumstances which may assist in determining the validity of the identification

4. Dying Declarations

   a. A dying declaration has been deemed reliable and is an exception to the Hearsay Rule.

   b. A dying declaration is based on the belief that a person is about to die and that he/she doesn't lie about the cause of his/her predicament.

5. Field Identification

   a. A field identification occurs whenever an officer arranges for a witness to view a suspect in the field.

   b. Prior to conducting a field identification, the investigating officer will ensure that the following elements are present:

      - Time and Location
        - The identification takes place in the field and in a reasonable amount of time after the incident.
      - Witness Description
        - The witness has described as completely as possible the appearance and clothing of the perpetrator.
      - Justification
        - The person to be viewed reasonably matches the witnesses description and/or the circumstances

surrounding the presence of such a person in the area is such that a field identification process is justified. Such justification is based on "reasonable suspicion."

- The following additional procedures will also be adhered to:

  - Probable Cause

    If probable cause to arrest is present, the suspect should be taken into full custody prior to conducting a field identification.

    If probable cause to arrest is not present, but the officer has a "reasonable suspicion" that the person may be the perpetrator, then a temporary detention is justified.

    The identification process will be conducted at the scene of the temporary detention, unless circumstances dictate otherwise.

  - Duration

    The duration of the temporary detention will be in conformance with provisions of this Manual, which, under normal conditions, limits such detentions to a reasonable amount of time.

  - Method of Identification

    The witness must be afforded an ample opportunity to view the suspect.

    This means that the suspect should be removed from a police car or the place of custody, prior to viewing, but only in a way that assures no physical evidence is contaminated, and there is no danger to suspect or witness.

    The suspect may be asked to utter certain words, make certain gestures, or assume particular poses that the witness might recognize.

  - Right to Lawyer

    No person has a right to have a lawyer present at any field identification procedure.

c. Field identifications will not be conducted at any custodial or police

facility.

- Photographic Identifications
    - A photographic identification occurs whenever an officer arranges for a witness to view a series of photographs, sketches, or composites in an attempt to identify the perpetrator of a criminal act.
    - A photographic identification may be conducted whenever one of the following circumstances is present:

        The nature of the offense, and/or investigative circumstances, indicate that a formal line-up is not appropriate.

        There is no known suspect, but the officer has a description which is similar to the photograph being shown.

        The unusual physical appearance of the suspect causes a lack of suitable person to use in a formal line-up

- When a decision is made to conduct a photographic identification process, the following procedures will be adhered to:
    - Sketches and Compositions

        Sketches or compositions may be used whenever there is no photograph of the suspect available.

    - Required Number

        When conducting a photographic identification, at least six photos, or facsimiles, will be used.

        The pictures will be arranged and displayed in a manner which does not attract undue attention to any one picture in the series.

    - Right to Lawyer

        No person has a right to have a lawyer present at any photographic identification procedure.

    - Procedure After Positive Identification

        When a positive photographic identification is made, the officer conducting the identification

process will preserve the photographic display, as viewed by the witness, for presentation in court at a later time.

Such preservation will be accomplished by booking the display into evidence in accordance with established procedures.

d. Formal Identification Procedures

- A formal identification (line-up) occurs whenever a suspect is placed in a live group of individuals, and then the entire group is presented to witnesses for viewing.

- Formal identification procedures will be conducted as soon after the criminal act as is possible.

- Formal identification line-ups will be conducted at the Martinez Detention Facility. Proper notification and coordination will occur between the Investigations Division and Custody staff prior to the line-up.

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.10
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 6-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Unusual Incident Investigations	

I. POLICY

A. Unusual incidents are cases which do not fall into the normal course of the Investigation Division operations.

1. Those cases involve Post Bomb Blast investigations, Hazardous Materials incidents, Environmental Crimes, Federal crimes with the possibility of Federal prosecution, Federal and Military Assets, Weapons of Mass Destruction and Serial Crimes investigations.

B. Predetermined incidents may come under the jurisdiction of the Federal Government or Military.

1. Assigned investigators will very likely conduct a parallel investigation if Federal, State or Military Agencies become involved.

2. These cases can become long in duration and are conducted by more than one investigator.

II. PROCEDURE

A. Unusual Incident Investigations

1. Cases of this nature will be reviewed by the Investigation Division Commander and assigned to those investigators who are qualified and trained in that particular field of expertise.

2. The investigator assigned to the case will maintain proper written reports and supplements.

3. The lead investigator will be responsible for maintaining an active and a positive liaison with the outside agencies involved in the case.

4. The lead investigator will report on the status of the case in a timely manner to their Unit Supervisor or Division Commander.

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.11
	RELATED ORDERS: Evidence Code 1040, 1041, 1042	
ISSUE DATE: 05-01-07 **REVISION DATE:** 06-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Operations	**SUBJECT:** Confidential Informants	

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Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.03.12
	RELATED ORDERS:	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Evidence and Property	**SUBJECT:** One-Day Liquor Licenses	

I. POLICY

A. It is the responsibility of the Vice detective to review all applications for a One-Day liquor license in the unincorporated areas of the county.

II. PROCEDURE

A. The Vice Unit (Vice) will review and recommend approval or denial of a One-Day liquor license application to the California Department of Alcohol Beverage Control and the applicant.

1. **The final decision to issue a One-Day liquor license will be made by the California Department of Alcohol Beverage Control.**

B. All requests for issuance of the One-Day liquor license shall be in writing and submitted to the Vice Unit at least **30 days prior** to the scheduled event.

C. **Only applicants that qualify as a caterer and/or a non-profit organization,** including a charitable, civic, cultural religious, fraternal, patriotic, political, social amateur sports organization for the following purposes, may apply. This permit allows the following:

1. Sales to members of the organization at the site of/and during an organized picnic, social gathering, or similar function of the organization: OR

2. Sales to the general public from the premises temporarily occupied at the site of and during a county fair, civic celebration or similar event, or at a designated premise and during fund raising events sponsored by a non-profit charitable organization as set forth by the State of California.

D. The written request should include the following:

1. Name of the organization

2. Location of scheduled event

3. Type of event planned

4. Date and time event starts and closes

5. Type of alcoholic beverage to be served (beer, wine, or hard liquor)

6. name, address, and telephone number of a contact person

E. The request should be made to:

Contra Costa County Office of the Sheriff
Vice Unit
1980 Muir Road
Martinez, Ca. 94553

F. The Special Investigations Unit will consider safety, security, size of the event, and logistical impact on the community and the Office of the Sheriff when determining approval.

G. Upon receipt of the written request for the One-Day liquor license, the Vice detective will check the records of the Organization and/or the location for any information that would preclude the issuance of the recommendation.

H. The Vice detective will conduct random on-site inspections of those hosting the event.

I. The Vice detective will prepare the approval letter which will be signed by the Investigations Division Commander or Field Operations Bureau Assistant Sheriff. This will be forwarded to the requesting party.

1. The requesting party must present this letter to the Alcohol Beverage Control Office for the issuance of the One-Day liquor license.

a. ***ABC accepts the original letter only***

2. A copy of the approval letter will be forwarded to the area Station House Commander where the event will occur.

J. When the Vice detective recommends denial for the issuance of a One-Day liquor license, the following will be completed:

1. Vice detective will prepare and forward a recommendation of denial letter to the applicant **within 3 business days** of the recommendation.

2. A copy of the denial letter will be forwarded to the Investigation Division Commander for review.

K. Appeal Process

1. If denied, the applicant may appeal the decision.

2. Upon receipt of the recommendation for denial letter, the applicant may appeal the decision in writing.

3. Once the Investigation Division Commander receives the appeal, he/she will:

a. Investigate the reason for denial.

b. Uphold the decision or will instruct the Special Investigation Unit to issue an approval letter.

c. Issue a final decision of recommendation **within 5 business days** from receipt of the appeal.

d. Forward the results to the applicant either by writing (time permitting) or by telephone contact.

4. The written appeal should be made to:

Contra Costa County Office of the Sheriff
Investigation Division Commander
1980 Muir Road
Martinez, Ca. 94553

Chapter Four - Evidence and Property

Chapter Four - **Evidence and Property**

3.4.1 Property Release and Destruction
3.4.2 Property and Evidence Control

Contra Costa County Office of the Sheriff Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.04.01
	RELATED ORDERS: CCCSO 1.06.37, 1.07.13	
ISSUE DATE: 05-01-07 **REVISION DATE:** 12-11-19	**CLEARANCE:** **CCCSO**	
CHAPTER: Evidence and Property	**SUBJECT:** Property Release and Destruction	

I. POLICY

A. The final disposition of all property taken as evidence or for investigation is the responsibility of the assigned investigator.

B. This applies to recovered items belonging to victims, clothing and personal items taken as evidence and motor vehicles impounded or stored.

C. Any Sheriff's Office Policies and Procedures Manual sections that apply shall be adhered to in conjunction with this section.

II. PROCEDURE

A. Property Release and Destruction

1. Property Room personnel are responsible for the physical release of property.

2. Property that was presented in court will be released only at the direction of the court or District Attorney.

3. Authorization for the release of property will be submitted to the Property Room on Evidence and Property Release Form CL-161.

   a. Detectives may release property to the rightful owner(s). The release will be documented in a supplemental report. If the property released was stored at the Property Room, Property Room personnel will be advised.

   b. Any property seized pursuant to a search warrant must have a signed Order from a judge/magistrate authorizing the release or destruction; unless the release to the rightful owner(s) or the destruction of the property was sought and authorized in the original search warrant affidavit.

Contra Costa County **Office of the Sheriff** Investigation Division Policy and Procedure	**INVESTIGATION**	**NUMBER:** 3.04.02
	RELATED ORDERS: CCCSO 1.06.37, 1.07.13	
ISSUE DATE: 05-01-07 **REVISION DATE:** 06-01-17	**CLEARANCE:** **CCCSO**	
CHAPTER: Evidence and Property	**SUBJECT:** Property and Evidence Control	

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Appendix 1

CONTRA COSTA DISTRICT ATTORNEY'S OFFICE FELONY FILING PROTOCOL

Thank you for your continued commitment to the citizens of Contra Costa County. Below is an updated **Felony Filing Protocol** that must be used to file **felony** cases in Contra Costa County. Please make sure that you include the following in your cases that you bring in for felony filing:

1) VERIFIED REQUEST FOR PROSECUTION FORM – please make sure to fill out the entire document because all of the information is essential for prosecution.

2) SIGNED DISCOVERY CHECKLIST certifying that all necessary "discovery" is being provided and is included in the filing packet.

3) RAP SHEETS for all suspects and victim (DMV and CII). Victim RAP Sheet for **(DA Packet only)**.

4) ALL REPORTS PREPARED AS PART OF INVESTIGATION, including but not limited to:

    a. All CAD Logs/Dispatch tapes related to the call for service.
    b. All police reports and supplemental reports written and associated with the case.
    c. Any prior reports involving the suspects that involve related conduct requested by the DDA at filing.
    d. LPO reports for theft cases.
    e. CHP 180 reports and initial reports from agencies entering stolen vehicles into SVS.
    f. Any search warrants associated with the case, excluding any sealed portions.

COPIES OF REPORTS must be included in the following format:

    a. A Digital Copy of the packet is very helpful and will speed up the log in process if it can be provided at the time of filing
    b. Three copies of all reports (or more if there are multiple defendants). Please include all search warrants (excluding sealed portions), lab reports, DPT reports, and all available computer print outs and CAD logs.

5) SUBPOENA ROSTERS for all felony requests for prosecution must include the following:

    a. SUSPECT IDENTIFYING INFORMATION. All suspects must be listed at the top of each page in the order in which charging is requested,
    b. DETECTIVE CONTACT INFORMATION. Please include your detective cell phone number, desk number, and email address on the subpoena roster.
    c. CIVILIAN WITNESSES. Please include all involved civilians. Included with the civilians, we need DOB, CDL, CII, FBI, and any other identifiers. **We need complete addresses including zip codes, telephone numbers and email addresses.** For juvenile witnesses, please provide information for the guardian. Please also include an explanation of the need for the witness (what the person did in the case), whether the witness is cooperative (to evaluate whether we need to personally serve), and other important information you deem helpful.
    d. LAW ENFORCEMENT WITNESSES. Please include all law enforcement from all involved agencies (first and last names), lab personnel and report numbers that are

relevant. Please detail the relevancy of each witness to the case to help us determine the necessity of the witness.

e. BUSINESS RECORDS OR CUSTODIANS. Please include the custodian of record witnesses for any documents relied upon. Please make sure to get reliable phone numbers (i.e. cell phone numbers for these witnesses). Please also include the account and routing numbers for all of the bank information.

6) COPIES OF ALL DOCUMENTS AND COLOR PHOTOGRAPHS of essential evidence relied upon in the investigation, including but not limited to:

   a. Photocopies of checks, mail, credit cards, receipts, bank statements, phone records, and indicia where there is something significant about the document that the investigation is hinging upon. Should an agency feel these documents are too voluminous, they should call the filer to discuss the issue and determine which, if any, copies the filer feels are necessary to view at time of filing.
   b. Color photo lineups with the admonishment and supporting documentation.

7) ALL MEDIA REFERENCED IN THE REPORT should be provided, including but not limited to:

   a. Copies of the media must be provided for all defendants and the prosecution.
   b. CDs of all the photographs collected as part of the case.
   c. Surveillance videos – When this is collected, the custodian of the surveillance must be interviewed to determine that the surveillance is in proper working condition and the date and time of the video is correct.
   d. Taped statements of any victim, witness, or defendant (even if not the requested subject for prosecution but a co-responsible).
   e. All body camera footage that is associated with the case.

8) VALUATION OF PROPERTY STOLEN OR DAMAGED must be Complete.

   a. A summary of the loss to a victim must be included, either a receipt, or a bank statement with a statement from a custodian at a bank to establish that the loss actually occurred, or a valid estimate for the value of the property.
   b. With stolen vehicles, a value of the vehicle must be included in order to establish that the vehicle is over $950.
   c. All firearms that are stolen must also include a proper valuation for determination if the firearm is worth over $950 (this includes all added components and magazines associated with the weapon).

9) TOTAL RESTITUTION AMOUNT owing to victims.

   a. Agencies must inquire during investigation about restitution owed to victims of ALL crime. The California Constitution guarantees victims restitution on all cases. Please make all attempts to inquire and include the amount of loss at the time of the initial report, any medical expenses, complete damage evaluations or even total loss calculations.

10) PRESUMPTIVE TEST PAPERWORK for any drugs that are the predicate for Drug Related

Charges.

11) MEDICAL RECORDS OF VICTIMS where they went to the hospital related to a particular case. Please obtain a consent release from the victim and identify the extent of the injuries.

    a. In many cases the records will not be complete at the time of in custody filing. In this circumstance, an oral summary from treating medical personnel can suffice but that witness needs to be identified with specificity and should be included as a witness on the subpoena roster.
    b. Please also bring copies of the records to filing if you have them.

Appendix 2

A Sexual Assault Response Team (S.A.R.T.} exam is a forensic medical examination for sexual assault victims. This is done to assist in the investigation of a sexual assault case by collecting physical evidence from the victim.

Basic considerations needed for a S.A.R.T. exam:

- Skin to skin touching
- Any sexual penetration including foreign objects
- Body fluid transfers (ie: saliva}
- Time considerations (see chart below}



The S.A.R.T. exam can last for approximately two to four hours. The exam consists of the following:

- An interview of the incident by nurse and or doctor
- A brief medical history review
- Physical examination
- Photograph of injuries
- Collection of evidence/samples to include:
    - foreign material
    - fluids
      urine

- blood
- clothing collection
- DNA {buccal swabs)

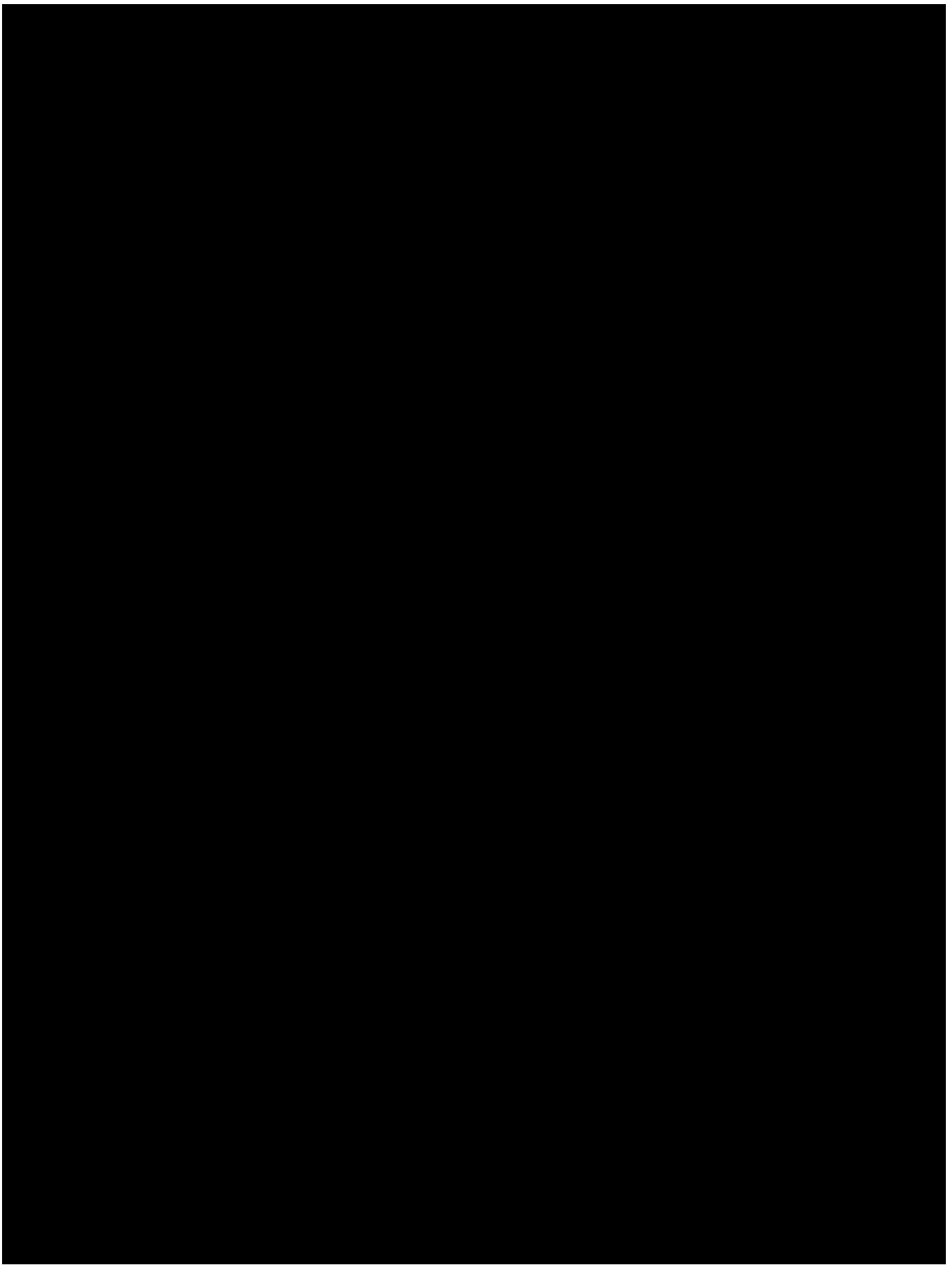
When collecting evidence it may include the following:

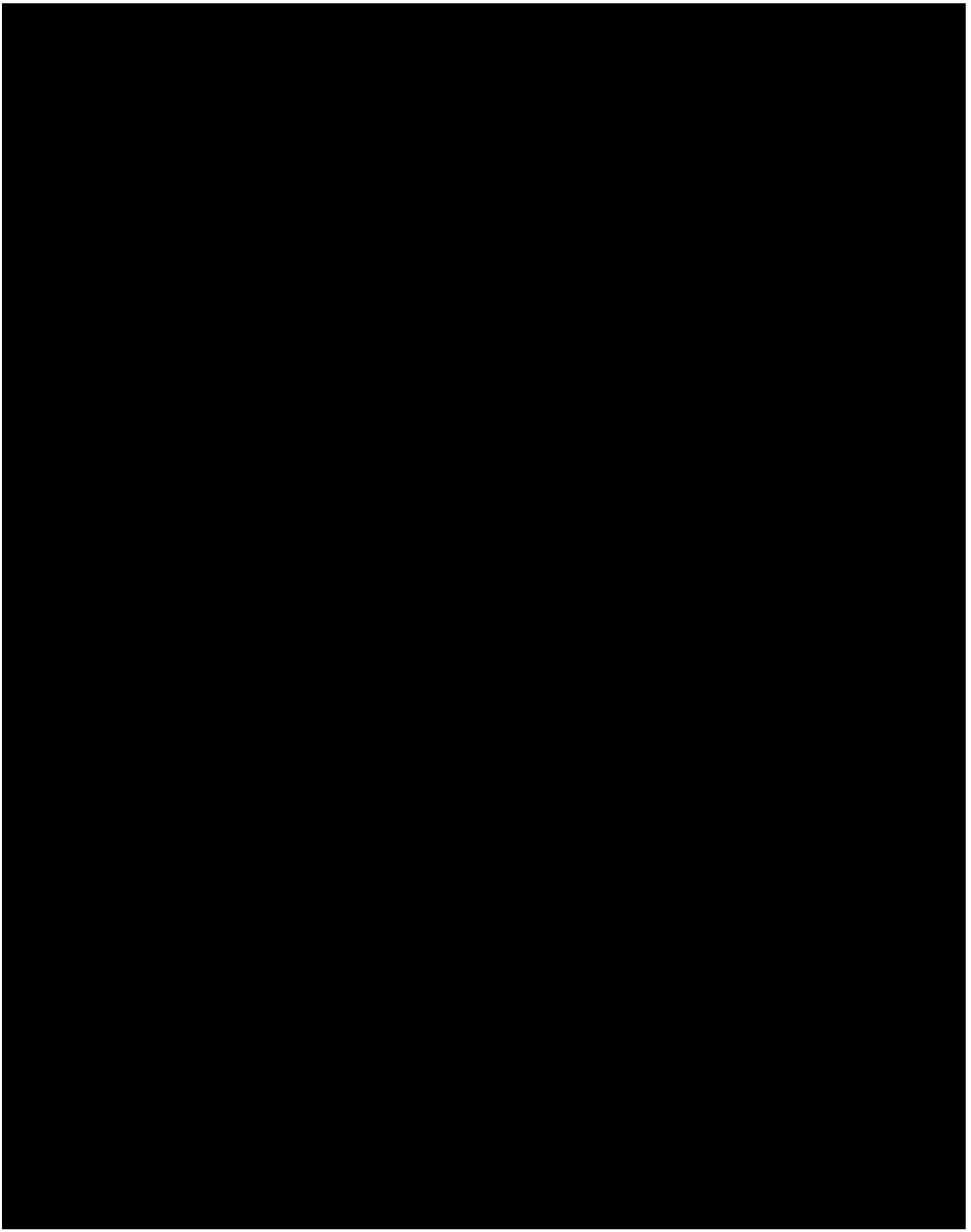
1. A brown paper bag containing victim's clothing {Sexual Assault Evidence Kit Clothing)
2. The Sexual Assault Evidence Kit {envelope)
3. The original S.A.R.T. examination report {Forensic Medical Report) and one additional copy
4. Blood sample for alcohol/drug analysis {envelope)
5. Urine Sample for alcohol/drug analysis {envelope)
6. Liquid Blood Evidence kit {envelope)

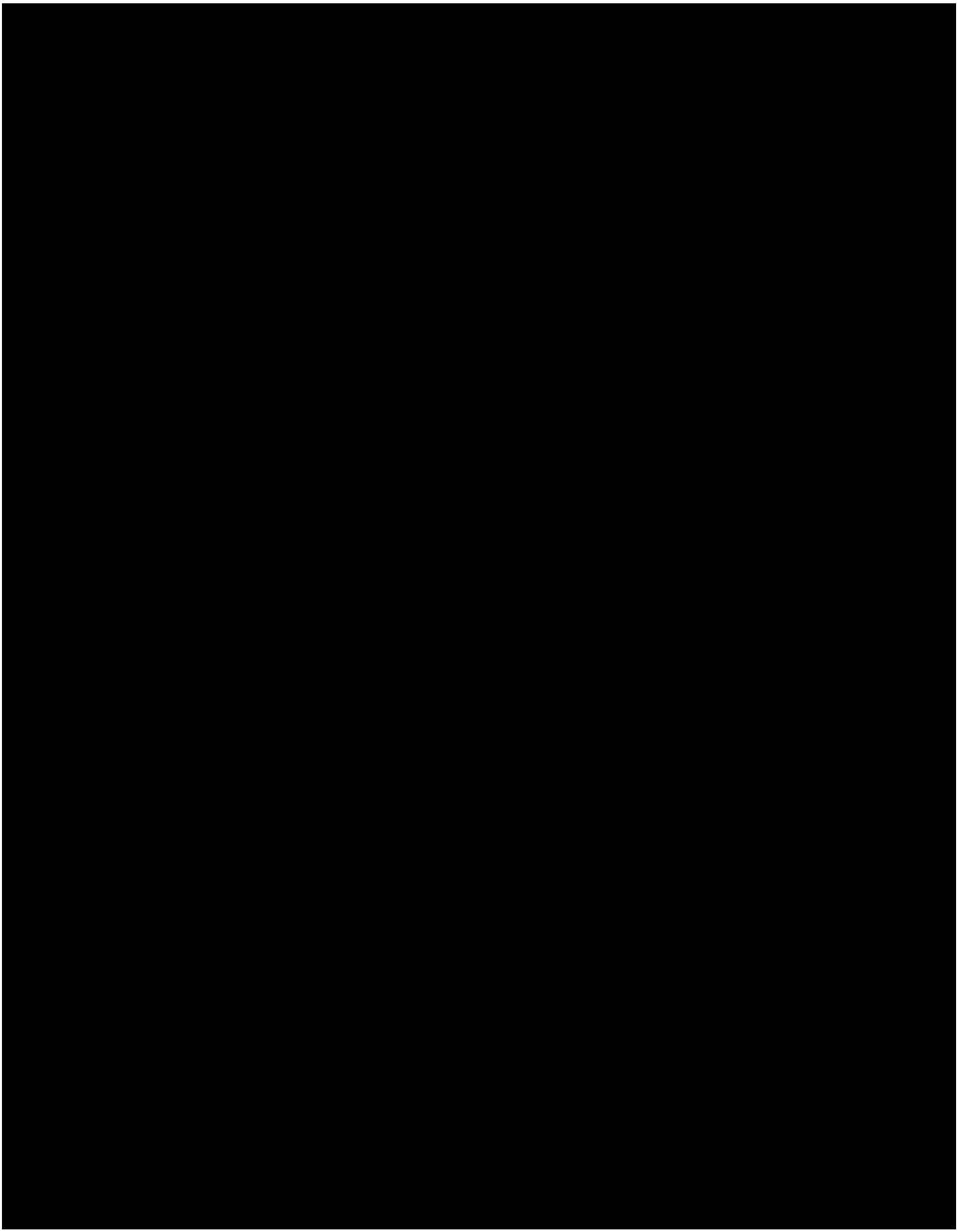
All specimens/fluids collected are to be placed in the refrigerator at the Concord Property Evidence. Clothing can be placed into an evidence locker. Each item must have its own evidence card.

The original S.A.R.T. exam report will be placed into evidence. Attach a copy of the S.A.R.T. exam to your report

Appendix 3









Contra Costa County

Office of the Sheriff

Field Operations Bureau

Patrol and Special Operations

Division Policy and Procedure

2018



Preface

This Manual is, and shall be, a composite of the current practices, objectives, principles, policies and administrative procedures governing the operation of the Sheriff's Office and the Field Operations Bureau.

This Manual has been designed to provide a clear understanding of the constraints under which members of this Office operate, and the expectations that they are to fulfill.

The policies and procedures listed herein are meant to serve as positive guidelines for actions by members of this Office. They are meant to be "attitude forming," to set limits of discretion, and to provide a method to achieve an objective. This Office assumes responsibility for official conduct or acts that are directed by, or in compliance with this manual.

This Manual supersedes all previously issued Sheriff's Office Policy Manuals and procedural memorandums. It does not supersede any applicable State/Federal Laws.

Infractions in policies, and the practice of poor procedures, decrease the public's confidence in law enforcement and this Office. It is the responsibility of all employees to thoroughly acquaint themselves with this Manual and use it as a guide in the performance of their daily operations. A thorough knowledge, familiarity and application of these policies should lead to individual and organizational success.

Many of the directives contained within this Manual must change as the need for change occurs. It is the responsibility of every member of the Sheriff's Office to ensure our policies are constantly reviewed and validated or updated.

Suggestions for corrections or additions to this Manual may be submitted to the Patrol Division Commander directly.

John Lowden
Special Operations Commander
June 2017

Daniel Hoffman
Patrol Division Commander
June 2017

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division Policy and Procedure

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Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Investigations

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.01**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Administrative Structure and Function of Patrol Division Personnel**	

I. POLICY

A. The Patrol and Special Opertions Divisions will provide police service to the community in a professional and caring manner.

B. Administration and management of patrol functions will be accomplished through the Patrol and Special Opeations Division Commanders and assigned staff.

II. GENERAL INFORMATION

A. PATROL AND SPECIAL OPERATIONS DIVISION ADMINISTRATION:

1. Ensures adherence to Department policies and procedures.
2. Manages the functions assigned to the Patrol and Special Operations Division.
3. Provides for communication between Sheriff-Coroner, Undersheriff, Bureau Commanders, other Division Commanders, and elements within the Division.
4. Maintains Division records to accomplish assigned functions.
5. Maintains temporary personnel records of Division members.
6. Ensures continuation of adequate staffing levels.
7. Maintains Division assignment records.
8. Develops and maintains productivity standards and priorities within the Division to achieve Department goals.
9. Ensures the supervision of clerical staff.
10. Supports Division personnel in achieving personal objectives.

B. PATROL AND SPECIAL OPERATIONS DIVISION-LINE OPERATIONS:

1. Performs continuous patrol services and operation.
2. Responds to calls for service.

3. Generates and reviews police reports.

4. Gathers and processes evidence and property.

5. Apprehends suspects and processes arrests.

6. Investigates and reports vehicle accidents within contract cities.

7. Conducts field training of deputies transferring to patrol.

8. Patrols special events and unusual occurrences.

9. Handles special crime problems occurring in specific areas of the County.

10. Ensures immediate public safety and well-being by assisting citizens as needed.

III. PROCEDURE

A. All Patrol and Special Operations members have a basic responsibility to perform assigned tasks and duties in a manner that ensures the success of the Department, Patrol and Special Operation Division's mission.

B. In addition to this basic responsibility, and other duties set forth in the Department manual, Patrol personnel have the following responsibilities:

1. PATROL COMMANDER/CAPTAIN

   a. Reports directly to the Field Operations Bureau Assistant Sheriff.

   b. Overall command of all Patrol personnel.

   c. Responsible for the administration of major programs, projects, or functions within the Division.

   d. Ensures the enforcement of laws and ordinances.

   e. Formulates special orders, policies and procedures for Patrol Division.

   f. Interprets all Department policies as to effects on the Patrol Division.

2. SPECIAL OPERATIONS COMMANDER/CAPTAIN

   a. Reports directly to the Field Operations Bureau Assistant Sheriff.

   b. Overall command of all Special Operations personnel.

   c. Responsible for the administration of major programs, projects, or functions within the Division.

   d. Ensures the enforcement of laws and ordinances.

   e. Formulates special orders, policies and procedures for the Special Operations Division.

   f. Interprets all Department policies as to effects on the Special Operations Division.

3. ASSISTANT PATROL COMMANDER/LIEUTENANT

   a. Serves as the executive officer of the Patrol Division.

b. Administrative:

- Administers all functions of the Justice Team.
- Assumes command of the Patrol Division in absence of Patrol Commander.
- Enforces rules, regulations, policies and procedures of the Division and Department.
- Prepares personnel scheduling and other assignments as needed.
- Reviews policies, procedures, personnel, equipment, and facilities of the Division to ensure the overall Patrol mission is accomplished.
- Insures proper span of control and unity of command and that the delegation of authority is commensurate with responsibility.
- Responsible for keeping the chain of command informed of all operations and problems.
- Evaluates the selection procedures, training programs, budget proposals, planning and research activities, public relations programs and managerial processes for efficiency and effectiveness.
- Reviews and comments on matters involving disciplinary actions.
- Performs special surveys, studies, and related duties as required.
- Maintains internal and external liaison.
- Updates and maintains field operations policies and procedures.
- Responsible for Administrative Services.
- Responsible for Special Operations.
- Patrol training.
- Color Guard.
- K-9 Program.

c. Operational:

- Confers with station commanders/police service managers relative to coordination of work and assumes command of line operations when necessary.
- Makes frequent inspections of entire Division to observe, note, recommend change, suggest compliance and control operations.

- Ensures that line and divisional staff functions are being discharged effectively.
- Advises and assists subordinates in proper disposition of complex or difficult assignments or situations.
- Ensures the enforcement of laws and ordinances.

4. STATION COMMANDER/POLICE SERVICE MANAGERS

a. Administrative:

- Responsible for the command of a Station House or a Contract City Police Department.
- Plans, assigns, reviews and supervises the work of personnel assigned.
- Ensures the development and implementation of assigned programs or functions.
- Reviews activity sheets to keep informed on relative efficiency and accomplishments of his command.
- Delegates administrative duties to others when necessary, monitoring and controlling the levels of performance.
- Investigates and/or reviews all complaints relative to services of personnel under their command.
- Contacts other divisions as necessary in order to insure the proper coordination of activities with Patrol Division.
- Enforces rules, regulations, policies and procedures of the Division and Department.
- Reviews policies and procedures of the Patrol Division and recommends changes.
- Recommends personnel for appointment, commendation, discipline, transfer and dismissal.
- Inspects operations, personnel, equipment and facilities.
- Ensures regular training sessions are conducted during roll call briefing, providing information best suited to the needs of their watch.
- Maintains liaison with allied law enforcement agencies.
- Prepares budget estimates as directed.
- Evaluates all major crimes and reports all unusual situations and emergencies to their supervisors.
- Receives and corrects reports from their subordinates, putting critical emphasis upon completeness and accuracy. Supervisors shall be equally critical regarding

the proper documentation of elements of the crime and all arrests.

- Ensures that proper station and field operations are being discharged effectively.
- Assigns subordinates in such a manner as to accomplish the overall police task.
- Confers with other supervisors relative to coordination of work.
- Ensures all members of their command are kept informed of changes, new laws, etc. via the briefing format.
- Advises and assists subordinates in the proper disposition of complex or difficult assignments or situations.
- Remains available by telephone or radio to all members of their command and shall monitor their activities by these methods.
- Keeps informed and familiar with all police matters occurring since last tour of duty.
- Aids, encourages, instructs, and sets a proper example for all members of their command
- Ensures proper enforcement of laws and ordinances.
- Reviews operating and performance records and reports.
- Prepares plans of operation relative to the Patrol mission.
- Ensures equipment rooms are maintained and operated in accordance with procedures.
- Ensures uniform and grooming inspections are conducted on a weekly basis by sergeants.
- Duties peculiar to individual Station Houses.

b. Bay Station

- Administers Resident Deputy Program in Bay Station operational area. Current Resident Deputy positions include:
- Crockett (1.5) – 1 Full Time, 1 part time (6 months)
- North Richmond (4)
- Rodeo – Contra Costa Housing Authority (2)
- Parking/Abandoned Vehicle Enforcement in Bay Station operational area

c. Muir Station

- Administers Resident Deputy Program in Muir Station operational area. Current Resident Deputy positions include:
- Pacheco Resident Deputy (1)
- Bay Point Resident Deputy (2)
- Bay Point School Resource Officer (1)
- Administers Parking Enforcement in Muir Station operational area
- Department Funeral Coordinator

d. Valley Station

- Administers following Police Service Districts
- P-2A, Blackhawk, during Blackhawk Chiefs Absence
- P-2B, Alamo
- P-5, Roundhill Country Club
- Diablo Services District
- Administers Resident Deputy Program in Valley Station operational area. Current positions include:
- Contra Costa Centre (1)
- Parking/Abandoned Vehicle Enforcement in Valley Station operational area

e. Delta Station

- Administers Resident Deputy program in Delta Station operational area. Current positions include:
- Discovery Bay (2)
- Parking/Abandoned Vehicle Enforcement in Delta Station operational area

f. Marine Services / Air Support

- STARR Helicopter Program
- Marine Patrol

g. Danville Police Department

- Administers law enforcement service for Town of Danville.

h. Lafayette Police Department

- Administers law enforcement service for City of Lafayette

i. Orinda Police Department

- Administers law enforcement service for City of Orinda

j. A.C. Transit

- Administer law enforcement service for A.C. Transit in West Contra Costa County

k. Blackhawk Police Services

- Administers law enforcement service in Blackhawk P2A

5. PATROL AND SPECIAL OPERATIONS SERGEANT/SUPERVISOR

a. Administrative:

- Represents the interest and well-being of non-management personnel to higher authority and transmits management concerns and directives to non-management personnel.
- Attempt to create and maintain high morale and cooperation among subordinates.
- Ensures that all Patrol/Special Operations and Department policies and procedures are adhered to.
- Conducts investigations regarding violations and/or non-conformance of policies and procedures to include written reprimands for remedial purposes and recommendations of discipline.
- Resolves, or if required, submits to higher authority for resolution conflict problems or disciplinary matters arising from assigned personnel.
- Ensures that complaints about personnel or services are promptly investigated and reported to the Station Commander.
- Constantly evaluates the work of assigned deputies and makes written and/or oral evaluations as required.
- Informs management of outstanding performances of any deputy and gives verbal commendations and/or initiates requests for written commendations from higher authority.
- Submits to higher authority suggestions from subordinates that enhance Division or Department operations, programs or functions.
- May relieve a deputy from duty if he/she appears to be physically or emotionally unfit for duty.
- Inspects the uniform and equipment of each deputy a minimum of once each week and ensures that discrepancies are corrected.

b. Operational:

- Supervises all beat deputies assigned to his/her area of responsibility.
- Conducts briefings, insuring that subordinates receive all available information required for the effective operation of the watch.
- Responds to major incidents and supervises the activities as needed to insure a thorough preliminary investigation and/or proper conclusion.
- Reports all unusual and/or emergency situations immediately to the Station House Commander or Watch Commander.
- Contacts each beat deputy as often as possible to ascertain if such deputy has questions or problems.
- Provides extra attention to any deputy assigned to a beat in which unusually large number of enforcement problems exist and aids and instructs such deputy in combating such situations.
- Instructs subordinates on any special assignment and ensures completion.
- Reviews and approves all reports of deputies in his/her area of responsibility.
- Supervises or participates in the enforcement of laws and ordinances.
- Assumes the position of watch commander when directed by higher authority.
- May be required to perform duties of a beat deputy whenever necessary and shall perform related duties when so assigned.
- Advises relieving sergeant of any information that will ensure continuity of effective operation of the Division.
- Reviews and approves all arrests by Patrol Deputies in his/her area of responsibility to ensure proper procedures have been followed and that the requirements of law have been met.

6. SPECIAL UNIT SERGEANTS

a. Within the Patrol Division, Patrol sergeants assume the task of commanding special units. In addition to the duties of a Patrol sergeant, those sergeants commanding special units are responsible for the following:

b. Additional training, maintenance and budgetary requirements pertaining to their unit.

c. Responsible for the evaluation of assigned personnel as to the specialized skills required for their unit.

7. PATROL ADMINISTRATIVE SERGEANT

a. Miscellaneous duties, required to ensure efficient operation of the Division, will be the responsibility of the Patrol Administrative Sergeant.

b. Perform other tasks as directed by competent authority.

c. Supervise "Temporary Student Workers" (Parking Enforcement).

d. Overall responsibility for Division Training.

e. FTO Program Coordinator.

f. Liaison with Property Room concerning destruction/returning property.

8. PATROL AND SPECIAL OPERATIONS DEPUTIES

a. A Patrol/Special Operations deputy has the greatest influence over the achievement of the Patrol and Special Operations Division and Department mission. Success or failure of the mission is directly dependent upon the deputy's professional conduct, knowledge and sense of duty.

b. Enforces laws and ordinances.

c. Responds to calls for service and investigates complaints of disorder or criminal conduct.

d. Maintains thorough knowledge of policies and procedures.

e. Makes arrests of persons who have violated laws and ordinances.

f. Reports all criminal activity assigned or observed to higher authority for proper disposition in the criminal justice system. Collects and preserves evidence pertaining to criminal activity for presentation to appropriate prosecuting authorities.

g. Protects life and property.

h. Participates in the prosecution of law violators by appearing in court to testify to situations observed and actions taken.

i. Investigates conditions hazardous to life or property and takes appropriate actions to remedy the conditions.

j. Maintains a thorough knowledge of assigned beat areas.

k. Performs other tasks serving the public interest and well-being.

l. Ensures the continual enhancement of the Patrol and Department image by displaying professional conduct at all times.

m. Evaluates performance of Reserve Deputies under their supervision.

n. Performs other tasks as directed by supervisors.

9. PATROL AND SPECIAL OPERATIONS DIVISION CIVILIAN PERSONNEL

a. Patrol and Special Operations members who are civilian personnel perform duties and tasks, which support Division and Department goals and objectives. Civilian personnel perform the following duties and/or functions:

b. Order and maintain an inventory of necessary supplies.

c. Perform other tasks as assigned to accomplish Division mission.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.02**
	RELATED ORDERS: CCCSO 1.06.53	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Deployment and Response Priorities**	

I. POLICY

A. Patrol and Special Operations Division will strive to provide the highest level of service possible by using all available resources.

B. Multiple calls for services handled simultaneously require established priorities.

1. Patrol Division will apply such priorities on the basis of

a. Threat to human life and property.

b. Probability of apprehension.

c. The nature of the offense involved.

d. The nature of the service required.

II. PROCEDURE

A. DEPLOYMENT-GENERAL PROVISIONS

1. The Department's responsibility to provide the public with the highest attainable standard of law enforcement, and the mission of the Patrol Division, will be the primary factors in the assignment and deployment of its members.

2. The total resources of the Patrol Division must be deployed in accordance with the demonstrated need for patrol and specialized police services.

B. DEPLOYMENT OF PERSONNEL

1. The Patrol Division services are varied in character and must be rendered at all hours in many locations.

2. Members will be assigned to tours of duty for watches and at places where their services will be of maximum benefit to the community.

C. RESPONSE PRIORITIES

1. The nature of many police tasks requires the Patrol Division to be prepared for any contingency.

2. Patrol members will attempt an appropriate response with sufficient resources to establish control, regardless of the nature of the assignment, or incident.

D. ASSIGNED DEPUTIES RESPONSIBILITY

1. The responding deputy has the responsibility to evaluate the assigned call and determine the appropriate response.

2. The assigned deputy will make contact in person on all incidents.

a. Making contact by telephone should only be done at the reporting party's request.

- Exception: in cases where contacting the reporting party would be impractical, or the reporting party has requested no personal contact.

E. SUPERVISOR'S RESPONSIBILITY

1. Supervisors have a responsibility to remain aware of assignments which affect subordinates.

2. Supervisors will monitor radio traffic, their subordinates workload, and performance.

a. These factors will be the basis for making his/her decision on deployments, and individual deputy evaluations.

F. DETERMINING MANNER OF RESPONSE

1. To assist Patrol members in determining the appropriate response, the following guidelines are provided:

a. Code 1 Responses: An assignment that involves no emergency or urgency. The majority of calls will be of this nature.

- If response will be delayed, the assigned deputy will notify Sheriff's Dispatch of the delay.
- Examples of assignments which are "Code 1" or may be delayed are as follows:
  - Taking a report of a prior incident.
  - Public assembly check (P.A.C.) that involves an appearance only.
  - Accidental alarms with contact requested.
- In any event, Patrol and Special Operations members will not use red lights or siren and will obey all traffic laws, rules of the road, and consider road conditions when responding "Code 1."

b. Code 2 Responses: An assignment that involves an immediate response.

- When responding "Code 2," Patrol members will proceed immediately to the location of the call.

- "Code 2" responses are not emergencies, and members will not use red lights or siren to expedite the response.
- Examples of assignments which are "Code 2" are as follows:
    - Criminal in custody of private persons.
    - Crimes or attempted crimes that just occurred and the identity or description of the perpetrator is known.
    - An incident that has potential to endanger the public's safety.
- Patrol and Special Operations members will obey all traffic laws, rules of the road, and consider roadway conditions when responding "Code 2."

c. Code 3 Responses: An assignment that involves an emergency response.

- Red lights and siren will be used when responding "Code 3."
- Patrol and Special Operations members may make a decision to utilize this response method when any of the circumstances listed below are reasonably believed to be present.
- An emergency response does not relieve the driver of a vehicle from the duty to drive with due regard for safety of all persons using the highway.
- Refer to Sheriff's Office Policy 1.06.53 Code Three Vehicle Operation. Use of warning lights and siren, is authorized when:
    - A crime or hazard endangering life exists.
    - The assignment involves a request for emergency assistance by another Patrol member or other peace officer.
    - The incident involves the immediate pursuit of a suspected violator.
    - It is mandatory that Patrol and Special Operations members responding "Code 3" notify Dispatch that such response is being initiated.
    - Dispatch will notify appropriate field supervisor of such "Code 3" response.
    - When responding "Code 3," units may discontinue the use of red lights and siren when close to arrival and respond the remainder of the distance "Code 2" in accordance with traffic laws.

- The exact time to discontinue a "Code 3" response is to be decided by each individual member assigned to respond.
- "Code 3" responses may be terminated at any time by a Field Supervisor, Station Commander, Officer of the Day or other competent supervisor who deems that such response is unnecessary.

G. DETAIL PRIORITY

1. Priority 1: Emergency, no delay permissible. Examples include:
    a. Felonies in progress
    b. Officer's calls for immediate assistance
    c. Report of potential violence or injury
    d. Any call for service determined by Dispatch to need immediate attention
    e. Traffic accidents with injury or unknown injury
2. Priority 2: Handle as soon as possible, delay permissible, but not desirable. Examples include:
    a. Felony and serious misdemeanor reports on cold circumstances
    b. Most routine reports situations
3. Priority 3: Delay permissible - non-serious details of low priority. Examples include:
    a. Check cases
    b. Stolen bicycles
    c. Cold vandalisms
4. Priority codes should not be confused with operational Codes 1, 2, and 3
    a. A priority 1 is not necessarily a Code 3 detail, even though it may be an emergency.
    b. Code 1 is not necessarily a "do-at-your-convenience," rather; a delay is permissible if it is necessary.

H. INTERVENING INCIDENTS

1. Patrol members in the field may be required to decide whether to continue on an assigned call or handle an in-person complaint or other observed event.
    a. Determination of which to handle will be based upon the degree of urgency and the risk to life and property of the assigned call and the intervening incident.
2. When one or the other cannot be immediately handled, the involved member should request the assistance needed.

I. FILLING-IN- ON CALLS

1. Deputies should be cognizant of pending calls for service, and when appropriate answer up for available calls to reduce Sheriff's Office response.

2. F.T.O.'s should encourage trainees to fill-in on calls for other units, as long as it will not interfere with their own duties and assignments.

J. COORDINATION OF RESPONSE

1. In the interest of officer safety and effectiveness, an attempt should be made to formulate plans between units when two or more are responding to the same incident.

    a. As an example, responding members may choose the side of a house each will take or they may plan to use different streets to provide greater coverage.

2. When such plans are made, members involved are obligated to advise each other of:

    a. The plan

    b. Their arrival at the planned location

    c. Any divergence from the agreed-upon plan, when possible.

K. RESPONSE AVAILABILITY

1. When a unit can decrease response time to a call because it is nearer than a dispatched unit, the closer unit may notify Dispatch of its location and availability to respond.

2. The dispatcher may then send the closer unit after checking with the area supervisor.

L. RETURN TO SERVICE

1. Each Patrol member has a responsibility to return to service as soon as possible after completion of an assignment.

2. Completion of an assignment includes the disposition of an incident and respective reports.

3. Patrol members will return to service sooner when directed by a supervisor to return to service or when the volume and gravity of activity requires such action.

M. 11-99 POLICY

1. It shall be the responsibility of the on-duty area supervisor, at his/her discretion, to decide:

    a. What units will respond to 11-99 calls

    b. How many units will respond

    c. How far they will respond

2. In areas that include contract cities, if no City Sergeant is on-duty, the area supervisor will insure that adequate city units remain in the cities to provide emergency service.

    a. When Sergeants are on duty in contract cities, they will determine the 11-99 response from their cities to insure adequate emergency coverage in the cities.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.03**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Daily Activity Information**	

I. POLICY

A. The compiling and proper coding of the daily activities of Patrol members is essential to planning and deployment of personnel.

B. The information submitted is important for achievement of the Department's and the Patrol Division's goals.

II. PROCEDURE

A. SELF-INITIATED ACTIVITIES

1. Patrol members initiating activities which are not assigned by Dispatch, shall advise Dispatch of the proper codes, disposition, victims name and address as soon as practical after completion of the detail.

B. REPORT DESCRIPTION/DETAIL CODE LISTING

1. Patrol members assigned details by Dispatch shall be responsible for providing accurate codes for such details as soon as practical after completion of the detail.

2. The proper code and disposition shall be obtained from the "Report Description/Detail Listing pamphlet".

a. EXAMPLE: Detail assigned is a residential burglary.

- The proper codes would be: "459R, disposition RTF".

b. In the event a detail is assigned as a specific crime, but after gathering all the information, the deputy determines the incident involves a different crime; codes shall be given for the appropriate crime.

- EXAMPLE: Detail is assigned as a grand theft. The deputy determines that the loss does not exceed the required amount for a grand theft.
- Proper codes would be: "488.9, disposition RTF".

3. The following information is meant to clarify some sections relative to the proper coding of incidents:

   a. Use only those codes listed in the Detail Listing Booklet.

   b. When one person is arrested for more than one crime, the code shall be given for the two most serious crimes.

      - Example: A person arrested for a burglary, resisting arrest, and battery.
      - The code would be for the appropriate burglary charge and resisting arrest.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.04**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Patrol and Special Operations Division Manual**	

I. POLICY

A. Effective April 4, 2017, all Patrol and Special Opeations Division policies and procedures not herein contained are superseded or canceled.

B. In order to provide effective and efficient police service, procedures must continuously be evaluated and techniques improved. It will be necessary to create and revise policies and procedures as needed.

C. All personnel assigned to the Patrol and Special Operations Division are responsible for knowing and adhering to the policies and procedures set forth in this manual.

II. PROCEDURE

A. MAINTENANCE OF PATROL MANUAL

1. Each member of the Division can access a copy of the manual on the [redacted], or via SPARKS.
2. Changes and / or new policy pages will be placed in the manual on [redacted] and in SPARKS.

B. INSERTING NEW MATERIAL

1. Discard superseded policies or procedures and replace with new.
2. Definitions of terms used are as follows:
   a. Amended: Addition to present policy
   b. Revised: Changed
   c. Added: Addition of entire section.
   d. Deleted: Deletion of entire section.
   e. Policies: Definitive statements indicating the Department's philosophy to the policy subject matter.

f. Procedure: Either guidelines or rules concerning the implementation of all or part of the policy.

C. MEMORANDUMS THAT EFFECT PATROL DIVISION PROCEDURES

1. All memorandums that have an effect on Patrol and Special Operations Division procedures will be assigned an expiration/review date which will be approximately 12 months after date of issue.

2. After the review date, the memorandum will have to be reissued and incorporated into the Manual to remain in effect.

3. The Assistant Patrol Division Commander will be responsible for maintenance of the master file for such memorandums.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.05**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Inspections**	

I. POLICY

A. Patrol and Special Operations Divisions will use inspections as a control process to attain its objectives:

1. Improve the Division's operational efficiency
2. Upgrade the Division's professional standards
3. Ensure personal safety equipment of uniformed officers is properly maintained

B. The Patrol and Special Operations Division Commanders or their designees may initiate an inspection at any time. Inspections are performed to ensure adherence to Department and Division policies and procedures so the Department and the Division can move efficiently and effectively towards their objectives.

II. GENERAL INFORMATION

A. An inspection is conducted by personnel of supervisory or higher rank who have direct authority and responsibility for the activity of persons or places being inspected.

B. The authority to effect immediate corrective changes can be exercised during inspections.

III. PROCEDURE

A. Station House/Building Inspections

1. Janitorial services are provided, but Patrol and Special Operations personnel assigned to Station Houses shall be responsible for the overall care, cleanliness and maintenance of the premises.
2. Necessary repairs and maintenance will be directed to the General Services Department via the Station House Commander or designee.

B. Personnel Inspections

1. All Uniformed Employees are expected to maintain their uniform and equipment in a clean, serviceable condition to ensure maximum safety and efficiency.

2. Personnel Inspections are performed biannualy at the end of shift rotation to ensure adherence to Department and Division policies and procedures.

3. The Personnel Inspection Form shall be used.

    a. This completed form will be submitted to the employee's Divisional Personnel file.

    b. The Deputy's Sergeant WILL inspect the employee's driver's license and note the expiration date.

C. Recording and Filing Results:

1. The results of the inspection will be reduced to writing by the member responsible for the inspection and forwarded to the Patrol Division Commander.

2. The report will include, but is not limited to, the following elements:

    a. Report of conditions: The report will clearly define the conditions that existed at the time the inspection was conducted.

    b. Report of deficiencies and/or acceptable conditions:

        - Measurements will be made against an acceptable standard and deficiencies and/or commendable conditions will be accurately reported.

        - NOTE: Acceptable standards are those defined by departmental or divisional policy and procedure.

D. Responsibility for Follow-Up and Corrective Action

1. Reported deficiencies will be corrected in accordance with the following procedures:

    a. Deficiencies caused by outside factors

        - When correction of reported deficiencies cannot be accomplished within the Division (such as deficiencies caused by factors not under control of the Division Commander) they will be forwarded to the level of command having authority to make the proper corrective decision.

2. Deficiencies caused within the unit:

        - When reported deficiencies are correctable within the Division, the deficiencies will be corrected and a follow-up report forwarded to the Division Commander identifying actions taken.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.06**
	RELATED ORDERS: CCCSO 1.04.52 Overtime Pay and Regulations CCCSO 1.04.68 Shift Trade Policy	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Miscellaneous Administrative Procedures**	

I. POLICY

A. The following procedures will apply in matters concerning overtime, shift work, and general time-keeping.

II. PROCEDURE

A. OVERTIME PROCEDURES

1. Authorization for all overtime, with the exception of holiday overtime, must be approved by a sergeant and/or station commander. Pursuant to Sheriff's Office Policy section 1.04.52, Deputies may not work more than 120 hours of overtime per month. Incidents in which overtime is authorized are as follows:

a. Court appearances

- Overtime is authorized for court appearances and pre-trial conferences which are required for deputies during off-duty hours.
- Subpoena or notice of trial must accompany the "overtime request card", when submitted.
- NOTE: Overtime is not authorized for travel time to and from court appearances, nor for a lunch recess taken by the court, if applicable.

b. Late details

- Overtime may be authorized for a late detail if the detail is of an emergency nature or a major felony and if/or in the opinion of a sergeant and/or station commander is absolutely necessary.

c. Sick leave relief

- Overtime will be authorized for sick leave replacement only to maintain the minimum staffing level of the affected shift.

d. Training

- Overtime for training will be authorized in advance by the Patrol Division Commander or Assistant Division Commander.

e. Special details

- Incidents requiring overtime, such as extraditions, security for dignitaries, etc., will be authorized by the Patrol Division Commander or Assistant Division Commander.

f. Civil witness cases

- The Sheriff's Department is reimbursed for all court appearances and/or oral depositions made by Deputies in civil cases.
- Overtime request cards are submitted as follows:
  - Attach overtime card to the subpoena; in addition, an "information/disposition" form will be completed.
  - Should appearance involve more than one day, do not submit overtime request until completion of appearances. Indicate each day separately.

g. Holiday overtime

- Overtime for holidays shall be posted on the holiday if it falls on the employee's regular working day or on his/her next regular working day if it falls on one of the employee's regular days off.
- NOTE: Any person taking either a sick day or a vacation day on their first regular working day after a holiday will not receive holiday overtime pay.
- Instead, for such employees sick leave or vacation accrual will not be charged, unless the absence exceeds 8 (eight) hours.

2. Submitting Overtime Requests

a. Employees must complete and sign an overtime request card and submit it to the appropriate supervisor in all cases where overtime is authorized.

b. The card must be countersigned by the appropriate supervisor and the Station Commander.

c. The sergeant and/or station commander must submit overtime cards to Payroll without unnecessary delay for any overtime authorized by them.

d. A separate card must be submitted for each authorized overtime detail and must be completed as accurately as possible. All

overtime cards should be in by the first working day after the end of the month in order to receive payment on the tenth of the month paycheck.

B. WORKING SHIFTS AND SHIFT TRADES

1. All deputies will work their shifts as published and posted at the beginning of each watch period. Any adjustments will be settled prior to the starting date of the watch period.

2. All shift trades will be in accordance with Sheriff's Office Policy and Procedures section 1.04.68.

C. TIMEKEEPING

1. All exceptions to the regularly assigned schedule (vacations, sick leave, comp time, etc.) must be documented. Requests for such exceptions are as follows:

   a. Vacation requests

      - Regular annual vacations are scheduled by the Assistant Division Commander.
      - All other requests consisting of one working week off or more must be submitted via e-mail to the Assistant Division Commander for approval.
      - Requests for less than one working week vacation time shall be submitted to the appropriate Station Commander.
      - EXCEPTION: In cases of emergency vacation time off, contact the Assistant Division Commander by phone or in person. Approval or disapproval will be given at that time.
      - Upon approval an "Absence Report Form", will be completed. After being posted on the time sheet, a copy will be given to the employee and the balance of the form delivered to the Administration Payroll Clerk for processing.

   b. Request for holiday comp time

      - Requests submitted for holiday comp time will be done in accordance with the procedures outlined for vacation requests.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.07**
	RELATED ORDERS: CCCSO General Policy and Procedures Sections: 1.07.54 – E-Mail, Texting, Internet, and Internet Access, 1.07.58 – Social Media/Social Networking Policy, 1.06.36 – Digital Photography, 1.06.51 – Vehicle Operations and Parking Procedures, 1.07.11 – Care and Maintenance of County Equipment	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Reporting For Duty**	

I. POLICY

A. Members of the Patrol and Special Operations Division will be punctual in reporting for duty at their assigned work station.

B. Members will report for duty properly groomed and in the uniform of the day. Apparel and equipment will be in a presentable condition.

II. PROCEDURE

A. GENERAL RULES

1. Patrol and Special Operations personnel shall be at their assigned station in full uniform and be ready to work by the beginning of their shift.

B. GENERAL RESPONSIBILITIES

1. All Patrol personnel will have a neat and clean uniform, shoes shined, brass polished.

2. All required and necessary equipment shall be carried; Deputies will:

   a. Check their utility box to insure an adequate supply of forms and miscellaneous supplies.

   b. Review the bulletin board and daily bulletin, and affix their signature when required.

   c. Be subject to dismissal from duty for that watch or tour if they report late. Immediate supervisors may allow tardy subordinates to assume their duties when prior notification has been received that lateness will occur.

   d. Report for duty promptly

      - Failure to do so will be neglect of duty and they will be subject to the Department Corrective Counseling procedure/Personnel Management Regulations.

e. Check individual mail slots/boxes and e-mail for messages and other information.

3. All Sergeants and Deputies in the Patrol Division who are assigned a department issued smart phone must adhere to the following guidelines:

   a. Retrieve and turn on their phones at the start of their shift.

   b. Ensure that their phone's voicemail is properly set up and available to receive messages. The voicemail should minimally state the employees name, phone number, current work assignment, and a statement that if the person calling is reporting an emergency, that they should hang up and call 9-1-1.

   c. Minimally check their voicemail at the beginning and end of their shift.

   d. Employees must comply with General Policy and Procedure Sections: 1.07.54 – E-Mail, Texting, Internet, and Internet Access and 1.07.58 – Social Media/Social Networking Policy with regards to the use of department issued smart phones.

   e. Employees are not to add any applications to the smart phone that are not approved by the Technical Services Division. Employees may recommend the addition of an application to the phone by submitting a memorandum to the Patrol Division Commander, via the chain of command.

   f. Employees are encouraged to utilize their department issued smart phone to make contact with citizens who are requesting contact by telephone. Employees should provide citizens with their phone number for the purposes of follow-up and direct contact with the employee.

   g. Employees are reminded of General Policy and Procedure Section 1.06.51 – Vehicle Operation and Parking Procedures, that prohibits Office of the Sheriff employees from utilizing a cell phone while driving, unless it is being operated in a "hands-free" manner.

   h. Employees may utilize their department issued smart phone to take evidentiary photographs pursuant to General Policy and Procedure Section 1.06.36 – Digital Photography. Photographs should be downloaded into the report writing system and deleted from the phone as soon as it is practical to do so.

   i. Employees should be cautioned that department issued smart phones are provided for the sole purpose of work related business.

   j. Deputies and Sergeants in the Patrol Division who are provided a department issued smart phone are under no obligation to answer phone calls or text messages while they are off duty. Employees are encouraged to leave their department issued smart phone in their locker in between shifts.

k. Employees assigned a smart phone will enter their phone number into their unit history at the start of each shift.

C. BEAT DEPUTIES RESPONSIBILITIES

1. Inspect the patrol vehicle completely.
2. Obtain the beat board.
3. Obtain a portable radio.
4. Document the following numbers on the shift schedule:
    a. Vehicle number
    b. Portable radio
    c. Flashlight
    d. Employee number and Beat/Call sign
    e. Any other station equipment used (shotgun, AR-15, camera, etc.)
5. The beat/call sign and employee numbers will also be given to dispatch by the deputy.
    a. Patrol vehicles with on-board computers (MDC) can be used to log all information above, and notify dispatch.
    b. Deputies must verify the information was received.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.08**
	RELATED ORDERS: CCCSO 1.06.41 – Report Writing	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Report Review**	

I. POLICY

A. Reports submitted by the Patrol and Special Operations Division personnel will be clear, concise, and complete.

B. They will be reviewed by the line supervisors prior to Department distribution.

C. They will be reviewed by Station Commanders and/or City Police Managers after Department distribution.

II. PROCEDURE

A. GENERAL RESPONSIBILITY

1. Patrol Deputies are responsible for contacting their supervisor to have their reports reviewed before the end of their shift.

B. AUTHORITY AND RESPONSIBILITY OF SUPERVISORS

1. All supervisors have the authority and responsibility to critically review reports and, when necessary, provide guidance and counseling in proper report writing methods and procedures.

2. They will review all reports generated by personnel and will make sure the reports contain:

   a. The necessary elements of all crimes listed on the face page.

   b. The actions taken by the Deputy and assisting Deputies.

   c. A list of all losses and damages to property and victims.

   d. Complete identification of all the involved parties and a correct disposition.

3. Supervisors will approve completed reports by logging into the report writing system, reviewing all documents, appropriately routing, and clicking the approve button.

4. Incomplete, inaccurate, or sloppy reports will be returned to the Deputy to correct the noted deficiencies and resubmit for review prior to going off duty, unless the supervisor makes another arrangement.

a. Requested corrections can be made in the report writing system by the Sergeant prior to rejecting the report back to the Deputy.

b. When appropriate, report critique forms will be utilized to promote training, and to document needed corrections.

c. Ideally the resubmitted report should be reviewed by the supervisor who requested the deficiencies be corrected.

5. When reviewing reports where an entry into C.L.E.T.S. is made, the Supervisor will review the report to verify the accuracy of the information entered into C.L.E.T.S. and that the entry information is supported in the original report.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.09**
	RELATED ORDERS: CCCSO 1.06.41 Report Writing	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Report Writing Procedures**	

I. POLICY

A. Patrol and Special Operations Supervisors will facilitate the proper dissemination of information and ensure that a complete investigation is conducted when necessary, by routing the reports they approve to the proper Outside Agencies, County Departments, Sheriff's Divisions and Patrol Administrators.

II. PROCEDURE

A. ROUTING WITHIN THE DIVISION

1. The following guidelines shall apply for proper routing of reports:

   a. All reports shall be read, corrected, and routed by the appropriate Patrol Sergeant or, if necessary, the Station Commander.

   b. The reports will be routed according to the Report Writing Manual and Report Routing Matrix.

   c. If follow-up is required, a copy should be routed to the appropriate deputy or shift.

   d. Reports concerning major felonies and all arrest reports shall have one copy routed to the Patrol or Special Operations Captain.

   e. Any reports of special significance or regarding a newsworthy incident should be routed to the Patrol or Special Operations Captain for his/her information.

   f. One copy of each report will be routed to the appropriate duty station.

B. ROUTING TO OTHER DIVISIONS

1. All copies of reports to other Divisions will be routed according to the "Report Routing Matrix."

2. Reports can be routed anywhere for information only and supervisors doing the routing are encouraged to do so freely in an effort to

disseminate as much information as possible to other units of the Department.

C. DISTRIBUTION

1. The Services Division will handle distribution of reports.

   a. Exceptions:

   - Reports concerning in-custody juveniles shall be sent to Juvenile Hall via FAX by the end of shift.
   - Serious Felony Cases and Felony Arrests shall be sent to the investigation division via FAX or e-mail by the end of shift. If the report is unacceptable as written, a copy will be sent to the investigation division via FAX with an attachment detailing the incident and advising the report is being rewritten.
   - Towed Vehicles must have the PF9 form (Tow Sheet) faxed or e-mailed (TOWCLERK) to the Patrol Secretary at FOB, [redacted].
   - 5150 Hospitalization cases where a firearm or weapon is taken or used must have a copy of the completed report, the 5150 form and a copy of the completed 8102 form faxed to the FOB, [redacted], attention Misdemeanor Complaints.
   - Out of state fugitive arrest (1551.1 PC) reports will be faxed to the Civil Sergeant prior to end of shift. Time limits concerning extradition, notifications, and verifications are crucial, and begin at time of arrest.

D. BLOOD/FLUID CONTAMINATED DOCUMENTS

1. The following guidelines shall be utilized when dealing with documents that have been contaminated with blood or other body fluids prior to submission to Records:

   a. When a report or other document is believed to be contaminated by blood or other body fluids, and it cannot be rewritten, a copy of the contaminated pages will be made and substituted for the contaminated pages prior to submission to Records.

   b. The contaminated pages will be placed in a plastic cover or bag and given to the Supervisor or Manager for disposal. In doing this, the contaminated document will be handled as little as possible and with great care.

   c. The employee should wash his/her hands thoroughly after handling the document.

   d. The copy machine and all work surfaces which may have been contaminated, should be cleaned.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.10**
	RELATED ORDERS: CCCSO 1.06.41 Report Writing	
ISSUE DATE: 1-26-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Computer Aided Dispatch Type (CADT) Report Management**	

I. POLICY

A. Patrol and Special Operations Sergeants are responsible for the daily review of the Station House Computer Aided Dispatch Type (CADT), and shall ensure that all completed reports have been signed off and the entry lined out on the CADT report.

B. The following procedures shall apply for daily processing of the CADT at station houses.

II. GENERAL INFORMATION

A. CCCSO Policy 1.06.41 states, "Crime reports shall be completed and routed in an expeditious manner to ensure the necessary information is received by the appropriate people."

B. Deputies shall complete arrest reports, or reports involving serious crimes, before the end of shift.

C. Deputies shall submit all reports prior to beginning their days off, unless authorized by their immediate supervisor.

D. In order to hold over reports, deputies must first contact their immediate supervisors and receive their permission (see the below listed procedure).

E. The CADT is automatically generated for each station house by Technical Services personnel and emailed to the Station House Commander each day Mondays through Fridays.

III. PROCEDURE

A. DAILY AUDIT OF CADT

1. The dayshift sergeant will obtain a copy of the CADT report, either through placement on the distribution list or from the Station House Commander.

2. Each shift sergeant shall conduct an audit of the CADT on a daily basis through the following steps:

a. Review the CADT, and highlight the reports on the CADT that belong to deputies on their shift which have not been lined out.

b. Check the report writing system.

- Log into the report writing system.
- Once the mask appears, go to the "Reports in-progress" box near the top of the page, and highlight the appropriate city code. For example, "MUI."
- Next, go to the center of the screen to the "Search" icon.
- Click on "Search" and a mask will appear.
- Type in the DR number and leave the any status box blank.
- This will locate the report if it is in the report writing system, no matter what status the report is in.

c. Check the WEB Query system.

- Log into WEB Query.
- Check to see if the CADT was by-passed, and verify the report is in the system.
- In the box marked "Value" you must type in a nine-digit DR number. For example, 050012345.

d. As a last resort open the Tiburon menu.

- Open the "Incident" folder.
- Open the "Entry" mask.
- Enter the DR number.
- Look at the "Incident" mask to determine whether or not the RECORDS Unit received the report.
- If the RECORDS Unit received the report there should be an employee number listed in the CLERK box, and in the "CONROL" box.
- Click on the "Notes" tab.
- Review the "Notes" mask to determine if the RECORDS clerk entered the original report and/or a supplemental report.
- If the RECORDS clerk entered an original report you will see "D.E." or "Orig." entered.
- If the RECORDS clerk entered a supplemental report you will see "Supp." entered.

3. If the sergeant is able to account for the report in WEB Query, Tiburon or the report writing system, he/she shall initial the report on the CADT.

4. If the sergeant is unable to locate the report, he/she shall notify the deputy who initiated the DR. The sergeant shall follow up with the deputy to determine the status of the report.

5. The CADT reports shall be placed on the CADT Board at the conclusion of each day.

B. REPORTS APPROVED FOR HOLDOVER

1. If a sergeant allows a deputy to hold over a report, the deputy shall complete an "A" page in the report writing system and print the "A" page.

   a. Any completed forms shall be attached with a paperclip to the "A" page.

2. The sergeant shall initial the "A" page, and place it into the "Holdover Reports" box in the Sergeant's Office.

3. The sergeant shall retain the original "A" page in the "Holdover Reports" box until the report has been completed.

C. SUPPLEMENTAL REPORTS

1. Supplemental reports, which are not listed on the CADT, must be handwritten on the CADT by the supervisor who signs off the supplemental report.

2. The supervisor shall write down the DR number, crime classification, and name of the deputy who wrote the supplement.

D. TOW FORMS

1. Tow forms that are assigned a DR number will appear on the CADT report, but cannot be located in the report writing system, WEB Query, or Tiburon.

2. Sergeants shall verify the status of a tow form by locating the yellow copy retained at the respective station house.

3. If the sergeant is able to account for the tow form, he/she shall initial the tow form on the CADT.

4. If the sergeant is unable to locate the tow form, he/she shall notify the deputy who initiated the DR. The sergeant shall follow up with the deputy to determine the status of the tow form.

E. STATION HOUSE COMMANDER'S REPONSIBILITY

1. The Station House Commander shall ensure the above listed procedures are followed and is responsible for compliance of staff under his/her command.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.11**
	RELATED ORDERS: None.	
ISSUE DATE: 1-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Sheriff's Office Station Houses and Contract Cities**	

I. POLICY

A. The Office of the Sheriff maintains substations throughout the County in order to provide better service response to the community.

B. Patrol personnel assigned to these substations shall adhere to all Departmental policies and procedures.

II. GENERAL INFORMATION

A. CARE AND MAINTENANCE

1. Janitorial services are provided, but Patrol personnel assigned to Station Houses shall be responsible for the overall care, cleanliness and maintenance of equipment located there.

2. A business office atmosphere is necessary to maintain a presentable appearance to the public.

B. LOCATION OF STATION HOUSES/CONTRACT CITIES

1. Bay Station
Address: 5555 Giant Hwy, Richmond 94801
Phone Numbers:
Public: (510) 262-4203
[redacted]

2. Delta Station
Address: 210 O'Hara Avenue, Oakley, 94561
Phone Numbers
Public: (925) 625-2341
[redacted]

3. Marine Services / Air Support
Address: 70 Lauritzen Ln, Oakley, 94561
[redacted]

4. Muir Station
Address: 1980 Muir Road, Martinez, 94553
Phone Numbers:

Public:(925) 313-2500
[redacted]

5. Valley Station
   Address: 150 "C" Alamo Plaza, Alamo, 94507
   Phone Numbers:
   Public: (925) 837-2902
   [redacted]

6. A.C. Transit
   Address: 5555 Giant Hwy, Richmond, 94801
   Phone Number: (510) 262-4208

7. Blackhawk P.D.
   Address: 1092 Eagle Nest Pl, Danville, 94506
   Phone Number: (925) 736-1018

8. Danville P.D
   Address: 510 LaGonda Way, Danville 94526
   Phone Numbers:
   Public: (925) 314-3700
   [redacted]

9. Lafayette P.D
   Address: 3675 Mt. Diablo Blvd.#130, Lafayette 94549 Phone Numbers:
   Public (925) 283-3680
   [redacted]

10. Orinda P.D
    Address: 26 Orinda Way, Orinda 94563
    Phone Numbers:
    Public: (925) 254-6820
    [redacted]

III. PROCEDURE

A. RESPONSIBILITIES OF PERSONNEL

1. Patrol members shall not congregate at station houses except when necessary to perform a task relative to their duty (i.e., line-up, make telephone calls, write lengthy reports, conduct interviews, etc.).

2. The last person leaving shall secure the building.

Contra Costa County **Office of the Sheriff** Patrol Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.12**
	RELATED ORDERS: PC 830.6, 832.6(a)(1), 832.6(a)(2), 832.6(a)(3) CCCSO POLICY 1.06.02	
ISSUE DATE: 1-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Sheriff's Reserves and Cadets**	

I. POLICY

A. The Sheriff's Office is augmented by a Sheriff's Reserve force and by Sheriff's Cadets.

B. Members of these units donate their time to aid and assist the Patrol Division and Special Operations in achieving and accomplishing the goals established.

C. In order to utilize their presence, the following guidelines and procedures are established and are inclusive of those procedures set forth in the Sheriff's Office Policies and Procedures Manual. (Sheriff's Office Policy and Procedures Manual Section 1.06.02)

II. GENERAL INFORMATION

A. RESERVE LEVELS AND AUTHORITY

1. Reserves: The following information pertains to the Peace Officer powers and authority of Reserves:

a. Level I Reserves:

- Level I Reserves may be used as prescribed in Penal Code Section 832.6(a)(1), which states in part: "May be assigned to the prevention and detection of crime and the general enforcement of the laws of this State, whether or not working alone."
- Level I Reserves are not authorized to have a citizen ride-along.

b. Level II Reserves:

- Reserves in this classification may be used as prescribed in Penal Code Section 832.6(a)(2), which states in part: "May be assigned to the prevention and detection of crime and the general enforcement of the laws of this State while under the immediate supervision of a peace officer possessing a basic certificate issued by the Peace Officer's Standards and Training Commission."

- Level II Reserves are not authorized to have citizen ride-alongs.

c. Level I,II, and III Reserves will transport arrestees as directed by the Patrol Sergeant.

d. Level III Reserve Officers are defined in Penal Code Section 832.6(a)(3) which states in part that a Level III Reserve Officer "may be deployed and are only authorized to carry out limited support duties not requiring general law enforcement powers in their routine performance. Those limited duties shall include traffic control, security at parades and sporting events, report taking, evidence transportation, parking enforcement, and other duties that are not likely to result in physical arrests. Level III Reserve Officers, while assigned those limited duties, shall be supervised in the accessible vicinity by a Level I Reserve Officer (who has completed an academy) or a full-time officer.

- Level III Reserves are not authorized to have citizen ride-a-longs, but they may be paired with other Level III Reserves working Level III assignments.
- Level III Reserves are not authorized to ride along in a patrol environment (including Marine Patrol) based on the fact that Level III Reserves are not to be assigned duties likely to result in physical arrests.

B. RESERVE UNITS

1. Reserves are assigned to the following areas because of their specialized skills:

a. Marine Patrol, Marine Divers, Search and Rescue, S.A.V.E.S. Program and the Sheriff's Air Squadron.

b. Reserve F.A.S.T. Team

- This team is made up of Level I and Level II Reserves who can respond on short notice to critical incidents within the Sheriff's jurisdiction.
- In the event of a major incident requiring immediate staffing, the Reserve F.A.S.T. Team can be activated by the Patrol Sergeant notifying the Reserve Coordinator through Sheriff's Dispatch.
- In the absence of the Reserve Coordinator the F.A.S.T. coordinator will be notified directly for activation by Sheriff's Dispatch. The F.A.S.T. Team coordinator will determine the availability of staff to respond to a critical incident.

c. Search and Rescue:

- Members are dedicated volunteers who can be summoned to assist the Sheriff's Office during the following critical incidents:

- Missing adults
- Lost or missing children
- Searches for criminal offenders
- Area searches for evidence

- In the event of a call out, the Patrol Sergeant notify the Reserve Coordinator, Sheriff's Dispatch will utilize the Search and Rescue callout list in Dispatch.
- When individuals on the callout list cannot be located SAR Dispatch will be called by Sheriff's Dispatch.

d. Marine Divers:

- During a callout for Sheriff's Office Divers the Patrol Sergeant will notify the Marine Patrol Lieutenant

III. PROCEDURE

A. DEPLOYMENT OF PATROL AND SPECIAL OPERATIONS RESERVES:

1. Reserves will be scheduled and deployed by the Volunteer Services Sergeant/Coordinator and report directly to a Station House or Contract City.

   a. The Station Commander, Contract City Manager or Patrol/Special Operations Sergeant may assign Reserves as needed.

2. Level I Reserves may be assigned to work alone

   a. They are not to be used to replace a salaried Patrol or Special Operations deputy or to maintain minimum staffing levels.

3. Both Level I and Level II Reserves may be utilized for traffic control and transportation details.

B. PATROL AND SPECIAL OPERATION DEPUTIES RESPONSIBILITIES:

1. The following guidelines are to be adhered to by Patrol or Special Operations members who may have Reserve personnel assigned. These guidelines include, but are not limited to:

   a. Training the Reserves in Patrol functions and duties.

   b. Evaluation of a Reserve's performance, either orally or in writing.

   c. Reporting incidents of misconduct of Reserve personnel, in writing, to the Volunteer Services Sergeant.

   d. Reserves may operate the Patrol or Special Operations unit under the supervision of a full time sworn Deputy Sheriff.

   e. Reserves may be assigned to write certain details, such as parking citations, alarms, petty thefts, found property reports, etc. Details that generally require no follow-up investigation and no suspect information.

C. REPORTING FOR DUTY

1. Reserves, when scheduled will report directly to a prearranged work location or Station House, at the agreed upon designated time.

2. Reserves will be well groomed and in appropriate uniform, together with authorized equipment.

D. FUNCTIONS AND USE OF SHERIFF'S CADETS

1. The Sheriff's Office Cadet Program is an opportunity for members of the community to be exposed to the responsibilities and duties of a Deputy Sheriff by those persons interested in a career in law enforcement.

    a. The extent of training and participation in Patrol activities is at the discretion of the assigned Deputy and Patrol Advisor.

2. The following guidelines are established to enable Cadets an opportunity to receive such exposure:

    a. Cadets may participate in ride-alongs, when scheduled with approval from the Cadet Advisor and Patrol Sergeant.

    b. Cadets will report in the appropriate uniform and be well groomed.

    c. Cadets will avoid continually riding with the same deputy as much as possible.

    d. The Deputy assigned a Cadet ride-along will attempt to provide insight and training in the Patrol function and responsibilities.

    e. Patrol and Special Operations members should remember that a Cadet’s status is similar to that of a citizen ride along.

    f. All incidents of misconduct will be reported in writing to the Cadet Advisor.

3. CONDUCT OF CADETS

    a. Cadets when assigned to a Patrol function will comply with and obey all policies and procedures applicable to a regularly employed deputy.

4. CADET POSTS

    a. The Sheriff's Office Cadet Post is located within the Office of Emergency Services building in Martinez.

    b. The Cadet Advisor for this post is the Volunteer Services Coordinator.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.13**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Tour of Duty**	

I. POLICY

A. Patrol and Special Operations Division Deputies will provide a wide range of public service to ensure that our community is a safe place in which to live and to deter crime.

B. That service will be performed in a professional manner under the following guidelines.

II. GENERAL INFORMATION

A. DIVISION OBJECTIVE

1. The Patrol and Special Operations Division operation is made-up of many diverse activities which are directed towards the Division's objectives.

   a. Activities such as patrolling, conducting field interviews, issuing citations and making arrests are not objectives in themselves. They are methods of achieving the Division's objectives:

   b. To assure that officers strive towards these goals in an effective manner, the following procedures are maintained to inform officers of, and to guide them in their performance of specific duties.

III. PROCEDURE

A. PREPARATION FOR PATROL

1. Division members are responsible for keeping current on information that pertains to suspects and/or probable events that may have an impact on the public's welfare and safety. Some examples of special conditions existing in their assigned area are:

   a. Patterns of criminal activity, and locations of known criminals.

   b. Possible targets for criminal activity, etc.

   c. Descriptions of wanted, missing, or suspicious persons.

d. Descriptions of stolen property.

2. Division members will keep the information in their beat boards current, and will have the boards with them while in the field.

3. Division members will properly call in or document their beat, patrol unit, portable radio, and other equipment as may be required before going to the field.

B. BASIC FUNCTIONS

1. A Patrol or Special Operations member will become acquainted with:

   a. Their area's beats

   b. Beat boundaries

   c. Crime-prone areas

   d. Businesses

   e. Possible targets for criminal activity

   f. Any other condition which is detrimental to life or property.

2. Members will also continuously seek to prevent, detect, or anticipate criminal activity.

3. To accomplish these functions, the following tasks will be performed as often as possible:

   a. Inspect premises for doors ajar, broken windows or other conditions conducive to crime or indicative of criminal activity.

   b. Carefully observe and take notes of the action of persons who might be involved in crime and take appropriate action.

   c. When reasonable suspicion of wrong doing is identified, follow proper case law and policy to stop and question those responsible.

   d. Obtain information on criminal activity through frequent contacts with residents, workers, merchants, and passers-by on the member's assigned beat.

   e. Inform the residents, workers, and merchants on the beat of actions they can take to protect their person or property from crime.

   f. Frequently patrol areas or places where criminal activity most often occurs.

   g. Carefully observe all premises which may be used to "fence" stolen goods and note suspicious persons.

   h. Observe all places of business and note the location of safes, cash registers, night lights, alarm systems, habits of staff, time of opening and closing, nature of business, number and locations of exits, and means of securing, such as locking doors, windows, gratings and skylights or other barriers.

C. FREQUENCY OF PATROL

1. Officers will patrol their assigned beats as often as possible, and will use the time available between radio assignments to observe conditions of the beat and take appropriate police action to correct and report any hazardous condition coming to their attention.

2. Patrol members, will on a daily basis, vary the sequence and schedule of their patrol activity, meal breaks and locations of those breaks so that potential criminals cannot anticipate the officer being in a given place at a given time.

D. RESPONSE TO DETAILS

1. Once a detail has been received, officers will proceed to that detail as soon as possible.

2. Officers will limit radio traffic whenever possible by making optimal use of MDC's, when they are available, and it is safe to do so.

3. Officers will advise Dispatch of the following:

   a. Estimated time of arrival to the detail, on Priority 1 and 2 details.

   b. If the officer is going to have an extended time of arrival on a Priority 3 detail.

   c. Arrival on the scene.

   d. Officer's Status (Code 4. Etc., with updates requested by dispatch)

   e. Completion of assignment.

   f. Disposition and appropriate codes.

E. MEALS AND OTHER BREAKS

1. It is an established policy that field personnel will generally work a straight eight, nine and one half hour, ten, or twelve hour / forty minute shift.

2. Patrol and Special Operations members will adhere to the following procedures:

   a. A thirty-minute meal period is inclusive in an eight or more-hour shift.

   b. Two 15 minute-breaks each shift are allowed for coffee, tea, or refreshments when time permits. These breaks will not be in conjunction with a Code-7 meal break.

   c. Breaks and Code-7 will be within the Deputy's assigned beat, unless approved by the Patrol or Special Operations Sergeant or field supervisor.

   d. When on meal or other break, the deputy will monitor his/her portable radio.

3. When going out of service for any reason, Dispatch will be advised of the following:

   a. The reason for the out of service status

b. Address or geographic location

c. Telephone number of where the Deputy will be.

4. Deputies who choose to take their breaks or Code-7 in their patrol cars will advise Dispatch (via MDC if available) of their geographic location.

a. Updates to Dispatch are required if the location changes.

- Patrol and Special Operations Uniformed Deputies working beats will not go out of service using a cell phone number or pager number as the only means of contact by Dispatch without the approval of the Patrol or Special Operations Sergeant or field supervisor on each occasion and location.
- Deputies shall not remain out of service longer than necessary and will report back in service promptly.
- The time for meals and other breaks may be limited at the discretion of a Patrol or Special Operations Supervisor if calls for police service are required. Deputies on breaks are subject to call outs and shall not congregate at any location during working hours unless detailed, approved by the Patrol or Special Operations Sergeant or for emergency reasons.
- No more than two Deputies will be permitted at the same location and time for purposes of a break without prior approval from their supervisor.

F. SUPERVISOR'S RESPONSIBILITIES

1. Patrol and Special Operations supervisor's responsibilities encompass and reinforce the subordinates' duties with additional supervision, direction and control, and other tasks specified in the manual or assigned by competent authority.

2. Patrol supervisors will meet with beat deputies as often as necessary and practical to insure that police services are properly and efficiently performed.

3. At shift's end, each supervisor will ensure that those members assigned appropriately process all reports, evidence, property and equipment.

G. INABILITY TO LOCATE BEAT DEPUTY

1. When an area supervisor is personally unable to locate a beat deputy, such supervisor will initiate a thorough search utilizing other beat deputies assigned to the supervisor's area.

2. If the missing deputy cannot be located within a reasonable time, the supervisor will ensure that the beat is properly covered.

3. The supervisor will then notify the appropriate Station Commander/Police Service Manager or Watch Commander.

4. Once the missing officer is located, the area supervisor will inquire as to the reason for the deputy not being available and report the findings

either orally or in writing to the appropriate Station Commander/Police Services Manager.

a. The appropriate Station Commander/Police Services Manager or Watch Commander may take immediate action which is appropriate and authorized or forward the report to the Division Commander, if the incident requires such action.

H. LEAVING THE BEAT

1. Patrol and Special Operations members may leave an assigned beat whenever any of the following conditions are met:

a. To aid and assist other officers when requested or required.

b. When performing a follow-up process after advising dispatch and their Patrol or Special Operations Sergeant or Field Supervisor.

c. When ending a tour of duty.

d. When in pursuit of a fleeing suspect.

e. When assigned or authorized by competent authority.

I. DUTIES AT COMPLETION OF SHIFT

1. Patrol and Special Operations members will adhere to the following procedures when a tour of duty nears completion:

a. At an appropriate time, notify Dispatch of the intent to respond to the office for the purpose of going off duty.

b. Patrol and Special Operations Deputies are not to terminate their tour of duty or sign off the air prior to fifteen minutes before end of the watch.

c. Deputies will be permitted to sign off the air fifteen minutes prior to end of watch for the purpose of completing any reports resulting from the day's activity.

d. When notified by Dispatch that off-duty status is not authorized, remain on the assigned beat until notified otherwise by Dispatchers or other competent authority.

e. Upon arrival at the office, complete and submit all reports and process all evidence or other property, prior to leaving the facility unless other arrangements have been made with approval of the Shift Supervisor.

f. When appropriate, inform relieving deputy of incidents or circumstances that may affect, hinder, or assist such relieving deputy in the performance of assigned duties.

g. Inspect individual mail slot or box for any messages received during shift. Check email and voicemail at least once a shift

h. Remove all Patrol and Special Operations Division shoulder fired weapons, shotguns, AR-15’s and less lethal, from their

patrol vehicle and store in a secured location within their respective Station House/Police Department.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.14**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **General Operation and Care of Vehicles**	

I. POLICY

A. Under normal conditions, members of the Patrol and Special Operations Division will obey provisions of the law relating to the operation of vehicles in the same manner required of any other person using the roadway.

B. Members are responsible for ensuring that their assigned vehicles are in a safe and operational condition.

C. The use of County vehicles will be limited to those operations which support the Patrol and Special Operations mission.

II. PROCEDURE

A. GENERAL OPERATION OF VEHICLES:

1. Patrol and Special Operations members will adhere to the following procedures whenever their duties require the use of a Patrol vehicle:

a. Inspection of vehicles

- At the beginning of each tour of duty, Patrol and Special Operations members shall make a thorough inspection of the vehicle and its equipment.
- Items that will be inspected or checked include the following:
  - Condition of tires, wheels and fluid levels.
  - Emergency equipment.
  - Locking mechanisms\windows\glass.
  - Condition of other equipment (brakes, lights, radio system, etc.)
  - NOTE: Radiator caps will not be removed when hot or unsafe.

b. Damaged vehicle or inoperative equipment

- Any damaged vehicle or missing/inoperative equipment shall be reported immediately unless the driver has personal knowledge that such damage or missing/inoperative equipment has been previously reported.
- When the damaged or missing/inoperative equipment is such that the vehicle should not be used, the deputy will obtain another vehicle after logging the defect.

B. REPORTING DAMAGED VEHICLES OR INOPERATIVE EQUIPMENT

1. Patrol and Special Operations members who discover previously unreported damage, missing or inoperative equipment shall adhere to the following:

   a. Vehicle damage shall be reported immediately to a Patrol Sergeant who will log damage on the "vehicle accident" form kept in the vehicle's glove box or other designated place and take photographs of all damage.

      - Vehicle damage incurred other than as a result of a traffic collision shall be reported as previously set forth and shall include a memorandum as directed by a Patrol/Special Operations Sergeant or Station House Commander/Police Services Manager.

   b. Vehicles in need of service, repair of mechanical defects or missing equipment shall be reported by the last operator, who will complete an "equipment service request" form indicating the nature of the problem and return it to the Station House Commander/Police Services Manager or Patrol/Special Operations Sergeant along with the keys to the vehicle.

   c. NOTE: The last driver of a vehicle is responsible for any damage or defective equipment unless he/she proves otherwise.

2. Driver responsibilities

   a. Patrol and Special Operations members who discover unreported damage to a Patrol vehicle shall report such damage as follows:

      - Driver will have the area supervisor respond to initiate an investigation and determine the last driver of vehicle.
      - Driver finding damage shall submit a memorandum through the chain of command to the Patrol Division Commander.

3. Patrol and Special Operations members whose vehicles incur damage as a result of vandalism or theft of items from the vehicle shall adhere to the following:

   a. Conduct an official investigation and complete a crime report and have photographs taken by the Patrol or Special Operations Sergeant if necessary.

- Notify area supervisor of occurrence and submit memorandum along with any reports to the Patrol Division Commander.

4. Area supervisor responsibilities

   a. Supervisor and driver complete the "vehicle damage sheet."

      - Take appropriate photographs and mark damaged area with initials.

   b. Submit memorandum regarding investigative findings as to the last driver of vehicle and circumstances regarding damage.

      - Ensure that all memorandums and necessary reports are submitted through the chain of command to the Patrol Division Commander.

C. SERVICING PATROL VEHICLES

1. The following procedures regarding the servicing of Patrol vehicles shall be carefully followed by all Patrol members:

   a. Patrol vehicles shall be serviced at County garages whenever possible.

   b. Patrol vehicles serviced at in field contract gas stations shall be limited to the following:

      - Gasoline and oil as needed.
      - Minor items such as fan belt adjustment or replacement, light bulbs, headlights, fuses.
      - Tire repair: Plugs, tubes, and sidewall repairs are not authorized. Patches are allowed.
        - EXCEPTION: Deputies are encouraged to have a tow truck Service respond to their location to change flat tires. However, if circumstances do not permit the use of a tow truck service and the Deputy is PHYSICALLY ABLE he/she may change the flat tire.
      - All sales tags for service or materials obtained in the field at contract gas stations must be signed legibly by the Deputy, with his\her employee number written on the invoice\receipt.
        - Before signing any sales tag, the Deputy must make certain that the vehicle equipment number is shown and that the total of the purchase appears on the bottom of the tag.
      - Except in emergencies, Patrol and Special Operations members will utilize only those locations authorized by Fleet Services for gas, oil and other service.

- Patrol and Special Operations members are not to use fuels of a different grade than specified on the gas cap/area, dashboard area or as directed in the service manual for the vehicle being fueled.
    - Fuel used for the Patrol Vehicle Fleet generally uses regular unleaded gas.
    - Diesel powered vehicles must have diesel fuel.
    - It is the responsibility of the Deputy to know what type of fuel the vehicle being driven uses.

c. The responsibility for having Patrol vehicles washed rests with day or swing watch personnel.

- Vehicles should be washed when needed as time permits, at those car washes authorized by Fleet Services.
- NOTE: Under no circumstances should Patrol and Special Operations members accept any premium service offered with the purchase of items or services at contract gas stations, or other service providers.

D. TOWING PATROL VEHICLES

1. The following procedures will be used when Patrol vehicles which are wrecked or disabled and require towing:

a. During the hours of 0700 – 1700, Monday through Friday (excluding holidays) Fleet services will handle towing the patrol vehicle. Contact number is [redacted]. After hours, on weekends or holidays, dispatch will contact the tow company which is designated as the primary tow service.

b. All wrecked and/or disabled vehicles shall be towed directly to the Public Works Garage at 2467 Waterbird Way, Martinez.

c. It shall be the responsibility of a Patrol or Special Operations Deputy to ensure the removal of the shotgun and rifle from all Patrol vehicles prior to towing.

- The shotgun and rifle is to be tagged with the unit's number and placed in a secure location as designated by the Station House Commander/Police Service Manager.

d. The Patrol and Special Operations members authorizing the towing of a Patrol vehicle shall be responsible for:

- Legibly signing the tow receipt with his/her name.
- Putting their employee number on the tow invoice.
- Ensuring the vehicle's equipment number is on the receipt. A copy of the towing receipt shall be delivered to the Station House Commander/Police Services Manager.

e. Deputies having a disabled vehicle towed shall place a note on the dash explaining the mechanical problem, if known.

f. NOTE: Minor repairs are the responsibility of the driver of the vehicle. Tow service shall not be dispatched for repairs of this nature.

E. MISCELLANEOUS PROCEDURES

1. In addition to the aforementioned procedures, Patrol and Special Operations members shall adhere to the following whenever applicable:

a. Patrol vehicles are not to be used for pulling or pushing other vehicles unless equipped with push bumpers.

b. The last driver of a vehicle is responsible for refueling the vehicle at the end of shift and for removing all litter from the interior.

c. All Patrol members driving or riding in Patrol vehicles shall wear safety belts with shoulder harness.

d. Deputies failing to return vehicle keys to the Patrol or Special Operations Sergeant or designated location upon completion of their watch will be contacted and directed to return the keys immediately.

e. Patrol and Special Operations members shall be held responsible for safeguarding vehicles and equipment contained therein.

- Unattended Patrol vehicles shall be properly secured by locking doors and windows.

f. The driver of a vehicle equipped with an M.D.C. will not operate this equipment while driving the vehicle.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.15**
	RELATED ORDERS: None.	
ISSUE DATE: 1-1-2006 **REVISION DATE:** 4-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Patrol Ride-Along Program**	

I. This policy has been removed effective 6-16-15

II. Refer to CCCSO Policy 1.06.42 – Ride-Along Program

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.16**
	RELATED ORDERS: None.	
ISSUE DATE: 06-15-2012 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Administration**	**SUBJECT:** **Sheriff's Community Service Officer**	

I. POLICY

A. The Sheriff's Office Patrol Division is augmented by Sheriff's Community Service Officers (CSO).

B. Sheriff's Community Service Officer will assist the Patrol Division in achieving and accomplishing the goals established.

C. Sheriff's Community Service Officer will be punctual in reporting for their assigned work station.

D. Sheriff's Community Service Officers will provide a service performed in a professional manner.

II. PROCEDURE

A. GENERAL RULES

1. Sheriff's CSOs shall be at their assigned station in full uniform and be ready to work by the beginning of their shift.

B. GENERAL RESPONSIBILITIES

1. All Sheriff's CSOs will have a neat and clean uniform, shoes shined, brass polished.

2. All required and necessary equipment shall be carried; CSOs will:

   a. Check their utility box to ensure an adequate supply of forms and miscellaneous supplies.

   b. Review the bulletin / line-up boards and affix their signature when required.

   c. Be subject to dismissal from duty for that watch if they report late. Immediate supervisors may allow tardy subordinates to assume their duties when prior notification has been received that lateness will occur.

   d. Report for duty promptly.

C. SHERIFF'S COMMUNITY SERVICE OFFICERS RESPONSIBILITIES

1. Inspect vehicle completely before leaving the station house.
2. Obtain a portable radio.
3. Notify the supervisor of the following numbers:
    a. Vehicle number and vehicle mileage at start time
    b. Portable radio
    c. Flashlight
    d. Employee number and call sign
    e. Department Issued cell phone
4. The call sign and employee number will also be given to Dispatch by the CSO.
    a. Patrol vehicles with on-board computers (MDC) can be used to log all information above, and notify Dispatch.
    b. CSO's must verify the information was received by Dispatch.

D. BASIC FUNCTIONS

1. CSOs will become acquainted with:
    a. Their area beats
    b. Station House beat boundaries
    c. Crime prone areas
    d. Businesses
    e. Possible targets for criminal activity
    f. Any other conditions which are detrimental to life or property

E. DUTIES

1. The duties of the Sheriff's CSO in the Patrol Division shall include, but not be limited to the following:
    a. Receive and respond to citizen inquiries and requests for law enforcement service at a public counter, by telephone, and in the field.
    b. Write reports and supplemental reports regarding cold cases.
    c. Write auto theft reports, issue warning notices, tows, and abates abandoned vehicles.
    d. Enforcement of county ordinances and various CVC regulations.
    e. Provide security checks and community presentations for the Office of the Sheriff.
    f. Provide assistance with lost and found property, area searches, and transportation of found children and elders.

g. Provide traffic and crowd control for public events, fire, flooding, hazardous materials, and other related incidents.

h. Fingerprint citizens and perform minor evidence collection duties to include fingerprint evidence.

i. Enter and retrieve confidential law enforcement information using computerized law enforcement data systems.

j. Use a two-way radio to receive and provide information.

k. Perform an assortment of administrative and messenger duties.

l. Assist in other areas, consistent with the needs of the Office.

F. RESPONSE TO DETAILS

1. Once a detail has been received, CSO's will proceed to that detail as soon as possible.

2. CSO's will limit radio traffic whenever possible by making use of MDC's when they are available, and it is safe to do so.

3. CSO's will advise Dispatch of the following:

a. Time of arrival

b. If the CSO is going to have an extended time of arrival

c. Arrival on scene

d. CSO's status (e.g. code 4, updates requested by Dispatch)

e. Completion of the assignment

f. Disposition and appropriate codes

G. MEALS AND OTHER BREAKS

1. It is an established policy that CSO's will work ten hour shifts.

2. Patrol CSO's will adhere to the following procedures:

a. A thirty minute meal period is inclusive in a ten hour shift.

- CSO's will ask Dispatch if they are cleared for a meal period (code 7) via MDC, telephone, or over the radio as a last choice.
- Two 15-minute breaks are allowed during each shift when time permits. These breaks will not be in conjunction with a code-7 break.
- Breaks and code-7 will be within the CSO's assigned beat, unless approved by the Patrol Sergeant or field supervisor.
- When on a meal break or other break, the CSO will monitor their portable radio.

3. When going out of service for any reason, Dispatch will be advised of the following:

a. The reason for the out of service status

b. Address or geographic location

c. Telephone number of where the CSO will be

H. DUTIES AT THE COMPLETION OF THE SHIFT

1. Sheriff's CSO's will adhere to the following procedures when a tour of duty nears completion:

a. At the appropriate time, notify Dispatch of the intent to respond to the station house for the purpose of going off-duty.

b. Sheriff's CSO's are not to terminate their tour of duty or sign off the air prior to fifteen minutes before the end of watch.

c. When notified by Dispatch that off-duty status is not authorized, remain on the assigned beat until notified otherwise by Dispatch or other competent authority.

d. Upon arrival at the station house, complete and submit all reports and process all evidence or other property prior to leaving the facility unless other arrangements have been made with the approval of the Shift Supervisor.

e. Inspect individual mail slot for messages received during shift. Check e-mail and voicemail at least once a shift.

f. Park and secure their vehicle.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Investigations

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.17**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Investigations**	**SUBJECT:** **Interviews and Interrogations**	

I. POLICY

A. Deputies will remain alert to gather information from witnesses, suspects, or arrestees that will help in the solution of crime.

B. Deputies will interview, interrogate or otherwise question persons in accordance with the law and established procedures.

II. DEFINITIONS

A. Interviews: The process by which a deputy obtains information from a cooperative individual who is not responsible for the incident under investigation, but who has personal knowledge of circumstances or facts that are of interest.

B. Interrogations: The process by which a deputy obtains information from an uncooperative individual who is either a suspect, witness, or victim of the incident under investigation.

III. GENERAL INFORMATION

A. INTERVIEWS AND INTERROGATIONS

1. An interview is conducted in order to collect any facts relating to an incident, to substantiate information obtained from other sources, or to provide additional information pertaining to the incident under investigation.

2. An interrogation is conducted in order to establish the extent of involvement of a particular person suspected of committing a crime and/or to obtain information from uncooperative individuals who have knowledge of the incident under investigation.

B. INTERVIEWS-LEGAL RESTRICTIONS

1. When a deputy has not arrested an individual or restricted the individual's freedom or ability to discontinue the conversation, the deputy may ask whatever questions are necessary and pertinent.

a. The key in this circumstance is custody- where there is "no custody," the law places no restrictions on questioning.

IV. PROCEDURE

A. INTERVIEWS-AUTHORITY AND METHOD

1. Deputies will, when possible, interview any person who may have the potential to supply information that relates to an incident under investigation.
2. Interviews will be conducted at a place that is convenient and familiar to the person being interviewed and as soon after the incident as possible.
3. Deputies will conduct interviews in a low pressure, informal manner that causes the least amount of inconvenience to the person being interviewed.
4. During the interview deputies should determine if the person or persons possess the following essential elements:
   a. Presence at the scene: Was the person to be interviewed present during the event, or portion of the event, under investigation?
   b. Awareness: Was the person to be interviewed conscious of the event, or a portion of the event, which prompted the investigation?
   c. Observant: Was the person attentive to the details of the incident?
   d. Ability: Is the person capable of discussing the observed event in a manner that is understandable and complete?
5. Deputies should note the condition of witnesses, their relationship to the incident under investigation, and any other information which would establish their credibility.

B. INTERROGATIONS

1. When a deputy acts to exert authority and/or control over a person in a manner which restricts the person's freedom to act, then a custody situation exists and legal restraints on questioning arise to protect the person's rights in regards to self- incrimination and assistance of counsel.
   a. The point where custody occurs is determined by the circumstances surrounding the interrogation as interpreted by a “reasonable person.”
      - The beliefs or intent of the deputy and/or the suspect are not considered. Factors that are considered when applying the “reasonable person” test, are as follows:
        - Place of questioning: When conducted at a police facility, in police vehicles, at jail, or in a prosecutor's office, such circumstances may lead to a conclusion that "custody" has occurred.

- Time of questioning: When conducted during odd hours.
- Persons present: The removal of a person from the presence of family, friends, or the presence of several deputies, may indicate a "custody" interrogation.
- Physical restraint used: Any type of physical restraint invariably leads to a finding of "custody."
- Orders to perform tasks not required: Any orders by the deputy to do something that the law does not require is indicative of custody.
- Length and form of questioning: Lengthy questioning consisting of accusative statements, confrontation with witnesses or evidence, and leading questions may lead to a finding of "custody."
- Demeanor of the Deputy: When a deputy is accusative and confronts a person with alleged guilt, the "custody" finding may occur.

b. A Deputy may question persons for purposes of obtaining information such as name, address, telephone numbers, occupation and other identifying data without advising them constitutional rights.

- In addition, suspicious persons may also be asked to explain their presence and conduct without advising them of their rights.

C. “CUSTODY" OF JUVENILES

1. Juveniles will be advised, as soon as possible and when practical, of their constitutional rights if taken into custody. (Pursuant to 625 W&I)

D. "CUSTODY" OF ADULTS

1. Whenever a deputy arrests, or otherwise takes "custody" of an adult person, and the deputy intends to question such person about incidents, actions, or conduct which is criminal in nature, the Deputy will then advise the person arrested of their constitutional rights.

E. WARNING PRIOR TO INTERROGATION

1. Each deputy will carry the plastic "Miranda Warning" card issued by the Patrol and Special Operations Division.
2. When appropriate, the arresting deputy will notify the person to be questioned of his/her “Miranda Rights” by reading aloud from the card.

F. WAIVER OF CONSTITUTIONAL RIGHTS

1. Before statements made by suspects become admissible in court, the prosecution must offer evidence to prove that suspects were not only

advised of their rights, but also that they understood the advisement and having been so advised, knowingly and intelligently waived those rights.

2. To secure a waiver the following questions will be asked:

    a. “Do you understand each of these rights I have explained to you?”

    b. “Do you wish to talk to us now?”

3. An affirmative reply will be obtained from suspects before questioning begins.

    a. Circumstances which establish an "affirmative reply" include, but are not limited to, the following:

        - Formal waiver (Express Consent): Where suspects state orally and unequivocally that they understand their rights and wish to talk.
        - Waiver followed by statement (Implied Consent): An acknowledgment by a suspect that such suspect understands, followed closely by a statement, is held to be a waiver.
        - Non-verbal waivers: Nods and shrugs seem to be sufficient, absent coercion.
            - Deputies should, however, strive for a verbal response. Gestures are subject to different interpretations and leave too much room for interpretation.
        - Written waivers: The signing of a written waiver is a good waiver if the suspect is literate.
        - Request to talk to attorney later: A desire to talk to an attorney in the future, while manifesting a willingness to answer questions now without counsel, is a waiver.

    b. If suspect indicates a desire to remain silent and/or see a lawyer before answering questions, all interrogation will cease.

    c. Deputies may question a suspect who originally refused to "waive" whenever the suspect initiates a request to talk.

        - Deputies will re-advise such suspects of their constitutional rights and obtain a waiver before questioning.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.18**
	RELATED ORDERS: CCCSO 1.06.35 Evidence Handling; 1.06.36 Digital Photography; 1.06.37 Property/Evidence Retention, Release and Disposition; 1.06.41 Report Writing.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Investigations**	**SUBJECT:** **Patrol Response and Investigations**	

I. POLICY

A. Patrol and Special Operations personnel will conduct a thorough preliminary investigation of, and fully document, each criminal act they on-view or are dispatched to.

II. PROCEDURE

A. ASSIGNED DEPUTY'S INITIAL RESPONSIBILITIES

1. The Deputy assigned to the initial response shall be responsible for the appropriate response, coordination, investigation and appropriate conclusion of the investigation unless relieved by an assigned investigator or their immediate supervisor.
2. If a Deputy is dispatched to a call of a serious or hazardous nature he/she will "stage" and wait for a cover officer to assist them.
3. The Deputy will take notice of anything that appears to be relevant to the case upon arrival to include, but not limited to:
   a. The condition of the scene/location
   b. Items of evidentiary value
   c. Location of victims/suspects etc.
4. The Deputy will call for additional resources as necessary to include, but not limited to:
   a. Additional cover units
   b. Specialized assistance such as K-9, Marine Patrol or Air Support Unit
   c. Fire Department, AMR ambulance services

B. CARE OF VICTIM

1. The first priority of the Deputy shall be the safety of the victim.

a. The Deputy may need to stay with the victim, during a life-threatening situation and administer emergency first aid until the arrival of medical professionals.

2. In the event that a suspect flees the scene while the victim is being tended to the Deputy will broadcast the following over the radio:

a. Suspect description and direction of travel

b. Details as to what crime has occurred (if any), to include any weapon that was used

C. APPREHENSION OF SUSPECTS

1. A primary responsibility of each Deputy is the contact, pursuit and apprehension of suspects.

a. This responsibility must be weighed against the immediate welfare of the victim(s) and the necessity to conduct a more thorough/systematic investigation.

2. Circumstances to consider when deciding on whether or not to pursue include, but are not limited to, the following:

a. When the identity of a suspect is known and an immediate pursuit is possible and/or necessary.

- An immediate pursuit may not be appropriate if the preliminary interview, crime scene protection, or preliminary investigation process would suffer.

b. When the Deputy is unable to determine a suspect's identity but may be aware of the suspect's actual or probable location, an immediate pursuit may be appropriate provided appropriate considerations for the victim(s) and the crime scene have been made.

- An immediate pursuit and apprehension of the suspect would be appropriate whenever a Deputy determines that a suspect's behavior, if allowed to continue, would jeopardize the immediate safety of other persons.

c. Bear in mind that the decision on whether or not to pursue a suspect must be made based upon factual information that is known to or perceived by the Deputy at the time of the incident.

- Facts unknown at the time cannot be considered in later determining justification for actions taken.

D. INVESTIGATIVE RESPONSIBILITIES

1. After making the above listed considerations, Deputies should attempt to determine the nature of the incident as quickly as possible.

2. Deputies will need to make contact with and interview all parties relevant to the investigation:

a. Victims

b. Witnesses

c. Suspects

d. Any other involved parties

3. Deputies will attempt to gather and document as much of the following identifying information as possible:

   a. True identification of the person being spoken to

   b. Addresses (home and work) and contact numbers of the person being spoken to

   c. Physical descriptors of the person being spoken to

   d. Account numbers and E-mail addresses of the person spoken to (if applicable)

   e. Detailed account of the incident to include:

      - What happened (be sure to capture the elements of a criminal act)
      - Statements made by suspect(s)
      - Full suspect description:
        - Race
        - Sex
        - Height/weight
        - Absence/presence of hair and style, to include color and length
        - Facial hair
        - Glasses
        - Type and color of clothing
        - Scars, marks or tattoos
        - Any unique mannerisms
      - Full description of any vehicles that were involved:
        - Make and model
        - Body style
        - Color
        - Any unique features
        - License plate number
      - Suspect(s) direction of flight.
      - Description of any weapons that were in possession of the suspect(s)
      - Likely location of suspect(s) (if known)
      - Relationship of suspect to victim

- Any other pertinent information to the incident.

4. Deputies will inspect and identify any potential physical evidence.

   a. Deputies will examine this evidence in an effort to determine if it supports or contradicts any accounts given by involved parties.

   b. Deputies will preserve, process and submit all evidence in accordance with Sheriff's Office Policy and Procedures.

      - Deputies will recognize that in some cases evidence will need to be processed by specialized personnel:
      - SART nurses
      - Blood withdraw technicians
      - Coroner's Division personnel
      - Homicide/Investigations personnel
      - Crime Lab personnel

   c. Deputies should photograph the crime scene and any evidence as soon as it becomes practical in relationship to their response and investigation.

E. SECURING AND PROTECTING THE CRIME SCENE

1. Deputies will secure and protect the scene of the crime as soon as it is practical to do so.

   a. In the event of a major investigation (i.e. homicide, assault with a deadly weapon etc.) Deputies will need to cordon/tape off the crime scene.

   b. Deputies should make the crime scene large enough to avoid having to expand it as the investigation unfolds.

   c. Deputies will evacuate the scene of all unnecessary persons, including police personnel if their duties and responsibilities are not directly related to what is going on in the crime scene, and will control the entry and egress of all persons into and out of the scene.

   d. Deputies will initiate a crime scene log that will be part of the crime report. The log will minimally include:

      - Names of people in the scene when log is started
      - Name of agencies the people belong to, if applicable
      - Reason for the people to be in the scene
      - Time of egress of the people from the scene
      - If more people are summoned into the scene be sure to record their name, agency, serial/employee number, time of arrival, reason for being at the scene, and time of departure.

F. DOCUMENTATION AND REPORT ROUTING

1. Deputies will prepare a written report in accordance with Sheriff's Office Policies and Procedures.
    a. The report should be prepared and submitted in a timely and efficient manner (preferably prior to the end of their shift especially when an arrest has occurred).
2. The report will contain a full account of what occurred in the incident to include:
    a. Date and time of occurrence
    b. Location of occurrence
    c. Full names, addresses and contact numbers for all persons involved
    d. Full, complete, accurate statement from each involved person
    e. Description of the scene, including any unique or unusual characteristics
    f. Disposition of suspect (if applicable)
    g. Location, collection and disposition of evidence (if applicable)
    h. Medical aid and disposition of victim or any injured party (if applicable)
    i. Any use of force (if applicable)
    j. Itemized list of any loss or damage, to include a full description (if applicable)
3. Deputies will investigate and conduct as much follow up into felony and missing person cases as they possibly can, they will also document all of their efforts in either the original report or a supplemental report.
    a. Deputies will "Refer" all felony and missing person cases to the Investigation Division.
4. In misdemeanor cases the investigative responsibility stays within the Patrol and Special Operations Division. Deputies will conduct a complete investigation, to include all follow-up contacts, themselves.
    a. It may be necessary for a supervisor to assign the follow-up investigation in a misdemeanor case to a different Deputy due to: the original deputy being unavailable, time and shift considerations and other factors as necessary to protect the interests of the investigation.
    b. It will be the responsibility of the assigned Deputy to provide a proper disposition in all misdemeanor cases.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.19**
	RELATED ORDERS: P.C. 13519.07, 14205, 14210, 14211, 14215, A.B. 2512, S.B. 391.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Investigations**	**SUBJECT:** **Missing Persons**	

I. POLICY

A. In recognition of the intent and spirit of State laws, deputies will accept and investigate any missing person report with sensitivity toward the family of the missing person.

All missing persons reports must be completed by the end of the reporting deputy's shift.

II. PROCEDURE

A. ACCEPTING REPORTS

1. Patrol and Special Operations Deputies will accept, without delay, any missing person report, including runaways, regardless of where the missing person resides or was last seen.

   a. In cases where a missing person report is taken on behalf of another jurisdiction, within 24-hours notify the jurisdiction where the missing person resides and the place where the missing person was last seen.

B. SEARCHES

1. A search will be instituted immediately whenever the following circumstances are present:

   a. All juveniles under 18 years of age

   b. Juveniles missing under suspicious or special circumstances

      - i.e., foul play suspected, juvenile is suicidal, juvenile is mentally disabled.

2. For missing persons under 21 but over 18 years of age the Field Supervisor will make an assessment of the reasonable steps to be taken to locate the person.

   a. Additional resources can be located in the Field Operations Guide (F.O.G.) Manual.

3. The assigned deputy will contact the area supervisor and advise him/her of the circumstance.

    a. The supervisor may then authorize/request assistance of special units that may include, but not be limited to, the use of a tracking K9, Search & Rescue, telephonic “ping” of cellular devices, investigations, community volunteers, Office of the Sheriff media outreach/PIO, etc.

C. NOTIFICATIONS

1. A Be On The Lookout (B.O.L.O.) bulletin will be broadcast without delay within the Sheriffs jurisdiction if the missing person is under 21 years of age, or there is evidence that the person is at risk (per 14205 P.C.).

2. The deputy initially taking a missing person report of persons at risk or under 21 years of age will ensure the missing person information is entered into NCIC within two (2) hours of receiving the report.

    a. The NCIC number will be included in the report.

3. Entries into NCIC of missing persons under twenty-one years old will be made no later than two hours of taking the report.

4. Entries into NCIC of missing persons over twenty-one years old will be based on the following circumstances:

    a. Age

    b. Mental condition, medical condition or immediate needs

    c. Possible foul play

    d. Media interest

5. The NCIC number will be included in the report in any case.

6. Deputies will contact Dispatch who will make all entries into NCIC and furnish the deputy with the NCIC number for his/her report.

    a. A copy of the NCIC entry will be attached to the report.

7. Supervisors will review the NCIC entry and the original report to verify the accuracy of the information entered into NCIC and that the entry information is supported in the original report.

D. REPORTING REQUIREMENTS

1. A separate report will be written for each missing/runaway even if they are together or suspected of being together.

2. Patrol and Special Operations sergeants will route copies of missing person reports to Investigation Division for follow-up investigation.

E. LOCATED MISSING/RUNAWAY PERSONS

1. When located by Contra Costa County Sheriff's Office patrol, the patrol deputy will:

    a. Write a supplemental report, requesting Investigations to remove the juvenile from the system.

b. Ensure any special units that have been summoned are canceled.

2. When advised by an outside agency a missing/runaway has been located the patrol deputy will:

   a. Contact the agency and confirm the I.D and status of the missing/runaway.

   b. Write a supplemental report.

   c. Confirm or change NCIC status via the appropriate Dispatch Center.

   d. Cancel any special units summoned - if applicable.

3. If the original report was an outside assist for another agency the deputy will:

   a. Contact the agency and advise them of the person's status

   b. If requested, have the appropriate dispatch center send a confirming tele- type to the agency.

F. CRIME INVOLVEMENT

1. When the missing/runaway person is the victim/suspect in any crime in this county, patrol deputies will:

   a. Advise the area sergeant of the circumstances

   b. Follow procedures in "Stranger Abduction Protocol" if applicable.

   c. Request any assistance needed.

   d. Write the appropriate report.

   e. Make arrests, issue citations, as needed.

Contra Costa County **Office of the Sheriff** Patrol and Special Operation Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.20**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Investigations**	**SUBJECT:** **Misdemeanor Complaints**	

I. POLICY

A. In misdemeanor investigations, the Investigations Division will seek a criminal complaint and arrest warrant whenever an investigation discloses sufficient evidence to identify the perpetrator of a criminal offense.

II. PROCEDURE

A. OBTAINING CRIMINAL COMPLAINTS

1. When the misdemeanor investigation is completed and the suspect identified, the Misdemeanor Complaint Detective will, when appropriate, obtain a criminal complaint in accordance with the following procedures:

a. Misdemeanor-Not in custody

- Ensure that the investigation is complete to include contact of suspect(s) and deliver report(s) to appropriate District Attorney's Office.

b. Misdemeanor-In custody

- Confirm that the suspect(s) is still in custody and wait for complaint from the District Attorney's Office.
- Upon receipt of complaint, deliver complaint and report(s) to appropriate court and advise jail to process the suspect for court.

c. Citizen's arrest-In custody

- Same procedure as misdemeanor in custody.

d. Citizen's arrest-Not in custody

- Citizen's arrest(s) involving citation and/or referral for complaint are as follows:

e. Referral for complaint

- Ensure investigation is complete. Deliver report to appropriate District Attorney's Office.

f. Citation issued

- Deliver citation and report(s) to appropriate District Attorney's Office.

B. SIGNING CRIMINAL COMPLAINTS

1. In all misdemeanor cases in which a complaint has been issued, the Misdemeanor Complaint Detective will sign the criminal complaint and when appropriate, deliver the complaint to the court.

C. OBTAINING SUSPECT(S) BACKGROUND HISTORY

1. The Misdemeanor Complaint Detective will conduct a background history check relative to the suspect's criminal conduct and include such information with the current investigation in the following instances:

a. All traffic related offenses. (Driver's license and registration information.)

b. All petty thefts, crimes of violence and weapons charges.

c. Any case in which a prior conviction would make the current arrest a felony.

D. ADDITIONAL FOLLOW-UP INVESTIGATION

1. When it becomes necessary for additional follow-up investigation, the Misdemeanor Complaint Detective will, when appropriate:

a. Refer follow-up investigation to the initially assigned/investigating deputy, outlining what follow-up is required.

b. The initially assigned/investigating deputy will complete the additional requested follow-up investigation in a timely manner and document their efforts in a supplemental report.

- This report will be turned into their supervisor so it can be routed back to the Misdemeanor ~~Complaints Deputy~~ Complaint Detective.

- EXCEPTION: In the event the initially assigned deputy is no longer assigned to the area of occurrence, the request for follow-up will be directed to the appropriate shift supervisor for assignment.

- Refer follow-up investigation to appropriate shift and area in all phone harassment cases in which the location of the originating telephone calls becomes known and contact of possible suspect(s) is required.

E. INCOMPLETE INVESTIGATIONS

1. In the event a report has been received by the Misdemeanor Complaint Office in which it is apparent that the investigation is incomplete, the

complaint deputy shall refer the report to the initially assigned deputy, outlining the reason(s) for return.

2. The initially assigned/investigating deputy will complete the additional requested investigation in a timely manner and document their efforts in a supplemental report.

    a. This report will be turned into their supervisor so it can be routed back to the Misdemeanor Complaint Detective.

3. When necessary, refer the report to the initially assigned deputy's supervisor for appropriate action, and route it via the Station House Commander/Police Services Manager.

4. Under no circumstances will an incomplete report or investigation be forwarded to the District Attorney's Office for a complaint.

F. ROUTING OF REPORTS:

1. It shall be the responsibility of area supervisors to route all misdemeanor reports in which a criminal complaint will be sought to the complaint deputy.

2. The supervisor routing/signing such report(s) will ensure the following:

    a. Completeness of investigation.

    b. Suspect identity known and contacted.

    c. All witnesses identified and interviewed.

    d. Proper elements of the offense are present.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.21**
	RELATED ORDERS: H&S 11469, 11470 (e), 11470 (f), 11470 (b); C.D. Cal. 1978	
ISSUE DATE: 5-1-2014 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Investigations**	**SUBJECT:** **Asset Forfeiture**	

I. POLICY

A. The Asset Forfeiture policy is established to provide guidance to Sheriff's Office personnel regarding the seizing of a suspect's assets, when the assets are related to narcotics trafficking in compliance with Health and Safety section 11469 et seq.

B. Department personnel will adhere to Sheriff's Office policy and codified California law when considering seizing assets related to narcotic trafficking.

C. The purpose of California's narcotic asset forfeiture statues (H&S 11469 et seq.) is to liberate operating tools and economic basis from persons directly involved in the illicit drug trade.

D. The principal objective of asset forfeiture is law enforcement.

E. Although civil forfeiture is intended to be remedial, by removing the tools and profits from those engaged in the illicit drug trade, it can have harsh effects on property owners in some circumstances. Therefore, law enforcement shall seek to protect the interests of innocent property owners via due process.

II. DEFINITIONS

A. Forfeiture is the uncompensated taking by the government of property which is illegally used or obtained (C.D. Cal. 1978).

III. PROCEDURE

A. GENERAL RULES

1. Property Considered for Seizure

a. Property subject to seizure includes any conveyances, to include but not limited to automobiles, boats, air craft, or any other vehicle purchased with drug proceeds or used in the facilitation of crimes specified in Health and Safety code section 11470 (e). The minimum value, or equity, of these conveyances should be five thousand dollars before the conveyance will be considered for seizure.

b. All monies, negotiable instruments, securities, or other items of value furnished or intended to be furnished by any person in exchange for a controlled substance as stated in Health and Safety code section 11470 (f). The minimum value in this instance should be five hundred dollars, when considering items for seizure. The five hundred dollar minimum may be met by an aggregate of negotiable items. Smaller amounts of monies and other negotiable instruments, which do not total the minimum or are not being seized, are to be booked as evidence.

c. All raw materials or products and equipment used to manufacture, process deliver import / export any controlled substance in violation of Health and Safety code section 11470 (b).

2. Asset Seizure Authority is outlined in Health and Safety code section 11471 and 11488.

3. Charges – Narcotics Activity Needed for Cash Seizure

Any violation of:

H&S Codes

11351 – Possession of Heroin, certain prescription drugs or Cocaine Salt (powder) for sale
11351.5 – Possession of Cocaine Base (Rock or Crack) for sale
11352 – Sales or transportation of drugs outline in H&S 11351
11355 – Sell, transport, furnish, administer, or give, in lieu of controlled substance
11359 – Possession of Marijuana for sale
11360 – Sales, transportation, or furnishing Marijuana
11366.8 – Possession or Use of False Compartment for Drugs
11378 – Possession of Methamphetamine, LSD, MDMA (Ecstasy, X or Molly), or certain other prescription and non-prescription drugs for sale
11378.8 – Possession of Phencyclidine (PCP) for sale
11379 – Sales or transportation for sales of drugs outlined in H&S 11378
11379.5 – Sales or transportation for sales of PCP
11379.6 – Manufacturing or preparing controlled substance
11380 – Adult using, soliciting or intimidating minor for drug violation
11382 – Transportation in lieu of controlled substance
11383 – Possession of precursor chemicals with intent to manufacture

Penal Code

182 – Conspiracy (when drugs are involved)

B. GENERAL RESPONSIBILITIES:

1. Must have a qualifying offense.

2. Contact the District Attorney's Office (at one of the phone numbers below) and obtain authorization for seizure. **They are to be contacted no matter the time of day/night for authorization prior to seizure.**

a. [redacted]



3. If you are unable to contact someone from the D.A.'s Office; take the property as evidence and email SIU Detectives so they are aware that authorization for the seizure still needs to be obtained.

4. Annotate authorizing D.A. representative's name and time of authorization on the Notice of Seizure form.

5. Fill out Notice of Seizure form. List assets separately.

    a. For example: Deputy stops a car and arrests the drive for H&S 11351.5 where $2000 is found in the glove compartment and $5000 is found in the trunk. The assets must be listed separately; do not make one entry stating $7000 was found.

6. List the location of where the cash was seized. Be specific; use an actual address. Do not put FOB or Station House as the location of the seizure unless that is where the Deputy was when they found the cash to be seized.

7. Collect and count all U.S. Currency/negotiable instruments (have a witness, deputy or sergeant, present). $500 currency recommended minimum for forfeiture.

8. Place the money/negotiable instrument into a "Cash Inventory Envelope" (tape and tag with evidence card).

9. Provide pink copy of Notice of Seizure form and Claim Opposing Forfeiture form to the person from whom the asset was seized. It is a legal document; refer person to their attorney if they have questions about this form.

10. Place all currency/negotiable instruments into the drop safe in room 123 at FOB. Complete log sheet on top of the safe.

11. All vehicles seized will be towed to [redacted]. The keys and associated paperwork will be placed into the SIU mailbox in the investigations area.

12. Any other items seized should be booked into property.

13. Notification of any asset seizure shall be made to the SIU supervisor prior to the end of shift via email or telephone call (during business hours).

    a. SIU is required to bring the case to the District Attorney's Office within 15 days of the seizure.

    b. The arresting deputy needs to ensure the report is written and submitted in a timely manner.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Property Crimes

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.22**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Property**	**SUBJECT:** **Bicycles Found/Lost/Stolen**	

I. POLICY

A. Incidents involving lost or stolen bicycles will be handled in the same manner as any other investigation.

II. GENERAL INFORMATION

A. Deputies should be aware that individuals who suffer a loss consider the matter a personal one, especially if the victim is a child who has lost his bicycle.

B. The Deputy's actions will make a lasting impression on the child and will have a profound effect on his view of law enforcement.

III. PROCEDURE

A. FOUND BICYCLES

1. Deputies assigned details involving found bicycles should follow the procedures set forth in "found property" details.
2. Status check: The serial number and bicycle license number should be checked to determine if the bicycle has been previously reported as stolen and/or lost.
3. Return to owner: Should the status check reveal the owner, the deputy may make arrangements to return the bicycle.
    a. Consideration should be given to the owner's place of residence.

B. LOST BICYCLES

1. If circumstances indicate that no criminal act (i.e. theft) is involved, the report will be classified as a lost property report.
2. The Deputy will contact Dispatch to have it entered into CLETS.
    a. (See procedure "Entry into CLETS")

C. STOLEN BICYCLES

1. Whenever facts are developed to indicate a theft of a bicycle, the proper investigative and reporting procedures will be conducted.

    a. NOTE: If the value of the bicycle does not amount to the value for grand theft, the initially assigned deputy is responsible for follow-up investigation.

D. DESCRIPTION OF BICYCLE

1. Complete descriptions will speed the return of the bicycle if or when it is recovered even if a serial number was not known.

2. A complete and accurate description of the bicycle will be obtained to include the following:

    a. Make, model, type, and model number.

    b. Serial number and license number, if any, and known by victim.

    c. Color, wheel size, frame type (boys/girls).

    d. Seat type/color, handlebars/grip color.

    e. Type of brakes and speeds.

    f. Optional equipment and distinctive markings.

        - This is very important in cases where the serial number is not known.

E. ENTRY INTO THE CALIFORNIA LAW ENFORCEMENT TELECOMMUNICATIONS SYSTEM (C.L.E.T.S.)

1. The assigned deputy will enter all found, lost or stolen bicycles in CLETS and obtain a "file control number" for inclusion in the report.

2. Entry will be made when the serial number is known and will be conducted through Dispatch.

3. A copy of the CLETS entry will be scanned and attached to the original crime report.

4. Supervisors will review the CLETS entry and the original report to verify the accuracy of the information entered into CLETS and that the entry information is supported in the original report.

    a. Exception: In Grand Theft cases, or where the value is $950.00 or more, the entry is done by Investigations Division.

F. STORAGE OF FOUND/RECOVERED BICYCLES

1. All found or recovered bicycles will be properly tagged with a "property record" tag and placed in the area Station House Evidence storage area until they are moved to the Property Room.

    a. Exception: Contract cities may retain all found or recovered bicycles at a location designated by their Police Manager.

    b. NOTE: The property record tag must be complete and accurate in order to identify the reporting party or owner in a timely manner.

G. RETURN TO OWNER

1. In the event the assigned deputy cannot return the bicycle to the owner, any notification or attempt to contact should be noted in the report.

2. Evidence personnel will notify the victim when a bicycle similar to theirs is retrieved or found.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.23**
	RELATED ORDERS: PC 470, 475, 475a, 476, 476a, 496.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Property**	**SUBJECT:** **Fraudulent Documents**	

I. POLICY

A. Patrol and Special Operations Division will respond to the scene of a reported fraud and establish the nature of the incident, protect and collect evidence, and apprehend suspects.

II. GENERAL INFORMATION

A. Fraudulent document cases normally fall within two broad categories:

1. True name checks which have been rejected by the bank for one or more reasons; i.e., non-sufficient funds, account closed, return to maker, etc.

B. Forgery is when a person's signature has been unlawfully affixed to a document.

1. The document may be a check or other form of conveyance. (Notes, deeds, credit applications, etc.)

2. Counterfeit documents may also fall within this category.

III. PROCEDURE

A. TRUE NAME CHECKS

1. This type of check involves: account closed, non-sufficient funds, and refer-to- maker.

2. The beat deputy will personally respond to reports of fraudulent documents.

3. The deputy will determine if the check meets the following criteria:

a. The check must include:

- Payee
- Date
- Amount
- Signature

b. The check must include the printed name and address of the checking account owner.

c. The person accepting the check must have taken the following steps in reviewing the check:

- Recorded the Driver's license number provided by the presenter.
- Recorded the Date of birth provided by the presenter.
- Initialed the check as the person accepting the document.

d. The check must not be pre- or post-dated.

e. The check must meet at least one of the following requirements:

- It was written in Contra Costa County.
- It was delivered to an address in Contra Costa County and be drawn on a bank doing business in California.

f. The check should be submitted within 30 days of the date that it was returned unpaid.

4. Unacceptable Documents

a. Two-party checks.

b. Any other document not meeting the criteria within this policy.

5. Reporting procedures

a. The assigned deputy will refer the individual(s) reporting the incident to the Contra Costa County District Attorney Bad Check Program.

b. The assigned deputy will supply the P.R.C. with a Bad Check Program brochure and the District Attorney's Returned Check Complaint Form.

- The P.R.C. will then be instructed to follow the instructions of the District Attorney Bad Check Program.

6. Deputies assigned true name check details will not obtain or assign case file numbers nor seize the involved check(s).

B. STOLEN, FORGED AND FICTITIOUS CHECKS

1. Incidents involving checks in this category shall be handled as any other criminal investigation.

2. The assigned deputy will respond to the scene and conduct an appropriate investigation.

3. The involved document will be seized for evidence.

a. Such document(s) will be preserved for fingerprints or other processing.

b. The document(s) will be placed into a "Fraudulent Document Envelope" and submitted into evidence.

c. This will be conducted regardless how many persons may have handled the document.

C. ARRESTS INVOLVING CHECKS

1. Deputies assigned details involving "true name checks" or "stolen, forged or fictitious checks" will adhere to the following procedures regarding arrest:

a. True name checks

- Deputies who respond to details in which the suspect is still present will not physically arrest the suspect, but rather:
- Conduct a field interview so as to identify the suspect and obtain enough additional information to support the issuance of a complaint at a later date.
- If the victim has made a citizen's arrest of the suspect, the citizen's arrest procedures outlined in chapter 5.3 will be followed. Should the deputy receive the citizen's arrest, a citation release should be utilized.

b. Forged checks

- When the assigned deputy establishes that a suspect at the scene has forged a check, an arrest will be made.
- A check may be considered as forged whenever the suspect uses the name of another person or the name of a fictitious person with intent to defraud a recipient of the check.
- Example: Mr. Jones reports his checks were stolen from his mailbox in El Sobrante.
    - Mr. Jones reports this theft to the Sheriff's Office. The theft from the mail is written with a copy of the report going to the postal inspector and copy to Investigations for information.
    - A few days later Mr. Jones reports to the Sheriff's Office that he has received a call from a business in Pinole about a check that has bounced.
    - Mr. Jones is instructed by the Sheriff's Office to tell the business that his checks were stolen, providing the case number.
    - It is now the responsibility of the business where the forged check was passed to contact the law enforcement agency where the business is located, in this example Pinole Police Department.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.24**
	RELATED ORDERS: PC 374, 374a, 374b, 374b.5, 374d, 374e.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Property**	**SUBJECT:** **Litter Details**	

I. POLICY

A. Patrol and Special Operations personnel will thoroughly investigate all litter details and will ensure the person responsible for clean-up is aware of the dump.

II. PROCEDURE

A. GENERAL RESPONSIBILITIES

1. It shall be the responsibility of the assigned deputy to conduct a thorough investigation to include the issuing of citations when appropriate.
2. Deputies will conduct a search of a litter dump for evidence.
   a. The deputy should be aware that the responsible individual(s) for the litter may not have dumped it.
   b. Frequently, homeowners hire individuals to remove trash and other debris from their property.

B. PROBABLE CAUSE FOR CITATION

1. The punishment for littering is by fine only (classifying the crime as an infraction) so the assigned deputy can issue a citation after establishing probable cause.

C. RESPONSIBILITY FOR PROPER DISPOSAL

1. Public property
   a. In the event the littering occurs on public property, a copy of the crime report will be routed to General Services Division for the proper disposal of the litter.
   b. All follow up and final disposition is the responsibility of the originating deputy.
2. Private Property

a. Litter dumps occurring on private property are the responsibility of the property owner for clean-up.

b. Deputies should be prepared for property owners who may dispute the responsibility for clean-up. Property owners can be advised to consult an attorney.

3. Deputies assigned litter dumps in which the responsible is properly identified may conclude the investigation by having the responsible clean-up of the litter.

4. Deputies should use good judgment and ensure that clean-up is done properly.

D. REPORTING LITTER DUMPS

1. Regardless of the location and/or disposition of a litter detail, the assigned deputy will report the incident on a “crime report,” and is responsible for all follow up investigation.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.25**
	RELATED ORDERS: PC 374, 374a, 374b, 374b.5, 374d, 374e.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Property**	**SUBJECT:** **Motorcycle Complaints**	

I. POLICY

A. Motorcycle complaints whether for noise or property damage will be investigated by Patrol and Special Operations Personnel and resolved.

II. PROCEDURE

A. ASSIGNED DEPUTY'S RESPONSIBILITIES

1. Deputies assigned "motorcycle" complaints will take appropriate lawful steps to ensure an equitable and satisfactory disposition to the problem.
2. Adult or juvenile citations may be issued to all trespassers with motor vehicles encountered upon lands "not known to be open to the general public."
3. Citations will be issued in all cases in which the property owner or representative of property owner desires prosecution.

B. ESTABLISHING TRESPASS VIOLATION

1. Frequently, deputies will encounter incidents in which questions arise concerning the aspect, "lands not known to be open to the general public."
2. To establish a "trespass," the following criterion is presented as a guideline:
   a. Lands completely enclosed by fence.
   b. Lands posted with "no trespassing" signs at intervals of three signs per mile around the perimeter of the property and at each recognizable entrance.
   c. The suspect cannot produce written permission from the owner of the land or his agent to utilize his vehicle on the property.
3. In other cases, the deputy must use good judgment in establishing a trespass. Examples of possible circumstances are:

a. If lands are partially posted with "no trespassing" signs in such a location that they would be visible to the trespasser, a citation could be issued.

b. Fenced lands in which signs are posted at gate entrances and would have been visible upon entry, a citation could be issued.

4. Lands that are unfenced or not posted, the burden of proof is still somewhat upon the trespasser if the deputy can establish through circumstantial evidence that the lands are "not known to be open to the general public."

C. PURSUIT OF MOTORCYCLE TRESPASSERS

1. Deputies should avoid pursuit of trespassers on motorcycles.

a. The advantages of a motorcycle in "off road" conditions greatly outweigh a four-wheel patrol unit.

b. Also, pursuit of a trespasser on a motorcycle may cause the rider to attempt unsafe maneuvers increasing the likelihood of injury to himself and possibly to the deputy.

D. EXCESSIVE NOISE COMPLAINTS

1. Complaints received involving excessive noise created by motorcycles or other vehicles will be handled in the following manner:

a. If the complaint involves a trespass follow PROCEDURES 2, 3 and 4.

b. If the complaint involves excessive noise only, proceed as follows for a violation of Section 415 P.C.:

- Listen to the noise from or near the complainant's residence.
- Ascertain if the complainant desires prosecution.
- When prosecution is desired, obtain names and addresses of neighbors for potential witnesses.
- Apprehend responsible(s) and cite when prosecution is desired and it is established that sufficient noise exists to cause an actual disturbance of the peace.
- In the event the complainant does not want prosecution, but requests the deputy to contact the responsible(s) and advise of the complaint and noise disturbance, the deputy will conduct the following:
  - Contact responsible(s) and obtain pertinent information for inclusion in the crime report.
  - Provide responsible(s) with "warning notice" form.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.26**
	RELATED ORDERS: California Civil Code 2080, 2080.1; County Ordinance #68-15, Section 2671.3.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Property**	**SUBJECT:** **Property Details**	

I. POLICY

A. Patrol and Special Operations Division will safeguard and properly dispose of all property coming into its custody. Every reasonable effort will be made to return property to its rightful owner.

II. PROCEDURE

A. NON-CRIMINAL PROPERTY

1. Any physical objects which come into the possession of a Patrol or Special Operations member and which are not instruments of a crime, contraband, or evidence are considered to be "non-criminal property."
2. Such property includes found items and items taken into custody for safekeeping.
3. Patrol and Special Operations deputies will perform the following tasks:
   a. Complete a "found report" or a "crime report" if applicable.
   b. Tag the property with a complete property record tag and submit into evidence.
   c. Complete a Found Property/Safekeeping Property form (PF#49), Distribution of this three part NCR form is as follows:
      - Original – Case File copy (scan and attach to report)
      - Pink – Citizen's copy (also acts as a property receipt, with instructions for claiming property on the back)
      - Yellow – Property Room copy
4. Patrol and Special Operations deputies will make every reasonable effort to locate and return property to its rightful owner.
   a. If the property owner lives within the assigned deputy's beat, the property may be returned.
      - A report is required.

b. Property owners located outside of the assigned deputy's beat will be notified by telephone (if telephone number is available) of recovery and advised to call Sheriff's Property, 925-646- 5877 between 0800 to 1700 hours, Monday to Friday, excluding holidays to arrange pickup.

5. When a finder of property expresses an interest in such property, the assigned deputy will perform the following tasks:

a. Direct the citizen’s attention to, the duties of the finder instructions, on the back side of his/her pink copy of the Found/Safekeeping Property Form.

b. Indicate on the "Property Record" tag and in the report that the finder wishes to claim the property.

- NOTE: If the finder refuses to sign the "Declaration of Found Property" or the finder has not moved the property or otherwise taken the property into his custody, the finder acquires no right to the property.
- It is suggested the above procedures for claim of property not be given unless the finder declares an intention to claim the property.

B. BOOKING PROPERTY FOR SAFEKEEPING:

1. Deputies are authorized to take property into custody and submit it into evidence whenever any of the following elements are present:

a. There is a reasonable indication that a crime may be committed if the property is not taken into custody.

b. If the circumstances reasonably indicate that the owner is incapable of taking care of the property.

2. Whenever property is taken for safekeeping deputies will:

a. Complete a crime report indicating the circumstances surrounding the taking of property.

b. Complete a Found/Safekeeping Property form and give the citizen the pink copy of the form, directing his/her attention to the instructions on the back side of their copy.

- This form will act as their property receipt as well.

C. DISPOSAL\DESTRUCTION OF PROPERTY:

1. Deputies are authorized to dispose of or destroy and dispose of unclaimed found property that has no evidentiary value, or material value.

a. "Disposal\destruction" of property should be noted on the property tag when item(s) are submitted to the Property Room for disposition.

2. Property that is "Trash" and has no value as above can be disposed of at the Station House disposal site, or other appropriate location.

3. Any property that may be or have hazardous waste contamination will be handled in accordance with the procedures covering Hazardous Materials in Chapter 7 of this manual.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Crimes vs. Persons

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.27**
	RELATED ORDERS: PC 148, 415, 240, 242.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Disturbance of the Peace**	

I. POLICY

A. The Patrol and Special Operations Division has a responsibility to detect, document, and resolve disturbances of the peace occurring within the unincorporated area of the county and the contract cities.

B. Each deputy has an individual responsibility to conduct appropriate investigations whenever a disturbance of the peace is discovered or otherwise reported.

II. GENERAL INFORMATION

A. Deputies assigned to incidents involving a disturbance of the peace must remain calm and objective in order to successfully resolve and manage the confused, emotional, and often dangerous situation.

B. Crucial to a successful response is the deputy's ability to demonstrate neutrality, tact, patience, and investigative thoroughness.

III. PROCEDURE

A. OFFICER SAFETY

1. Deputies assigned to disturbance calls will remain aware that police intervention is often viewed by participants as unwarranted and may result in violence directed at arriving deputies.

2. The following elements will be considered by deputies assigned to respond to the scene of a disturbance:

a. The nature of the disturbance

- The degree of threat to a deputy's safety is directly related to the number of people involved and the nature of the disturbance.
- Deputies and supervisors will assess the situation to determine the appropriate response, personnel, and resources necessary to maintain control. Supervisors

will continue to monitor the situation and deploy additional personnel and resources as needed.

b. The location

- The deputy will take into consideration the structure or area where the disturbance is occurring in order to determine the approach that will provide maximum safety and control of the situation.

3. Deputies will remain aware that incidents involving a disturbance of the peace are normally accompanied by participants who are emotional, angry, and unconcerned about the consequences of their actions.

B. OFFICER CONDUCT

1. Deputies will convey a calm, positive, determined, objective, and professional image by adhering to the following process when appropriate:

a. Supply information to participant

- Deputies will introduce themselves and explain their presence to participant.
- When necessary, assigned deputies will also explain the law.

b. Display effective attitude

- Deputies will not downplay the incident by belittling the problem or by ridiculing participants.
- A matter-of-fact, business-like attitude is advisable so that participants are made aware that the deputy intends to mitigate the problem and restore the public peace.

c. Maintain effort

- When entry into a dwelling or area is refused, and the disturbance is continuing, deputies may enter to make an arrest if probable cause and the elements of a crime are present.
- When a decision to force entry is made, prior approval from an area supervisor will be obtained and sufficient resources will be allocated to effectively accomplish entrance and arrest.

d. Obtain facts

- Upon arrival at the scene, assigned deputies will be attentive to the conduct and actions of participants.
- When violence is occurring, deputies will, if possible and practical, intervene and take into custody those persons initiating the violence.
- Once calm is restored, deputies will carefully interview those participants directly involved in the disturbance.

- Deputies will avoid taking action until pertinent facts have been obtained from both parties.
- This is crucial to maintaining objectivity and impartiality.

e. Inform parties of limits

- When the facts and/or circumstances fail to establish probable cause for an arrest or otherwise limits the options available, deputies will explain true limits on police authority to participants or other person demanding action.

2. When an atmosphere of calm is established and facts obtained, the assigned deputy will then perform those tasks required to resolve the conflict or disturbance.

C. TAKING POSITIVE ACTION

1. Deputies assigned will resolve the disturbance and restore the public peace through the use of one or more of the following options:

a. Mediation

- Except where the circumstances require an arrest, deputies will attempt to have participants agree to a solution to the dispute.
- Deputies will remain aware of the important role the participants have in deciding on any solution.
- A settlement cannot be imposed unless the parties themselves agree that a given solution is acceptable, otherwise any agreement between them will quickly disappear after the deputy is out of their sight.
- Essentially what is to be sought is recognition by participants of their respective contribution to the problem and a commitment to solve the problem in other ways than by displaying hostility or violence.

b. Referrals

- Where outside counseling seems advisable, deputies will carefully consider what the most appropriate referral would be, before suggesting a referral.
- It is essential that the disputants be referred only to an agency that is equipped to help with the particular problem.
- When making a referral, the following elements will be considered and employed when appropriate – cost, multiple issues, public or private agencies etc.:
- Identifying the referral agency

- When making a referral, write down the name of the agency, the address and the telephone number.
- If someone at the agency is known personally, write down his or her name, too.
- Parties are much more likely to take advantage of services offered when they have a specific person to ask for upon their arrival at the agency.
- If there is a choice among agencies, make the referral to the agency or organization closest to the home of the disputants.

- Dissimilar problems
  - Where the disputants or the family has more than one problem and really need the services of a number of agencies, determine the most acute problem and make an appropriate referral for such.
- Arrests
  - There are some situations when there is no reasonable alternative but to arrest; for instance, where there has been a serious assault committed in the deputy's presence.
  - When the action taken warrants, deputies will document all facts surrounding the incident, the statements of the participants or reporting party, and the action taken by the deputy in a crime report.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.28**
	RELATED ORDERS: PC 136.1, 166.4, 243(e), 261, 262, 273.5, 273.6, 278, 278.5, 286, 288a, 289, 415, 602.5, 784.5, 836, 837, 849(b), 853.6, 1000.6, 13700, 13701, 13730, 18125, 18250; CCCSO 3.01.39 Code of Civil Procedure 525, 527.6, 540, 546, 553, 4000-5181, 4359, 7020; Family Code 6211, 6241, 6250, 6254, 6271, 6272, 6273, 6380, 6383; Contra Costa County Police Chief's Association Domestic Violence Policy Guideline.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Domestic Violence, Gun Violence, Harassment and Restraining Orders**	

I. POLICY

A. In cases of domestic violence, deputies shall enforce the laws to protect the victim and shall communicate the attitude that violent behavior in the home will not be tolerated. Arrests will be made when appropriate.

B. It is the policy of the Contra Costa County Office of the Sheriff, that when an officer believes that a person is in immediate and present danger of domestic violence, or a child is in immediate and present danger of child abuse by a family or household member, or child abduction by a parent or relative, based on the allegation of a recent incident of abuse or abduction, or threat of abuse or abduction, the deputy may assist the person in securing an emergency protective order when no other valid court protective order exists.

II. DEFINITIONS

A. Abuse: Intentionally or recklessly causing or attempting to cause bodily injury, or placing another person in reasonable apprehension or imminent serious bodily injury to himself or another.

B. Domestic Violence: Abuse committed against an adult or fully emancipated minor who is a spouse, former spouse, cohabitant, former cohabitant, or a person with whom the suspect has had a child or has had a dating or engagement relationship. Also includes abuse against those closely related to one another by consanguinity or affinity within the second degree.

C. Emergency Protective Order (E.P.O.): An Ex Parte court order prepared by a law enforcement officer and issued by a Judge, Commissioner, or Referee, by the telephone or otherwise, whether or not the Superior Court is in session, when there is immediate and present danger of domestic violence, child abuse, or child abduction. Or that an elder or dependent adult is in immediate and present danger of abuse as defined by Welfare and Institutions section 15610.07, based on an allegation of a recent incident of abuse or threat of abuse by the person

against whom the order is sought, except that no emergency protective order shall be issued based solely on an allegation of financial abuse.

1. Such an order restrains activity and/or excludes the restrained party from specific locations and/or determines temporary custody of minor children.

2. E.P.O.'s are good until the 5th court day following its issuance and depending on weekends and holidays the order can be in effect for up to seven days.

D. Immediate and Present Danger (As it applies to E.P.O.'s): Reasonable grounds to believe that a person is in danger, based upon the person's allegation of a recent incident of abuse or threat of abuse.

E. Family or Household Member (As it applies to E.P.O.'s, specifically regarding child abuse): Individuals who are related to each other and/or persons who regularly live or who regularly lived in the household.

F. Gun Violence Restraining Orders (GVRO): May be issued if the subject is determined to be an immediate threat to themselves or others, but does not fit the criteria for a W&I 5150 hold. A GVRO may be applied for Ex-Parte by family members, as defined in Penal Code 422.4, or by Law Enforcement. It may also be applied for as a Temporary Emergency Gun Violence Restraining Order by Law Enforcement only. This order, if granted, is in effect for 21-days from issuance.

III. GENERAL INFORMATION

A. A major portion of a deputy's time is spent on dispute or disturbance calls.

1. Of these calls, domestic disputes and/or violence is frequently encountered.

B. The handling of these types of disputes is often hazardous to the safety of the deputy.

C. Deputies will attempt to arrive at a solution to the problem, which is equitable to the involved parties.

D. A deputy can be detailed to a disturbance and encounter a situation where a husband and wife are in the process of obtaining a divorce, cohabitants are separating, or a family argument is in progress.

E. Deputies also frequently encounter situations involving restraining orders.

F. The following procedures are set forth to enable field deputies to handle situations of this nature.

G. GENERAL GUIDE LINES FOR ENFORCING RESTRAINING ORDERS:

1. MOST COMMON TYPES OF ORDERS

a. Criminal Protective Order/Criminal Stay Away Order

b. Emergency Protective Order (E.P.O.)

c. Domestic Violence Prevention Act

- Pre-hearing: Order to Show Cause and Temporary Restraining Order
- Post-hearing: Restraining Order After Hearing

d. Family Law Restraining Orders

- Pre-hearing: Temporary Restraining Orders/Order to Show Cause
- Post-hearing: Restraining Order After Hearing or Findings and Order After Hearing

e. Gun Violence Restraining Order

- Ex-Parte Gun Violence Restraining Order pre-hearing
- Temporary Emergency Gun Violence Restraining Order pre-hearing by Law Enforcement
- Gun Violence Restraining Order after hearing

2. TIME LIMITS

a. As long as defendant is under court jurisdiction.

b. Emergency Protective Orders (5 court days - up to 7 days depending on weekends and holidays)

c. Domestic Violence Prevention Act

- Until date of hearing
- 3 years maximum

d. Family Law Restraining Orders

- Until date of hearing
- 3 years, generally

e. Gun Violence Restraining Order

- 21 days until hearing
- 1 year if granted by hearing

3. ENFORCEMENT SECTIONS

a. P.C. 136.1 per 136.2 P.C. Violation of Court Order 2, 3, and 4. 166.4 P.C. (General), 273.6 P.C. (Specific)

b. Other: 278.5 P.C. Deprivation of Custody or Right to Visitation of Child

4. WHEN TO ENFORCE

a. Upon communicated confirmation of existence and proof of service.

b. Upon being shown at scene a copy of Order and serving same on defendant.

5. IMPORTANT FACTORS

a. Read the Orders - Determine if Orders were issued before or after hearing.

b. If Orders appear proper on face and in content, don't look for hidden meanings.

c. Never take a petitioner or attorney's word of existence of Orders.

d. If more than one order is presented, and orders are conflicting, enforce the most recent.

IV. PROCEDURE

A. DISTURBANCE CALLS

1. Deputies shall treat all domestic violence as criminal conduct and will respond accordingly.

2. The most critical time for any police officer is approach and entry.

a. The police rarely have the element of surprise.

b. Emotions run high and the danger of the situation escalating into a crime of physical violence is great.

c. The initially assigned deputy is responsible for the proper handling of domestic disputes.

d. The deputy’s arrival on the scene of a dispute may be viewed as a possible solution by one party, but as an intruder by the other.

[redacted]

[redacted]

5. Appropriate Action

   a. Crisis intervention techniques shall not be used in lieu of an arrest where arrest is the most appropriate response unless there exists exigent and extraordinary circumstances.

   b. Crisis intervention techniques may be an appropriate response to domestic dispute incidents.

B. ARRESTS

1. The existence of the elements of a crime and/or the willingness of the victim to sign a Citizen's Arrest Form shall be the sole factors that determine the proper method of handling the incident.

2. The following factors, for example, are not to influence the deputy's course of action in domestic violence incidents:

   a. The relationship or marital status of the suspect and the complainant, i.e., not married, separated, or pending divorce.

   b. Whether or not the suspect lives on the premises with the complainant.

   c. The existence or lack of a temporary restraining order.

   d. The potential financial consequence of arrest.

   e. The complainant's history of prior complaints.

   f. Verbal assurances that violence will cease.

g. The complainant's emotional state.

h. The absence of visible injuries.

i. The location of the incident (i.e., public or private).

j. Speculation that the complainant may not follow through with the criminal justice process or that the arrest may not lead to a conviction.

3. Felony Arrest

a. Make an arrest when there is probable cause to believe that a felony has occurred.

4. Misdemeanor Arrest

a. Make an arrest when there is probable cause to believe that a misdemeanor (including violations of court orders) has occurred in the officer's presence.

b. Penal code section 836 sets forth authority for warrantless arrests in domestic violence disputes, either in the presence of the officer or outside his/her presence, under specified conditions:

- In 1997, the legislature broadened Penal Code Section 836(c)(1), which now specifies that when a peace officer is responding to a call alleging a violation of a domestic violence protective or restraining order issued under the Family Code, Section 527.6 of the Code of Civil Procedure, Section 213.5 of the Welfare and Institutions Code, or Section 136.2 of this code, or of a domestic violence protective or restraining order issued by the court of another state, tribe, or territory and the peace officer has probable cause to believe that the person against whom the order is issued has notice of the order and has committed an act in violation of the order, the officer may arrest the person without a warrant whether or not the violation occurred in the presence of the arresting officer.
- Per 13701 PC, arrest policies shall require the arrest of an offender, absent exigent circumstances, if there is probable cause to believe that a protective order has been violated.
- In any case in which a person is arrested for a misdemeanor violation of a protective court order involving domestic violence, the person shall be taken before a magistrate instead of being released on a citation unless the arresting deputy determines there is not a reasonable likelihood that the offense will continue or resume or that the safety of persons or property would be imminently endangered by release of the person arrested.

- Nothing in this subdivision shall be construed to affect a defendant's ability to be released on bail or his or her recognizance. (Section 853.6(a) PC).

- In 1997, the legislature added Penal Code Section 836(d) which specifies that if a person commits an assault or battery upon his or her spouse, a person with whom he or she is cohabiting, the parent of his or her child, or upon a person with whom the suspect currently is having or has previously had an engagement or dating relationship, a peace officer may arrest the person without a warrant where both of the following circumstances apply:

- 1. The peace officer has probable cause to believe that the person to be arrested has committed the assault or battery, whether or not it has in fact been committed.

- 2. The peace officer makes the arrest as soon as probable cause arises to believe that the person to be arrested has committed the assault or battery, whether or not it has, in fact, been committed.

c. Deputies considering releasing the suspect on a citation shall evaluate the likelihood of a continuing offense (which is one of the statutory conditions under which a field release is not appropriate). Any one of the following may support the likelihood of a continuing offense:

- Whether the suspect has a prior history of arrests or citations involving domestic violence.

- Whether the suspect is violating a criminal court issued stay-away order.

- Whether the suspect has previously violated, or is currently violating, valid temporary restraining orders.

- Whether the suspect has a prior history of other assaulting behavior (e.g., arrest/convictions for battery or aggravated assaults).

- Statements taken from the victim that the suspect has a history of physical abuse towards the victim.

- Statements taken from the victim expressing fear of retaliation or further violence should the suspect be released.

- Information about the suspect’s alcohol or drug abuse, access to weapons, suicide threats or attempts.

- Threats of kidnapping family members, or history of mental illness.

5. Dual Arrests

a. Dual arrests shall be discouraged but not prohibited. (P.C. 13701, as amended effective 7/1/96.)

b. Peace officers shall make reasonable efforts to identify and arrest only the primary aggressor.

- The primary aggressor is the person determined to be the most significant rather than the first aggressor.
- In identifying the primary aggressor, the officer shall consider:
  - The intent of the law is to protect victims of domestic violence from continued abuse.
  - The threats creating fear of physical injury.
  - The history of domestic violence between the persons involved.
  - Whether either person involved acted in self-defense.

6. Private Person's Arrest (Citizen's)

a. Inform the victim of the right to make a private person's arrest when a crime has been committed outside the deputy's presence and does not meet the requirements for a felony or misdemeanor arrest.

- Whenever possible, such discussion shall be held out of the presence of the suspect. Accept a private persons arrest if satisfied the arrested is supported by probable cause.
- Deputies shall not dissuade victims from making a lawful Private Person's Arrest.

7. Temporary Custody of Firearms

a. California Penal Code Section 18250 authorizes peace officers at the scene of a domestic violence incident involving a threat to human life or a physical assault "to take temporary custody of any firearm or other deadly weapon in plain sight or discovered pursuant to a consensual search as necessary for the protection of the peace officer or other person present."

b. Officers are encouraged to exercise their authority to permit maximum protection of persons at the scene of a domestic violence incident.

c. The main procedural requirements of ~~12028.5~~ 18250 are summarized as follows:

- A receipt shall be given to the owner when the weapon is taken into custody (Use Sheriff Office Firearm Receipt, copy attached).
- The receipt shall:

- Describe the firearm or other deadly weapon.
- List any identification or serial number on the firearm.
- Indicate how the weapon can be recovered. Procedure listed on S.O. Firearm Receipt.

d. The deputy will fill out the Declaration re: Confiscation of Weapons/Deadly Weapons at the scene of the incident or immediately thereafter.

- The weapon shall be held until the courts make a determination regarding the disposition of the confiscated weapons.

e. Firearms will not be released without authorization from the Investigation Division Misdemeanor Complaints Unit. (Refer to Sheriff's Office Firearm Receipt)

f. When a law enforcement agency has reasonable cause to believe the weapon could be used to endanger the victim, and the weapon is going to be confiscated, the deputy shall advise the owner/person in possession of the weapon, the following:

- Their weapons are being confiscated pursuant to ~~12028.5~~ 18250 PC.
- Within ~~10~~ 60 days, County Counsel will initiate a petition in Superior Court to determine if the weapon(s) should be returned.
- At the completion of the incident the deputy will forward/fax a copy of the complete police report, firearm receipt and declaration re: Confiscation of Firearm/Deadly Weapons to Misdemeanor complaints the same day of the seizure.

C. COURT PROTECTIVE ORDERS

1. Temporary Restraining Orders (T.R.O.'s)
2. Temporary Restraining Orders are recorded in the Sheriff's Office computer system and available to the deputy.
3. Effective dates, service dates, etc.
4. Deputies should also check to see if any and all persons involved have:
   a. Outstanding warrants
   b. Electronic Home Detention
   c. Probation with search clauses
   d. Restrictions on alcohol and/or drug use, movement, times of the day allowed to be away from home or named in recent Emergency Protective Orders.

e. The presence of any of the above may give the deputy an option to solve the immediate situation, and should not be overlooked.

5. The MDC's in the patrol cars should be utilized to get information when possible, in order to lessen the workload on Dispatch and shorten airtime used on the radio.

6. Sheriff's Records maintain a complete file of all restraining orders delivered to them by the courts, county clerks, complainants, etc.

   a. This file is for the use of deputies to verify the order's validity and terms.

7. Verification of Valid Restraining Orders

   a. Whenever a complainant advises of the existence of a restraining order, the deputy should ascertain:

      - Whether a restraining order is on file with the department, or whether complainant has a copy of the restraining order in possession, that was signed by a judge and should have been filed and stamped by the court or county clerk.
      - Whether a restraining order is still valid as to duration/time.
      - Whether the proof of service or prior notice exists or that the defendant was in court when the order was made.
      - The terms of or restrictions imposed by the order.

8. Arrest Criteria and Enforcement Procedures

   a. A violation of a restraining order is a misdemeanor under Penal Code Sections 273.6 (specific), or 166.4 (general).

   b. A deputy may make an arrest when there is probable cause to believe the subject of the restraining/protective order has violated the order, and any of the following conditions is met (P.C. 13701):

      - The existence of a valid order and proof of service on the defendant has been verified by the deputy.
      - The complainant produces a valid copy of the order and proof of service on the defendant.
      - The existence of a valid order has been verified by the deputy; no proof of service is required if the order reflects that the defendant was personally present in court when the order was made.
      - The existence of a valid order has been verified, and there is proof that the defendant has previously been admonished by an officer.

c. When the deputy verifies that a valid restraining order exists, but cannot verify proof of service, or prior knowledge of order by defendant, the deputy should:

- Serve the defendant with a copy of the order, if the plaintiff has an extra copy.
    - Do not take, or serve the defendant with the plaintiff's last-or only-copy.
- If the plaintiff does not have an extra copy that the deputy can serve on the defendant, the deputy should verbally inform the defendant of the order and its specific terms.
- Upon service of the order outside of the court, a law enforcement officer shall advise the respondent to go to the local court to obtain a copy of the order containing the full terms and conditions of the order. (Family Code 6383(g)).
- Advise the defendant that they are now on notice and that a violation of the order will result in arrest.
    - If the defendant continues to violate the order, after being advised of the terms, an arrest should be made.
    - Verbal notification to the respondent of the terms of the order shall be sufficient notice for enforcement of P.C. 136.2, 273.6, and 29825. (Family Code 6383 (e)).

d. If the subject complies after admonishment of the terms, the deputy shall write a report pursuant to Penal Code section 13730 (c) which will include:

- That the subject was admonished/advised of the terms of the order.
- The specific terms of the order.
- The specific terms of the order the subject was advised about.
- The name of the admonishing officer.
- Time and date.

e. The department's copy of the restraining/protective order will be updated to reflect the admonishment information listed above.

f. If the deputy serves the defendant with a copy of the order, the plaintiff shall provide the deputy with a proof of service which the deputy shall complete (Family Code 6383(b)).

- The deputy will return the proof of service to the plaintiff to file with the court.

g. If the deputy serves the defendant with a copy of the order, he/she should state in the crime report that service was made, attach a copy of the restraining order to the report, and forward a copy of the entire report to Records, Restraining Order File.

h. Whenever any service is made (verbal or otherwise), Sheriff's Records needs to be notified in order to update the restraining order file (Family Code 6380 (e)).

- If the plaintiff does not provide a proof of service, the law enforcement officer's report will act as such until one is filed.

i. If the defendant has left the scene of the incident, an investigation shall be made to determine if a crime has been committed.

- Penal Code Section 13730 (c) and 13701 (c)(8) require that a retrievable report shall be made and complainant shall be advised of the follow-up criminal procedure and case number of the report.

9. Order Not Verifiable

a. When the victim is not in possession of the restraining order and/or in the case of a computer or a filing error, deputies may not be able to confirm an order's validity.

b. When an order is not verifiable through the verification procedures, deputies should advise the victim of the right to make a private person's (citizen's) arrest for the appropriate violation.

- See guidelines for enforcing restraining orders attached at the end of this policy and procedure section.
- Assist the victim in obtaining an Emergency Protective Order, if appropriate.

D. CRITERIA FOR OBTAINING EMERGENCY PROTECTIVE ORDER

1. Emergency protective orders are available at all times, whether or not court is in session. (Family Code 6241)

E. If the deputy has reasonable grounds to believe a person is in immediate and present danger of domestic violence, or a child is in immediate and present danger of abuse by a family or household member, or abduction by a parent or relative, or that an elder or dependent adult is in immediate and present danger of abuse as defined by Welfare and Institutions section 15610.07, based on an allegation of a recent incident of abuse or threat of abuse by the person against whom the order is sought, except that no emergency protective order shall be issued based solely on an allegation of financial abuse.

1. The deputy should inform the complainant as to the availability of Emergency Protective Orders.

2. Regardless of the victim's preference, the deputy may request an Ex Parte Emergency Protective Order from the on-call judicial officer.

a. A deputy will make this determination based on the applicant's allegation of a recent incident of abuse or abduction or threat of abuse or abduction.

3. The availability of an Emergency Protective Order shall not be affected by the fact that the endangered person has vacated the household to avoid abuse. (Family Code 6254)

4. The deputy may request an Emergency Protective Order whether or not the suspect is present or has been arrested.

5. A crime does not have to be committed for an E.P.O. to be issued.

6. The following are examples of situations in which requesting an Emergency Protective Order may be appropriate:

a. The suspect is being arrested for a charge related to a domestic violence incident.

b. The suspect has a history of domestic violence.

c. The victim expresses fear of retaliation or further violence.

d. Threats of serious danger have been made to the victim or to the victim's family.

e. If the applicant requests the order include a "move-out immediately" provision, the deputy should verify that the applicant has lawful possession of the address named through marriage, rental agreement, or receipts, etc.

F. REQUESTS FOR EMERGENCY PROTECTIVE ORDER

1. Supervisor approval is required prior to contacting the on-call judicial officer.

2. The deputy shall contact the on-call judicial officer by telephone or otherwise and assert the grounds for belief that an Emergency Protective Order is appropriate.

a. Daytime (during court hours)

- Call the Superior Court Family Law Legal Technicians.
- Identify yourself by name and agency and advise them you are requesting an EPO.
- Provide the legal technicians with the basic information they need.
    - The legal technicians will locate an available judicial officer to talk with you.

b. Evening and Weekends

- Contact the on-call judicial officer by telephone.
- The on-call list is available at each station house or contract police department and in the dispatch center.

3. If the telephone call is to be made from any location other than a police department, or Sheriff's Office Substation, place the call through dispatch.

    a. This precaution is to prevent the telephone number of the judicial officer or legal technicians from appearing on the telephone bill of one of the parties.

4. Upon oral issuance of the order by the on-call judicial officer, the Emergency Protective Order form shall be completed as per the Judicial Officer's instructions regarding restraint, and/or temporary custody.

5. The deputy shall sign the Emergency Protective Order.

G. ISSUED ORDERS

1. The deputy who requested the Emergency Protective Order shall:

    a. Provide a copy of the order to the protected party.

    b. Advise the protected party when the order will expire.

    c. Explain how to secure a permanent Restraining Order.

    d. Serve a copy of the order on the restrained party, if the party can be reasonably located.

    e. Carry a copy of the order until the end of shift.

    f. Advise the relieving shift and deliver a copy to the appropriate beat board at the end of shift.

2. When a violation of any Emergency Protective Order has occurred, the deputy shall verify the restrained party has been served, then arrest in accordance with all other restraining order procedures.

    a. A law enforcement officer, acting pursuant to Section 546 CCP, shall not be held civil or criminally liable if he or she acted in good faith in requesting and enforcing an Emergency Protective Order.

3. Deliver a copy of the Emergency Protective Order to the Records Bureau by:

    a. Attaching a copy to your Police report.

    b. Faxing a copy to the Records Bureau at 335-1589

4. Upon expiration of the Emergency Protective Order:

    a. The Support Services Bureau Records Clerk's copy shall be mailed, by Records personnel, to the Superior Court of Contra Costa County at 500 Court Street, Martinez, CA 94553.

H. TENANCY

1. Request a person who is not in lawful possession of the premises to leave the premises when:

    a. The complainant is in lawful possession of the premises; and, the complainant has requested that the person leave the premises.

- Arrest the suspect under Penal Code 602.5 if the suspect does not leave upon request.

b. The deputy should refer the complainant for a temporary restraining order or other appropriate civil remedy if the complainant requesting removal cannot show proof of lawful possession.

- NOTE: "Lawful possession" of the premises can be shown by a rental agreement, canceled rent check, lease, grant deed, verification from landlord, court order, or other documentation.

I. VICTIM ASSISTANCE

1. Assist in obtaining appropriate medical attention if the victim claims injury whether visible or not.
2. Assist in making arrangements to transport the victim to an alternate shelter, if the victim expresses a concern for safety or the deputy determines need exists.
3. Stand-by for a reasonable amount of time when a complainant requests police assistance while removing essential items of personal property.
4. Explain legal options available to the victim, including the private person's arrest procedures, temporary restraining orders, and in case of arrest, or if the victim is going to seek a complaint, the follow-up procedures and ensuing criminal proceedings.
5. Advise the victim of available community resources and the State Victim Assistance Program.
6. Give the victim a completed Marsy's Law (California Attorney General's Office – Marsy's Card and Resources) pamphlet with an explanation of its use to access the Victim/Witness Assistance Program.
7. Give the victim a Domestic Violence Resource Pamphlet properly documented with the case file number for the incident and use the pamphlet to explain to the victim their legal options and to advise the victim of the community resources available to them.

J. REPORTING

1. Write a report in all cases of Domestic Violence, all cases involving Restraining Orders and any Property Exchange.

   a. In addition to the crime report, deputies shall complete a Domestic Violence Supplemental Report and submit one with every Domestic Violence related report.

      - Identify any Domestic Violence report as such by filling in the D.V. box located on the top right side of each Sheriff's Office crime report form. (13730(c)).

2. State in the report:

   a. Whether or not weapons were involved. (13730 PC)

b. Whether there were any signs the alleged abuser was under the influence of alcohol or a controlled substance. (13730 PC)

c. Whether there are prior reports of domestic violence at the same address involving the same alleged abuser or victim. (13730 PC)

d. Whether the victim states there is a history of prior violent acts.

e. Whether a child was present and witnessed the violence.

3. Provide the victim with the case file number in cases of domestic violence and cases involving restraining orders.

   a. The case file number should be written on a Domestic Violence Pamphlet and the pamphlet should be given the victim.

4. If the deputy serves the defendant with a copy of the order, the deputy will document the following in his/her report:

   a. That the defendant was served with a copy of the order.

   b. The filed date and the case number of the order.

   c. The deputy that served the defendant.

   d. The date, time and location where the defendant was served.

5. If the deputy verbally puts the defendant on notice that an order exists and advises them of the specific terms of the order the deputy will document the following in his report:

   a. That the defendant was put on notice that the order existed.

   b. The order's specific terms that the defendant was advised of.

   c. The deputy that put the defendant on notice.

   d. The date, time and location where the defendant was advised.

6. Advise Records, as soon as possible, by land-wire that the defendant was served with a copy of the order or was verbally advised of the specific terms of the order, for entry into the D.V.R.O. system.

   NOTE: EXERCISE REASONABLE CARE FOR THE SAFETY OF DEPUTIES AND PARTIES INVOLVED AND NO PROVISION OF THIS GUIDELINE SHALL SUPERSEDE THAT RESPONSIBILITY.

K. DOMESTIC VIOLENCE PHOTOGRAPHS

1. Deputies should take photographs of the involved parties, the scene and any other evidence at a domestic violence detail. The photos should be attached to the report electronically. The District Attorney’s Office will use these photos to assist them in deciding how to file charges, if any, in the matter.

2. Digital photographs will be taken and submitted in accordance with CCCSO Policy 1.06.36 – Digital Photography.

V. PROCEDURE II

A. GUN VIOLENCE RESTRAINING ORDERS

1. Temporary Emergency GVRO

a. Deputies will determine if there is reasonable cause to believe that a person poses an immediate and present danger of injury to him/herself or others by having a firearm in their possession and less restrictive alternatives have been ineffective, inadequate, or inappropriate as defined in Penal Code 18125.

b. If reasonable cause exists, deputies will contact the courts during business hours or the On-Call Judge after hours and request the EPO GVRO be granted.

c. If the request is granted by a judge, the GVRO will be served and the restrained person be given the opportunity to comply with the order.
   - This order is effective for 21 days from the date of issuance.
   - Once served with a Temporary Emergency GVRO (Form EPO-002 – Firearms Emergency Protective Order), the restrained person must immediately surrender the firearms and ammunition to deputies on scene.

d. If the restrained person does not comply with the order after being properly served, a search warrant must be obtained prior to searching or forcibly seizing the firearms and ammunition.
   - Firearms and ammunition not owned by the restrained person may not be seized.
   - These firearms and ammunition must be stored so that the prohibited person does not have access to them.

e. Failing to comply with the EPO GVRO by the restrained person is a violation of PC18205 which is a misdemeanor.

f. The subject will be given a receipt for firearms or ammunition seized.

g. The Firearms Emergency Protective Order shall be entered into the system by Records in the same manner as a Domestic Violence EPO and a copy routed to Records.

h. A copy of the Firearms Emergency Protective Order and report documenting the incident will be sent to Misdemeanor Complaints for follow up.

i. Seizure of firearms and ammunition is not mandatory if the criteria is not met Penal Code 18109.

j. A person knowingly making false statements while filing an EPO GVRO petition is a violation of PC 18200 and is also a misdemeanor.

B. Ex-Parte GVRO:

1. Immediate family members, as defined in PC 422.4, or any peace officer may request an Ex-Parte GVRO during normal business hours from any Superior Court.

2. Those seeking the Ex-Parte GVRO, family members of the subject or Investigations, must complete forms GV-109 and GV-110 which includes an affidavit to support their petition to establish the grounds for the petition. The court will consider the following types of evidence in making their decision:
   - A recent threat of violence or act of violence directed at another in the last six months.
   - A recent threat of violence or act of violence toward themselves.
   - Any recent violation of a protective order of any kind.
   - Any conviction of a violent offense.
   - Any pattern of violent acts or threats within the past twelve months.

3. After the Ex-Parte GVRO is granted by the Courts it must be served in the same manner as any other Restraining Order.
   - If served by another party, the restrained person has up to 24-hours to turn in firearms and ammunition to either law enforcement or a licensed gun dealer if the firearms and ammunition is not immediately requested by deputies.

4. The subject turning in firearms to a licensed gun dealer or law enforcement must have a GV-800 form completed by the recipient taking possession of the firearms and ammunition. The GV-800 form must be returned to the Court within 24-hours of being served or the next business day following a weekend or holiday.

5. Should the subject refuse to turn over firearms and ammunition in their possession he/she will be in violation of PC 18205. A search warrant must be authored prior to seizing the firearms and ammunition.

6. Patrol and Special Operations Divisions will assist in the service of Ex-Parte GVRO's when requested.

a. If the Sheriff's Office becomes involved with the service of an Ex-Parte order, the 24-hour rule will not be utilized.

b. For safety concerns, Sheriff's Office representatives will request the immediate surrender of firearms and ammunition from the restrained subject.

- Temporary Emergency GVRO procedures will be followed.

c. The subject will be given a receipt for firearms or ammunition seized.

d. A copy of the Ex-Parte order and report documenting the incident shall be forwarded to Misdemeanor Complaints for follow up.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.29**
	RELATED ORDERS: PC 211; Patrol 3.01.17, Interviews and Interrogations; Patrol 3.01.18, Patrol Response and Investigations; Patrol 3.01.41, Field Interviews; CCCSO 1.02.24 Cooperation With Other Agencies; CCCSO 1.06.03, Physical Evidence; CCCSO 1.06.28, County Intersection Observation Plan (Code 666); CCCSO 1.06.35, Evidence Handling	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Robbery Cases**	

I. POLICY

A. Patrol and Special Operations personnel will respond to robbery cases in a manner consistent with officer and public safety.

B. They will care for injured persons, determine the nature of the incident, protect and collect evidence, and when appropriate, detain suspects.

II. PROCEDURE

A. RESPONSE TO REPORTED ROBBERY

1. Deputies assigned to respond to the scene of a robbery incident will act in accordance with Patrol and Special Operations Division Policy 3.02.02, Patrol Response and Investigations.

B. INITIAL RESPONSIBILITY

1. The person receiving the initial report of a robbery will ascertain the address of the incident and, while maintaining contact with the reporting party, ensure that Patrol vehicles are immediately dispatched to the scene.

2. The person receiving the initial report will then obtain the following additional information as quickly as possible:

   a. Description of suspects

   b. Weapons involved

   c. Vehicles involved

   d. Suspect's direction of travel

   e. Elements of crime

   f. Time of occurrence

g. Any unique, unusual, or dangerous conditions that may exist, such as lookouts or emotional condition of the suspect that may endanger responding deputies or citizens.

3. Any additional information obtained will be broadcast immediately by Communications to units responding to the scene, and a request for Code 666 will be made if the suspects fled the scene in a vehicle within fifteen minutes of the initial report.

C. ASSIGNMENT AND RESPONSIBILITY OF UNITS

1. When the robbery is not in progress, one Patrol unit will be assigned to the scene and will then perform the following tasks:

   a. Approach the area with caution since the suspect may still be in the area with special consideration given to the time frame of the robbery and vehicles leaving the area.

   b. Check on the welfare of the victim(s) and, if necessary, provide first aid and arrange for further medical treatment.

   c. Obtain a brief description of the suspect(s), vehicle involved, direction of travel and the time element involved.

   d. Immediately broadcast the information obtained.

2. The deputy assigned to the scene will then conduct a preliminary investigation in accordance with established "investigative procedures."

   a. Scene evidence processing, to include DNA swabs, is the responsibility of the investigating deputy, unless the Crime Lab is called out.

3. When the robbery is in progress or information indicates that the suspect(s) is in the area, a [redacted] will be assigned to respond to the scene; and upon arrival, they will perform the following tasks:

[redacted]

[redacted]

D. AREA SEARCH

1. When the robbery is not in progress and the suspect has recently left the scene, the location of the crime will be the center for sectioning off the search area.

2. Assigned cars will not converge on the scene, but will work out from the scene based on the knowledge of the area, elapsed time from the occurrence and the suspect's means of travel.

3. Units not involved in the area search will take positions at major intersections or along arterial routes that may be used for escape.

[redacted]

[redacted]

[redacted]

[redacted]

G. RECORDING VICTIM WHEN BUSINESS INVOLVED

1. When the incident involves a business, the name of the business will be listed as Victim #1 on the crime report, A page.

2. Individuals working at the business or customers of the business whose personal items or money were taken will be listed as subsequent victims (Victim 2, 3, and so forth).

   a. A Marsy's Law (California Attorney General's Office – Marsy's Card and Resources) pamphlet shall be completed and given to the victim with an explanation of its use

H. PROCESSING THE SCENE

1. Unless circumstances warrant the use of Criminalist personnel, the assigned deputy will be responsible for processing the scene for physical evidence.

   a. This includes but is not limited to any video, still photographs, fingerprinting, DNA swabs, etc.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.30**
	RELATED ORDERS: PC 261; PC288; PC289; Patrol 3.01.17, Interviews and Interrogations; Patrol 3.01.18, Patrol Response and Investigations; Patrol 3.01.41, Field Interviews; CCCSO 1.06.03, Physical Evidence; CCCSO 1.06.35, Evidence Handling; CCCSO Appendix 02:2.8 (SART)	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Sexual Assaults**	

I. POLICY

A. Deputies assigned to a sexual assault incident will remain sensitive to the victim's emotional trauma and will conduct the investigation in a sensitive manner.

B. Deputies are to identify, locate, and arrest any person reasonably believed to have committed a sexual assault.

II. GENERAL INFORMATION

A. For the purposes of this manual, sexual assaults are comprised of the following criminal acts:

1. Rape
2. Child Molest
3. Sodomy
4. Lewd and lascivious act with child/children
5. Forced oral copulation
6. Incest
7. Unlawful intercourse
8. Sexual assaults on animals
9. Sexual battery
10. Sexual exploitation
11. Assault to commit sexual act
12. Penetration with a foreign object

III. DEFINITIONS

A. S.A.R.T. The Sexual Assault Response Team, commonly referred to as SART are specially trained nurses who will respond to CCCRMC and assist in the investigation of a sexual assault by collecting physical evidence from the victim.

IV. PROCEDURE

A. INITIAL STATEMENTS

1. The Deputy initially assigned to respond to a sexual assault victim's location will ensure that medical care is provided to a victim when necessary.

2. Deputies will then conduct a brief interview of the victim and witnesses to obtain the following information:

   a. The circumstances that establish the elements of a criminal act.

   b. Complete description of the suspect(s), the suspect(s)' vehicle, and if known, the suspect(s) location.

   c. Relationship of suspect(s) to victim.

   d. Time, place, and location of the incident.

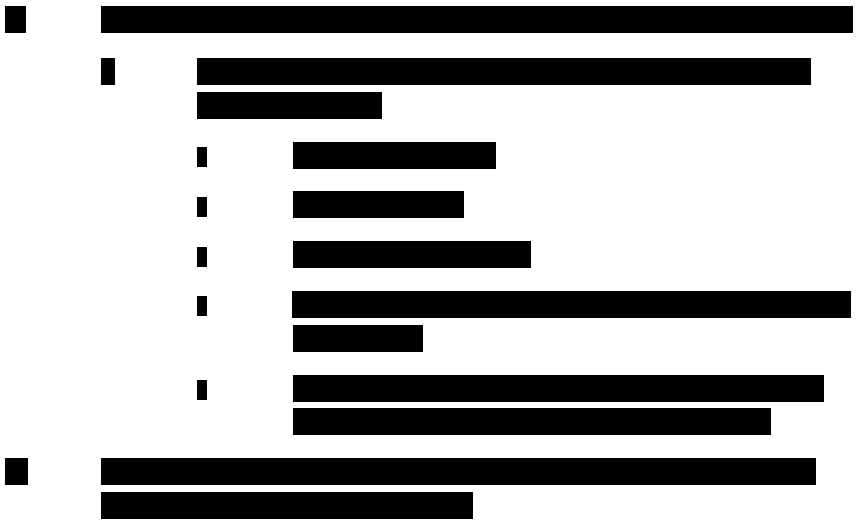
   e. When appropriate, the Deputy initially assigned will ensure that the information obtained is immediately broadcast to other field units and subsequently recorded in the crime report. Deputies should avoid using the radio to broadcast information related to the victim's identity.

      - *If victim is a child, limit the interview to establishing the elements of the crime.

B. SUBSEQUENT STATEMENTS

1. The Deputy initially assigned will determine if the victim's emotional or physical condition dictates that the interview should take place at a later time.

2. When a further interview is possible, deputies will obtain the following information:



[redacted]

C. INVESTIGATION NOTIFICATION

1. In any sexual assault where the victim and suspect do not know each other, i.e.; stranger rape, in home invasion rape or stranger abduction rape, the on-call investigator will be notified.

D. PRESERVING EVIDENCE

1. Deputies at the scene of a sexual assault shall ensure that evidence at the scene is not disturbed and that the victim does not unintentionally destroy evidence.

2. In the interest of preserving and collecting the best evidence, the Deputy will inform the victim and suspect to refrain from eating, drinking (even water), washing, changing clothes or using the bathroom until after the sexual assault exam has been completed at the hospital.

[redacted]

[redacted]

F. MEDICAL EXAMINATION

1. The first priority in responding to a sexual assault is rendering emergency medical aid to the victim regardless of age.

   a. This aid can be given at a medical emergency or trauma center closest to where the victim is located.

2. The second consideration is evidence preservation and collection.

[redacted]

3. A SART RN will examine adults.

   a. SART will respond to JMMC Trauma unit if necessary.

   b. The hospital cannot refuse medical treatment of the victim but can refuse to collect physical evidence.

[redacted]

d. Parent/Guardian Does Not Consent

- When a parent or guardian refuses consent, the examination will not be performed.
- Note: When a parent or guardian is a suspect in the sexual assault prompting the examination, no consent is necessary.
- If the Deputy takes custody of the child victim pursuant to Section 300 W&I Code (no parent control, unfit home, etc.), consent will be implied and the examination will be conducted.

5. Authorization to Transport

a. Deputies will obtain permission from the area supervisor prior to transporting a victim and family member/friend to the hospital.

G. RAPE EVIDENCE KIT

1. SART kits are kept by the RN. Once completed RN will notify dispatch.
2. Steps to completing SART evidence:

a. The collecting Deputy will sign the document the required forms and complete an evidence card for each item.

b. Attach the Medical Examination Report to the outside of the SART Kit.

c. Submit a copy of the Medical Exam Report with the original crime report.

[redacted]

[redacted]

f. Leave in the Lab, once proper notifications to the Crime Lab has been made.

g. Kits will be picked up by the Crime Lab personnel from the downtown lab as soon as possible after collection.

h. If a victim declines consent to a SART exam, it will be appropriately documented in the crime report.

3. Arrested Suspects

a. When a suspect is arrested, the Deputy should collect a suspect sexual assault kit.

b. Kits are stored at the MDF in Intake in the cabinet near the Intake Medical Exam Room

c. The key to the cabinet is on the Intake Deputy key ring.

d. Instructions for the collection of evidence are included in the sexual assault kit.

e. If necessary, the Crime Lab will provide assistance and instruction via phone regarding completing the kit.

f. Book the kit into Concord Evidence.

H. VICTIM ADVOCATE AGENCIES

1. In sexual assault cases, deputies should provide a victim with information regarding Services and the location of Rape Crisis Centers.

2. A Marsy's Law (California Attorney General's Office – Marsy's Card and Resources) pamphlet shall be completed and given to the victim with an explanation of its use.

3. Deputies should not hesitate to request assistance from personnel associated with these centers during the interview and medical examination process.

I. TEDDY BEARS

1. Teddy Bears have been placed in all patrol cars and can be given to any traumatized child.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.31**
	RELATED ORDERS: CCCSO 1.06.35. Evidence Handling Patrol 3.01.17, Interviews and Interrogations; Patrol 3.01.18, Patrol Response and Investigations; Patrol 3.01.41, Field Interviews; CCCSO 1.06.03, Physical Evidence	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Vice and Narcotics Cases**	

I. POLICY

A. When Patrol and Special Operations personnel detect vice and narcotic activity they will investigate, enforce the appropriate laws and document the incidents.

II. PROCEDURE

A. VICE CASES

1. Deputies are directed to investigate and report all violations of vice laws including gambling, bookmaking, alcohol beverage control and prostitution.

2. Arrests will normally be made in all instances in which a deputy reasonably believes that the person to be arrested is guilty of a violation and there is sufficient evidence to warrant the arrest.

3. When the violation is occurring inside a dwelling or other closed area the deputy discovering the violation will assess the circumstances and determine if the services of the Vice Unit are appropriate.

4. Circumstances to be assessed are as follows:

   a. Destruction of Evidence

   - If the circumstances indicate that entry into a dwelling or closed area by uniformed officers would result in the destruction of evidence, or require the obtaining of a search warrant the services of non-uniformed Vice Unit personnel is appropriate.

   b. Development of Further Suspects

   - When the circumstances reasonably indicate that the use of Vice Unit personnel would enhance the ability to develop further suspects, the use of non-uniformed Vice Unit personnel is appropriate.

   c. Development of Further Evidence

- When the incident is complex and requires the development of documented evidence uncovered over a period of time, or involves repeated contact with a suspect or informant in order to develop such evidence, then the use of non-uniformed Vice Unit personnel is appropriate.

B. NOTIFICATION OF VICE UNIT

1. When a deputy determines that the use of Vice Unit personnel is warranted, the deputy discovering the violation will notify the Vice Unit by initiating a crime report, which should include the following information:

a. General location

- Deputies will record the location of the violation by indicating the address and/or cross streets and description of the dwelling or area involved.

b. Particular Location and Peculiarities

- Deputies will indicate the particular part of the building or area where the violation(s) occur; such as the rear storage area of a business. Deputies will also indicate any peculiarities, obstacles, or impediments to entry, which may endanger investigating officers or otherwise hamper an investigation.

c. Nature of the Violation

- Deputies will explain the nature of the acts that constitute the violation and supply the appropriate code name and section number violated.

d. Time Element

- Deputies will record the time of the day and weekday during which the violation usually occurs.

e. Method of Discovery

- Deputies will indicate how the violation was discovered.
- When the discovery was based on an informant, deputies will indicate the name of such informant unless the informing person requested confidentiality and/or respecting this confidentiality would ensure obtaining further information.
- EXCEPTION: When an informant's testimony is crucial to a case or mandated by magistrate, the identity of an informant will be disclosed to the District Attorney handling the case.

f. Miscellaneous Information

- Other pertinent information such as passwords, introduction cards, or the names of participants should

be indicated as long as the uniformed deputy obtaining such information does not arouse the suspicions of the violators and thereby adversely affect any further investigation.

2. Deputies will not hesitate to report any suspected violation of vice laws.

   a. When the information obtained is only fragmentary, deputies should report such information to the Vice Unit Sergeant via email.

C. DISORDERLY HOUSES

1. The Vice Unit also has the responsibility to monitor the activities of card rooms and bars in the unincorporated area of the County and the contract cities.

2. Incidents occurring at such locations are to be documented on a crime report and a copy routed to the Vice Unit.

D. NARCOTICS ACTIVITY

1. Incidents involving suspected narcotics trafficking and related activity shall be reported in the same manner as vice related activity.

2. They will be documented on a crime report form and a copy routed to the narcotics unit.

E. EVIDENCE DISPOSITION

1. Evidence collected will be handled according to Sheriff's Office Policy and Procedures Manual section 1.06.35.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.32**
	RELATED ORDERS: Government Code 13959, 13968, Et Seq.; Marsy's Law:Victim Bill of Rights Act of 2008	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Victims of Violent Crime Program**	

I. POLICY

A. Patrol members, as mandated by state law, will participate in the state "Victims of Violent Crime Program" by informing qualified persons of the availability and provisions of the program.

II. GENERAL INFORMATION

A. VICTIMS OF VIOLENT CRIME PROGRAM

1. The State of California has appropriated funds for compensating "victims of violent crimes" and "good Samaritans" who render assistance in crimes for their unreimbursed medical expenses, wage loss, or other expenses incurred as a result of injury, including benefits to survivors of those killed.
2. The claims are adjudicated by the State Board of Control upon the recommendations of the Attorney General at public hearings.
3. The claimant need not personally appear, and claims may be honored even in cases where there is not successful prosecution.
4. Patrol and Special Operations members need not be concerned with establishing the eligibility of a victim.
   a. The legitimacy of a potential claim will ultimately be determined by the State Board of Control in conjunction with recommendations and investigation by the Attorney General's Office.
5. A victim of a violent crime is defined as any person who sustains physical injury as a direct result of any public offense.
   a. The law excludes vehicle accidents under normal circumstances, but includes assaults with motor vehicles or injuries sustained as a result of any hit-run collision or incident involving driving under the influence of alcohol or drugs.
   b. Victims also include dependents of those so injured.

6. Marsy's Law, the California Victims' Bill of Rights Act of 2008, is an Amendment to the state's Constitution and certain Penal Code sections enacted by voters through the initiative process in the November 2008 general election. The Act protects and expands the legal rights of victims of crime to include 17 rights in the judicial process, including the right to legal standing, protection from the defendant, notification of all court proceedings, and restitution, as well as granting parole boards far greater powers to deny inmates parole.

III. PROCEDURE

A. NOTIFICATION

1. Any deputy responsible for the initial preliminary investigation of any criminal activity shall notify physically injured victims of the Victims of Violent Crime Program and provide them with a Marsy's Law (California Attorney General's Office – Marsy's Card and Resources) pamphlet. The pamphlet shall be completed and given to the victim with an explanation of its use.

    a. When a deputy is unable to directly supply such notification (i.e., unconscious person), either the next of kin will be notified or the completed pamphlet will be placed within the victim's personal effects.

2. Additional information on all Crime Victim Programs within California can be obtained by calling the Victims of Crime Resource Center, Sacramento, California 1-800-VICTIMS.

3. When notification cannot be made in concert with the preliminary investigation, the deputy assigned to report the incident will indicate what effort was made

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.33**
	RELATED ORDERS: CCCSO 1.06.23 Major Disaster Response	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Bombings, Bomb Threats, Explosives and Explosive Devices**	

I. POLICY

A. When notified that a bombing, bomb threat, or other explosive or dangerous device has been placed in or around a dwelling or business, patrol members will respond with sufficient available resources to control the incident and protect life and property.

B. Such response will be coordinated so that Patrol actions are effective and ensure the problem is resolved and order restored.

C. When responding to an incident of this nature, Sheriff's personnel will take into consideration the possibility of a secondary device when setting up the incident command post or staging area.

D. This policy is designed for facilities not owned or operated by the Office of the Sheriff. For bomb related incidents involving an Office of the Sheriff facility, see Office of the Sheriff Policy and Procedures Manual Section 1.06.23.

II. PROCEDURE

A. [redacted]

[redacted]

[redacted]

B. INCIDENTS INVOLVING ACTUAL BOMBINGS

1. Response to the Scene

a. Dependent upon the information received, the assigned unit may respond Code 2 or Code 3.

b. The appropriate field supervisor will also respond to the scene and assume responsibility of incident commander and oversee the initial investigation.

2. Incident Commander

a. Once verification is received of an actual bombing, the incident commander shall notify the following:

- Investigation Division
  - During normal business hours (0800-1700, Monday to Friday) the appropriate Investigation personnel will be contacted.
  - During non-business hours, the "on-call" Investigation personnel will be notified.
- Crime Laboratory

- During normal business hours (0800-1700, Monday to Friday), the appropriate crime scene technician will be contacted.
- During non-business hours, the criminalist "on-call" will be notified.

- Federal Bureau of Investigation
  - In the event the bombing or attempted bombing may be a terrorist related incident, the F.B.I. will be notified for assistance.
  - During normal business hours (0800-1700 hours, Monday to Friday) call Oakland office, [redacted]
  - During non-business hours, agent on duty, San Francisco office, [redacted]
- Bomb Disposal Unit(s)
  - The Walnut Creek, Bomb Disposal Unit, [redacted], will be notified in the event an unexploded device(s) is located.

3. Initial Responsibilities at the Scene
   a. The assigned unit will assume responsibility of the scene.
   b. The responsibilities will be the same as that of any other major felony investigation.
4. Investigation Personnel
   a. Upon arrival of assigned investigators, they will assume command of the investigation. Overall operational command will remain with the Incident Commander.
   b. Field units will assist as directed.

C. INCIDENTS INVOLVING EXPLOSIVES AND EXPLOSIVE DEVICES

1. [redacted]

[redacted]

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.34**
	RELATED ORDERS: None.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Elder Abuse and Dependent Adult Abuse**	

I. POLICY

A. Reports of elder abuse will be documented completely and an investigation will be conducted to ensure the most comprehensive report possible.

B. Deputies will be aware of the poor credibility factors of an elder abuse victim and will make every effort to obtain corroborating evidence.

C. Supervisors will ensure that all Elder Abuse and Dependent Adult Abuse cases are routed to Contra Costa County Adult Protective Services.

II. DEFINITIONS

A. Elder: Any person who is 65 years old or older.

B. Dependent Adult: A person between 18 years old and 64 years old who, because of any mental disability due to birth defect, physical disorder or advanced age, is unable to properly provide for his or her own personal needs.

C. Physical Abuse: Any physical pain or injury that is willfully inflicted upon a dependent adult or elder. This includes, but is not limited to, direct beating, sexual assault or unreasonable physical restraint.

D. Financial Abuse: Any theft or misuse of an elder's money or property, by a relative or person in a position of trust with an elder.

E. Psychological, emotional abuse: The infliction of unjustifiable mental suffering. Examples of such abuse are: verbal assaults, threats, instilling fear, humiliation, intimidation, or isolation of an elder.

F. Neglect: The failure of any person having the care or custody of an elder to provide that degree of care that a reasonable person in a like position would provide. This includes, but is not limited to:

1. Prolonged deprivation of food or water.

2. Failure to assist in personal hygiene or the provision of clothing for an elder.

3. Failure to provide medical care for the physical and mental health needs of the elder, this does not include instances in which an elder refuses treatment.

4. Failure to protect an elder from health and safety hazards.

G. Self-Neglect: Failure to provide for self through inattention or dissipation, The identification of this type of case depends on the elder's ability to choose a life-style versus a recent change in the elder's ability to manage.

H. Abandonment: The desertion or willful forsaking of an elder by any person having the care and custody of that elder, under circumstances in which a reasonable person would continue to provide care or custody.

III. PROCEDURE

A. PHYSICAL INDICATORS

1. Deputies will familiarize themselves with indicators of Physical Elder Abuse and whenever they see any of these indicators they will complete a crime report and investigate the matter completely.

a. The following indicators will be listed in the crime report:

- Cuts, lacerations, puncture wounds.
- Bruises, welts, discoloration.
- Any injury incompatible with history.
- An injury that has not been properly cared for. (Including injuries that may be hidden on areas of the body normally covered by clothing).
- Poor skin condition or poor skin hygiene.
- Absence of hair (other than natural balding) and/or hemorrhaging below the scalp.
- Dehydration and/or malnourished without illness-related cause.
- Burns that appear to have been caused by cigarettes, caustics, acids, friction from ropes or chains.

B. FINANCIAL, EMOTIONAL ABUSE OR NEGLECT

1. Deputies will familiarize themselves with indicators of Financial, Emotional Abuse or Neglect.

2. Whenever a Deputy receives information indicating any of these types of abuse they will investigate competently.

3. If a determination is made that an abuse case may exist then the Deputy will document the incident and include any of the following indicators that are present in their crime report:

a. Possible indicators of financial abuse:

- Unusual or inappropriate activity in bank accounts.

- Signatures on checks, etc., that do not resemble the elder's signature.
- Power of attorney given, or recent changes of will, when the person is incapable of making such decisions.
- Unusual concern that an excessive amount of money is being expended on the care of the older person.
- Numerous unpaid bills, overdue rent, when someone is supposed to be paying the bills for a dependent elder.
- Lack of amenities, such as TV, personal grooming items, appropriate clothing, when the elder can well afford it.
- Personal belongings such as art, silverware, jewelry, family heirlooms missing.
- Deliberate isolation, by a housekeeper, of an elder adult, from old friends and family, resulting in the housekeeper alone having total control.

b. Possible indicators of Psychological/Emotional Abuse:

- Fear, withdrawal, depression, helplessness, hesitation to talk openly, implausible stories, confusion or disorientation, anger, denial, agitation or anxiety.

C. CARE PROVIDERS

1. When Deputies are investigating any instance that may relate to Elder Abuse they will be aware and document any of the following indicators of abuse by the care provider/suspect in their crime report:

a. The elder may not be given the opportunity to speak for him or herself, or to see others without the presence of the suspect.

b. Obvious absence of assistance, attitudes of indifference or anger toward the dependent person.

c. Aggressive behavior. (threats, insults, harassment)

d. Previous history of abuse to others.

e. Problems with alcohol or drugs.

f. Inappropriate display of affection by the suspect.

g. Social isolation of the elder’s family, or isolation of the elder, or restriction of the elder’s activity.

h. Conflicting accounts of incidents by the family, supporters, victims, or suspect.

i. Unwillingness or reluctance to comply with service providers in planning for care or implementation of care.

j. Inappropriate or unwarranted defensiveness by the suspect.

D. PHYSICAL EVIDENCE

1. Deputies will look for and obtain any physical evidence they find. These may include:

   a. Pictures of injuries.

   b. Pictures of the home; refrigerator, bedroom, living spaces, toilet facilities, trash disposal, locks on doors.

   c. Torn, stained or bloody clothing or bed clothes.

   d. Videotape of the elder's conduct and mannerisms.

   e. Copies of bank transactions, canceled checks, power of attorneys, unpaid bills.

E. INSPECTION OF PLACES FOR EVIDENCE OF ABUSE

1. A report of elder abuse does not automatically provide deputies with the right of access to the place of abuse.

2. Deputies should develop probable cause and obtain a consensual entry.

3. Consensual entry may be obtained from either the caretaker or the elderly resident.

4. Forced entry may be made only with the approval of the area supervisor on probable belief that exigent circumstances exist.

F. REPORTING

1. Health Care and Medical Service providers are required by state law under PC 11160 to report to law enforcement any incidents where they treat a victim of assaultive or abusive conduct.

2. Deputies must include the reporting person's Title and name of the treatment location in their crime reports.

3. All reports will be routed to CPS/APS.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.35**
	RELATED ORDERS: CCCSO 1.06.02, 1.06.24, 6.02.11; Patrol 3.01.27, 3.01.28, 3.01.29.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Barricaded Subjects**	

I. POLICY

A. Barricaded suspects pose an extreme danger, not only to deputies who seek to arrest them, but to other persons as well.

B. Good judgment demands that a tactical plan be developed rather than immediately rushing a barricaded suspect.

C. Nevertheless, certain preliminary procedures must be followed to ensure that the Patrol and Special Operations Division response is effective.

D. In this regard, the Patrol and Special Operations Division maintains guidelines to assist initial units responding to a barricaded suspect incident.

II. PROCEDURE

A. RESPONSE TO BARRICADED SUSPECT INCIDENTS

1. The following will be adhered to, when possible, by the units initially responding to the scene:

   a. Secure the area so that a barricaded suspect cannot escape.

      - This may involve requests for additional units.
      - Such requests will be made by the Patrol Sergeant in command at the scene.

   b. Clear the area of bystanders and evacuate adjoining buildings or apartments if necessary and possible.

   c. Advise Communications of the situation and request the presence of the area supervisor.

2. Once a barricaded suspect is isolated, time is to the benefit of the Patrol members. Patrol members initially responding should stand by until arrival of supervisory personnel unless there is imminent danger to life.

B. AREA SUPERVISOR RESPONSIBILITIES

1. The area supervisor first notified of a barricaded suspect situation will respond to the scene immediately.

2. While en-route, the following procedures will be adhered to:

    a. Notify Dispatch of the response and estimated time of arrival.

    b. Ensure that the Station Commander is notified, or in their absence the Watch Commander or on-call Watch Commander.

3. When at the scene, the following procedure will be adhered to:

    a. Review action taken and determine if more personnel/resources are needed.

    b. Establish a temporary command center and advise Dispatch of the location.

    c. If appropriate, request a S.W.A.T. response via Chain of Command.

4. If possible, an effort should be made to contact the suspect and attempt to persuade the suspect to voluntarily surrender.

    a. This should be done before force is used unless the lives of Patrol personnel or citizens would be placed in jeopardy.

C. BARRICADED SUSPECT CHECK LIST

1. IMMEDIATE CONSIDERATIONS

    a. Confine suspect to present location or area, and establish inner perimeter.

    b. Advise area supervisor of situation, deploy on scene deputies.

    c. Determine crimes involved.

    d. Advise responding units of a safe avenue of approach to the scene.

    e. Determine our need for further involvement in the situation.

2. ESTABLISH FIELD COMMAND POST

    a. Select radio frequency to be used.

    b. Advise Station House Commander, or in their absence, Watch Commander or on-call Watch Commander.

    c. Request additional personnel/resources if needed.

    d. Identify areas vulnerable to suspect's field of fire.

    e. Number, type and range of suspect's weapons.

    f. Establish outer perimeter & isolate area from traffic, request CHP to assist.

    g. Evacuate injured if possible.

    h. Evacuate neighboring buildings/homes if necessary.

    i. Brief personnel regarding intelligence gathered.

[redacted]

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.36**
	RELATED ORDERS: CCCSO 1.06.46, 1.06.24, 1.06.21.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Crimes vs. Persons**	**SUBJECT:** **Hostage Situations**	

I. POLICY

A. Criminals who use hostages to effect their escape are desperate individuals who, if allowed to escape, will pose a continuing threat to their hostage and to the public at large.

B. The Patrol and Special Operations Division does not have the ability to protect the safety of a hostage who is allowed to be removed from the presence of deputies.

C. The safety of hostages can be best assured by keeping them in the presence of deputies and by preventing their removal by the suspect.

D. Inclusive of Departmental procedures, the following procedures are maintained for the initial response to hostage situations.

II. PROCEDURE

A. RESPONSE TO HOSTAGE SITUATIONS

1. The following will be adhered to, when possible, by a minimum of two units who initially respond to the scene:

   a. Secure the area so that the criminal cannot escape.

      - This may involve requests for additional units.
      - Such requests will be made by the Patrol member in command at the scene.

   b. Clear the area of bystanders and evacuate adjoining buildings and apartments if necessary and possible.

   c. Advise dispatch of the situation and request the presence of an area supervisor.

   d. Stand by for instructions from supervisory personnel.

2. Deputies should realize that exceptional situations could arise where considered judgment might dictate allowing removal of a hostage, such

as where there is imminent and probable danger to a large group of persons.

a. In this event, initial units may make such a decision after a thorough consideration of the potential for injury or death to hostages and on-scene personnel.

B. AREA SUPERVISOR RESPONSIBILITIES

1. The area supervisor first notified of a hostage situation will respond to the scene immediately.

2. While en-route, the following procedure will be adhered to:

a. Notify dispatch of the response and estimated time of arrival.

b. Ensure that the Station Commander, SWAT Commander, Watch Commander, or in their absence the on call Watch Commander are notified.

3. When at the scene, the following procedure will be adhered to:

a. Review action taken and determine if additional personnel or resources are needed, such as CHP for traffic control, Air Support, K-9, HNT, etc.

b. Establish temporary command center and advise Communications of its location.

c. Advise Communications of current status of the incident.

d. Inform Station Commander of the details, action taken, and resources at the scene.

e. Take action indicated by the situation or at the direction of superiors.

f. When specialized units report their arrival at the scene, advise such personnel, when possible, of the details of the incident.

g. In any event, determine that the area is secure and use every verbal and tactical tool to ensure the safety of the hostage and the arrest of the suspect. The original responding deputy should be relieved, if possible, to allow a debrief with SWAT/HNT as soon as perimeters are secure.

C. STATION COMMANDER'S RESPONSIBILITIES

1. When notified of a hostage situation, the Station Commander/Watch Commander should:

a. Determine if the appropriate area supervisor is responding.

b. Ensure that the designated hostage negotiator is notified and advised of the situation.

c. Notify the Patrol Division Commander of the situation.

d. Notify S.W.A.T. Unit commander, or a designee, if applicable.

e. Perform any other duties or functions believed necessary.

2. The Station Commander may respond to the scene and assume command.

   a. If command is not assumed, the Station Commander will monitor the tactics to be employed.

   b. In any event, the Station Commander may take what appropriate action is deemed necessary to successfully resolve the incident.

III. RESPONSIBILITIES OF SPECIALIZED UNITS (S.W.A.T., K-9)

A. When a specialized unit has been notified of a hostage situation, the commander of such a unit will ensure that adequate unit personnel and equipment are assembled at the command post or other designated area.

B. Dispatch will be notified of the assembly area.

C. The specialized unit will then stand by until notified to respond to the scene.

   1. Once notified to respond, the following procedure will be adhered to:

      a. While en-route, notify Dispatch of estimated time of arrival.

      b. Upon arrival, report to the on-scene commander.

D. When authorized to perform the specialized function, the highest-ranking specialized unit member at the scene will assume command of the specialized unit.

E. Tactics employed will be the responsibility of the commander/team leader of the specialized unit.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Arrest and Contacts with Persons

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.37**
	RELATED ORDERS: PC 834, 835, 836.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Arrests**	

I. POLICY

A. Arrestees will be treated and processed in accordance with all applicable laws and Sheriff's Office Policies and Procedures.

B. Officers will strive to minimize the time an arrestee spends in custody in the field, transporting arrestees to the Main Detention Facility as soon as possible, consistent with a completed investigation.

C. Patrol and Special Operations Division supervisors will approve all arrests made in their area of responsibility during their tour of duty.

II. DEFINITIONS

A. Probable Cause: A phrase that describes the amount of evidence (facts observed, information from others, or personal knowledge) that would be sufficient to lead an ordinary and prudent person to reasonably believe that a crime is occurring or has occurred, and that the person to be arrested committed or is committing a crime.

1. Probable cause is determined by a consideration of the facts and circumstances present or apparent to the officer at the time he/she acted.

2. It is not necessary to believe beyond a reasonable doubt, rather, the standard is simply reasonable belief.

III. GENERAL INFORMATION

A. Arrests

1. California Penal Code Sections 834 and 835 define an arrest, however, according to the constitution; an arrest is a seizure of the person pursuant to the Fourth Amendment.

2. Because it is a seizure pursuant to the Fourth Amendment, that arrest must be reasonable.

3. Since the basis for the arrest lies in the doctrine of probable cause, any interference with personal mobility, whether traffic stop, detention for

investigation of criminal activity, or actual arrest, must be tested by the Fourth Amendment.

IV. PROCEDURE

A. SUPERVISOR NOTIFICATION/APPROVAL

1. The arresting deputy will ensure the area supervisor is notified of the arrest.
2. The supervisor will evaluate the arrest based upon the elements of the crime and the circumstances as explained by the deputy.
3. The supervisor will approve the arrest prior to the suspect being transported from the scene.
4. The arrest will either be approved as being lawful and proper or the supervisor will cause the arrested person to be released.
    a. If the arrested person has been transported away from the area, the deputy will return the person to the location of the arrest.
5. In all instances where a citizen is deprived of his freedom, the responsible deputy will cause his immediate supervisor to be advised of the circumstances.
    a. This includes all warrant arrests and commitments for 5150 W&I.
    b. The ultimate responsibility for the lawfulness of all arrests and commitments lies with the field supervisor.

B. ARREST REPORTS

1. The arresting deputy will be given every reasonable opportunity to complete the arrest report as quickly as possible after the arrest.
    a. The report will include the name of the supervisor who approved the arrest.
    b. The arresting deputy should not go off duty until the report has been reviewed and approved by a supervisor.
        - Exception: Supervisors may approve the holdover of an arrest report after making considerations that include the type of arrest, the nature of the incident and how the holdover may affect the investigation and/or prosecution of the crime.
    c. The supervisor who reviews the report will be responsible for the content of the report and cause corrections to be made prior to allowing the deputy to go off duty.
    d. In the event that this is not the supervisor who approved the arrest, a copy of the report is to be routed to that supervisor.
2. One copy of the report will be routed to the Station Commander.
    a. The Station Commander will review all arrest reports.

C. AUTHORITY TO ARREST

1. Deputies will comply with California Penal Code Section 836 which, authorizes an arrest under the following conditions:

    a. Whenever the deputy has probable cause to believe that the person to be arrested has committed a public offense in the officer's presence, or pursuant to an arrest warrant.

    b. When a person arrested has committed a felony, although not in a deputy's presence.

    c. Whenever a deputy has probable cause to believe that the person to be arrested has committed a felony, whether or not a felony has, in fact, been committed.

    d. When directed by a magistrate or pursuant to a judicial order.

    e. When the person to be arrested has escaped from a place of detention or custody.

D. DEVELOPING PROBABLE CAUSE

1. Probable cause to arrest will be supported by facts.

    a. Vague "hunches" or suspicion are not enough.

    b. However, a deputy's experience is definitely a fact that can be relied upon to support probable cause provided the deputy can document such experience.

    c. Deputies will establish probable cause to arrest by collecting facts of such quality that in all logic and common sense, they point with reasonable certainty in the direction of guilt.

E. IRRELEVANT FACTS

1. The facts upon which the belief is based must have been known at the time of arrest.

2. What the arrested person said or did or what other circumstances happened after the arrest took place are irrelevant to the question of the arrest's lawfulness.

3. Patrol members will base an arrest on only those facts occurring prior to making the arrest.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.38**
	RELATED ORDERS: PC 853.6; CVC 23136, 23152, 23153, 40302, 40303, 40500, 40202, 40505;W&I 626.C.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Citations**	

I. POLICY

A. Citations will be employed as an alternative to physical arrest in all misdemeanor situations except those in which the arresting deputy can articulate specific factors that cause a belief that the citation process is not appropriate.

II. GENERAL INFORMATION

A. The citation form serves as a means of releasing a defendant on his own recognizance in lieu of conducting the booking process.

1. The following Penal Code sections and Vehicle Code sections authorize the use of citations:

   a. Section 853.6 P.C.: Notice to appear

   b. Section 40500 C.V.C.: Notice to appear

B. Before issuance of a citation under the above sections, certain elements must be present:

1. Probable cause for an arrest exists.
2. The offense involves an infraction or misdemeanor.
3. The individual responsible for the violation does not demand to be taken before a magistrate.

III. PROCEDURE

A. COMPLETING THE CITATION

1. Information required on the face of the citation must be filled in as completely as possible.
2. In securing a violator's name, address, description, etc., a deputy must exercise the same care as if the information is to be used for a warrant.
3. Citations shall be completed in quadruplicate, and the defendant's copy (yellow) given to the person cited.

4. The original and file copy will be submitted with the report, if a written report is required.

5. An electronic copy of the citation will be attached to the electronic report (ARS).

6. Deputies will retain the green copy for future reference.

7. All citations shall be printed with a writing instrument capable of making all copies legible.

8. Deputies will not cite Adults suspects for felony sections of the vehicle code (e.g., Evading a Peace Officer, Stolen Vehicle) or for felony driving under the influence cases.

B. REPORTING PROCEDURES

1. Citations issued for violations of the Penal Code, or any other federal, state, or county code will be accompanied by a "crime report."

2. Citations issued for any misdemeanor section of the vehicle code require a crime report.

   a. EXCEPTION: Deputies are not required to complete a crime report involving citations issued for Vehicle Code violations 12500a and 14601 if the probable cause for the stop is listed on the face of the citation.

C. PREPARATION PRIOR TO ISSUING

1. When the circumstances in an arrest involving misdemeanors allow for the issuance of a citation, the arresting deputy will conduct a brief background investigation to determine if the arrestee should be cited or released.

2. This information, if available, should include:

   a. Adequate proof of identity.

   b. Adequate proof of residence.

   c. Length of time at present address.

   d. Occupation, employer, and length of employment.

   e. Previous criminal record.

   f. Marital and family status.

   g. Any other facts that would assist in determining if a citation and release is appropriate.

3. The decision to use the citation process will be made by the arresting deputy or as directed by a supervisor.

4. When a decision is made to issue a citation, deputies will obtain and document adequate information so that the individual receiving the citation can be located later if they fail to appear as promised.

D. CITATIONS ISSUED FOR PENAL CODE VIOLATIONS

1. The following procedures set forth regarding citations issued for violations of the Penal Code will be adhered to by all deputies:

a. Adults

- Misdemeanor citations issued by deputies will be conducted in the following manner:
  - Allow at least six (6) weeks, when citing a person into court.
  - Allow at least eight (8) weeks if the offense involves laboratory work of any kind i.e.: a blood or urine sample for a D.U.I. case.
  - See Court Appearance Date form for days of the week and times to assign for appearance.
  - Refer to court card for specific times.
  - When the thirtieth day (sixth week) is a holiday or a weekend day, cite the defendant on the next succeeding weekday when the court will be in session.
  - When violations for other codes are also included with Penal Code violations, the appearance date will be set in accordance for the Penal Code violation.
  - Defendant receives the yellow copy of the citation.

b. Juveniles

- When citing juveniles in misdemeanor cases the Juvenile Affidavit Form (Contra Costa Probation Department) will be used.
- Juveniles may be released on a juvenile citation involving a felony when circumstances are present (i.e., no previous police record, no violence involved, etc.) which dictate such release as proper, and then only if authorized by a field supervisor, Station Commander or O.D.
  - Exception: Juveniles involved in crimes of violence, acts involving potential for violence, and felony narcotics or dangerous drugs violations shall be attempted to be booked at Juvenile Hall.
  - Call Juvenile Hall with the arrest information prior to transporting to be sure they have room, or will make room for the juvenile.

- The decision to issue a citation or to book a juvenile will be dependent upon the nature of alleged offense, the demeanor of the involved juvenile, and previous police contacts and records.
- In all felony juvenile cases regardless of the disposition of the juvenile (cite released or booked) the case will be routed to the Investigation Division for follow up investigation, if needed and the filing of criminal charges through the District Attorney's Office.
- Juvenile's that are to be charged with a felony crime are not to be referred through the Probation Department via a Juvenile affidavit.
- Deputies must also remember: "In determining which disposition of the minor he will make, the officer shall prefer the alternative which least restricts the minor's freedom of movement, provided such alternative is compatible with the best interests of the minor and the community."(Section 626c W & I Code)

E. CITATIONS ISSUED FOR VEHICLE CODE VIOLATIONS

1. There will also be occasions when other misdemeanor citations are warranted involving Vehicle Code violations.
    a. Deputies are to refer to the current Court Appearance Dates Card for days of the week and times to assign for appearance.
2. When the violation involves both Penal Code and Vehicle Code violations, the appearance date will be set utilizing court appearance dates for Penal Code violations.
3. Speed shall be indicated on all citations, if applicable.
4. Juveniles: Citations issued to juveniles for Vehicle Code violations will be done in the following manner:
    a. Infractions: Juveniles will be cited in the appropriate court for all Vehicle Code violations designated as infractions.
    b. Misdemeanors
        - All juvenile misdemeanors require that the juvenile be cited directly to the Contra Costa County Probation Department (see form JH-50 revised 12/94)
            - Exception: Violation of 12500 CVC, which is always filed as an infraction.
            - NOTE: Juveniles may be issued a citation on "reasonable cause"; it is not necessary to observe the violation.
    c. Citations will also state: "Bring parent/guardian."
    d. Felonies

- Juveniles arrested for felony violations of the Vehicle Code will be attempted to be booked at Juvenile Hall unless circumstances are present, which warrant a citation, and only with approval of a field supervisor, station house commander, contract manager, or O.D.
- In all felony juvenile cases regardless of the disposition of the juvenile (cite released or booked) the case will be routed to the Investigation Division for follow up investigation, if needed and the filing of criminal charges through the District Attorney's Office.
- Juveniles that are to be charged with a felony crime are not to be referred through the Probation Department via a Juvenile affidavit.

F. MUST-TAKE AND MAY-TAKE VIOLATIONS

1. When a person is arrested and taken into physical custody for a Vehicle Code violation, other than a felony, the violation must fall under one of the following sections:

   a. Section 40302 C.V.C.: Mandatory appearance

   b. Section 40303 C.V.C.: Optional appearance before a magistrate

   c. In the event an arrest occurs, as a result of a violation of either of these sections and the suspect is booked, no citation will be issued

      - The violations will be listed on the booking.

G. BOOKING AND CITABLE VIOLATIONS COMBINED

1. If any person is arrested on a charge that is not a Vehicle Code violation and there is an infraction including a Vehicle Code violation or lesser offenses also involved in the incident, deputies should indicate in their report the reason for the stop without issuing a citation for the lesser offense(s).

2. The person being arrested shall not be booked on the lesser offenses.

H. OTHER CITABLE CODES

1. Deputies will adhere to the procedures previously set forth in this manual section.

2. The requirement of writing a "crime report" also applies to any citation issued for violation of any other State or County code. (i.e., County ordinances, Fish and Game Code etc.)

I. AMENDING OR VOIDING A CITATION

1. In the event it becomes necessary to amend or void a citation, the following procedures apply:

   a. Section 40505 C.V.C.

      - Copy of notice, states in part, "No traffic or police officer shall set forth on any notice filed with a

magistrate or attach thereto or accompany the notice with any written statement giving information or containing allegations which have not been delivered to the person receiving the notice to appear or notice of violation."

b. Any changes or amendments on a citation will be conducted as follows:

- If the deputy is still with the person being cited, a line will be drawn through the error and the issuing deputy will initial change.
- The issuing deputy will ensure that the defendant's copy is changed in the exact manner.
- If an error has been discovered after the citation has been issued, the issuing deputy will:
  - Obtain the Notice of Correction Form from the Patrol Clerical Staff.
  - The issuing deputy will complete and forward this form to Patrol Administration.
  - The Patrol Clerical Staff will contact the defendant and notify him/her of the change or amendment to the citation. This may be done by sending a copy of the letter to defendant at the address on the citation.

c. Instances which require a citation to be voided:

- Deputies may not personally "void" a citation, if they have already issued the citation to the suspect or placed it on a parked vehicle. Doing so makes the deputy guilty of a misdemeanor.
- To dismiss a citation after it has been issued to the suspect, you must:
  - Write a written memorandum to the appropriate court explaining the reason for the dismissal.
  - Attach the citation to the memo and forward it to the Patrol Division Secretary, who will in turn mail the package to the appropriate court.

J. REASONS FOR NON-RELEASE

1. Whenever any person is arrested by a peace officer for a misdemeanor, and one or more of the following conditions exist, the person will not be released with a notice to appear:

   a. The person is so intoxicated as to be a danger to him/herself or others.

   b. The person arrested requires medical examination or medical care or is otherwise unable to care for his/her own safety.

c. The person is arrested for one or more of the offenses listed in Section 40302 of the Vehicle Code:

- When the person arrested fails to present a driver's license or other satisfactory evidence of identity for examination.
- When the person arrested refuses to give a written promise to appear in court.
- When the person arrested demands an immediate appearance before a magistrate/refuses to sign the notice to appear.

d. There are one or more outstanding arrest warrants for the person.

e. The person cannot provide satisfactory evidence of personal identification.

f. The prosecution of the offense or offenses for which the person is arrested, or the prosecution of any other offense or offenses will be jeopardized by immediate release of the person arrested.

g. There is reasonable likelihood that the offense or offenses will continue or resume, or that the safety of persons or property will be endangered by release of the person arrested.

h. The person arrested attempts to evade or resist arrest.

i. Any other valid reason with the prior approval of the area supervisor.

2. The reason for non-release shall be specified on the arrest report or on forms provided by the detention facility for that purpose.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.39**
	RELATED ORDERS: PC 142, 837, 838, 839, 841, 847, 849(b), 853.6.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Citizen's Arrests**	

I. POLICY

A. Deputies will carefully and objectively evaluate private person arrests and, where it is lawful to do so, will receive and properly process the person arrested.

II. GENERAL INFORMATION

A. Penal Code section 142 as amended by the State Legislature has removed the criminal and civil liability for peace officers if they refuse to receive a person arrested by a private person.

B. Officers may receive the arrest if they are satisfied it is supported by probable cause, and may decline to do so in other cases, without risk of state prosecution or liability for false arrest.

C. There shall be no civil liability on the part of, and no cause for action shall arise against, any peace officer, acting within the scope of his authority, for false arrest or false imprisonment arising out of any arrest when:

1. Such arrest was lawful or when such peace officer, at the time of such arrest, had reasonable cause to believe such arrest was lawful.

2. When such arrest was made pursuant to a charge made, upon reasonable cause, of the commission of a felony by the person to be arrested.

3. When such arrest was made pursuant to the requirements of Penal Code Section 142, 838, or 839.

III. PROCEDURE

A. RESPONSIBILITIES OF ASSIGNED DEPUTY

1. The assigned Deputy is responsible for conducting a thorough investigation and will:

a. Obtain pertinent information concerning the offense.

b. Obtain complete suspect and arresting party information.

c. Follow through on the proper completion of a citizen's arrest form.

d. Interview all witnesses and gather any other pertinent information.

B. RESPONSIBILITIES OF CITIZEN MAKING A PRIVATE PERSON'S OR CITIZEN'S ARREST

1. The deputy shall ensure that the person making the arrest:

a. Informs the person arrested that they are under arrest and the offense they are being arrested for.

b. Signs the citizen's arrest form.

C. CITIZEN'S ARREST FORM

1. In all cases involving citizen's arrest, the involved deputy will ensure the person making the arrest completes the citizen’s arrest form.

a. A citizen's arrest form is not required in cases where a juvenile is arrested and cited on a Juvenile Affidavit to Probation.

2. The original copy of the citizen's arrest form will be attached to and submitted with the crime report.

D. UNLAWFUL CITIZEN'S ARRESTS

1. In the event the involved deputy believes the citizen's arrest is unlawful, the involved deputy will not accept the citizen’s arrest.

E. REPORTING

1. All citizen's arrests, including those not accepted by deputies, will be documented in a crime report.

2. The crime report will minimally include:

a. Who (the citizen) made the arrest

b. What (the code section) crime the arrest was made for

c. Who (the deputy) the citizen turned the arrested person over to.

3. In those cases involving a citizen’s arrest not accepted, the reasons for not accepting the arrest will be articulated.

F. CITATION AND RELEASE OR BOOKING

1. The circumstances surrounding the alleged offense will determine whether or not the person arrested should be cited and released or booked. The following should be considered:

a. The nature of the offense committed.

b. Suspect's prior criminal record.

c. Continuation of incident and/or a further offense.

d. Threats of retaliation by suspect.

e. Any citizen's arrest involving a felony, the person arrested will be booked.

G. CITIZEN'S ARRESTS INVOLVING JUVENILES

1. Citizen's arrests involving juveniles are to be conducted in the same manner as those involving adults, except for the aforementioned exceptions.

2. In cases where a juvenile places another juvenile under arrest, discretion will be used when considering the alternatives, after the arrest has been accepted by the deputy.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.40**
	RELATED ORDERS: None.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Consensual Contacts**	

I. POLICY

A. Deputies are authorized to make appropriate contacts with individual members of the public in order to enhance the general public's welfare and safety.

B. These contacts will be made in a professional manner and with constant awareness of the citizen's "rights" and the possibility of danger to the Deputy and/or the public.

II. PROCEDURE

A. CITIZEN CONTACTS

1. A "citizen contact" is a face-to-face communication between a deputy and an individual when there is a lack of "reasonable cause" to detain or arrest.

2. Contacts differ from detentions or arrests in that contacts do not involve the "seizure" of persons within the meaning of the Fourth Amendment and, therefore, the person contacted has a legal right to leave at any time.

B. JUSTIFICATION AND AUTHORITY

1. Whenever the training, experience and knowledge of a deputy indicates to him/her a person's conduct or presence needs clarification, the deputy may contact that person in any place that the deputy has a right to be.

C. CONDUCT DURING CONTACTS

1. When making "citizen contacts," deputies will remember that the individual is under no legal obligation to cooperate, due to lack of probable cause or legal justification to detain or arrest.

   a. The deputy cannot require the individual to answer questions or cooperate in any way.

2. If the person contacted refuses to cooperate, the deputy must allow the person to proceed with whatever activity the person was engaged in.

a. A Deputy may continue to observe such a person, and when additional facts warrant, conduct a stop and field interview, or arrest.

D. PUBLIC ASSEMBLY CHECKS

1. Public Assembly Checks (PAC) will only be conducted in businesses that are within the patrol deputy's assigned beat.

2. These checks may be performed when time and circumstances permit.

3. The duration of a Public Assembly Check should be no longer than ten minutes.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.41**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Field Interviews**	

I. POLICY

A. Patrol and Special Operations Division personnel will utilize "field interviews" to maintain the safety and welfare of the community by identifying and documenting movement of suspicious persons.

II. DEFINITIONS

A. Field Interviews: A temporary detention of a person while investigating an unusual activity, which reasonably infers criminal activity.

1. A "field interview" occurs when a deputy uses police authority either to compel an individual to halt, to remain in a certain place, or to perform some act (such as walking to a nearby location where the deputy can use a radio or telephone).

2. If the individual believes that he or she is not free to leave a "field interview" is occurring.

B. Reasonable suspicion: Is more than a hunch or mere speculation on the part of a deputy, but less than the probable cause necessary for arrest.

1. It may arise out of contact, or it may exist prior to or independently of a contact.

2. It may be based on factors such as appearance, actions, prior knowledge, area, time and experience.

III. GENERAL INFORMATION

A. FIELD INTERVIEWS

1. The "field interview" is a very useful and effective means of maintaining the safety and welfare of the community.

2. By remaining alert, perceiving circumstances that may indicate crime, stopping suspicious individuals and conducting field interviews, deputies serve the community by preventing, discovering, or solving crimes.

a. However, the courts have indicated that certain elements must be present before a deputy initiates a field interview.

3. If a deputy has a reasonable suspicion that an individual has committed, is committing, or is about to commit any crime, they have the authority to stop that individual and conduct a field interview.

a. The deputy may exercise this authority in any place that the deputy has a right to be.

b. Both pedestrians and individuals in vehicles may be stopped.

4. The following elements must be present before a field interview is authorized:

a. The deputy has reasonable suspicion that some unusual or out of the ordinary activity is or has taken place.

b. There is some indication that the individual under suspicion is connected to the unusual activity.

c. There is some suggestion that the unusual activity is related to criminal activity.

d. All three elements must be present before an individual is stopped and a field interview conducted.

IV. PROCEDURE

A. INITIAL APPROACH

1. Once the required elements have been established, the person may be stopped.

a. However, provided that the public is not endangered and the chance of losing the suspect is not significant, it may be better for the deputy to wait to develop additional information to establish probable cause to arrest.

- The guideline is: Don't ruin a good arrest by a premature stop.

B. USE OF FORCE TO DETAIN

1. Deputies will use the least coercive means necessary under the circumstances to affect the stop of a person.

2. The means used may be a verbal request, an order, or the use of physical force.

a. However, under no circumstances may force be used which could cause death or serious bodily harm.

b. If the deputy is attacked, or circumstances exist that create probable cause to arrest, the deputy may use the amount of force necessary to defend himself or affect a full custody arrest.

C. REFUSAL TO COOPERATE

1. Refusal to answer questions or cooperate does not establish probable cause to arrest.

2. Officers cannot compel an individual to cooperate in a field interview.

D. TREATMENT OF DETAINED INDIVIDUALS

1. Officers will act with restraint and courtesy towards individuals being stopped.

2. They will identify themselves as law enforcement officers and advise the individual of the reason and purpose of the field interview.

E. MOVING THE DETAINED INDIVIDUAL

1. Officers will not transport or otherwise move an individual from the location where the stop is made except to verify answers given, and only when no other method of verification is available.

2. The distance such an individual may be moved is extremely limited.

   a. Stops are intended by law to be on-the-spot inquiries.

   b. When a suspect is moved farther than a limited distance, courts are likely to conclude that an arrest has been made.

F. LENGTH OF DETENTION

1. A detention must be temporary and last no longer than is necessary to carry out the stop.

   a. "Time" is a factor that can make a legal detention invalid.

G. DURATION OF STOP

1. A person may be detained only at or near the scene of the stop for a reasonable time.

2. Officers should detain a person only as long as is reasonably necessary to conclude the investigation.

   a. Should further suspicious circumstances arise during this period, the officer may detain the person until the further suspicious circumstances can be investigated.

   b. A reasonable guideline is that the stop should be terminated within twenty minutes unless answers given.

      - However, officers should not detain a person in excess of this time limit merely to ask further questions.

H. FIELD INTERVIEW RECORDS

1. Since a field interview is based on suspicious activity that relates to crime, officers should normally complete a "field interrogation" card and enter the data in the SPARKS database.

   a. In addition, the officer should maintain a copy.

2. All specific facts and circumstances relative to the stop should be recorded.

   a. If circumstances warrant, a "crime report" should be written.

3. Field Interview records are placed into a data file by the Crime Analyst Unit and kept for possible future identification of suspects, victims or witnesses when a crime scene is later discovered in the area of the stop.

    a. Field Interview information taken days prior may be a crucial element in solving a crime or series of crimes in a geographic area.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.42**
	RELATED ORDERS: W&I 300, 305, 600, 601, 602, 625, 626; 777; Education Code 48264, 49100.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Juvenile Contacts**	

I. POLICY

A. In cases involving minors taken into custody, deputies will use discretionary judgment and select a disposition which least restricts the minor's freedom of movement, but provides compatibility to the best interest of the community.

II. PROCEDURE

A. DISPOSITION IN THE FIELD

1. Deputies are encouraged to use an appropriate citation or counsel and release whenever circumstances indicate such alternatives are in the best interest of the juvenile and consistent with the safety of the community.

B. REPORTING ACTIONS TAKEN IN THE FIELD

1. Actions taken regarding juveniles will be documented in a report and routed as follows:

a. Felony Offenses

- Juvenile Victim-Investigations
- Juvenile Suspect-Investigations

b. Misdemeanor Offenses

- Juvenile Suspect
- Probation Cite
- Juvenile Probation Department
- Juvenile Diversion (Contract City)
- NOTE: the field deputy shall conduct Investigation in cases referred to the Probation Department.

C. NOTIFICATION OF CUSTODY

1. The deputy having custody of the juvenile will be responsible for notifying the minor's parents, guardian, or responsible relative that the juvenile is in custody.

2. When the juvenile is delivered to Juvenile Hall, deputies will advise an appropriate relative to call Juvenile Hall to secure information regarding the juvenile's status as it pertains to visitation and release.

3. Notification of an appropriate relative may be conducted as follows:

   a. By telephone.

   b. By making personal contact.

   c. By causing another beat car or police agency to make notification.

4. In the event of the absence of an appropriate relative, a note may be left at the residence or with a neighbor, or request the next appropriate beat car to make further attempt for notification.

D. DEPENDENT JUVENILES (300 W&I)

1. Deputies will, without a warrant, take custody of any dependent juvenile when one or more of the following elements are present:

   a. When a deputy has reasonable cause to believe that the juvenile has no parent or guardian willing, capable, or actually exercising care or control.

   b. When the juvenile is destitute and not provided with the necessities of life or suitable home.

   c. When the juvenile is a danger to the public and such danger is the result of a mental or physical disorder.

   d. When the juvenile is being neglected, deprived or physically abused by a person having custody of such juvenile.

2. In all cases, where a deputy is advised that any of the conditions listed in Section 300 W&I may exist, the deputy will conduct a full investigation.

   a. The deputy will not release the child into the custody of any parent or guardian that MAY NOT be willing or capable to care for the child.

   b. If the child is under the age of eighteen months, the shift supervisor will make the decision as to the custody of the child.

   c. A deputy taking custody of such a juvenile will report the circumstances in detail on a crime report and contact Protective Services who will make arrangements for placement.

   d. The child may be turned over to Protective Services or delivered to a foster home which they designate.

   e. Child Protective Services may be contacted at the following Telephone number:

- 1-877-881-1116 Press one for reporting which will take you to the Law Enforcement prompt

f. NOTE: Dependent juveniles, under eighteen months of age, will be transported by ambulance to the County Hospital.

g. Protective Services will then be notified of the dependent infant.

E. STATUS OFFENDERS (601 W&I)

1. Deputies may, without a warrant, take custody of any juvenile when the juvenile continuously disobeys the reasonable and proper orders or directions of a parent, guardian or custodian, or is beyond the control of such persons.

2. The deputy assigned to the incident will determine that the elements of 601 W&I are clearly present and that the juvenile is not a law violator (602 W&I) or a dependent minor (300 W&I).

a. These facts will be recorded in the crime report.

3. The deputy will inform the reporting party that juvenile laws do not provide for placement of status offenders into secure detention facilities.

4. Under certain circumstances and with consent of the involved parent(s), a juvenile may be placed with friends or relatives.

a. At no time will a "status offender" be taken to Juvenile Hall.

b. NOTE: Juvenile Hall will not take juveniles violating only 601 W&I.

5. The deputy will attempt to resolve the issue in accordance with the following procedures:

a. Referral for counseling

- Deputies will first attempt to resolve the issue through use of public or private counseling services.

b. Twenty-four hour crisis resolution service

- Telephone: 1-800-718-4357.

c. Hotlines for Runaways

- Contra Costa Hotlines are answered by Crisis and Suicide Intervention.
- Telephone: 1-800-833-2900.

d. Services for runaway and homeless youth, families and relatives of runaway children.

- The first two sessions are free.
- Beyond this crisis phase, fees are based on a sliding scale according to income and number of dependents.
- Fees vary.
- Health Insurance may cover part of the fee.

- The service accepts Contra Costa Health Plan.

e. California Youth Crisis Line

- 1-800-718-4357
- Callers will be told where they can get counseling, help on obtaining shelter, transportation, food and medical care.
- The Line will also relay CONFIDENTIAL MESSAGES between families and missing youths.

f. National Runaway Hotline

- 1-800-621-4000
- 24 Hour confidential advisory services for runaways and parents.
- Crisis line for minors 17 years and younger.
- Provides crisis information and referrals to youth through national and local switch board.

g. Crisis Home Placement

- Northern California Family Center is a privately owned and operated emergency shelter for runaways and homeless youth.
- Any child in Contra Costa County between the ages of 9-17 may access Youth Crisis services free, for home or on site crisis intervention.
- Crisis home placement may be denied if the child:
    - Is a "602" ward or on formal probation
    - Has a history of fire starting
    - Is actively suicidal
    - Is exhibiting psychotic behavior
    - Is under the influence of drugs or alcohol
    - Has a history of violence or theft, especially towards people outside their immediate family
    - The parent/guardian refuses placement
    - The child refuses placement by not agreeing to obey Crisis Home rules
    - The child refuses to identify self and/or allow contact of legal guardian
    - Has a health problem or condition requiring medical treatment or special care
    - There is no bed available

- Intake will be conducted through the office at 2244 Pacheco Blvd, Martinez on a 24-hour a day basis.
- Deputies are to call in advance at 370-1990, to assure that the center will accept the juvenile, prior to transportation.
- Police officers are given priority in Youth Crisis service placement.

F. LAW VIOLATORS (602 W&I)

1. When a juvenile is a suspect in a criminal offense the deputy assigned will process the incident in accordance with one of the following appropriate procedures:

   a. Citizen's arrest involving juveniles

      - The juvenile suspect will be processed in accordance with "citizen's arrest" procedures.
      - Discretion will be used in permitting juveniles to arrest other juveniles and the procedure should not be followed in such cases, unless no other alternative is available.
      - NOTE: Do not advise a person making an arrest of a juvenile to contact the District Attorney's Office.

   b. Juvenile citation process

      - When a citizen's arrest for a misdemeanor is made or the deputy has observed the crime, the juvenile may be cited to the Juvenile Probation Department.
      - When the circumstances and facts cause a deputy to reasonably believe a felony has been committed, such deputy will make a direct arrest as authorized by Sections 625(a), 625.1(b), or 625.1(c) of the Welfare and Institutions Code.

2. In all cases when an arrest of a juvenile has been made, the deputy continues to have the discretion outlined in Section 626 W&I which allows deputies to counsel and release, cite, or take the minor to Juvenile Hall in accordance with policy and procedures set forth in this manual.

   a. In all juvenile arrest cases a supervisor’s approval must be obtained for all dispositions (booking, cite release or counsel and release).

   b. In cases involving felony charges against a juvenile, the case will be filed directly with the District Attorney’s Office, not the Probation Department.

      - These cases will be referred to the Investigation Division for follow-up investigation and the filing of criminal charges.
      - NOTE: A Juvenile Probation Referral will not be used as the means to file felony charges against a juvenile.

- NOTE: Call Juvenile Hall to check if the juvenile is on probation. Juvenile Hall will provide information on search clauses, and probation status.

3. Deputies may assist Juvenile Hall Officers when requested to pick up violators of Juvenile Probation when the Juvenile Hall Officers have the proper paperwork showing P.C. to detain.

   a. Requests are generally made when the re-taking into custody presents a potential for violence by the juvenile or others.

G. PLACEMENT OF JUVENILES AT A DETENTION FACILITY

1. When a decision to place a juvenile in a detention facility is made, deputies will ensure that one of the following elements is present:

   a. The juvenile has been properly taken into custody for a violation of a federal, state, or local law.

   b. The juvenile is a ward or dependent of the juvenile court and there is reasonable cause to believe that the juvenile has violated an order of such court or has escaped from a commitment ordered by such court. (625 W&I)

2. Call Juvenile Hall to confirm all warrants and to advise them of the arrest prior to transport.

   a. If a warrant is from out of the county, confirm it and have it faxed to Juvenile Hall Intake.

      - Juvenile Hall has 160 beds, with an over flow of 20 beds.
      - It may be necessary for them to release a juvenile to make room for the new juvenile being booked.
      - Prior notification of a new booking will shorten delays at Intake for the transporting Deputy.

3. Deputies will transport the juvenile to the main intake center located at 202 Glacier Drive, Martinez.

   a. A Probable Cause declaration will be completed in ARIES containing a brief synopsis of what occurred and the probable cause to detain.

      - A certificate of probable cause (juvenile probation cite from #JH-50) will be completed and scanned/attached to the crime report.
      - The report can be faxed over to Juvenile Hall at the end of the shift.
      - The "Juvenile" copy (green) is given to the Juvenile, Parent or Guardian.
      - If the juvenile is cited, a juvenile probation cite will be completed and scanned/attached to the crime report.

4. Deputies will thoroughly report all facts in a crime report which indicate detention is necessary

   a. This report will be routed to the Investigation Division for any follow up investigation and/or the filing of criminal charges with the District Attorney's Office.

   b. Such facts include, but are not limited to, the following:

      - The circumstances that establish the elements of the crime.
      - Facts that indicate the juvenile is likely to flee the jurisdiction of the court.
      - Facts which indicate that detention is urgent and of immediate necessity in order to protect the juvenile or the person or property of someone else.
      - Juvenile Hall must file a petition within 48 hours of the minor's arrest or the minor must be released.
      - Deputies will:
        - Provide a copy of the written report to the Juvenile Hall Intake Staff when the minor is brought to Juvenile Hall, or Fax a copy by end of shift.
        - Complete the Juvenile Probable Cause declaration in as much detail as possible, setting forth a summary of the facts and the manner by which the minor is identified as the perpetrator.
        - Fax all supplemental reports to the Intake Unit at Juvenile Hall within 24 hours of the supplement.

H. OBTAINING MEDICAL TREATMENT

1. When circumstances, facts, or other sources of information indicate that a juvenile is in need of immediate medical treatment, the deputy assigned to the incident will obtain such medical treatment in accordance with the following procedures:

   a. In a public place

      - When a juvenile is discovered in a public place and is in need of immediate medical treatment, the deputy will take the juvenile into custody and ensure the juvenile is transported to the Contra Costa County Regional Medical Center in Martinez.
      - When the emergency is severe and immediate medical treatment is required, deputies may transport such juvenile to the closest medical facility.
      - Upon arrival at a medical facility, deputies will abide by the medical facility's procedures pertaining to

completing forms, obtaining parental consent and other procedures deemed necessary.

b. In a private dwelling

- When the circumstances are such that it is reasonable to believe a juvenile is in need of medical care and a parent, guardian or other person in control of a juvenile's welfare refuses to provide the deputy with information regarding the condition of the juvenile, or refuses to allow a deputy's entrance into the place where the juvenile resides in order to investigate the condition of such a juvenile, deputies will notify the shift supervisor.
- The deputy will document all such facts available and forward a copy of the report to Child Protective Services for information.
    - EXCEPTION: When the facts, circumstances or other information lead a deputy to reasonably believe that a medical emergency exists and a delay in obtaining medical aid would threaten the life of a juvenile, such deputy will contact an area supervisor, explain the circumstances, and proceed as directed. When an area supervisor is not available (the deputy is authorized to take immediate custody of the juvenile).
- The deputy intending to take custody of such a juvenile will explain to the parent, guardian or other person in control of the juvenile that the law authorizes such action and will then demand entry.
- When/if entry is denied, the deputy should advise the supervisor and may use all means, short of deadly force (unless attacked with deadly force) to obtain custody of the juvenile.
- Once custody is obtained, the juvenile will be transported to the nearest medical facility.

c. Juveniles arrested for certain offenses

- Persons under eighteen years of age who are arrested for drunkenness, glue sniffing, or narcotics, and who display the symptoms of intoxication to a degree where injury might result, must be taken to the Contra Costa County Regional Medical Center for examination if detention is anticipated.
- A medical clearance will be obtained from the examining physician and delivered with the juvenile to the intake officer at Juvenile Hall.
- In all cases, deputies will ensure that the facts, circumstances, and information are adequate to establish

reasonable cause to believe that immediate medical treatment was necessary, and required taking the juvenile into custody.

- Deputies will report all such facts, circumstances and information received on appropriate forms and submit such reports prior to ending their tour of duty during which the incident occurred.

I. INCIDENTS OCCURRING AT SCHOOLS

1. Deputies assigned incidents that have occurred or are occurring on school grounds will cooperate fully with the appropriate school officials.

J. NON-CRIMINAL INCIDENTS INVOLVING INFANTS AND SMALL CHILDREN:

1. Deputies assigned or who become involved in incidents involving infants and small children in which the parent or other guardian is taken into custody.

2. The deputy will contact Protective Services for temporary placement of the child.

3. Children may also be left with responsible relatives or friends of the family (with a parent/guardian's approval, when there are not any conditions of 300 W&I involved).

4. The place of care will be noted in the deputy's report.

K. TRUANTS

1. West County Patrol units may take into custody juveniles found not in school between the hours of 0800 to 1400 hrs, and transport them to the location identified by the school district.

2. The Juvenile can be turned over to the S.W.A.T. Program (Student Welfare and Attendance), who will identify the student and make arrangements to return the student to the appropriate school. (As authorized by Section 48264 of the Education Code.)

3. NOTE: School periods, when campuses are open, juveniles cannot be detained; i.e., first period, lunch, seventh period.

   a. No open campus for junior high school students.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.43**
	RELATED ORDERS: W&I 5150, 5170, 5400, 7325, 8102.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Mental Illness**	

I. POLICY

A. When dealing with persons suffering from mental illness or inebriety, Patrol and Special Operations personnel will constantly evaluate the situation watching for mood swings that may affect officer safety.

B. They will obtain the proper treatment for the involved individual.

II. PROCEDURE

A. FIELD INITIATED EMERGENCY ADMISSIONS

1. Section 5150 of Welfare and Institutions Code provides a peace officer the power to take into custody and transport to the nearest mental health facility any person who falls into the following categories:

   a. A danger to others.

   b. A danger to him/herself.

   c. Gravely disabled as a result of mental disorder.

   - NOTE: A deputy need only to establish reasonable cause to believe a person may be suffering from a mental disorder.
   - A person is considered gravely disabled when, as a result of a mental disorder, they are unable to provide for the basic needs such as food, clothing, and shelter.

B. HANDLING AND CONTROLLING DISTURBED PERSONS

1. Deputies assigned incidents involving disturbed persons should place officer safety as the first priority.

2. Whenever possible, the initially assigned deputy should wait for a backup unit to assist.

3. Deputies should evaluate the situation and obtain as much information as possible concerning the involved person; i.e., past history of mental

illness, violence potential, and if the involved person is currently under a physician's care.

4. The assigned deputy should keep in mind that the conduct exhibited toward a mentally ill person is important to the person's mental well-being.

    a. Deputies should:

        - Ignore verbal abuse.
        - Avoid excitement.
        - Do not deceive the individual.
        - Restrain and calm the person.

5. Deputies responding to incidents involving persons believed to be a danger to themselves must continually evaluate the incident. If it is determined that the best course of action to defuse or keep the situation from escalating is to withdraw from the scene, the following shall be done:

    a. The incident and our actions will be documented in a crime report.

    b. The Station House Commander will be notified and made aware of the incident.

    c. The Station House Commander or designee will assign a deputy to:

        - Follow up contact with the subject either in person or by phone to check on their welfare.
        - Generate a Mental Health Evaluation Team (MHET) referral.
        - Document all follow up actions in a supplemental crime report.

C. USE OF FORCE

1. Deputies shall use only that amount of force necessary to overcome resistance and obtain control of the individual.

2. The use of restraints, handcuffs and leg restraints shall be used only to prevent the individual from inflicting injury upon themselves or others.

3. The Deputy placing such equipment on an individual shall be responsible for the documentation of the use of force and/or restraints in their written report.

D. TRANSPORTATION OF DISTURBED PERSONS

1. The transporting of mentally disturbed persons to the mental health facility shall be conducted by ambulance, when available.

E. DOCUMENTATION AND FORMS

1. The Deputy must complete an "Application For 72 Hr. Detention For Evaluation and Treatment" (copy attached), of a person believed to be mentally ill, deliver it to hospital personnel (usually via ambulance personnel), and give a copy to the person detained.

2. The applicable case file number should also be written on the 5150 form in the upper left-hand corner.

    a. The Deputy is responsible for completion of a written report involving all field initiated 5150 W & I admissions.

    b. This report will be in addition to the 5150 W&I commitment form and the 8102 W&I weapons confiscation form if applicable.

        - If a weapon is confiscated, the Deputy will complete a declaration re: Confiscation of Weapons at the scene of incident or immediately thereafter.

3. In the event the subject is transported by ambulance, the emergency admission form should be given to ambulance attendants for medical chart and mental health clinic personnel.

4. In all cases involving the taking of a person to a mental health facility, the assigned Deputy will orally read the "Detainment Advisement" from the 5150 form to the involved person.

5. When weapons are confiscated or involved route and Fax a copy of the 5150 form, the 5150 report, the 8102 form and the Declaration re: Confiscation of Weapons to the Misdemeanor Complaints Office.

    a. Route a copy of the entire report to the Intelligence Sergeant.

    b. When 8102 forms are used, a copy will go with the involved party via the ambulance attendants to be given to the County Hospital personnel.

        - They must advise the Misdemeanor Complaints Office when the involved person is released, and document the same on the 8102 form.

F. PROCEDURES AT COUNTY HOSPITAL

1. At the time of the emergency commitment, the deputy is required to make written application, and complete an emergency admission form.

2. All 5150 commitments are to be taken directly to “Psychiatric Emergency Room” except for those in the following categories:

    a. Persons requiring medical treatment for injuries or drug overdose.

    b. Persons who are intoxicated or under the influence of narcotics.

    c. All persons over the age of sixty (60).

    d. Persons in the above categories are to be taken to the emergency room for examination.

3. Deputies shall conduct searches of all persons and remove items which could be used as weapons.

4. In cases of combative commitments, the deputy should request Communications to telephone the Contra Costa County Regional Medical Center, Psychiatric Emergency Room, and notify them of the patient's sex, age and arrival time.

5. Deputies should complete an emergency admission form on voluntary commitments that have a potential for violence or aggressive behavior.

6. All deputies are to cooperate and assist the hospital staff in the handling of patients.

G. EMERGENCY INEBRIETY COMMITMENT

1. The procedures for admission of a person under 5170 W & I are the same as set forth for 5150 W & I.

2. Before a person can be admitted to the County Hospital, the following conditions must be present:

a. A designated 5170 Facility must exist.

- County Hospital is not funded to house 5170's.

b. The person is in such a physical condition which requires medical treatment; i.e., malnutrition.

c. The person is suffering delirium tremors (D.T.'s).

d. NOTE: The County Hospital will not accept persons who are merely intoxicated.

e. The deputy must evaluate the person for other conditions that may exist that will warrant hospital admission

- Example: Medical emergency or mental conditions relative to possible 5150 W&I.

H. SUICIDE ATTEMPTS

1. Suicide attempts are to be evaluated very thoroughly.

2. If the victim is already hospitalized or under the care of a private physician, no action is necessary unless requested by these authorities.

3. In cases involving suicide attempts, a crime report will be written reflecting the victim's actions, attitude, remarks, etc.

I. CONFISCATION OF WEAPONS

1. Officers are required by law (8102 W & I) to confiscate any firearm or other deadly weapon found in the possession or under control of a person detained for examination of his or her mental condition.

2. When a deadly weapon is taken under these circumstances, the deputy will complete a Declaration re: Confiscation of Weapons at the scene of the incident or immediately thereafter, and a NOTICE OF CONFISCATION OF FIREARM(S) OR OTHER DEADLY WEAPON(S).

a. The original of the Notice of Confiscation form will be attached to the crime report and the remaining copies will be given to the ambulance attendees or hospital attendants for their disposition.

b. A copy of the report, Notice of Confiscation and Declaration re: Confiscation of Weapons will be faxed and routed to the Misdemeanor Complaints Office.

- A copy will be routed to the Homeland Security Unit.

c. Contra Costa County Counsel will petition the court in all cases to prevent return of these weapons when necessary.

d. The W&I 8102 procedure is time specific, and is imperative that the Misdemeanor Complaints Office receives the report as soon as possible so the petition process can begin.

3. A complete and thorough report must be submitted on each such incident. Included in this report must be a complete description of the weapons, including:

a. Make

b. Model

c. Caliber

d. Serial number

e. Type of weapon (semi-automatic, revolver, bolt or pump action)

f. Any other identifying marks or characteristics of the weapon

g. The report must state who recovered the weapons, where the weapons were located and whether the weapons were loaded.

h. The report will also include any statements or actions by the subject that indicated a willingness to use the weapon on themselves or others.

J. WALKAWAYS FROM COUNTY HOSPITAL

1. Persons who have walked away from the County Hospital and who have been committed under any of the preceding conditions are considered a walk-away.

2. These persons may be apprehended, without a warrant, upon written request of the hospital.

a. Deputies should keep in mind that most commitments are not criminal offenders.

3. Persons who have been booked or had a booking opened should be considered escapees if they leave the hospital.

4. Patrol members will not act on direct request from the hospital, but will adhere to the following:

a. Martinez Police Department will respond to calls from the Contra Costa County Regional Medical Center regarding walk aways.

b. Deputies will assist if a walk away is to be apprehended in County area.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.44**
	RELATED ORDERS: PC 147, 196, 573, 854, 855, 1567, 4533, 4534, 4550 W&I 5400.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Miscellaneous Transportation**	

I. POLICY

A. Patrol and Special Operations personnel will maintain the highest officer safety possible when transporting prisoners, citizens or injured persons.

B. In emergency transportation, such as blood and injured persons, they will drive courteously, defensively and safely.

II. PROCEDURE

A. TRANSPORTATION OF PRISONERS

1. Search of Prisoner's Person

   a. Every prisoner shall be completely and thoroughly searched for weapons, materials which can be employed to pick locks (ball point pens, safety matches, paper clips, etc.) and other contraband before any movement or transportation is made.

   b. The transporting deputy shall be responsible for such search.

2. Restraint Equipment

   a. All felons and misdemeanants or known prisoners with potential violence and/or escape risks shall be restrained by securely applied double-locked handcuffs placed behind the back.

   b. Exceptions to this procedure are:

   - Very young juveniles, if in the deputy's judgment they can be safely transported without restraint or with handcuffs in front.
   - Prisoners transported by commercial airline while actually aboard the aircraft.
   - Prisoners to be transported for long distances; in which case, the handcuffs may be applied in front, double-locked and a waist belt also used.

- Where there are an insufficient number of handcuffs; in which case, two prisoners should be cuffed with their right hands together.

c. Restraint equipment should be applied as soon as possible and not removed until reaching the destination.

- If necessary to remove restraints during transport, more than one deputy should be present whenever possible.

3. Preparation for Transport

a. Whenever possible, deputies should familiarize themselves with the prisoner's record, attitude, and physical description.

b. The deputy should notify dispatch of the identity of prisoners prior to transporting.

c. It shall also be the transporting deputy's responsibility to obtain all documents, warrants, and other necessary papers before transporting.

d. The deputy must expect escape attempts and shall preplan his route, familiarizing himself with police agencies along the route, and have preconceived plans of action in the event an escape occurs.

e. All Deputies transporting prisoners will advise Dispatch, via voice radio, of their starting and ending mileage.

4. Prisoner Transports

a. The transportation of male and female prisoners together must be approved by a supervisor. The following must be taken into consideration when transporting male and female prisoners together:

- Whenever operations allow, male and female prisoners shall be transported in separate vehicles, or in vehicles that have separate compartments.

- If the female prisoner is cooperative, the transporting deputy can place the female prisoner in the front seat as long as the prisoner is properly restrained.

b. The transportation of adult and juvenile prisoners together must be approved by a supervisor. If the juvenile prisoner is cooperative, the transporting deputy can place the juvenile prisoner in the front seat as long as the prisoner is properly restrained.

5. Transportation Vehicles

a. All security devices provided to prevent escape shall be utilized.

b. Vehicles used for transporting shall be utilized as follows:

- Prisoners shall be placed behind the security screen in Patrol and Special Operations units unless the deputy has

more prisoners than can be accommodated there; in which case, a prisoner, hands cuffed behind the back, may be seated in front using the seat belt for further restraint.

- Note: The placing of a prisoner in front will only be conducted when no other alternative exists.

c. If unscreened vehicles must be used (i.e., rental cars), prisoners shall be handcuffed either with their hands behind their backs or in front provided a waist belt is used.

- No prisoner should be allowed to sit behind the driver.
- In these cases, the prisoner should be secured in the right front passenger seat with the second deputy seated directly behind the prisoner in the right rear seat.

d. All security devices, security doors and locks provided shall be utilized.

e. The procedure for unscreened vehicles applies to prisoners transported by chartered aircraft.

f. Deputies transporting prisoners by train, commercial aircraft or commercial bus shall follow current security guidelines as provided by the officer in charge of extradition or prisoner transport.

6. Hospital Transports

a. Patrol and Special Operations members conducting transports to the Contra Costa County Regional Medical Center shall restrain the prisoner as previously set forth.

b. Restraints shall not be removed during the examination or treatment unless the doctor indicates that it is absolutely necessary.

c. The deputy shall remain within sight of such prisoners at all times.

- If the deputy has more than one prisoner, only one should be removed from the vehicle at a time. More than one misdemeanant may be taken into the hospital, if in the deputy's judgment it is safe to do so.

7. Other Security Measures

a. Handcuff keys should be kept hidden from view.

b. The deputy should walk slightly behind and to one side with his firearm away from the prisoner.

c. Prisoners should not be allowed to talk with unauthorized persons.

B. TRANSPORTATION FOR OTHER AGENCIES

1. Transportation of persons arrested by other law enforcement agencies shall be conducted only as authorized by an area supervisor and/or Station Commander:

C. EMERGENCY TRANSPORTATION OF BLOOD

1. The Patrol and Special Operations Division will provide emergency transportation of blood between hospitals or from outside blood banks to hospitals in cases of true emergencies.

   a. For this policy, true emergency is defined as a situation in which a patient is in immediate need of blood (or other medical supplies) to avert a possible loss of life.

2. The transportation of blood will be conducted in the following manner:

   a. Dispatch will receive and act upon the initial request for blood.

      - Dispatch will obtain the pick-up information and drop off location along with the name of the doctor, the name of the patient and the response code.

      - Dispatch will schedule transportation to the designated hospital.

   b. The assigned deputy will pick up the blood, and after delivery of the blood, gather information provided by the hospital needed to write a report outlining the detail and any peculiarities involved.

      - The reviewing Sergeant will route a copy of the written report to Dispatch.

   c. The Station Commander/Contract Manager is to be advised of any cases where it appears that no true emergency need existed and the wrong code had been requested.

   d. All Code 3 blood runs must have approval of a patrol supervisor, area commander or O.D.

D. TRANSPORTATION OF CITIZENS

1. Patrol and Special Operations members may provide transportation for citizens under the following provisions:

   a. Such transportation is conducted within the requesting deputy's beat or near proximity.

   b. The citizen has no other means of transportation available.

   c. No priority 1 or 2 details are pending.

   d. The citizen submits his/her person to search prior to transporting. When refused, no transportation need be made.

2. All deputies transporting any citizen will advise Dispatch, via voice radio, of their starting and ending mileage.

3. No transportation of this type will be performed without first obtaining approval from an area supervisor, Station commander, Contract Manager or O.D.

E. TRANSPORTING INJURED PERSONS

1. Deputies should not transport injured persons from the scene of an injury to a hospital; an ambulance should be called.

2. Exceptions may be made whenever the member believes such transport is necessary due to unusual or exigent circumstances.

F. CAR STOPS WHILE TRANSPORTING PRISONERS

1. Deputies observing serious threats to public safety while transporting prisoners should notify dispatch immediately.

    a. They should not stop or attempt to stop another vehicle unless there is an immediate danger of loss of life.

2. If a traffic violation is observed, such as Driving Under the Influence, the deputy should notify dispatch and follow the driver until a support unit arrives to handle the detail.

3. The transporting deputy must advise the area supervisor of any interruption, stops, or deviation from the normal route or scheduled route in the transport from point of arrest or pick-up to point of booking.

    a. Notification must be made at the time the interruption occurs, unless the area supervisor is already aware that the stop will occur, and approves.

4. The safety of the prisoner is the responsibility of the transporting deputy.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.45**
	RELATED ORDERS: None.	
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CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Prisoner Processing**	

I. POLICY

A. Once an individual is in custody, patrol and special operations personnel will make sure the prisoner is properly controlled and processed.

II. GENERAL INFORMATION

A. Once an individual is in custody, the Patrol and Special Operations Division has a responsibility to the community to ensure that an arrestee is properly controlled and processed.

B. Control may mean mere guarding or may require physical restraint.

C. Processing includes obtaining information about the arrestee and incident, completion of appropriate forms, and physical incarceration in an appropriate place of detention.

III. PROCEDURE

A. PROCEDURE IMMEDIATELY FOLLOWING ARREST

1. When an arrest has been made, the deputy making the arrest will immediately, if possible and practical, perform the following tasks:

   a. Inform the arrestee of the charge.

   b. Handcuff the offender behind the back.

   c. Conduct a cursory search to ensure the deputy's and others' safety.

   d. Search the area within the arrestee's immediate reach.

2. After transporting an arrestee, thoroughly search the patrol unit to see if evidence or weapons have been discarded during transportation.

B. PROCESSING AT BOOKING

1. Deputies, when presenting a prisoner for booking at the Main Detention Facility, will adhere to the following:

a. All appropriate forms will be thoroughly completed.

b. Remove all property from the prisoner for turnover to the booking deputy.

- Evidence will be retained by the arresting deputy and booked into evidence according to policy.

c. Patrol and Special Operations deputies will abide by other rules pertaining to prisoner processing that have been established by the Detention Division.

C. SICK OR INJURED SUSPECTS IN CUSTODY

1. Sick and injured suspects will be transported to the County Hospital and medical treatment obtained.

2. An ambulance or patrol unit may be used for transportation depending on the prisoner's condition.

3. In extreme emergencies, the nearest hospital will be used.

a. The prisoner will be transferred later, to the County hospital.

4. Upon arrival at a medical facility, the deputy transporting the prisoner will:

a. Advise hospital emergency room of the prisoner's presence.

b. Complete all appropriate hospital forms in accordance with hospital procedures.

c. Ensure that the prisoner remains under control during the preliminary processing.

d. Determine as soon as possible if the suspect is going to be admitted or treated and released.

5. When the preliminary tasks have been completed, the deputy will ensure that one of the following appropriate procedures is employed:

a. Misdemeanor Crime-Suspect Not Admitted

- The deputy having custody of the suspect will gather sufficient information to accurately identify the suspect.
- The deputy may then issue a citation unless the circumstances of the incident and/or the need to further identify the suspect indicates that booking is appropriate.
- If the suspect is issued a citation, the appropriate hospital personnel will be advised that the suspect may be released upon completion of medical treatment.
- If the suspect is to be booked, the deputy having custody will stand by at the medical facility until medical treatment is completed and then book the suspect in accordance with established procedure.

b. Misdemeanor Crime-Suspect Admitted

- The deputy will gather sufficient information to accurately identify the suspect and may then issue a citation.
- When a suspect is unconscious and unable to sign the citation, as much information as possible will be obtained about the suspect's identity and a complaint may be obtained at a later time.
- If the circumstances of the crime indicate that booking is appropriate to protect the public, the deputy will adhere to the "hospital booking" procedure.

c. Felony Crime-Suspect Not Admitted

- The deputy will stand by until completion of medical treatment and then process the suspect in accordance with established procedures.

d. Felony Crime-Suspect Admitted

- All felony suspects will be booked in accordance with the "hospital booking" procedure unless directed otherwise by a supervisor.

D. VIOLENT SUSPECTS

1. Deputies transporting a violent suspect to a medical facility for treatment will stand by with the suspect until medical treatment is completed or until the suspect is booked in accordance with the "hospital booking" procedure.

E. HOSPITAL BOOKING

1. When a suspect has been admitted to the County Hospital and it is determined that booking is appropriate, the following procedures will be adhered to:

   a. Notification M.D.F. supervisor.

   b. Fill out police hold form.

   c. Give custody of prisoner and hold form to hospital deputy.

2. "Open" bookings

   a. The arresting/transporting deputy will go to the Main Detention Facility and fill out all the booking forms.

      - Note: Obtain as much of the pre-booking form information as possible from suspect.

   b. In the event the suspect is a juvenile, the above procedures apply, except a booking will be opened at Juvenile Hall.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.46**
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ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Warrants and Warrant Service**	

I. POLICY

A. Patrol and Special Operations personnel will exercise due diligence in serving arrest warrants.

II. DEFINITIONS

A. DUE DILIGENCE: “Such a measure of prudence, activity, or assiduously as is properly to be expected from, and ordinarily exercised by, a reasonable and prudent person under particular circumstances; not measured by an absolute standard, but depending on the relative facts of the special case."

B. JAWS: Justice Automated Warrant System

C. CLETS: California Law Enforcement Teletype System

D. NCIC: National Crime Information Center

III. PROCEDURE

A. GENERAL RESPONSIBILITIES

1. Warrants assigned to Patrol and Special Operations Division shall be processed in the following manner:

a. Field Sergeants will ensure adequate attention is given to warrant service and will facilitate the service of warrants whenever possible.

- Field sergeants will be responsible for the following:
- Ensure warrants assigned to beats within their area have service attempts and comply with due diligence.
- Ensure members of his or her shift understand the importance of due diligence and those deputies are taking appropriate action on misdemeanors warrants to include cite releases as well as updating due diligence.

- Run the Outstanding Warrant List (OWL) for his or her area weekly and provide it to deputies for warrant attempts. The sergeant may designate a patrol staff member to perform this function.

b. Beat deputies will ensure attempts are made on warrants and due diligence is met.

- The following procedures are to be utilized for warrant service:
- Prior to assuming patrol duties, obtain all warrants for assigned beat.
- Obtain a copy of the current Outstanding Warrant List. (OWL)
- Time permitting attempt service on warrants in his or her assigned area.
- Updating warrant information is a primary responsibility of field deputies and will be done using JAWS.
- Field deputies will verify active warrant status prior to service.

B. DUE DILIGENCE

1. All warrants must reflect "due diligence" which is accomplished by exercising all reasonable possibilities of service.
2. If "due diligence" has been exercised, and a warrant cannot be served it will be documented in the proper manner.
3. The court’s expectations are that misdemeanor warrants should be served within a one-year time period and felony warrants should be served within a three-year time period.
   a. If a warrant is un-served within the above listed time periods, the District Attorney’s office must be able to provide the court with DOCUMENTED DUE DILLIGENCE to serve the warrant.
   b. Failure to document due diligence may result in a Serna Motion and ultimately the dismissal of the case.

C. SOURCES OF INFORMATION ON DEFENDANT

1. In many cases, the information on the warrant is no longer accurate or current as to the defendant's whereabouts.
2. Suggested sources for obtaining current information are:
   a. Neighbors, landlords, family members, associates and schools.
   b. Post offices, water, gas, and telephone companies.
   c. Department of Motor Vehicles for changes of address and vehicles registered.
   d. Checking JWS 2 screen of JAWS for updated warrant information.

[redacted]

f. Check phone book for current address listing.

D. PHYSICAL ARREST PURSUANT TO A WARRANT

1. Deputies will arrest and book at the Main Detention Facility all persons taken into custody pursuant to a Felony Warrant.

2. The following procedures will be followed prior to transporting arrested subject(s):

a. It is mandatory that the warrant(s) be confirmed as valid prior to service.

b. It is mandatory that an abstract be requested or confirmation obtained from the Records Unit prior to booking.

- No confirmation is needed if the warrant is in JAWS.

c. EXCEPTION: Pursuant to Section 40304.5 of the Vehicle Code, no person will be booked at the Main Detention Facility on two or fewer warrants for failure to appear on a citation for a parking offense or a traffic infraction unless and until all of the following requirements have been exhausted:

- If the person has sufficient cash in their possession, they shall be given the opportunity to post bail.
- If the person does not have sufficient cash in their possession, they shall be informed of their rights and given the opportunity to all of the following:
- The person shall be permitted the use of the police or Sheriff's Office telephone to make not less than three completed local or long distance collect telephone calls to obtain bail.
- Have not less than three hours in which to arrange for the deposit of bail.
- Field deputies will refrain from becoming involved in the three hours required to arrange for bail, except under extenuating circumstances and prior approval of a field supervisor, Station Commander, Contract Manager or O.D.

d. Prior to transporting the person for booking, the deputy will confirm that the identifying information contained in the warrant (name, date of birth, driver's license number, etc. and physical descriptions) match the person that has been detained.

- This comparison will be done in the field via dispatch or the patrol vehicle's MDC.

3. Prior to booking a subject(s) arrested pursuant to a warrant, the deputy will obtain the original warrant or warrant abstract from the Records

Unit. Services may notify the Detention Facility of the warrant by sending the abstract warrant directly to the facility.

E. SERVING MISDEMEANOR WARRANTS

1. Deputies intending to serve a misdemeanor warrant between the hours of 2200 and 0600 hours will ensure that the warrant is endorsed for night service.

2. When such endorsement is lacking, officers will not serve the warrant unless the following circumstances are present:

   a. The arrest is made in a public place.

   b. The arrest is made when the person is already in custody pursuant to another lawful arrest.

F. FIELD CITE RELEASE OF SUBJECTS ARRESTED ON A WARRANT

1. Field citations may be issued on most warrants.

2. Field deputies will follow the procedure below:

   a. Run a warrants check on subject via Communication or via the Mobile Data Computer (MDC)

   b. Verify identity with a valid form of photo identification

   c. Obtain the Field Supervisors approval prior to the arrest

   d. Request Sheriff's Communications have the Records Unit fax a copy of the abstract to the appropriate station house

   e. Request Sheriff's Communications inform the Records Unit that the warrant will be cleared by cite and release

   f. Issue the wanted subject a citation to appear in the court listed on the warrant:

      - The appearance date shall be eight weeks from the date the citation is being issued.
      - Court Codes
      - 07100 Superior Court Martinez, 1020 Ward Street, Martinez
      - 07410 Superior Court Concord, 1010 Ward Street, Martinez
      - 07460 Superior Court Richmond, 100 37th Street Room 185 Richmond
      - 07465 Superior Court Pittsburg, 45 Civic Drive Pittsburg
      - 07480 Superior Court Walnut Creek, 640 Ygnacio Valley Road Walnut Creek (Traffic Only)

   g. Request a report number from Communications and write it on the citation in the appropriate location.

h. Complete an arrest report and submit it to the field supervisor prior to the end of shift.

i. The field supervisor shall ensure that the citation and warrant abstract is faxed to the Records Unit prior to the end of shift.

G. REPORTING WARRANT ARRESTS

1. All warrant arrests will be documented by the arresting deputy on an “A” page warrant arrest crime report, unless as otherwise directed by either this policy or a supervisor.

H. TELETYPE AND TELEGRAPHIC WARRANTS

1. The following procedures will be adhered to when handling teletype and CLETS/NCIC warrants:

a. Teletype Warrants

- Affixed to all teletype warrants is a "warrant service slip” which serves as the means for documenting service.
- The procedure for service is the same as previously set forth.
- When a defendant is arrested on a Teletype warrant, the original teletype will be obtained from the Records Unit prior to booking at Main Detention Facility (MDF).

I. FUGITIVE ARREST WARRANTS

1. An arrest made for an out of state warrant is an on view arrest per section 1551.1 of the California Penal Code and as such the deputy must develop probable cause for the arrest.

2. Regarding all fugitive arrest warrants refer to CCCSO 1.06.30, Out of State Warrants/Extradition and Rendition for detailed procedures.

3. The arresting deputy will prepare a detailed crime report of the arrest.

J. JUSTICE AUTOMATED WARRANT SYSTEM (JAWS)

1. This system allows the courts in Contra Costa County to enter warrants issued by the judge directly into the JAWS system at the time the warrant is issued.

2. This is an "Automated" paperless system for the most part with all the information concerning the warrant kept in a computer database.

3. When the field deputy does a warrant check, either through Communications or from their Mobile Data Computer (MDC), the JAWS, CLETS and NCIC will be queried.

4. The JAWS system works in the following manner:

a. When a subject is issued a citation for a crime and fails to appear in court as promised, the judge will issue a warrant for an arrest and the court clerk then enters that warrant into the JAWS system at that time.

b. Information on the warrant becomes immediately available to field deputies.

c. Verification

- When a Field Deputy does a warrant check on the subject, the warrant will be located in the JAWS system and the subject can be immediately arrested.

d. Confirmation of the warrant is not needed as the JAWS hit itself is confirmation that the warrant exists and provides the authority to book or release on citation.

e. Field Deputies will request that Communications contact the Records Unit to route a warrant abstract to the MDF and update JAWS.

f. If a JAWS warrant has been requested or served in error, the deputy making the request is responsible for having the warrant reactivated either by the Sheriff's Office Records Unit, or if a contract department, through their own department.

g. Outside (Out of County) Warrants

- In cases of an outside warrant, the Field Officer will need to have Communications confirm the warrant with the agency that is holding the warrant and obtain verification of an active warrant.
- The department that holds the warrant will then send the warrant abstract to the MDF or other location as requested by the field deputy.
- Prior to transporting the person for booking, the deputy will confirm that the identifying information contained in the warrant (name, date of birth, driver's license number, etc. and physical descriptions) match the person that has been detained.
- This comparison will be done in the field via dispatch or the patrol vehicle's MDC.

h. Due Diligence

- Due Diligence is documented by field deputies in the JAWS system.
- The deputy serving the warrant shall enter attempts to serve the warrant or updated information "due diligence" via the JWS1 screen or AIRES website on the MDC or station house computer terminal.
- Typing JWS1 on a blank screen brings up the Due Diligence screen.
- The Due Diligence information can then be entered by the deputy using the warrant number, the court case

number is the same number as the warrant number, the issue date of the warrant and the control number.

- The JAWS system will track and record all of a warrant's due diligence history and is available from station computer terminals and the MDC by using JWS2 screen and entering the warrant number.
- The JWS2 screen will also allow you to obtain other basic information on a JAWS warrant using the warrant number.
- The JAWS warrant system will allow you to run a subject using only a last name and first name. This is the only system that allows you to do this.
- You may also get a JAWS hit when you run a license plate if that plate is associated with a subject who has a JAWS warrant.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.47**
	RELATED ORDERS: None.	
ISSUE DATE: 11-08-2012 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Mobile Identification Device**	

I. POLICY

A. Office of the Sheriff personnel will use a Mobile Fingerprint Identification Device to obtain positive identification of people that we as law enforcement come into contact with during the course of an investigation. Deputies shall conform to this policy when using the Mobile ID Device.

II. DEFINITIONS

A. Mobile Identification Device (Mobile ID Device): A handheld scanning device that communicates with established fingerprint databases.

B. Blue Check: A Model of a Mobile ID device made by the vendor Cogent

C. AFIS: Automated Fingerprint Identification System

D. CAFIS: Cogent Automated Fingerprint Identification System (Current CCCSO Database)

E. DOJ NEC AFIS: The California Department of Justice AFIS system purchased from the vendor Nippon Electric Company (NEC)

F. IAFIS: Integrated Automated Fingerprint Identification System (FBI Database)

III. PROCEDURE

A. Because the process is more intrusive than a request for identification, a deputy using the Mobile ID device shall do so within the scope of this policy. Personnel must be sure not to violate a subject's protection under the 4th Amendment of the U.S. Constitution.

IV. TRAINING

A. Personnel shall receive training in the use and application of the Mobile ID Device prior to field deployment. Personnel shall also be issued a quick reference "User-Guide" for the device.

AUTHORIZED USE

B. The Mobile ID Device may be used in situations where a person gives a knowing and willing voluntary consent.

1. Prior to arrest or during a lawful detention, the Mobile ID Device may be used with the consent of a person under the following circumstance:

a. The officer has reasonable suspicion that a crime has just occurred or is about to occur and the person to be printed is believed to be connected with that criminal activity. The fingerprint won't "establish or nullify" someone's connection to the crime, the fingerprint will identify that person who is believed to be connected to the crime. Evidence or the lack of evidence will establish or nullify someone's connection to a crime.

b. The deputy has reasonable suspicion the person to be printed is subject to an arrest warrant and there is a justifiable and reasonable belief the fingerprint scan will establish or nullify the person's identity in the execution of the warrant.

c. The deputy lawfully detained the person, and has reasonable suspicion the person intentionally gave a false or fictitious name or date of birth to the officer.

d. If the officer has good cause to believe the person is a witness to a criminal offense and the officer has reasonable suspicion the person intentionally gave a false or fictitious name or date of birth to the officer.

2. Subsequent to an arrest, the Mobile ID Device may be used without the consent of an arrested suspect to:

a. Verify the identity of the person to assist the officer in determining the appropriate handling, transporting and routing of the individual

b. Obtain a person's fingerprints that are required in the execution of a valid search warrant

c. The deputy is going to cite a person for a California Vehicle Code violation (Misdemeanor or Infraction)

3. Reasonable force may be used to gain the suspect's compliance with the execution of the search warrant. A deputy shall use the least amount of force needed to execute the search warrant. A person's failure to comply may constitute contempt of court and failure to comply with the lawful order of a peace officer.

V. OTHER USE

A. When a subject is not in custody but is unable to give consent due to a medical condition and the confirmation of the subject's identity is in the best interest of public safety.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.48**
	RELATED ORDERS: None.	
ISSUE DATE: 04-08-2013 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Arrest and Contacts with Persons**	**SUBJECT:** **Identification and In-Field Show-up**	

I. POLICY

A. All members of the Patrol and Special Operations Division have a responsibility to identify individuals responsible for criminal acts.

B. Such identifications will be accomplished in a manner which ensures due process of the law, eliminates suggestiveness, and documents the process for use in court prosecution.

II. PROCEDURE

A. Identifications

1. Integrity of Identification

a. Officers conducting an identification process will do so in a manner which ensures that individual witnesses are not influenced by another witness. The following guidelines should be employed whenever applicable:

- Each witness will view the suspect out of the presence of other witnesses.
- Witnesses will not be allowed to discuss their observations with other persons who are to participate in a future identification process.

2. Maintenance of Neutrality

a. When presenting a suspect to an eyewitness for identification, officers will remain as neutral as possible, consistent with the continued secure custody of the suspect.

b. Officers will not suggest the correct identity of the suspect or make any suggestion, either verbal, through gesturing, or any other means which would influence a witness to identify a particular suspect

3. Recording Circumstances

a. The Officer will record the following circumstances when conducting any identification:

- Time and location
- Persons present
- How conducted
- Duration
- Statements of witnesses attempting the identification
- Other circumstances which may assist in determining the validity of the identification

B. In-Field Showup

1. A field show-up occurs whenever an officer arranges for a witness to view a suspect who is being detained in the field.

2. When conducting a field show-up, the investigating officer will ensure that the following elements are present and documented:

a. Time and Location

- The show-up should take place in the field and in a reasonable amount of time after the incident.
- An officer who detains a suspect pending a show-up should not move the suspect to a different location or conduct a full-scale search of the suspect unless cause exists to conduct such a search.

b. Witness Description

- The witness has described as completely as possible the appearance and clothing of the perpetrator.

c. Justification

- The person to be viewed reasonably matches the witness description and/or the circumstances surrounding the presence of such a person in the area is such that a field identification process is justified. Such justification is based on “reasonable suspicion.”

3. There are three exceptions to the general rule of "bring the witness to the suspect."

a. Probable Cause to Arrest - If an officer has probable cause to arrest the suspect, the officer may transport him to the witness for identification. (Rafael (1982) 132 Cal.App.3d 977.)

b. Consent - If an officer obtains the valid, voluntary consent of a detainee to move him to the witness for a show-up, the movement is lawful. (Ortega (1982) 135 Cal.App.3d 244.)

c. Impracticability - If it is impossible or impractical to bring the witness to the suspect, the courts will often permit the movement of the suspect to the witness.

- The Witness / Victim Is Injured or Incapacitated: If the witness is injured, it is clearly permissible to transport the suspect to the witness. (Hall (1979) 95 Cal.App.3d 299; Carlos M. (1990) 220 Cal.App.3d 372.)
- Availability of Officers Is Limited: If the detention occurs in an area where there are not enough officers to secure the scene, to chase other suspects, or to transport the witnesses, courts have permitted the immediate transportation of the suspect to the witness. (Gatch (1976) 56 Cal.App.3d 505.)

d. Searches - A suspect detained on reasonable suspicion should not be subjected to a "full" search until after positive identification is made at the show-up and the suspect is arrested. A lawful pat down search of a detained suspect for weapons is permitted if an officer has specific reasons to fear for his or her safety.

C. Photographic Identifications

1. A photographic identification occurs whenever an officer arranges for a witness to view a series of photographs, sketches, or composites in an attempt to identify the perpetrator of a criminal act.

2. A photographic identification may be conducted whenever one of the following circumstances is present:

   a. The nature of the offense, and/or investigative circumstances, indicate that a formal line-up is not appropriate.

   b. There is no known suspect, but the officer has a description which is similar to the photograph being shown.

   c. The unusual physical appearance of the suspect causes a lack of suitable person to use in a formal show-up.

3. When a decision is made to conduct a photographic identification process, the following procedures will be adhered to:

   a. The pictures will be arranged and displayed in a manner which does not attract undue attention to any one picture in the series.

   b. Sketches or compositions may be used whenever there is no photograph of the suspect available.

   c. When conducting a photographic identification, at least six photos, or facsimiles, will be used. .

4. Procedure After Positive Identification

   a. When a positive photographic identification is made, the officer conducting the identification process will preserve the photographic display, as viewed by the witness, for presentation in court at a later time.

   b. Such preservation will be accomplished by booking the display into evidence in accordance with established procedures.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Traffic Management

Contra Costa County Office of the Sheriff Patrol and Special Operations Division Policy and Procedure	PATROL	NUMBER: 3.01.49
	RELATED ORDERS: PC 1463.001; CVC 12500, 12501, 12502, 12503, 12504, 12505,12951a, 13353, 14601, 14601.1, 14602.6, 22651(k), 22669, 23152, 23153, 40001, 40002, 40003, 40004, 40005;AB 433.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 06-01-2015	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Traffic Management**	**SUBJECT:** **Traffic and Related Matters**	

I. POLICY

A. Unless assigned to traffic enforcement duties or a contract city, members of the Patrol and Special Operations Divisions will enforce sections of the California Vehicle Code on an as needed basis to maintain the safety of the community and to protect property.

II. PROCEDURE

A. OPERATING A MOTOR VEHICLE WHILE UNDER THE INFLUENCE

1. Deputies may encounter individuals who are operating a vehicle while under the influence of alcohol or drugs. When a deputy believes an individual is under the influence, the has a duty to act to protect the members of the public.

2. As part of their normal duties, Deputies assigned to contact cities will perform DUI Investigations when appropriate.

3. Deputies who are working in unincorporated areas will turn over DUI Investigations to the CHP (or agency with jurisdiction) once the deputy develops probable cause to believe the driver is impaired. The law enforcement officer responsible for evaluating impairment is the individual who should administer the Field Sobriety Tests (FSTs). If the investigation is to be turned over to the CHP, the deputy will request dispatch notify CHP of a "DUI Turn-over" and not administer FSTs. When a "DUI Turn-over" is done, deputies are responsible for authoring an "Outside Assist" report detailing their probable cause for the enforcement stop and their observations which led to the belief the driver was operating while impaired. This report will be completed prior to the end of the deputy's shift.

4. When an allied agency is unable or unwilling to respond, supervisors may ask contract city deputies respond to the location to perform the investigation.

5. Initial Responsibilities

a. Deputies should observe and note the following in their report as part of their initial investigation:

- **Vehicle Operation**. The critical factor in any DUI investigation is the driver's ability to operate their vehicle. Deputies should annotate observed CVC Violations (failure to maintain lane, failure to use lights at night, etc.) that create probable cause for the initial vehicle enforcement stop.
- **Initial Observations**. The initial observations of the deputy upon contacting the driver should also be noted. Deputies should pay attention to odors (alcohol or drugs), the present of alcohol containers or drug paraphernalia, and other indicators of alcohol or drug use within the vehicle.
- **Driver Actions**. The deputy should note the physical condition of the driver when initial contact was made. The speech of the driver, their inability to complete simple tasks (such as locating their license and vehicle registration), the physical appearance of their eyes and face, and their response to basic questions may all signal impairment.
- **Note**: Some medical conditions present signs/symptoms that are similar to alcohol intoxication. Prior to beginning a DUI Investigation, deputies should rule out possible medical causes.

6. Field Sobriety Testing

a. When a deputy develops probable cause to believe a driver is impaired and the responsible agency is unable to respond, the deputy should begin a DUI Investigation.

b. Certain conditions may restrict the ability to perform formal Field Sobriety Tests (FSTs). A driver who needs medical treatment, physically disabled, or who is extremely intoxicated may not be able to perform FSTs. In these situations, the deputy may be forced to determine impairment based upon their training and experience in handling intoxicated individuals.

c. Field Sobriety Tests (FSTs) determine the driver's ability to perform motor skills similar to those required in operating a motor vehicle. FSTs should be demonstrated and performed in a safe location, for both the deputy and the driver. Drivers should be afforded the opportunity to remove shoes or outer clothing (jackets) that may restrict their ability to properly perform the tests. Whenever possible, FSTs should be administered on a flat surface.

d. When possible, the driver's performance of FSTs should be annotated on a DUI Investigation Card at the time the tests are

administered. Those notes should be transferred later to the deputy's police report.

e. **Standard Field Sobriety Tests (SFSTs)**. The following tests are those that will commonly be used in DUI Investigations. Additional tests are authorized based upon the deputy's training and experience in administering those tests:

- **Walk and Turn**: In the walk-and-turn test, the driver is directed to take a specific number of steps, placing their feet heel-to-toe, along a straight line. The line should be visible (street marking or a line drawn by the officer). After taking the steps, the driver is instructed to turn on one foot and return in the same manner in the opposite direction. The deputy should looks for seven indicators of impairment: (1) Can the driver keep their balance while listening to the instructions; (2) The driver begins before the instructions are finished; (3) The driver stops while walking to regain their balance; (4) The driver does not touch heel-to-toe; (5) The driver uses their arms to balance; (6) The driver loses their balance while turning, and/or; (7) The driver takes an incorrect number of steps.

- **One-Leg Stand**: In the one-leg stand test, the driver is instructed to stand with one leg extended and that foot held approximately six inches off of the ground. The driver is then instructed to count aloud by thousands (One thousand-one, one thousand-two, etc.) until told to put their foot down. The deputy times the subject for a 30 second time period. The deputy looks for four indicators of impairment: (1) Swaying while balancing, (2) Driver uses their arms to balance; (3) The driver hops to maintain their balance, and; (4) The driver puts their foot down during the test.

- **Horizontal Gaze Nystagmus (HGN)**: Horizontal gaze nystagmus is the involuntary jerking of the eyeball which occurs naturally as the eyes gaze to the side. Under normal circumstances, nystagmus occurs when the eyes are rotated at high peripheral angles. However, when a person is impaired by alcohol, nystagmus is exaggerated and may occur at a reduced angle. An alcohol-impaired person will also often have difficulty in smoothly tracking a moving object. In the HGN test, the deputy observes the eyes of the driver as they follow a slow moving object (such as a pen or small flashlight), horizontally with their eyes. The deputy looks for three indicators of impairment in each eye: (1) If the eye cannot follow a moving object smoothly; (2) If jerking is distinct when the eye is at maximum deviation, and; (3) If the angle of onset of jerking is within 45 degrees of center.

- Field Sobriety Testing normally includes these three tests. An optional fourth test that can be administered is the

  Romberg Test: In the Romberg Test the driver is asked to stand straight with their feet together, their arms at the side and to remain in this position until told to start the test. When told to start, the driver begins the test by tilting their head back fully, close their eyes, and estimate 30 seconds while remaining in this position. Once the driver think 30 seconds has passed, they should bring their head forward, open their eyes and say "stop." The deputy looks for sway side-to-side and front-to-back. The officer also notes how long the driver's estimation was really.

7. Arrests and Detentions for DUI

   a. Should circumstances arise which prevent the turn-over of the investigation of a suspected drunk driver as mentioned above, Patrol members will adhere to the following procedures:

      - Conduct the field sobriety tests listed in 3.a.
      - Advise the suspect of the requirements to submit a breath or blood test per VC 23612 (Implied Consent Law).
      - Complete DMV Form DS 367.
      - Write a crime report and a fill out a DUI supplement.
      - Transport the suspect to the Main Detention Facility, for chemical testing and to complete the booking process.
      - Appropriately store all associated evidence.

   b. **NOTE**: Deputies will utilize good judgment when making a DUI arrest, considering the time involved and the absence of a unit in the beat.

      - The Deputy must eliminate any danger to the public before clearing the scene.

   c. Should the arrest involve a juvenile, deputies will follow the same general procedures. Juveniles should be cite released to a parent or guardian, unless the DUI arrest results in a felony charge.

   d. Arrests occurring within a contract city for DUI will be handled to completion by the investigating deputy.

   e. In the event the driver is being arrested and booked on additional charges, deputies will not request a C.H.P. unit or other agency respond, but will handle the arrest themselves.

8. Disposition of Arrestee Vehicles

a. The arresting deputy will advise the arrestee of the following options regarding his/her vehicle:

- Secure and lock the vehicle at the scene (legally parked).
- Release the vehicle to another person. (Note sobriety of other person prior to releasing the vehicle.
- Tow and store the vehicle.

b. Whatever the disposition, deputies should check the vehicle for the presence of physical evidence related to the arrest.

B. TRAFFIC CASES

1. When responding to an accident that involves a driver who may be under the influence, deputies will:

a. Determine Involvement. When a driver is suspected of being under the influence following a collision, the investigating deputy is required to establish that the person was driving at the time the accident occurred before an arrest can be made.

b. Conduct an Investigation. Traffic accidents involving a suspected drunk driver who causes injuries to others (not themselves) will be handled as any other felony investigation, to include:

- When the driver is conscious, a blood sample will be obtained using necessary force if the driver refuses. A search warrant is required.
- When the driver is unconscious a blood sample will be obtained without consent when a search warrant is obtained. .
- Impound of the suspect vehicle.
- Thoroughly photograph the of accident scene.
- Collect evidence that shows the driver was impaired at the time of the collision. This may include empty beer bottle, drug paraphernalia, etc.
- In all arrests for felony drunk driving, the area supervisor, station commander or O.D. will be notified.

2. Other traffic related incidents

a. Deputies assigned to other traffic incidents (hit and run, vehicle/pedestrian, etc.) involving persons suspected of being DUI will process the incident in accordance with this manual section.

C. DRIVING UNLICENSED, OR WITH A SUSPENDED OR REVOKED LICENSE

1. When violations of this nature are encountered, to include Section 12500 C.V.C., Unlicensed driver:

   a. No crime report will be required for 12951a, 12500a, or 14601 C.V.C. violations when a driving or mechanical offense is also listed upon the citations (PC for the stop). If a CVC Section is not used to determine PC for the stop, a repot is required.

   b. The citation will be routed to the Misdemeanor Complaint Deputy.

2. The Patrol Sergeant, Station Commander/Contract Manager or Watch Commander must approve physical arrest in 14601 C.V.C. cases.

   a. The arresting deputy will complete an arrest report and a probable cause declaration when the driver requires booking.

3. The Misdemeanor Complaint Deputy (upon receipt of a citation involving licensing) will review the citation and determine the appropriate Vehicle Code section to charge.

   a. The citation will be sent to either the appropriate court, the District Attorney's Misdemeanor Complaint Desk, or Juvenile Probation.

D. PARKING ENFORCEMENT-UNINCORPORATED AREA

1. In the unincorporated areas where control of parking has been established and posted by County Ordinance, enforcement is the responsibility of salaried Sheriff's Cadets, or Student Workers.

   a. Beat deputies may enforce parking regulations when necessary.

2. Violations of parking regulations will be cited as appropriate.

   a. Section 22500 A-K, 22500.1, 22502a, 22514, 21113a, C.V.C.

      - Denote parking violation on citation (i.e., no parking zone, overtime parking in two-hour zone)

   b. Section 22507.8, 22522 C.V.C. or violations involving handicapped zones.

      - Vehicles registered to disabled persons will bear a distinctive license plate or have a current blue placard visible within the vehicle

      - Note: When citations are issued for failing to display a placard, a photograph should be taken. The photos should show the lack of a placard, the positioning of the vehicle in the stall and the presence of both sign and ground markings.

3. The parking citation for the appropriate jurisdiction will be used when issuing parking citations (Crocket in Crocket, Diablo in Diablo, etc.).

E. OWNER RESPONSIBILITY VIOLATIONS

1. Patrol and Special Operations members will adhere to the following guidelines regarding violations which are the responsibility of the vehicle owner:

    a. If the violation involves an equipment violation only and the driver is not the registered owner, the deputy will obtain information relative to the owner.

        - The driver will not sign nor be given the defendant's copy (pink).
        - The deputy will write "owner's responsibility-40001 C.V.C." in the signature block.
        - EXCEPTION: If the driver cannot provide information regarding the identity of the registered owner, the driver will be directed to sign the citation and given the defendant's copy.
        - The issuing deputy will forward the defendant's copy of citation to the Patrol Clerical Staff for mailing to the registered owner.
        - If both moving and equipment violations, are involved, separate citations will be issued.

    b. In cases where a vehicle has changed ownership between parties and the driver claims ownership, but cannot provide registration to substantiate ownership, the citation will be given to the driver.

        - Note the date of change on ownership as claimed by the driver, and cite current owner for appropriate CVC Section if beyond the time allowed to notify DMV of change of ownership.

F. 72 HOUR VEHICLE CHECK/PARKING WARNING NOTICES

1. The lower half of the Vehicle Check/Parking Warning Notice must be removed and forwarded to the Patrol Clerk for future revenue collection by the Sheriff's Office (Vehicle Abatement Program requirement). .

G. CITATION AND REPORT REQUIREMENTS

1. P.C. 1463.001 allows police districts to receive revenue from all court-imposed fines.

    a. This revenue is derived from any fine imposed by the court when disposing of traffic, misdemeanor, and felony cases.

    b. When citations are issued in specialty districts and a unique citation is not provided or available, deputies will change the numbering of the citation to reflect the correct special district. This can be accomplished on both moving and parking citations.

    c. When modifying the citation, the deputy simply lines through the agency code on the citation and writes in the appropriate agency code on the citation.

        Agency Codes

20 - CCCSO	24 - P-1 (Crockett)	28 - AC Transit
78 - Orinda	81 - P-5 (Roundhill)	40 - Lafayette
33 - Danville	83 - P2A (Blackhawk)	86 - Diablo

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.50**
	RELATED ORDERS: CVC 2454; PUC 8226, 8227, 7678, 7679, 7680, 7681	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Traffic Management**	**SUBJECT:** **Response to Railroad Incidents**	

I. POLICY

A. Patrol and Special Operations Division will assist and cooperate with railroad police in unincorporated areas of the county when notified that an incident with a train has occurred. This section also applies to assistance provided to officers of the Bay Area Rapid Transit System (BART).

B. Deputies will respond to assist in the protection of life and property, scene control, preliminary investigation and collection of evidence.

C. Response will be coordinated to ensure that the incident is resolved and that the community's welfare and safety is restored.

D. Whenever called upon deputies will provide the necessary assistance to ensure that a complete and accurate investigation is conducted.

II. GENERAL INFORMATION

A. EMERGENCY CONTACTS

1. Burlington Northern and Santa Fe Railroad Police Topeka, Kansas
   a. 1-800-832-5452 will call all other necessary contacts
2. Union Pacific Railroad
   a. (24 Hr. Hot Line) Emergency Only 1-888-877-7267
   b. Signal Operations - 1-800-848-8715
3. Calif. Public Utilities Commission-Railroad Operations & Safety Section, Hazardous Spills or Releases (OES)
   a. 24-Hour Number 1-800-852-7550
4. Bay Area Rapid Transit, Oakland
   a. 510-464-7000
5. State Warning Center (CALOES) (24 hr.)
   a. 916-845-891

To activate an emergency call out for an incident involving a train, the responding deputy (with supervisor's approval) will contact the State Warninnig Center (CALOES).

- OES will then contact the Public Utilities Commission who will assist in the investigation of the incident.

III. PROCEDURE

A. PROVIDE A SITUATIONAL ASSESSMENT / ESTABLISH A COMMAND POST

1. The first Deputy at the scene of a railroad incident will assume the duties of the Incident Commander until relieved.
2. The first Deputy will immediately notify dispatch of the following:
    a. Type of train involved (passenger/cargo/tanker)
    b. Size of the involved area
    c. Types of vehicles/structures involved
    d. Location of staging areas and landing zones (if needed).
    e. Determine the jurisdictional area
    f. Report additional hazards
    g. Additional resources that are required
    h. Location of the Command Post (CP).
3. Deputies and Supervisors should consult the Field Operations Guide (FOG) for checklists involving the management of rail incidents.

B. PROVIDE EMERGENCY FIRST AID TO THE VICTIMS

1. Providing care and aid to those that have been injured is a priority.
    a. The injured must receive the highest priority therefore; the first arriving deputy will ensure that the victim receives emergency first aid and further medical care as necessary.
    b. This task may be delegated to other competent persons or deputies, but the responsibility to ensure this task is accomplished remains with the first arriving unit or until the scene is turned over to the appropriate investigating agency.

C. NOTIFY COMMUNICATIONS AND REQUEST ASSISTANCE FROM JURISDICTIONAL AGENCY IN CHARGE

1. The initial responding deputy will attempt to identify which rail company is responsible for managing the incident.
2. Notifications to be made include the railroad police with jurisdiction, the Public Utilities Commission via OES, and CHP/Coroner if appropriate.
3. The railroad has the responsibility to report incidents to the Federal Railroad Administration per the Federal Code of Regulations.

D. DETERMINE THE NATURE AND CIRCUMSTANCES OF THE INCIDENT

1. The first deputy arriving at the scene has the additional responsibility to conduct a preliminary interview of appropriate persons at the scene.

2. The purpose of this preliminary interview is to obtain as much information as quickly as possible.

    a. Persons to be interviewed include the victim, the person reporting the incident, the train crew, and any other witnesses to the incident.

E. PROTECTION OF THE SCENE

1. The railroad emergency scene shall be protected as a crime scene until it is determined no crime occurred.

2. When practical, deputies dispatched to the scene will ensure that the area is protected so that physical evidence located in the area remains in the same physical condition.

3. Protection of the scene may require closing the perimeter of the scene and securing the train.

    a. The extent of the protection necessary will be established by observing the entire scene and determining the extent of the emergency scene area where items of evidentiary value may exist.

4. If the incident involves a hazardous material situation follow policy and procedures contained in the field manual for hazardous material incidents.

F. INFORM FOLLOW-UP PERSONNEL

1. Deputies will document their response to an emergency train scene and will inform the appropriate jurisdictional investigator of witnesses/suspects detained, evidence found and all other information regarding the case, which may be helpful in achieving a successful investigation of the incident.

2. The deputy will complete an outside assist report to include:

    a. Time of notification and arrival on scene.

    b. Time of notification to investigative agency (railroad/CHP).

    c. Time OES was contacted and requested to notify the Public Utilities Commission.

    d. Location of the scene.

    e. Summary of incident and statements if any.

3. Copies of the report are to be routed to the investigating railroad police, the Public Utilities Commission, and the Federal Railroad Administration.

Contra Costa County Office of the Sheriff Patrol and Special Operations Division Policy and Procedure	PATROL	NUMBER: 3.01.51
	RELATED ORDERS: PC 503; CVC 10500, 10501, 10502, 10851, 22651, 22653, 22655, 22658, 22669, 22670, 22850, 22851, 22852, 22853, 22854, 22855, 22856, 42002; County Ordinance 46-4.004. Brewster v. Beck, 2017	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 08-29-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Traffic Management**	**SUBJECT:** **Stolen, Embezzled, Recovered, Impounded or Stored Vehicles**	

I. POLICY

A. Patrol and Special Operations Division personnel will process and handle stolen, embezzled and impounded vehicles in a professional manner that maintains the proper chain of evidence.

II. DEFINITIONS

A. Vehicle: A device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.

III. PROCEDURE

A. STOLEN VEHICLES

1. Agency Jurisdiction

a. The California Highway Patrol has primary responsibility for taking the initial report and completing the subsequent investigation of stolen vehicles in the unincorporated area of the County, except when:

- The vehicle was taken as part of a Burglary or Grand Theft when other items were also taken.
- The theft of the vehicle is incidental to the theft of its cargo (i.e., furs, money, merchandise).
- The theft occurred within the boundaries of an incorporated city, which contracts for police services from the Sheriff's Office.

b. If there is a conflict as to what agency will handle a stolen vehicle report that cannot be resolved by the field supervisor, the Sheriff's Deputy will complete the initial report and submit an interoffice memo to the Station Commander outlining the circumstances of the conflict.

- Jurisdiction will be resolved at that level or higher.

2. Report Format

   a. A Crime Report must be completed, along with a "Stolen Vehicle Report" form.

   b. Deputies are required to obtain the signature of the registered owner, or if they are unavailable, the person reporting the incident upon the Stolen Vehicle Report Form.

   c. The "Stolen Vehicle Report" will be scanned and attached to the report, along with a copy of the vehicle registration.

   d. The crime report must also include the date and time a BOLO was issued and who requested the BOLO.

3. BOLO Request

   a. After informing the field supervisor, the assigned deputy will provide the vehicle description and suspect information to communications and request a BOLO if the theft occurred recently.

   b. The deputy will provide additional information as necessary for the stolen vehicle to be entered into the Stolen Vehicle System (SVS).

   c. The deputy will obtain a File Control Number from Communications.

      - The File Control Number must be listed on the "Stolen Vehicle Report" form.
      - A copy of the FCN printout will be attached to the deputy's report
      - Supervisors will review the FCN entry and the original report to verify the accuracy of the information entered and that the entry information is supported in the original report.

4. Unreported Stolen Vehicles

   a. When a vehicle is recovered that the deputy believes has been stolen, but has not yet been reported stolen, the deputy will attempt to contact the registered owner of the vehicle to confirm whether their vehicle has or has not been stolen.

      - If necessary, this contact may be made through dispatch by having an allied agency check with the registered owner.

   b. If the vehicle is determined to be an unreported stolen vehicle, the agency with jurisdiction over the location where the vehicle was stolen will be asked to complete a stolen vehicle report. The agency will be asked to enter the vehicle into SVS as a Stolen Vehicle.

c. In situations where the registered owner may be present at the recovery location, the assigned deputy may take the report as an outside assist, having the victim sign the Stolen Vehicle Report Form.

B. EMBEZZLED VEHICLES

1. Patrol or Special Operations Division deputies will conduct the initial investigation of all cases involving an embezzled vehicle.

2. An "Embezzled Vehicle Report" form will be completed and a signature of the registered owner, legal owner or representative if owned by a corporation will be obtained.

a. Copies of rental agreements will be attached to the report if available.

3. Embezzled vehicles will only be entered by Investigations personnel once an arrest warrant is secured.

C. RECOVERED STOLEN OR RECOVERED EMBEZZLED VEHICLES

1. Agency Jurisdiction

a. Deputies will handle recoveries under the following circumstances:

- The recovered vehicle is directly related to another offense also under investigation by the Sheriff's Office.
- The suspect(s) arrested are also arrested for crimes other than the stolen vehicle (i.e., possession of narcotics).
- The Lo-Jack system was used to locate the stolen vehicle.
- The vehicle was reported stolen by an agency other than the California Highway Patrol.
    - CHP may respond in most cases even when they are not the original reporting agency.
    - The California Highway Patrol's stolen vehicle cases will be recovered by the California Highway Patrol.

2. Report Format

a. Deputies will complete a "Recovered Vehicle Report" form on all recovered vehicles.

b. A new case file number will be requested only if the report originated through another agency.

c. If the Sheriff's Office is the originating agency, the original case file number will be used (this is a supplement to our original report).

d. If the vehicle is stored or impounded, a duplicate form will be given to the Tow Company Driver.

e. If the vehicle is returned to the owner the crime report must properly identify the owner.

f. The PF-9 Form must be faxed and/or e-mailed (TOWCLERK) to the Patrol Clerk on all impounds, stored vehicles (CHP-180 copy attached).

3. Notation of Time on scene

a. The recovering deputy(s) will note their time of arrival on scene; time at scene processing the recovery, and the time the scene was cleared on the PF-9 or in the written report.

b. The total elapsed time will be noted even when another agency is called and responds to take the recovery.

- Total elapsed time is used to compile a record of total Sheriff's Office expenditures in processing vehicle recoveries and submitting a claim for revenue reimbursement from the State of California.
- When more than one deputy is needed in the vehicle recovery, the elapsed times of each deputy on scene is noted and the total time for all involved will be documented in the written report.

4. Estimation of Vehicle's Value

a. The recovering deputy will note the estimated value of all recovered vehicles.

- This estimation will be on the last line of the report and should read "estimated value at recovery" followed by a dollar figure.
- This provides necessary information that is tabulated and reported to the State of California.

5. Notifications

a. The recovering deputy will request dispatch "LOCATE" the vehicle in the Stolen Vehicle System (SVS) and remove it from the system.

- At this time, dispatch must immediately notify the originating agency of the stolen vehicle recovery.

b. CVC 10500 specifies that the original reporting agency, upon receipt of the information from the recovering agency, shall immediately attempt to notify the reporting party by telephone, if available, of the location and condition of the recovered vehicle.

c. If the reporting party's telephone number is unknown, or notification attempts were unsuccessful, the original reporting agency shall notify the reporting party by placing, in the mail, a notice providing the location and condition of the recovered vehicle.

- This written notice shall be mailed within 24 hours of the original reporting agency's receipt of the information of the recovery of the vehicle, excluding holidays and weekends.

6. Recovered 10851 vehicles where Sheriff's Office/Contract Cities are the Reporting Agency and the Recovering Agency:

   a. The deputy will have dispatch "LOCATE" the vehicle in the system and request dispatch attempt to telephone the owner immediately.

   b. If the owner is contacted and can respond to retrieve the vehicle (if it is drivable) in a reasonable time, the deputy will stand by and release the vehicle to the owner with proper ID.

   c. If the vehicle is Lo-Jack equipped, the deputy will not release it until the transponder has been deactivated.

   d. The deputy will have the owner sign Form PF#9 taking possession of the vehicle.

   e. Prior to releasing the vehicle, the deputy will ensure the stolen vehicle entry has been removed from the vehicle.

   f. If dispatch is unable to make phone contact or leaves a message, the deputy will document this information on the recovery form.

7. Outside agency makes recovery of Sheriff's Office/Contract Cities 10851 and sends a locate message which is received at the main CLETS terminal located in Services Division (warrant desk):

   a. Support Services Division personnel shall, upon receipt of 10851 messages, immediately re-route the LOCATE messages to the following two terminals:

      - PIC5 - Patrol Division Vehicle Clerk
      - CDS1 - Communications Supervisor

   b. Dispatch, upon receipt, shall locate through CAD/RMS, the beat that the original report was taken in.

   c. Dispatch will attempt telephone contact of the victim/RO.

   d. Dispatch will detail the beat deputy to write a Supplemental Report regarding notification.

      - This report will be routed to the Patrol Vehicle Clerk.

   e. In those cases, where the owner responds immediately to claim their vehicle, the vehicle will be processed by the deputy for physical evidence.

8. Evidence Processing

   a. Deputies will process the recovered stolen vehicle for evidence such as fingerprints, evidence of other crimes or items left in the vehicle by the suspect.

b. If the recovered stolen vehicle was involved in a major felony, place a hold on it for more comprehensive processing by the Crime Lab.

- Document on the tow form that Crime Lab personnel will be processing for evidence.
- Check with the Patrol Sergeant prior to requesting the Crime Lab.

9. Disposition of the Vehicle

a. Impound

- Vehicles will only be impounded with the approval of a field supervisor.
- Vehicles impounded for allied agencies will be billed to the originating agency. Deputies shall notify the tow truck driver of this and annotate this on the PF-9 Form.

b. Release to Owner

- If the owner is responding to recover the vehicle the deputy will make every effort to stand by until the owner arrives.
- The recovering deputy will not release impounded vehicles to the owner.
- Vehicles from cases originating with another agency may not be released without a release form the originating agency.
- Vehicles from Sheriff's Office cases may be released to the owner by the investigator assigned to the case if they have been processed for evidence.

c. Tow and Store

- All other vehicles will be "Towed and Stored" unless the owner explicitly tells the recovering deputy to leave the vehicle at the scene.
- This will be noted in the crime report. All Routine tows will utilize the rotational tow system.

D. LO–JACK STOLEN VEHICLE RECOVERY NETWORK (SVRN) GUIDELINES

1. NOTE: SVRN guidelines do not change existing policy regarding jurisdiction, or reporting as outlined in this policy.
2. The procedure outlined in this policy applies only to stolen vehicle tracking situations, using the Lo–Jack system.
3. Once deputies have identified and are actively following a stolen vehicle, existing policies and procedures involving jurisdiction, tactics, follow-up responsibilities, etc. shall apply:

a. Equipment

- When assigned to a vehicle equipped with the Lo–Jack system, deputies shall ensure that the equipment is turned “on” during their tour of duty.
- When the Lo-Jack system is found to be inoperative, deputies will write the vehicle up for repairs.

b. Activation Signal

- An SVRN activation signal will appear as a five-digit code on the Vehicle’s Lo-Jack display when the deputy is in range of an equipped stolen vehicle.
- The codes for stolen vehicles may be any combination of letters and numbers.

c. Tracking

- Upon receiving an activation signal from a Lo-Jack equipped stolen vehicle, deputies shall:
  - Conduct a query of the Lo-Jack code via the Mobile Data Computer Type “JACK” on a blank screen and hit enter, a mask will appear, enter the required information and send or have dispatch conduct the query for you.
- Notify dispatch (give them the 5 digit Lo-Jack code) and request that they broadcast descriptive information about the stolen vehicle.
- This will ensure vehicles not equipped with the Lo-Jack system are advised of the tracking activity, location and pertinent information about the stolen vehicle.
- Request the helicopter if necessary.
- When deputies receive an activation signal from a vehicle outside county jurisdiction, or when a vehicle being tracked leaves county jurisdiction, deputies shall:
  - Notify dispatch to contact the appropriate jurisdiction.
  - Notify their immediate supervisor.
  - Request the helicopter if necessary.
  - Continue to track the vehicle unless otherwise directed by a supervisor, or the track is taken over by the agency with jurisdiction.
  - NOTE: When another agency takes over a tracking, it is very important that the outside agency and the Office of the Sheriff communicate their intentions with one another.

- Tracking jurisdiction will be in command of the tactical situation and subsequent follow-up responsibilities (i.e. arrest, disposition of the vehicle, booking, reports etc.).
- Supervisors will monitor and ensure that S.O. units are either in command of a tracking or merely assisting an outside agency.
- All jurisdictional concerns shall be referred to a supervisor.

- When deputies become aware of a vehicle being tracked within their area by an outside agency, deputies shall:
  - Notify dispatch to ensure the information is broadcast.
  - Notify a supervisor.
  - Request the helicopter if necessary.
  - Assist the other agency when requested or directed by a supervisor.
- Upon receiving an activation signal from a vehicle that appears to be radiating from within a building or other enclosed area, deputies should contact their supervisor, property crimes detectives or C.H.P.
- As a general rule, a search warrant should be obtained. A deputy's probable cause for the search warrant is the activation of the transponder, which gives the 5 digit code and subsequent verification of the stolen vehicle information.

d. Vehicle recovery

- Upon recovering a transponder equipped stolen vehicle, deputies shall broadcast the information to other units in the area, adjacent areas, or outside jurisdictions as necessary as outlined in this policy.
- Deputies should be aware of the potential problems that could occur if a recovered vehicle is still transmitting an electronic signal after being towed or released to an owner.
- NOTE: Deputies shall not release a recovered vehicle to the vehicle's owner as long as an electronic signal is still being transmitted.
- In such cases, deputies shall contact dispatch, or request their supervisor to contact dispatch to ensure the vehicle is reported and entered into the system as recovered.

e. Supervisor's responsibilities

- When advised of a SVRN (Lo-Jack) activation signal, and when practical, a supervisor should respond to the tracking incident.
- A supervisor shall respond to all tracking instances involving, or potentially involving outside agencies.
- During SVRN activation, supervisors shall consider area workload, traffic conditions, and strength of SVRN signal. In addition, supervisors shall ensure the following:
  - Proper tactics are employed.
  - A minimum number of units are used to track the stolen vehicle.
  - Descriptive information about the stolen vehicle is broadcast to non Lo-Jack equipped vehicles.
  - The helicopter is requested if a moving vehicle has not been located within a reasonable time after the signal has been detected.
  - Affected outside agencies are notified in cases in which a transponder equipped vehicle leaves county jurisdiction.
  - The unit or agency handling is clearly communicated.
  - Recovery information on transponder equipped stolen vehicles is broadcast to other units in the area, adjacent areas or other jurisdictions when needed.
- Recovered vehicles are not to be released to vehicle owners until the vehicle's transponder has been deactivated.
- Ensure that transponder equipped vehicles being towed/stored/impounded have been deactivated.

E. IMPOUNDED VEHICLES

1. Patrol and Special Operations deputies will not impound vehicles unless they are involved in serious incidents and are of evidentiary value or when requested to do so by an outside agency (the Tow Driver will be advised of the agency requesting the impound, so the tow will be properly billed).
2. All impounds must be approved by the field supervisor.
3. When a vehicle is involved in one or more of the following circumstances, an impound tow may be appropriate.

   a. Homicides

b. Traffic fatalities

c. Other fatal incidents involving the vehicle

d. Other serious felonies involving the vehicle

4. Impounds will not be brought to the impound storage yard at [redacted] unless authorized specifically by the Crime Lab. The Muir Station Sergeant, Dispatch Supervisor and Watch Commander will maintain a key to the yard.

a. After receiving Crime Lab approval for an impound to be stored and processed at Suite "C", the vehicle may be towed to the location.

b. If Crime Lab personnel are not immediately available to respond to and allow access to Suite "C", they may contact the Muir Station Sergeant or Watch Commander to disarm the vehicle bay and open the garage door.

c. It shall be the responding authority's responsibility to ensure that suite "C" is properly secured after the vehicle has been placed in the garage.

d. The following two companies will handle all impounded vehicle tows. [redacted]

5. Report Format

a. The deputy impounding a vehicle will complete an "Impounded Vehicle Report" form.

b. The case number should be the same as the original case number if it is a Sheriff's Office case.

- Additional cases should be cross-referenced on the "Impounded Vehicle Report" form.

c. The field supervisor must review the report.

6. Evidence Handling

a. If ignition keys are taken as evidence they will be tagged and placed into the evidence lockers at Muir Station Evidence.

b. A card will be placed on the dash of the impounded vehicle stating the Case #, Date, Time and deputy's name impounding the vehicle.

F. TOWED OR STORED VEHICLES

1. Any time a vehicle is towed and stored a "Stored Vehicle Report" form will be completed.

2. Crime Classification

a. The crime classification will be the crime for which an arrest is made, or the probable cause for the vehicle stop, or other appropriate code from the "REPORT DESCRIPTIONS/DETAIL LISTINGS" booklet.

- It should not be listed as “Towed Vehicle.”

3. Inventory

   a. The deputy will conduct a complete inventory of the vehicle.

      - This should include any closed container whose contents cannot be determined by the exterior of the container and which may contain any items of value.

4. Authority to Tow

   a. The deputy will list their authority to tow the vehicle in the box titled "Storage Authority."

      - If more than one storage authority applies the deputy will list the most appropriate one first, other authorities that apply should be listed in the body of the report.

5. Tow Hearings

   a. A tow hearing will be held to determine the legality of the storage of a vehicle at the vehicle owner’s request. A Patrol Supervisors will conduct a tow hearing in accordance with Vehicle Code Section 22852 for persons requesting a release of impounded vehicles.

   b. The registered owner of the stored vehicle must submit a request for a tow hearing upon receiving the Notice of Stored Vehicle. The request for a hearing may be submitted in writing, by phone or in person.

   c. Tow hearings must be completed within 48 hours of the request of the registered owner, excluding weekends and holidays.

   d. The citizen requesting the hearing must present the patrol supervisor with a valid driver’s license, valid vehicle registration, proof of insurance and legal ownership of the towed and stored vehicle.

   e. Upon verification of all required documentation, the Patrol Supervisor will immediately waive the 30-day hold and release the vehicle to the legal owner.

      - The supervisor may refuse to release vehicle only when a warrant is obtained to continue law enforcement’s possession of the vehicle, or an agency can articulate facts to support an exception to the warrant requirement. (Brewster v. Beck, 2017).

6. Vehicle Release

   a. All Sheriff’s Office vehicle impounds or tows require a signed released (PF-9), also referred to as a CHP 180, prior to the owner or authorized agent taking possession of vehicle from the applicable tow company.

   b. Vehicle releases can be signed by any sworn employee or FOB administrative staff.

c. Original tow forms are kept on file at the FOB, in the front office.

d. The owner of the vehicle to be released must provide the following documentation:

- Possess a valid driver license – and present photo identification. If the owner does not have a valid driver license, they must bring a valid driver to obtain a release.
- Show proof of insurance for the vehicle.
- Possess a valid registration (verifiable through DMV).
- If the owner does not possess a valid registration, but has paid the fees and are waiting to smog the vehicle, they must first obtain a One-Day Trip Permit from DMV prior obtaining a Sheriff's Office release.

e. An agent representing the legal owner (i.e. a financial institution) of the vehicle can obtain a release upon presenting proper paperwork showing authorization.

f. The Sheriff's Office employee authorizing the release is responsible for faxing the signed release to the applicable tow company immediately after the completing the release.

G. VEHICLE LICENSE PLATES

1. Stolen Plates

a. If both plates are missing the deputy will complete a "Stolen Plate(s) Report" form.

b. Request dispatch enter the plate number into AutoStats and obtain a File Control Number.

- This "FCN" number will be placed on the "Stolen Plate(s) Report" form.

c. If only one plate is missing the incident will be handled as a lost plate unless witnesses or evidence indicate the plate stolen.

d. A copy of the FCN printout will be affixed to a "C" page and included with the original report.

e. Supervisors will review the FCN entry and the original report to verify the accuracy of the information entered and that the entry information is supported in the original report.

2. Lost Plates

a. If only one plate is missing and there is no evidence of theft the citizen will be advised to contact the Department of Motor Vehicles to report the lost plate.

3. Recovered Plate(s)

a. Request Dispatch run the plate to determine if it is stolen.

- If it is stolen have it removed from the system as recovered and complete a "Stolen Plate(s) Report" form.
- Indicate if one or both plates have been recovered.
- If the original case is a Sheriff's Office case write a supplement.

b. If it is not, then a case file number must be drawn.

c. The "Stolen Plate(s) Report" form may suffice as the entire crime report if all the information concerning the recovery can be put on the form.

d. A field supervisor must review this form.

e. If the plate has not been entered into the system as stolen, then simply return it to DMV or send the plate to the Field Operations Bureau and have it placed in the box marked DMV – LICENSE PLATE RETURNS in the Muir station evidence room.

- The deputy shall document their actions by completing the appropriate report form(s).
- Do not send found property license plates to the Central Property room or book them as evidence.

H. MOPEDS, MINIBIKES AND MOTORSCOOTERS

1. Vehicles in this category that are impounded, stolen, recovered, stored, or found abandoned will be handled as evidence or found property.

   a. Exceptions: If a DMV license plate is attached, or the Vehicle has a VIN number that has been registered with DMV.

2. Motorcycles over five horsepower do not fall in this category, even if the motorcycle does not have an engine attached at the time of the report.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.52**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Traffic Management**	**SUBJECT:** **Injury and Major Protocol Accident Call Out Team (I.M.P.A.C.T.)**	

I. POLICY

A. The primary purpose of the Injury and Major Protocol Accident Call Out Team (IMPACT) is to conduct and/or assist in the investigation of vehicle collisions involving fatalities, life threatening injuries, or other incidents when directed.

B. Members of the IMPACT Team may be used to perform forensic mapping for non-traffic related events when authorized by the on-duty manager.

C. IMPACT services are a resource of the Office of the Sheriff and participating agencies. Any outside request for IMPACT services will be handled as mutual aid request through the Emergency Services Division.

II. GENERAL

A. TEAM MEMBERS

1. The IMPACT Team shall be comprised of staff members who have specialized collision investigation training.

2. IMPACT Team members do not have to be assigned to the Patrol or Special Operations Divisions, but their assignment must be approved by the Special Operations Division Commander.

3. As a minimum, members must have completed advanced traffic investigation training.

4. The team will maintain at least one member who has completed training in traffic collision reconstruction.

5. One Sergeant from each participating agency will be assigned to the team and assume the title of IMPACT Team Leader for that agency. Ideally, when an incident occurs in a participating agency, that supervisor should coordinate the activities of the IMPACT Team.

6. Civilian support staff who have received specialized training in the collection of evidence, crime scene photography, and the operation of the Forensic Mapping System, may also be assigned to the IMPACT Team. Their primary function will be to serve as support personnel, assisting the

primary investigating officer with various tasks associated with the collection and diagramming of evidence.

7. One IMPACT Team Supervisor will be designated to serve as the IMPACT Team Administrator. The administrator is responsible for maintaining a current member roster containing the names and contact phone numbers (work, home, cell) for all team members. A copy of the roster will be provided to all Team Leaders and Sheriff's Office Dispatch to help facilitate call-out notifications.

8. The Administrator will also be responsible for generating an After Action incident report, documenting the nature of the call-out, location, personnel, and equipment involved in the call-out.

III. PROCEDURE

A. CALL-OUT PROTOCOL CRITERIA

1. An IMPACT call-out should be considered when:

   a. A collision results in death, a life-threatening injury, or a severe incapacitating injury to any person.

   b. The collision itself is a felony crime.

   c. A complex crime scene needs to be documented and can best be done using the Forensic Mapping Tools used by the IMPACT Team.

   d. A collision resulting in a severe incapacitating injury to any person, and involving one of the following types of vehicles:

      - A public or private transportation vehicle, other than a school bus.
      - An on-duty emergency vehicle.
      - Any government vehicle.

   e. A supervisor believes there may be implied municipal liability.

   f. A supervisor believes the circumstances warrant a call-out.

   g. A request is made by an outside agency and approved by the Patrol or Special Operations Division Commanders.

B. CALL-OUT PROCEDURE

1. When a qualifying incident occurs, the IMPACT Team may be requested by a participating agency manger. When the IMPACT Team is requested, dispatch will notify the IMPACT Team Administrator (or another IMPACT Team Supervisor) who will contact the requesting manager.

2. If the IMPACT Team Administrator is unavailable, dispatch will utilize the IMPACT Team Roster and notify another IMPACT Team Leader to serve as the Supervisor for the incident.

3. The IMPACT Team Supervisor will:

a. Contact the manager who requested the activation to obtain a situation briefing. Following the briefing, the IMPACT Team Supervisor will verify that an IMPACT Team deployment is appropriate.

b. Determine the number of team members and equipment required for scene control and investigation.

c. Determine which team members will respond.

- To minimize the impact to on-duty staffing, all efforts will be made to first utilize off-duty team members.
- A team member from the requesting agency will be responsible for conducting the collision investigation. Should no officer from the host agency be available or should there be a conflict of interest (i.e., host agency officer involved collision), then the Team Leader will assign another non-host agency member to conduct the investigation.
- If available, at least one of the responding members should be from the host agency.

d. Activate the team members needed for the call-out with the assistance of Sheriff's Dispatch.

e. Assign responsibilities to responding members as related to: investigative duties, evidence collection, forensic diagramming, and equipment transportation.

f. Notify the Team Administrator of the circumstances surrounding the call-out and what personnel are involved.

- The Administrator will subsequently complete an After Action Report (AAR), documenting the nature of the call, location, personnel and equipment involved.
- The AAR will be forwarded to the Special Operations Division Commander and the manager for the requesting agency.

C. ON SCENE PROTOCOLS

1. PRIOR TO TEAM ARRIVAL

a. The critical incident or collision scene must be preserved to protect the integrity of the forensic evidence and to help ensure an accurate investigation.

b. Prior to the team members' arrival, the scene should remain closed to vehicular and pedestrian traffic.

c. A perimeter should be established, encompassing the scene area, and restricting unnecessary activity within the location.

d. If the incident is of a criminal nature, the scene should first be rendered safe and a crime scene log employed.

D. SCENE SECURITY

1. Leave involved vehicles in place and do not manipulate or adjust any vehicle equipment, gauges, accessories, etc.
2. Establish a perimeter around the scene, entire debris field, and all points of evidence (skids, gouges, vehicle parts, debris).
3. Stop all vehicle and unnecessary pedestrian traffic within the scene.
4. Do not touch or move any pieces of evidence.
5. If a vehicle or piece of evidence must be moved, photograph the item in place (up close and distant), and then mark its location with marking paint.
    a. Vehicles will be marked with a "T" at all four axles.
    b. Photographs will be taken from all eight points around the vehicle perimeter and should include the general area.
6. Victims
    a. Leave deceased victims in place.
    b. If a surviving victim, bicyclist, or pedestrian was ejected, efforts should be made to mark the location where the victim was found. Medical treatment and transport of the victim will not be delayed by accomplishing this.
    c. Mark positions of both head and feet with marking paint.
    d. If a victim is transported for medical care, obtain identification and statement if possible.
    e. Secure the victim's clothing (including helmets and any carried articles) for evidence examination.
7. Suspects
    a. If transported for medical treatment, maintain custody of suspect.
    b. Following department procedure concerning Miranda, ask questions concerning the collision:
        - Speeds involved
        - Direction of travel
        - Vehicle condition
        - When/where victim seen
    c. If arrested, transport the suspect to a station house and await arrival of investigators.
8. Witnesses
    a. Locate and identify all witnesses for subsequent contact by an investigator.
    b. Document any statements and forward all information to team members.

E. AFTER TEAM ARRIVAL

1. The requesting agency will provide necessary personnel and resources to support IMPACT Team members. These resources may include:

   a. Traffic control around the incident scene.

   b. Emergency scene lighting.

   c. Evidence Technicians, to assist with the collection and logging of evidence.

   d. An agency liaison officer, and public works support.

   e. Sheriff's Office Volunteer Services personnel (Sheriff's Reserves, SAR) may be utilized to help source these needs.

2. All vehicles towed and stored/impounded during an IMPACT investigation will be towed and stored according to the directions of the responsible IMPACT Team Leader.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.53**
	RELATED ORDERS: CVC 22710, 22669, 22651; CO ORD 46-4.004, CO. ORD. Division 430, Agreement for Contra Costa County Abandoned Vehicle Abatement Service Authority (1991).	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Traffic Management**	**SUBJECT:** **Abandoned Vehicles**	

I. POLICY

A. The Sheriff's Office is a member of the Abandoned Vehicle Abatement Service Authority.

B. The Sheriff's Office Abandoned Vehicle Program has, as its primary responsibility the removal of abandoned vehicles from public property in the unincorporated areas of the county

II. GENERAL INFORMATION

A. Abandoned vehicles pose a health and safety hazard to the unincorporated communities and detract from the quality of life of the community.

B. Abandoned vehicles on private property require special handling and shall be referred to Contra Costa County Code Enforcement for investigation and disposal.

C. Abandoned vehicles on public property may be investigated or removed by Patrol Deputies or specially assigned abatement officers.

D. Unincorporated Areas

1. Calls concerning abandoned, dismantled, wrecked or inoperable vehicles that are on private property will be handled by Contra Costa County Code Enforcement who has the primary responsibility for removal.

2. On public property abandoned vehicle complaints will be handled by Sheriff's Office personnel.

3. The below procedures do not apply to the contract cities.

III. PROCEDURE

A. IDENTIFICATION AND INVESTIGATION

1. Once the vehicle is determined not to be stolen, the assigned employee will complete a 72-hour limit tag and place the tag onto the vehicle in an obvious location.

The vehicle's tires will be marked in a manner that can be identified by other employees.

The bottom portion of the tag will be provided to the FOB Tow Clerk.

2. Immobilized Inoperable Vehicles

Motor vehicles which are parked, resting, or otherwise immobilized on any highway or public right-of-way and lack an engine, transmission, wheels, tires, doors, windshield or any other part or equipment necessary to operate safely on the highways of this State, are declared a hazard to public health, safety, and welfare and may be immediately removed per Section 22669(d) V.C.

3. Operational and Registered

Vehicles where the vehicle's registration has not been expired for over six months.

- After being properly tagged for 72-hours, if the vehicle has not moved, it can be removed.
- Vehicles parked more than 72 hours are in violation of Section 46-4.004 of the Contra Costa County Code and may be removed. The authority cited on the tow form will be CVC Section 22651(k) V.C.
- Prior to removing the vehicle, an attempt will be made to notify the owner of the vehicle of the impending removal.
- At the end of the 72-hours, the vehicle will be checked to determine if the vehicle has been moved.
- No further action is required if the vehicle has been moved.
- The re-checking of the vehicle will be the responsibility of the staff member that performed the initial tagging.

4. Unregistered Vehicles

If the vehicle registration is over six months expired and located on a highway, public lands, or an off-street parking facility:

- The vehicle can be removed immediately per Section 22651(o) CVC.
- The owner must furnish proof of current registration before the vehicle can be released. This should be noted on the "Abandoned Stored or Released Vehicle Report" form in the remarks section.
- Unregistered vehicles that pose a danger to traffic flow or are a hazard will be removed immediately.

B. REMOVAL OF ABANDONED VEHICLES

1. The Sheriff's Office will process reports of abandoned vehicles on public property at any time.

2. Abandoned vehicle calls for service will be routed to the Supervisor of the appropriate Sheriff's Station by Dispatch.

   The Supervisor is responsible for assigning the investigation of abandoned vehicle reports to the appropriate employee.

   Dispatch will continue to advise CHP of abandoned vehicles that are also traffic hazards.

3. Vehicles that are towed will be handled in accordance with Section 3.01.51, Impounded or Stored Vehicles.

   Every effort will be made to have all the abandoned vehicles towed during the daylight hours.

   Public agency salvage slips will be issued by the Station House Commander or designee on all vehicles with a value not exceeding $300.00 per 22851.3 V.C

C. ABANDONED VEHICLES ON PRIVATE PROPERTY

1. When a vehicle(s) is observed on private property that meets the Abandoned Vehicle Abatement Program criteria, the address of the property where the vehicle is located will be forwarded, in writing, to Contra Costa County Code Enforcement.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

General Information

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.54**
	RELATED ORDERS: None.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Coroner's Cases**	

I. POLICY

A. Patrol and Special Operations Division will assist and cooperate with the Coroner's Office whenever called upon to do so.

II. PROCEDURE

A. CIRCUMSTANCES REQUIRING A REPORT

1. When a deputy is assigned to a death scene that is not a request for assistance from the Coroner's Office, a crime report will be written and submitted.

   a. Examples:

   - Traumatic deaths (industrial, suicide, homicide, etc.)
   - Any unattended death, to include apparent natural.
   - S.I.D.S. (Sudden Infant Death Syndrome)
   - Drug or alcohol related deaths (i.e., overdose).
   - Any death in which the cause is apparently other than natural.

B. DEATH NOTIFICATIONS

1. All notifications should be made in person whenever possible.
2. The assigned deputy will ensure that the next of kin is emotionally stable before departing. If not, attempt to locate a relative or friend. Deputies should consider offering Sheriff's Office Chaplain services to the next of kin.
3. If the request is made by an outside agency, that agency will be notified, either by teletype or telephone of the outcome.

   a. A report will be written to document notifications.

b. The next of kin will be referred to the originating agency regarding inquiries surrounding the death.

C. REMOVAL OF BODIES

1. Deputies may be called to assist the Coroner's personnel in the removal of bodies when other assistance is not available.

2. The Coroner's investigator will contact the Patrol or Special Operations supervisor to request assistance.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.55**
	RELATED ORDERS: None.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Diplomatic/Legislative Immunity**	

I. POLICY

A. It is the policy of the Sheriff's Office that foreign diplomatic officers be accorded their respective privileges, rights and immunities as directed by international law, federal and state statute and be treated with courtesy and respect that befit their distinguished positions.

B. At the same time, it is a well-established principle of international and state law that, without prejudice to their privileges and immunities, it is their duty to respect local laws and regulations.

II. GENERAL INFORMATION

A. This policy instructs Deputies on the nature of diplomatic/legislative immunity, and outlines procedures for dealing with criminal and traffic violations by diplomatic/legislative personnel.

B. Embassies

1. The highest ranking foreign diplomatic office in this country is an embassy.

2. The majority of embassies are located either in Washington, D.C. or in New York, N.Y.

C. Diplomatic Officers

1. Foreign diplomatic officers assigned to embassies are titled:

a. Ambassador

b. Minister

c. Minister Counselor

d. Counselor

e. First Secretary

f. Second Secretary

g. Third Secretary

h. Attaché

2. The State Department designates these persons as “Diplomatic Agents.”

D. Employees

1. Employees at embassies are either members of the administrative or technical staff who are accorded a lower level of inviolability.

E. Members of the Legislature

1. Any person duly elected to the California Legislature or Federal Congress.

F. Consulate Offices

1. Branches of embassies located throughout the country are consulate offices.

2. Foreign diplomatic officers assigned to consulate offices are titled:

a. Consuls-General

b. Deputy Consuls-General

c. Consuls

d. Vice Consuls

3. Persons assigned to consulate offices are designated as career consular officers.

G. Honorary Consuls

1. Often nationals or permanent residents of the receiving state are appointed and received as honorary consular officers to perform the functions generally performed by career consular officers.

2. Such officers do not receive identification cards from the State Department of the type issued to career consular officers, though they may exhibit reduced-size copies of the exequatur or diplomatic note evidencing recognition by the United States Government.

H. Immunity

1. Honorary Consuls are not immune from arrest or detention

a. They are also not entitled to personal immunity from the civil and criminal jurisdiction of the receiving state except as to official acts performed in the exercise of their consular functions.

b. However, appropriate steps must be provided to accord such officers the protection required by virtue of their official position.

I. Archives and Documents

1. The consular archives and documents of a consular post headed by an honorary consul are inviolable (secure) always provided they are kept separate from other papers and documents of a private or commercial nature relating to other activities of an honorary consul.

J. Identification

1. State Department Foreign Diplomatic officials can be identified by credentials issued by the State Department and by other locally issued official identification papers or cards.

2. The extent of the "immunity" or "inviolability" for each classification is stated on the reverse of the card.

3. The State Department credential bears its seal, the name of the officer, his title, and the signature of State Department officials.

   a. A blue-bordered "Diplomatic" card indicates that the bearer has the status of a diplomatic agent.

   b. A green-bordered "Official" card indicates that the bearer has the status of an employee of a diplomatic agent.

   c. A red-bordered "Consular" card indicates that the bearer has the status of a consular employee.

4. State of California

   a. The State of California issues status cards to some foreign diplomatic officers, federal, congressional, and state legislators.

5. Honorary Consuls

   a. Honorary consuls will bear identification as stated above.

K. Immunities

1. Diplomatic Persons

   a. Diplomatic agents enjoy diplomatic immunity, which is broadly defined as the freedom from the jurisdiction of local criminal and civil courts accorded to duly accredited foreign diplomatic agents, their families, and their key employees, if such employees are not nationals of or a permanent resident in the receiving state.

   b. Career Consular Officers, his/her family or qualifying employees are not liable to arrest or detention pending trial, except in the case of a grave crime (felony offense or other act that would endanger the public safety) and pursuant to a decision by the competent judicial authority.

      - This immunity from criminal jurisdiction is limited to acts performed in the exercise of consular functions and is subject to court determination.

2. Treaties extend "immunity" or "inviolability" to other members of foreign missions.

3. If a deputy has a question regarding a claim of immunity, or if one who claims immunity does not possess identification to that effect, the deputy should contact the FBI or Special Investigations Division (SID) of the San Francisco Police Department for verification before taking further police action of any nature.

4. Legislative immunity is broadly defined as the immunity from arrest afforded members of the legislature who are en-route to an official session of the legislature.

L. Members of the Legislature

1. Persons who are elected members of the California legislature or United States Congress should not be unduly detained or arrested when such officials are en- route to a legislative session or meeting.

a. However, when an offense is so serious as to warrant follow-up, a deputy may gather sufficient data to complete a preliminary investigation and then submit a report for later review by appropriate superiors.

2. When the conduct of such an official endangers the lives or safety of any person, the deputy may take custody of the official and transport to the nearest substation to confer with an immediate supervisor.

M. Premises and Papers

1. Consular premises used exclusively for the work of the consular post or his or her private residence cannot be entered without explicit permission of the head of the consular post, their designee or by the head of the diplomatic mission.

a. This permission may be assumed in the case of fire or other disaster requiring prompt protective action.

2. The consular archives and documents are inviolable always and wherever they may be.

a. The official correspondence of the consular post, which means all correspondence relating to the consular post and its functions, is likewise inviolable.

III. PROCEDURE

A. VIOLATIONS OF THE LAW

1. Criminal Violations

a. Diplomatic agents shall not be arrested and booked, but may be physically detained when their actions involve a grave or felonious act.

b. Detention shall be made with the minimum amount of physical restraint necessary under the circumstances.

2. Traffic Violations

a. Moving Violations

- When a diplomatic agent, a member of his or her family, or a qualified employee is stopped for a moving violation other than driving under the influence of drugs or alcohol (see below), the deputy upon being advised by the driver that they have immunity, shall ascertain that the driver possesses the proper credentials.

- Although some diplomats may receive immunity from prosecution, they are held accountable for traffic violations.
- Stopping diplomatic or consular personnel and issuing a traffic citation does not constitute an arrest or detention, and is permissible.
- Properly identified foreign diplomatic officers, a member of the diplomatic officer's family, or a qualified employee may be issued a citation, but shall not be required to sign it.
- Forward the citation to the Patrol Division Commander along with an incident report detailing the circumstances of the traffic stop.
- Carefully note the identification information in the incident report.

b. Parking Violations

- Consular Corps license plates do not exempt vehicles displaying them from being cited for parking violations.
- However, it shall be the policy of the Sheriff's Office that vehicles bearing such plates will not be cited for parking violations within one block of consular premises or residences of foreign consular officers in Contra Costa County.
- Deputies observing any abuse of this policy shall prepare a memorandum to their commanding officer. The memorandum must outline the circumstances in full and include license number(s).

c. Driving Under the Influence of Drugs or Alcohol

- The primary consideration in this type of incident shall be seen that the foreign diplomatic officer, a member of his or her family, or a qualified employee or a legislative officer is not a danger to himself or the public.
- Based upon the circumstances the following options, short of a detention are available:
    - Take the person to a telephone to call someone to pick them up.
    - Take the person home.
    - Call a taxi for the person.
    - Take the person to the Station House in the area of occurrence to recover sufficiently to drive safely.

- The diplomatic official should not be handcuffed, subjected to any sobriety test, or manhandled in any way, unless such an official is violent and such behavior endangers the safety of any person.
- It should be impressed upon such an official that the primary responsibility of the detaining deputy is to care for the diplomat's safety and the safety of others.

3. Prepare an unusual incident report and forward a copy to the Patrol or Special Operations Division Commander.

    a. Careful documentation of the identifying credential and the facts concerning the incident shall be included in the report.

B. NOTIFICATION AND REPORTING

1. When a detention occurs, the investigating deputy must notify the area Patrol or Special Operations sergeant.

2. An investigation will be initiated by the area patrol sergeant in cooperation with the station house commander, contract manager, or watch commander and the U.S. Department of State and the F.B.I.

3. In the event that a foreign diplomatic officer, a member of his or her family or a qualified employee should become involved in any action taken by members of this Department, the station house commander, contract manager, or Watch Commander shall be notified immediately and an unusual incident report prepared detailing the circumstances.

4. When a diplomatic/consular officer family member or staff is involved in a serious incident (murder, negligent homicide, etc.) the San Francisco Office of Security, U.S. State Department should be notified. When the incident involves a crime against the U.S., the F.B.I. should be notified.

5. The area supervisor upon notification of an incident involving a diplomatic or legislative official will respond to the location and assume command, the area supervisor will notify the station commander as soon as practical as to the circumstances involving such official.

6. Station commanders/police service managers will document incidents involving diplomatic or legislative officials on the "daily watch summary log."

    a. All reports will be routed to the Patrol Division Commander.

    b. In the event a diplomatic/consular officer, family member or diplomatic staff member is arrested or otherwise detained at a Sheriff's Office facility, the station commander or contract manager will notify the Patrol or Special Operations Division Commander as soon as practical.

C. ASSISTANCE

1. Driver and vehicle information, as well as assistance in incident handling, can be obtained from the Office of Foreign Missions (OFM) by calling:

a. (415) 744-2910, Extension 22 or 23 during normal business hours.

b. (571) 345-3146 on evenings, weekends and holidays.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.56**
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ISSUE DATE: 01-15-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Hazardous/Radioactive Materials Spills and Emergency Responsibility**	

I. POLICY

A. Patrol and Special Operations deputies will respond to reported spills of hazardous and/or radioactive materials in such a way that the risks to the deputy, responding agencies and the public are minimized.

II. DEFINITIONS

A. Hazardous materials: Chemicals that can be toxic, flammable, or explosive to include herbicides, pesticides, radioactive materials, petroleum derivatives and toxic chemical compounds.

B. Standardized Emergency Management System (SEMS): SEMS is a management system intended to standardize response to emergencies involving multiple jurisdictions or multiple agencies. SEMS is flexible and adaptable to the needs of all emergency responders. SEMS requires emergency response agencies to use the basic principles and components of emergency management including ICS, Multi-Agency or Inter-Agency coordination.

C. Incident Commander (IC): The Incident Commander is the individual responsible for the command of all functions at the field response level.

D. Incident Command System (ICS): The Incident Command System is a standardized on scene emergency management concept specifically designed to allow its users to adopt an integrated organization structure equal to the complexity and demands of single or multiple incidents. ICS is the combination of facilities, equipment, personnel, procedures and communications operating within a common organizations structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

E. Access to Remote Areas: Provide and maintain transportation means to and from hazardous material incidents located in remote areas.

F. Communications: To establish an on-the-scene communications system from a command post location and coordinate communications off-site with the various support and resource agencies (i.e., CCC mobile unit).

G. Containment: Those immediate activities involved in confining material to its immediate influence and preventing further contamination.

H. Critique/Follow-up: To provide agencies involved a suitable site for critique and format for the continued improvement of hazardous material incidents.

I. Decontamination: The act of providing technical resources for neutralization of any contamination involving people or equipment.

J. Emergency Product Removal: To make necessary arrangements to ensure proper disposal of hazardous or potentially hazardous material and coordinate the various channels of funding available.

K. Evacuation: The process of removing citizens from a hostile or potentially hostile atmosphere or situation. Shelter is not included in the initial action.

L. Fire Control: Those activities that are necessary to prevent, confine, extinguish or protect citizens or property from a hostile fire.

M. Health and Environmental Hazard Assessment: To involve proper resources to make decisions on dangers and potentials of hazardous materials.

N. Inter-Agency Training: To coordinate the development of the initial and subsequent on going inter-agency training of all agencies or departments involved in the committee.

O. Medical Care: Immediate first aid treatment and/or triage and securing transportation for further treatment and care.

P. Notification: Process of informing proper authorities, departments, divisions, agencies, and districts systematically as the hazardous incident requires.

Q. Public Information: The act of releasing information concerning a hazardous material incident to the public, county E.O.C., media, or other persons not included in the matrix or not considered as a support agency or person.

R. Product I.D. Coordination: The action of attempting to identify the material and its characteristics and the securing of resources to obtain the information.

S. Radiological Monitoring: To provide monitoring and evaluation of a radioactive hazard. Advise on containment procedures and contact proper state and federal authorities.

T. Rescue: Those activities that remove victims from a source of harm or potential harm from any given situation.

U. Resource Coordination: The act of organizing, requesting, and dispatching resources not customarily available at the scene of a hazardous material incident as requested by the incident commander.

V. Scene Isolation: The initial securing of the scene and its perimeters to prevent unauthorized persons from entering (or exiting) or becoming involved in a hostile atmosphere or situation.

W. Scene Management: That process of continuing all acts that secure the scene and its perimeters to prevent unauthorized persons from entering (or exiting) or becoming involved in a hostile atmosphere or situation.

III. GENERAL INFORMATION

A. Section 8574.8 Government Code and Section 2454 Vehicle Code vests the responsibility for the management of an on-highway hazardous substance spill or disaster in the appropriate law enforcement agency having primary traffic investigative authority where the spill occurs.

B. In the unincorporated areas, the California Highway Patrol is responsible for spills on the roads or highways.

C. No specific regulation covers the authority for management of incidents on private property; however, the potential threat to life and property dictates police involvement.

D. Contra Costa County hazardous material area plans name the law enforcement agency having primary investigative authority as responsible for incident management.

IV. PROCEDURE

A. PATROL AND SPECIAL OPERATIONS RESPONSIBILITIES

1. Patrol and Special Operations Deputy

   a. The first deputy arriving at a hazardous spill will assume the duties of the incident commander.

   b. Per SEMS the deputy will, as soon as possible, determine the immediate hazard area.

2. Patrol and Special Operations Supervisor

   a. If circumstances warrant, and in the case of a major hazardous spill, a patrol supervisor shall relieve the assigned deputy as the incident commander as soon as practical.

   b. The supervisor will assess the magnitude of the incident to determine whether or not the multi-agency response procedure should be activated.

   c. The Patrol or Special Operations supervisor shall determine the appropriate mobilization status in accordance with standard procedures for major incidents.

      - In the event of multiple injured or, if the potential for large scale medical care is present, the County Multi-Casualty Incident Plan shall be activated.
      - If there are no known injuries, do not activate multi-casualty plan, instead, call for a medical advisory alert.

B. LAW ENFORCEMENT AGENCY RESPONSIBILITIES

1. Law Enforcement is responsible for scene security and isolation.

   a. Once the primary risk area has been identified, isolate and secure it immediately.

2. Two perimeter areas will normally be established.

      - Inner Perimeter Area

- A high-risk area and area needed to attack the spill by appropriate personnel.

- Outer Perimeter Area
  - An area needed for scene managers and incident commander(s) that will provide control of access and has no risk factor for committed personnel.
- These are priority measures when subsequent assistance arrives. TREAT THE AREA AS A CRIME SCENE.

3. Fire Department
   a. The fire department will effect rescue, containment, fire control, and assist with product identification.
4. National Response Center
   a. Incidents involving suspected radioactive material must be reported to the A.C.E.
      - Phone (800) 424-8802.
   b. A Radiological Assistance Team will be dispatched, if necessary.
5. Environmental Health Department
   a. In a hazardous material situation, including suspected PCB's from a ruptured transformer, the Contra Costa County Hazardous Material Section should be notified by the first responder.
      - Phone (925) 646-2286.
   b. This can be done through the Office of Emergency Service (O.E.S.) who also must be notified.
   c. Both agencies can be contacted at the following numbers:
      - Contra Costa County Office of Emergency Services
      - 228-5000, Mon-Fri 0800-1700
      - Dispatch (CCSO Radio) 646-2441, 24 hours daily
6. Federal Bureau of Investigation
   a. The FBI will be advised and will assume ultimate responsibility in incidents involving a bomb threat or an actual bombing involving radioactive materials.
7. Public Health Department
   a. Once the Public Health Department has been notified, a health specialist will call the scene commanding agency.
   b. It has the ability and resources (two hi-tech units with 24-hour service) to make a product category identification and hazard assessment.

c. In all cases of hazardous materials (defined as caustics, corrosives, flammable, and toxins), someone from the Health Department will respond to the scene when requested.

- In a minor spill situation, the health specialist may simply advise what action should be taken by telephone.

d. The health specialist will also give instant advice to the scene commander regarding safety of the public and employees near the site.

e. Generally, they have a one-hour response time.

f. They will respond to all "unknown substances," if requested.

g. They are not responsible for clean-up.

C. INITIAL RESPONSE

1. Any spill or potential release of chemicals or gases shall be considered and treated as hazardous until determined otherwise.

2. The deputy should approach from up-wind, up-stream and high ground, if possible.

3. Fuses (flares) or other sources of combustion should not be used in the vicinity of any hazardous materials incident without specific clearance from the incident commander, after conferring with the on-scene fire commander.

4. If possible, the deputy should attempt to identify the hazardous material by visual observation of hazardous material placards and/or shipping papers, referring to Department of Transportation (DOT) Hazardous Materials Emergency Response Guidebook (1993, 2nd Revision).

5. Initial scene isolation distances shall be determined by using the guidebook.

6. All but essential personnel shall be excluded from the immediate scene to avoid exposure.

D. INCIDENT COMMAND POST

1. An incident command post should be established outside the immediate hazard area as outlined by SEMS and the ICS.

2. The incident commander is charged with coordinating all activities at the incident and will act with the fire battalion chief in making decisions relative to hazard assessments, personnel needs, and communications between the scene and the communication center.

3. In the event of a major incident requiring total departmental mobilization and/or mutual aid, the command duty officer will assume the duties of the incident commander.

4. In addition, a representative of the involved company should be available at the command post to offer technical assistance and coordinate activities with reference to the substance involved.

5. The incident commander shall ensure that the medical staging area is located outside the immediate hazard area for use as an assembly point for medical evacuees.

    a. Contra Costa County Communications shall coordinate ambulance and hospital assignments.

E. EVACUATIONS:

1. Law enforcement is responsible for coordinating any evacuation efforts.

2. The decision to evacuate must be carefully weighed.

    a. Risk of exposure to citizens already in an exposed area could be increased by having them evacuate their homes or other structures and into a contaminated atmosphere.

3. Evacuation areas should be identified based on risk and anticipated exposure.

    a. This should be weighed against the risks and hazards that accompany an evacuation.

    b. The following considerations must be made prior to conducting an evacuation:

        - Identify areas of highest risk and initiate evacuation outward to areas of lesser risk.
            - Identify and communicate the following information to those who are to be evacuated:
            - Specific areas to be evacuated
            - Routes to be taken
            - Location of assembly areas
            - General reason for evacuation
            - Duration of evacuation.
        - If the duration of the evacuation is going to be extended over a long period of time, locate and identify relocation areas and provide for support unit to care for evacuees.
        - Determine the methods by which the evacuation order will be communicated.
        - May include radio and TV communication systems.
        - May request activation of Community Alert Network (C.A.N.)
        - May request activation of Community Warning System (C.W.S.)
        - May contact the FAA if airborne hazards may cause problems to air traffic flying over the area.
        - Determine how evacuated areas will be checked to ensure that he evacuation order has been followed.

- Consider the following:
    - Handicapped (hearing impaired) may not have heard the evacuation order.
    - Handicapped and/or non-ambulatory persons may not be able to evacuate without assistance.
    - Determine a Security Plan for the evacuated area(s).

F. DOCUMENTATION

1. A detailed log shall be maintained at the command post.
    a. The log shall be specific as to exact time and action taken.
    b. The log shall be maintained by the deputy designated by the incident commander.
2. A detailed report documenting the incident shall be completed at the termination of the incident by the assigned deputy.

G. HAZARDOUS MATERIAL IDENTIFICATION

1. To properly handle a hazardous material incident, the material must be identified and the dangers and methods of handling determined.
    a. The D.O.T. Hazardous Materials Guidebook may not cover all types of materials encountered.
2. The following procedure should be used in identifying hazardous materials:
    a. The incident commander should gather the basic information in the field relative to the product(s) involved.
    b. Product(s) should be identified, if possible, and emergency actions initiated by utilizing D.O.T. Hazardous Materials Guidebook. (2000)
    c. Product identification or requests for assistance to do so should be relayed to the communication center and the station house commander.
        - This information should be forwarded to the County Environmental Health Department as outlined above.
        - The Health Department should be requested to report to the site, the California Transportation Department may also be contacted for assistance.
    d. Additional assistance in identification and removal may be sought on a 24-hour basis through a nationwide agency called (CHEMTREC) Chemical Transportation Emergency Center.
        - Phone (800) 262-8200.
    e. Follow reporting requirements in the D.O.T. Handbook (2000).

H. CHEMICAL SPILL SAFETY RULES

1. Accidental chemical spillage can create a potential hazardous condition for deputies, fire fighters, and citizens.

    a. The manufacture and transportation of chemicals within the county increases the probability of such condition.

2. Prevent Contact

    a. Prevent anyone from contacting or driving through the spilled materials.

    b. If it is a gas, dust, or volatile liquid, evacuate surrounding areas after establishing the inner perimeter.

    c. If there is a relatively small amount of hazardous dust or powder, request the fire fighters to attempt to cover it with a canvas, plastic sheet, or other appropriate material.

        - Refer to DOT Guidebook for evacuation distances.

3. Detain Contaminated Vehicles

    a. If available, detain the vehicle from which the spill occurred.

    b. Note any contaminated cargo, and detain persons and property that have contacted the spilled material.

        - The Health Department may need to decontaminate exposed areas.

4. Possible Food Contamination/Fire Hazard

    a. Do not allow anyone to eat or smoke near a spill or provide any source of ignition.

    b. If the carrier (truck) is on fire and the product is a Class "A" explosive, Class "A" poison, or reactive material, the deputy should immediately withdraw and should consider if evacuation is imminent.

5. Explosion Hazard

6. If the material is not known to be a Class "A" explosive or poison, or an unstable or reactive material and the fire has been burning with a direct flame on a closed tank shell for more than 10 minutes, even with the relief valve operating, there should be an immediate evacuation and withdrawal.

        - Refer to DOT Guidebook for recommended evacuation distances.

7. Secondary Contamination

    a. Advise paramedics of possible contamination of victims clothing prior to transport.

I. HAZARDOUS MATERIAL INCIDENT RESPONSIBILITY MATRIX

1. Contra Costa County has adopted a management system for response to hazardous materials spills.

2. This system is outlined in the form of a matrix, which designates the primary responsibilities of responding agencies.

3. Frequently at hazardous materials incidents, agency personnel exercise some reluctance in their initiative because of uncertainty of their role and/or function.

    a. This apprehension can be critical at times adding confusion to an already dangerous situation.

4. It is essential that all agencies who have a responsibility to provide a function during an emergency understand that responsibility and equally understand the other agency's responsibilities.

5. The purpose of the Linear Chart of Responsibility is to establish and identify federal, state, and local responsibilities and activities required to minimize the damage to human health, natural systems, and property caused by the release or potential release of hazardous materials in Contra Costa County.

6. The objectives of this matrix are:

    a. To summarize the primary operational and support systems required to mitigate a hazardous materials incident.

    b. To establish lines of authority/coordination when such an incident occurs.

7. The responsibilities and activities outlined in this matrix will be in effect, as needed, throughout Contra Costa County, incorporated cities, unincorporated areas, and private property.

8. All agencies, in and around Contra Costa County that may have a direct or indirect effect on the mitigation of a hazardous material release are included in this plan of initial actions.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.57**
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CHAPTER: **General Information**	**SUBJECT:** **Issuance of Teletypes**	

I. POLICY

A. Patrol and Special Operations Division personnel will utilize teletypes to document and communicate between law enforcement agencies.

II. PROCEDURE

A. INCIDENTS REQUIRING TELETYPES

1. Teletypes shall be sent whenever one of the following situations occur:

   a. Wanted persons, when immediate dissemination of information is necessary, and the Investigation Division is not involved at the time.

   b. Assistance requested from another agency; i.e., notifications, follow-up investigations, etc.

   c. Runaways or missing juveniles/adults, when the situation indicates immediate action is necessary.

   d. In response to requests for assistance from other law enforcement agencies mutual aid.

B. TELETYPE ISSUANCE PROCEDURES

1. When teletypes must be sent from the field because of the immediate and urgent nature of the request (i.e. an in progress, tactical incident or investigation where an immediate or quick action or response to the teletype request is needed), the deputy involved will call communication personnel and dictate the message.

2. Whenever the teletype is not of an immediate, urgent nature, the involved deputy shall complete an "Administrative Teletype Form (copy attached) and forward via mail or fax to the Patrol Division Clerical Support Unit.

   a. Teletypes of this nature are processed during business hours.

3. Any teletype sent in which the investigation will be conducted by another division, the "Refer to" block of the Administrative Message Form" will

reflect the appropriate division commander's name; i.e., when Investigation Division is involved, it will reflect the Investigation Division Commander's name.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.58**
	RELATED ORDERS: None.	
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CHAPTER: **General Information**	**SUBJECT:** **Patrol Requests and Vacation House Checks**	

I. POLICY

A. Patrol and Special Operations Division personnel will utilize "extra patrol requests and vacation house checks" to maintain the safety and welfare of the community.

B. They will also utilize them as a means of positive public contact and familiarization with specific locations within their beat.

II. PROCEDURE

A. PATROL REQUESTS

1. The primary use of Patrol Request Cards is to inform patrol deputies of a particular police problem at a specific location requiring frequent patrol checks to either resolve or control the problem.

2. Patrol Request Cards can be initiated by patrol personnel who receive information that requires the need for special or selective patrol by dispatch personnel who receive similar information from citizens who telephone the department requesting selective patrol.

3. It is the responsibility of each beat deputy to conduct patrol requests as required.

4. The procedure for maintaining Patrol Request Cards is:

   a. Deputies will secure Patrol Request Cards from beat slots prior to assuming patrol duties.

   b. Patrol Request Cards will be placed on appropriate beat boards.

   c. Each patrol inspection made will be logged on the Patrol Request Card indicating date and time of inspection, observations, and signature of deputy conducting inspection.

5. At completion of the patrol request period, return cards to Patrol or Special Operations Division for necessary disposition.

B. VACATION HOUSE CHECKS

1. The Patrol Station House, Contract City, or Sheriff's Dispatch receives and prepares Vacation House check requests.
2. Calls received by dispatch for vacation house checks will be referred to the beat deputy.
3. Patrol or Special Operations deputies may accept such requests in the field.
4. It is the responsibility of Patrol or Special Operations deputies to conduct checks assigned to their beat.
5. Vacation house checks are to be made on all watches, especially day and evening watches as time permits.
6. Deputies should walk around the residence and make sure all the entrances and accessible vehicles are secure, taking extra precautions during darkness as the homeowner may have returned home.
    a. Use the guidance given by the station house commander, contract manager, or patrol sergeant during times of darkness.
7. When feasible, leave an email or phone message for the homeowner once a week indicating that the residence has been checked.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.59**
	RELATED ORDERS: None.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Dangerous or Injured Animals**	

I. POLICY

A. Knowledge of what to do when dealing with injured and rabid animals in law enforcement is important because, in most cases involving animal problems, the police are the first to be called.

B. When deputies are confronted with unattended or injured animals that present a danger to the public or a serious traffic problem that requires prompt action, they may shoot the animal as a last resort of action.

II. PROCEDURE

A. ADVISE ANIMAL CONTROL TO RESPOND

1. In all cases where Animal Control is available, the deputy should request they respond, if time and circumstances allow.

B. PUBLIC SAFETY

1. Public safety is a top priority, and should be taken into consideration in all cases.

2. To ensure the public's safety, the following steps will be taken:

a. If the animal poses no immediate threat to persons, property, or its own well-being:

- Wait for Animal Control, if possible
- Keep the animal from injuring people
- Confine the animal, if possible

b. If the animal does present an immediate threat, try to isolate the animal until Animal Control arrives.

- If that is not possible, and the deputy determines it is necessary to kill the animal, the following steps will be taken:
- Obtain a supervisor's approval, if time allows.

- Protect all bystanders by removal to a safe area behind the shooter.
- Check the area behind and to the sides of the animal to make sure no one will be injured by over-penetration or ricochet of the bullet.

C. SHOOTING THE ANIMAL

1. When shooting the animal in the head the chances of ricochet are reduced by shooting from a 90-degree angle to the point of entry.
2. Shots to the heart are to be used as a last resort because of the possibility of ricochet from the shoulder and rib bones.
3. Shots to the head should be avoided when the animal has been involved in a bite.
4. Head shots
   a. The skull structure of large animals is predominately thick.
   b. There are limited areas where the skull is thin enough for a bullet to penetrate.
   c. The target area or thin portion of the skull plate is located by drawing imaginary lines between the eyes and the center of the ears.
   d. Cattle
      - The target is approximately one inch above the point where the imaginary lines cross.
      - This area can also be identified by hair growing in all directions, commonly referred to as a cowlick
   e. Swine
      - The target is approximately one inch below the point where the imaginary lines cross.
   f. Horses and deer
      - The target is where the imaginary lines cross.
   g. Canines and smaller animals
      - The skull plate is generally not thick enough to prevent bullet penetration by the deputy's duty weapon.

D. ANIMAL BITES

1. Administer First Aid and/or advise victim to seek medical assistance
2. Confine the offending animal
3. Notify Animal Control
4. Try to identify the owner of the offending animal
5. If a bite has occurred, and the animal must be shot, avoid shooting it in the head. The rabies testing procedure requires an intact brain.

E. INJURED WILD ANIMALS

1. Try to locate the animal.
2. Try to confine the animal or maintain visual contact with it.
3. If a bite occurred, administer first aid.
    a. Since rabies is a chief danger in wild and undomesticated animals, advise the victim to seek immediate medical attention.
4. Notify Animal Control.

F. DEAD ANIMALS

1. Deputies will often be notified by citizens of a dead animal in the roadway.
2. Confirm, if possible, the location and confirm the animal is still there.
3. Advise dispatch of the location and type of animal.
4. Dispatch will notify Animal Control for removal.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.60**
	RELATED ORDERS: None.	
ISSUE DATE: 01-11-2005 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Radio Vault Site Information**	

I. POLICY

A. Patrol and Special Operations personnel will be aware of the location of the General Services Division's Radio Vaults and will respond to all entry alarms at those locations.

II. PROCEDURE

A. RESPONSE TO INTRUSION ALARMS

1. In the event of an intrusion alarm at a radio vault site, the response shall be as follows:

[redacted]

B. RADIO VAULT SITE LOCATIONS

1. Patrol and Special Operations members shall familiarize themselves with the following radio vault locations which may be within their area of assignment:

a. [redacted]

- [redacted]

b. [redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

c. [redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

d. [redacted]

e. [redacted]

f. [redacted]

g. [redacted]

- [redacted]

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.61**
	RELATED ORDERS: Contra Costa County Ordnance 54-12.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Alarms**	

I. POLICY

A. Deputies will respond to alarms as an in-progress situation with due regard to the potential dangers involved.

B. The deputies' first concern will be public and officer safety.

C. Protection of property will be secondary.

II. PROCEDURE

A. RESPONSIBILITIES OF RESPONDING DEPUTIES

1. This type of call requires a multiple unit response until the first deputy on the scene can advise if additional units are needed.

B. BURGLARY ALARMS

1. [redacted]

   a. [redacted]

2. [redacted]

   a. [redacted]

C. AUDIBLE ALARMS

1. Deputies encountering audible alarms in the field will advise dispatch of the name and address, the location and name of the alarm company.

D. REPORTING PROCEDURES

1. In order to alleviate the continuous response to false alarms, the assigned deputy will document all incidents involving malfunctioning alarms.

2. Incidents for mechanical alarms will be coded as a 10-33 (UNF, RTF or UTL), with written report being required when something suspicious is found, or the deputy discovers some type of criminal activity.

E. RESPONSE TO COMMERCIAL ALARMS

1. [redacted]

   a. [redacted]

      - [redacted]
      - [redacted]
      - [redacted]

   b. [redacted]

   c. [redacted]

F. RESPONSE TO PANIC ALARMS

1. [redacted]
2. [redacted]

G. FALSE ALARMS

1. A location that has an alarm system that malfunctions continuously may be put on a non-response status by the patrol sergeant, station house commander or OD. County Ordnance 54-12.016 specifically applies.
2. Also refer to County Ordinances 54-12.004; 54-12.006; 54-12008; 54-12.010; 54- 12.014; 54-12.028. Any violation of any one of these ordinances is an infraction, and shall constitute a public nuisance.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.62**
	RELATED ORDERS: CCCSO 1.06.61, Use of Force PC 12020, 12031, 12276, 12280; POST PAM Section 1081.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 4-1-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Shotguns and Patrol Rifles**	

I. POLICY.

A. The Patrol and Special Operations Division Commanders recognizes the need for a variety of force options for members of the Patrol and Special Operations Divisions. Rifles and shotguns are two additional options for deputies to use in the field following the guidelines of the agency Use of Force Policy. This policy is established in order to provide guidance regarding the carrying, handling, deployment and use of the patrol rifle and shotgun by division personnel. The intent of the policy is to promote the safety of both the public and employees.

II. GENERAL INFORMATION

A. AUTHORIZED WEAPONS AND MUNITIONS

1. The authorized rifle is a Bushmaster and/or Colt brand AR-15 series of rifle. The rifle will have a standard or adjustable stock. The rifle will have a minimum barrel length of 16 inches as defined by the manufacturer or California Law (PC 33210). The rifle will be of .223 caliber/5.56 mm.

    a. The authorized duty round for the patrol rifle is the .223 caliber, 55- grain FMJ (full metal jacket) bullet. Authorized duty rounds will be from a manufacturer approved by the Sheriff's Training Division and duty rounds will be obtained from Sheriff's Training.

2. The authorized shotgun is a Remington brand, model 870, pump-action, 12 gauge, 18-inch barrel, standard stock, bead and/or rifle sighting system.

    a. Although this particular weapon is capable of firing a multitude of different munitions for different applications, the only munitions authorized for duty use are the 12-gauge (8 or 9-pellet) 00 buckshot round and the 12-gauge rifled slug.

B. TRAINING

1. Deputy Sheriffs shall successfully complete a basic course of instruction in the deployment and use of the patrol rifle prior to being authorized to carry and deploy the patrol rifle during their shift.

2. The course shall be conducted by a trained rifle instructor and will consist of classroom instruction, demonstration, practical application on the range, a written test, and qualification. When practical, this Basic Rifle Course will be presented and conducted following a POST-approved course outline and course of instruction (to allow the employee to meet the requirements of PC 33210 when handling and deploying other agency weapons.)

   a. Qualification with the Patrol Rifle will consist of firing 31 rounds on an approved course of fire. To qualify, deputies must strike the target a minimum of 25 times (80%). The approved course of fire is:

Distance	Action/Drill	# of Rounds	Time (Secs)
25 yards	Standing	2 rds. to body	3.5
25 yards	Standing to kneeling	2 rds. to body	5.0
50 yards	Standing to kneeling	2 rds. to body	6.5
50 yards	Standing to prone	2 rds. to body	10.0
10 yards	Double Tap	2 rds. to body	2.5
10 yards	Failure drill	2 rds. to body 2 rds. to head	3.5
10 yards	Tactical reload	N/A	6.0
10 yards	Pistol transition/ malfunction/ failure to fire (dummy rd on top of mag)	1 rd. to body, transition to pistol, 2 rds. body; clear malfunction, 2 rds. to body,	15.0
10-7 yards	Shooting on the move, forward	2 rds. to body	2.5
7-10 yards	Shooting on the move, backwards	2 rds. to body	2.5
7 yards	Pistol transition, out of battery reload	1 rd. to body, transition, 2 rds. to the body, out of battery reload, 2 rds. to the body	18.0
7 yards	Multiple target drill, 3 targets: 1 designated “no shoot”	2 rds. to body each target (4 rds. total)	4.0

b. Requalification with the Patrol Rifle will consist of completing the same course of fire as done for qualification.

3. Annual training with the patrol rifle will occur after the initial training class. Employees who deploy the rifle will have qualified within the last twelve months with the rifle. Employees who have not qualified with the rifle in the last twelve months will not deploy the weapon.

   a. Annual training will consist of four hours of instruction on the rifle and will include qualification with the rifle.

      - Training during years ending in an odd number will be performed during the day.
      - Training during years ending in an even number will be performed during reduced daylight hours (night).

   b. Copies of completed training rosters will be maintained in the deputy's division training file.

   c. The original training roster will be forwarded to the Sheriff's Training Unit.

4. The Patrol Administrative Sergeant will maintain a roster identifying the date each deputy completed the Basic Rifle Course and their current qualification date. The Patrol Administrative Sergeant will compile this listing on a monthly basis and provide this listing to the Patrol Division Administrative Lieutenant. The Division Lieutenant will forward the roster to Patrol and Special Operations Division Managers on a monthly basis.

5. Deputy Sheriffs will train annually with the patrol shotgun. The training will consist of range instruction by a certified range instructor.

   a. The training will include demonstration and practical application on the range.

C. USE AND DEPLOYMENT

1. When properly deployed, the patrol rifle and shotgun provides an enhanced tactical resource, with each of them filling a different tactical niche.

2. The patrol rifle and shotgun can be especially more effective than a sidearm when dealing with certain critical and life threatening situations, to include overcoming heavily armed resistance, achieving containment and saving lives. Such situations include, but are not limited to:

   a. Violent and armed suspects who are wearing body armor

   b. Subjects armed with high capacity automatic or semi-automatic weapons

   c. Multiple armed suspects

3. All usages of the patrol rifle and shotgun shall be in accordance with the Department use of force policy.

   a. When not in use, the patrol rifle and shotgun shall be secured in the patrol armory. Weapons shall not be stored in vehicles.

D. DOCUMENTATION

1. Any incident involving the use of the patrol rifle or shotgun will be fully documented in a Department report, and will include the following specific information:

    a. The name of the Sergeant/Deputy deploying the weapon

    b. Circumstances surrounding the deployment of the weapon

    c. Number of rounds fired

    d. Distance between the suspect and the Sergeant/Deputy deploying the weapon

    e. Area of suspect's body struck by the fired rounds

    f. Injuries sustained by the suspect and subsequent medical treatment

    g. Any collateral damage (unintended injured persons, property damage, etc.)

E. MAINTENANCE AND CARE OF THE PATROL RIFLE AND SHOTGUN

1. Patrol Rifles will be maintained according to the guidelines of the manufacturer and common firearm maintenance procedures.

    a. Operators are responsible for cleaning and lubricating rifles after they have gotten wet or become soiled.

    b. Managers are responsible for ensuring that their assigned rifles are cleaned and lubed minimally at least at each shift change.

    c. Managers are responsible for reporting completed maintenance to the Patrol Division Administrative Sergeant.

    d. The Patrol Division Administrative Sergeant will maintain a roster of routine maintenance that is reported as having been completed by Patrol Division Managers.

    e. Annually, Patrol Division Rifles will be inspected, fired, and serviced by an armorer.

    f. Rifles that require service beyond the capabilities of Department Armorers will be returned to the manufacturer or their designee for services.

2. Rifles or shotguns found to be defective shall be immediately forwarded to the patrol armory for repair and replacement.

3. Patrol rifles will be maintained in their original factory assembled condition and will not be modified.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.63**
	RELATED ORDERS: Contra Costa County Ordnance 54-12.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-01-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **40mm Less Lethal Weapons System**	

I. POLICY

A. The Department recognizes the value and need for the use of less lethal weapons under certain circumstances.

B. The use of such weapons will follow the Department's policies and procedures pertaining to the use of force.

II. DEFINITIONS

A. Cover Officer: An officer armed with lethal force that is covering a subject.

B. Sponge Round: The Safariland Group eXact iMpact 40mm foam sponge round.

C. 40 mm Launcher: The Defense Technologies Number 1325 40mm single shot gas gun.

III. PROCEDURE

A. GENERAL PROVISIONS

1. The less lethal weapons system is intended for use by trained sergeants and deputies to defend themselves and the public against combative, resisting, and or violent individuals.

2. Each patrol supervisor's vehicle and those deputies' vehicles as assigned by the supervisor will be equipped with the 40mm launchers.

3. Only sergeants and deputies who have been trained in the use of the 40mm launcher will deploy the sponge round.

B. DEPLOYING LESS LETHAL ROUNDS

1. All users of the 40mm less lethal system must remember that any use of force must be objectively reasonable and necessary to protect themselves and others or to overcome resistance to lawful authority.

2. Whenever possible, the deploying officer will warn the intended target of the weapon's eminent use in an effort to have him/her surrender to the officer's lawful authority.

3. Prior to deploying the sponge round, the deploying sergeant/deputy will give a loud, clear warning to other personnel at the scene.

    a. This is done to advise all personnel of the impending use of force so they may quickly move to affect the subsequent arrest of the subject and to minimize the potential of sympathetic weapons fire.

4. Primary target areas for the Exact Impact rounds will be lower torso, buttocks, thighs, and lower leg area.

5. Secondary target areas will include the upper torso, arms, elbows and hands.

6. The groin, head and neck should be avoided. The Sponge Round should not be deployed at distances of less than 10 feet.

C. ROLE OF THE COVER OFFICER

1. Deployment of the less lethal weapons system will always be a coordinated effort between the deputy/sergeant armed with the 40mm rifle and a second deputy/sergeant armed with their department issued sidearm, shotgun or rifle.

2. The cover officer's role is to protect the officer armed with the less lethal system should the need arise for the immediate deployment of lethal force.

3. At no time will the less lethal system be deployed without a cover officer.

D. HANDLING OF INJURED SUBJECTS

1. In all cases where the sponge round is deployed and a person is hit, they will be transported to a medical facility for evaluation and treatment.

E. DOCUMENTATION

1. All uses of the less lethal weapons system will be documented in a department crime report.

2. The report should minimally contain the number of less lethal rounds fired, the distance they were fired from, the impact area, the injuries caused and actions taken to treat those injuries.

3. Photos of injuries will be taken and submitted to evidence.

4. When possible, the expended less lethal projectile will be recovered and placed into evidence.

F. MAINTENANCE AND CARE OF THE LESS LETHAL WEAPONS

1. The primary responsibility for care and maintenance of the 40mm weapons system will rest with the department armorer.

2. Routine maintenance and repairs will be documented and a copy of all records maintained in the armorer's files.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.64**
	RELATED ORDERS: Contra Costa County Ordnance 54-12. CCCSO 1.06.60 – Crowd Control and Management	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Civil Disputes**	

I. POLICY

A. Deputies responding to, becoming involved in and/or investigating a civil situation will be committed to preserving the peace and will ascertain whether a crime has been committed.

B. They will remain impartial, they will express themselves in such a manner that their comments will not and cannot be taken as legal advice.

C. Deputies will never recommend a particular law firm or attorney when suggesting that legal advice be obtained.

II. GENERAL INFORMATION

A. Civil situations arise over disputes involving landlord/tenant, strikes, estranged or divorced couples, property boundary, repossessions, liens, and community property and business transactions.

B. The variety of problem situations arising from civil disputes and their related ramifications are almost endless.

C. It is generally not known until the deputy responds and investigates the situation whether it is civil or criminal in nature.

D. Whether civil or criminal, these situations can become police problems, which require immediate attention to prevent possible criminal acts arising out of, or a further escalation of criminal acts from the dispute.

III. PROCEDURE

A. LANDLORD/TENANT DISPUTES

1. Often, landlord/tenant disputes are considered to be civil in nature only; however, such disputes often involve a misdemeanor violation of the Penal Code or result in some type of violence.

2. It is important for deputies to be aware of both the practical and the legal issues involved.

3. Lockout of Tenant.

a. Usually conducted for non-payment of rent. This lockout procedure is a misdemeanor under Penal Code Section 418.

4. Seizure of Tenant's Property

a. Also, conducted for non-payment of rent and also occurs during a lockout. This procedure is also a misdemeanor under Penal Code Section 418.

5. Removal of Doors and Windows

a. Normally conducted in an attempt to evict the tenant.

b. Even though the destruction may be to the landlord's own property, such acts may constitute malicious mischief against the tenant, thus a violation of Penal Code Section 594.

6. Termination of Services

a. Also, a common practice is the interference of the tenant's ability to obtain services such as gas, electricity, and water.

b. Such action makes a landlord liable in a civil action under California Civil Code Section 789.3.

7. Trespass

a. A landlord will often enter a tenant's premises without prior permission in order to harass or to snoop around.

b. This conduct is considered to be a trespass constituting a misdemeanor under Penal Code Section 602.5.

c. However, if entry is for repairs, to investigate smoke, or entry at will is consented in the lease, then no trespass occurs.

8. In summary, even though a landlord may have proper legal grounds for evicting a tenant, it is unlawful for him to use any of the above methods.

a. The landlord's recourse is to bring a civil suit, called an "unlawful detainer" action and have the tenant legally evicted.

b. The deputy's objective is not to make or encourage an arrest, but to try to achieve a lasting solution to the conflict by explaining to the parties what conduct is not lawful and by suggesting alternative solutions that are lawful.

c. The deputy can often resolve a dispute by:

- Informing the landlord of any criminal violations committed.
- Explaining to the landlord the legal grounds for eviction process; i.e., lawful detainer, attorney, small claims.
- Explain to the tenant legal alternatives open; i.e., housing authorities, health department, attorney.

B. ARRESTS RESULTING FROM LANDLORD/TENANT DISPUTES

1. While deputies should not encourage an arrest, they should ultimately take whatever police action is necessary under the circumstances.

2. Patrol and Special Operations members must note that most offenses related to landlord/tenant disputes are misdemeanors.

    a. Consequently, no arrest should be made unless the offense occurred in deputy's presence.

3. If an arrest is warranted (i.e., assaults, batteries, etc.). The deputy will advise the citizen of private person arrest requirements and procedures.

C. REPOSSESSION DISPUTES

1. Patrol and Special Operations members must retain a neutral position in their relationship with both labor and company management.

2. The deputy's primary responsibility at the scene of a repossession dispute is to keep the peace.

3. The following guidelines are established to aid in this type of dispute:

    a. In no event is a deputy authorized to give legal advice.

    b. Parties should be advised to contact their respective attorneys.

    c. Investigate all alleged criminal offenses committed by involved parties and take appropriate action.

4. Deputies should be knowledgeable of the following:

    a. There are three groups who may repossess property:

        - The seller and his full-time employees.
        - A bank or finance company who has purchased the debt from the seller.
        - Private repossessors:
        - Must have a State license.
        - Repossessors shall carry a pocket card.

    b. As a rule, repossession occurs when the repossessor gains entry to the collateral or when the collateral becomes connected to a tow truck (B&P 7507.12).

        - EXAMPLE: If the repossessor has entered the vehicle or the vehicle has been connected to a tow truck repossession has occurred.

    c. Buyer's Rights

        - The buyer, buyer's spouse, or other persons entrusted with the property have the following rights:
        - A right to object, either orally or by conduct, to the repossessors taking of the property.
        - Objection must be made before the repossessor has made entry to the property to be repossessed or the property has been connected to a tow truck.

- EXAMPLE: The repossessor has not entered the automobile or connected the automobile to a tow truck.

- If the repossession is complete and there is other personal property involved; i.e., clothing, tools, etc., in a vehicle, the buyer has a right to retain the property provided if it is not an integral part of the repossessed property.

d. In all cases where property is exchanged a report must be written.

D. LABOR/MANAGEMENT DISPUTES

1. There is no secret formula for handling labor disputes.

2. Decisions made by deputies at the scene of a labor dispute must be based on sound judgment.

3. The following guidelines are set forth to aid patrol members in handling labor disputes:

a. Primary Functions of Patrol Members

- Maintain and keep the peace.
- Prevent injury to involved parties.
- Protection of property.
- Responsibilities at the Scene:
  - Patrol vehicles should not enter company property except for official business.
  - Patrol vehicles are not to be used as an escort for people coming or going from a facility.
  - Do not assume a fixed post except under unusual circumstances.
  - Avoid spending prolonged periods of time parked in the same location.
  - When a problem is identified, notify dispatch if additional units should respond for cover purposes.
  - Attempt to establish a rapport with both picket captains and company security people.
  - Avoid acceptance of food and/or beverages from either involved party.

b. Response to Reported Problems

- Confirm that a problem exists and the nature.
- Advise as soon as possible if additional units are needed. (No more deputies should respond than are required.)

- Avoid an aggressive attitude; i.e., immediately putting on a riot helmet and/or bringing the baton out with more flourish than necessary.
- Attempt to maintain as low a profile as possible.
- Exit vehicle as soon as practical and attempt to get as close to the participants as possible and ascertain what is occurring.
- Advise the field supervisor, station house commander or O.D. as soon as practical as to the nature of the problem.

c. Criminal Acts at the Scene

- Except in incidents involving on-view felonies, arrest will be the last resort in handling picket line problems.
- The following guidelines are established for criminal acts:
    - If the act is a misdemeanor where the responsible is known, conduct appropriate investigation.
    - EXAMPLE: If the responsible is cooperative and will leave the area after the report is written and the victim desires to pursue the matter, refer the report to the District Attorney for prosecution.
- In the event the victim wishes to exercise a citizen's arrest, conduct normal procedures for citizen's arrest and cite release the responsible if cooperative.
- If the responsible is less than ideally cooperative, physically taking the person into custody may be necessary.
- On-view felonies will be handled as any other felony investigation.
    - Again, the immediate focus of the deputy should be on alleviating the problem at the lowest possible level.

d. Disruptive Acts at Picket Lines

- A subject conducting himself in a manner that might be agitating other pickets should be brought to the attention of the picket captain, requesting his behavior be corrected or he should be removed from the line.
    - EXAMPLE: This behavior can range from consuming alcoholic beverages to wearing a mask, carrying weapons, or actually committing a crime.

- Further disruptive acts normally occur in the stopping or delaying of vehicles crossing the picket line.
- Management and labor representatives have the right to talk to the driver of a vehicle that approaches the picket line.
- The stopping or delaying of vehicles should not impede the normal flow of traffic or pedestrians in the area.

e. Use of Specialized Personnel

- The station house commander or patrol manager, whenever possible will assign those deputies who have received specialized training in labor management disputes to pickets.
- A current list of trained deputies is maintained by the Assistant Division Commander.
- The use of canine units will not be utilized on strike assignment except in cases where a deputy is actually endangered.

f. Violations of an Injunction

- Representatives of labor and management may call a deputy's attention to violations of an injunction and insist that the injunction be enforced.
- It is not the duty of law enforcement to enforce an injunction.
- Exceptions would be if violations of the injunction also violate a provision of the law or the court order is directed to the Sheriff ordering the enforcement.
- NOTE: Violations of an injunction are treated as contempt of court. If either party desires legal recourse, such action must be filed in the court of issuance.

g. Incident Reports

- Deputies assigned to strikes will document, on a standard report form, all incidents occurring and/or action taken.
- These reports will be for information in nature.

h. Commonly Used State Statutes

- The following is a list of those Penal Code and Vehicle Code sections that may be applicable in connection with labor disputes.
- This list is not intended to be all inclusive and patrol members should familiarize themselves with applicable codes:

Penal Code:

- 69 Resisting officer
- 148 Resisting, delaying, interfering
- 148.1 False explosive report
- 240 Assault
- 242 Battery
- 245 Assault with deadly weapon
- 403 Disturbance of public meeting
- 404 Riot
- 404.6 Urging riot
- 405a Lynching
- 406 Rout
- 407 Unlawful assembly
- 409 Remaining present at place of riot
- 415 Disturbing the peace
- 451 Arson
- 455 Arson-building
- 453 Possession of flammable materials
- 552.1 Exemptions-union activities
- 588a Throwing injurious substance on highway
- 588b Breaking down barrier, sign, or light on highway
- 594 Vandalism
- 647c Obstruction of street, sidewalk or other place open to public
- 647f Disorderly conduct, drunk
- 653m Annoying-threatening phone calls
- 25400 Possession of concealable weapon
- 25850 Carrying loaded firearms
- 18710-18725 Possession of destructive devices

Vehicle Code:

- 20002a Hit and run
- 21106b Crosswalks, pedestrians
- 23331 Pedestrian yield
- 21955 Jaywalking

- 21956 Walking on roadway
- 23152 Driving under the influence
- 23110a Throwing substance at vehicle
- 23110b Throwing substance at vehicle with intent
- 23112b Depositing rocks or dirt on highway
- 23221 Drinking in motor vehicle on highway
- 23222 Possession of open container
- 23223 Storage of open container
- 23224 Possession by minor

E. OTHER CIVIL DISPUTES

1. Frequently, a deputy will receive a call of a business dispute, petty theft, or disturbance that turns out to be an argument over payment for goods or services.

    a. In many of these disputes it is often difficult to determine whether they constitute a civil dispute only or also involve a criminal offense.

    b. Accordingly, prior to deciding upon a course of action, the deputy must analyze the total circumstances to assure himself of the true nature of the alleged grievance (i.e., civil and/or criminal) coupled with the options available to him.

2. In the event that no crime can be established, deputies should conduct the following:

    a. Maintain the peace.

    b. Advise the complaining party or parties that no crime exists or was committed.

    c. Attempt to have the parties resolve the dispute.

    d. Do not take sides.

    e. Do not use, or allow to be used, your position as a police officer to compel payment or similar action by any party.

    f. Do not use the threat of arrest or other police action to compel civil action by either party.

3. If the parties cannot or will not informally resolve their dispute, assist in exchanging identifying information and advise them to contact their attorneys or file a small claims suit, etc.

4. If the deputy feels that criminal action might be involved, (i.e., consumer fraud, theft by false pretenses, etc.) they should:

    a. In instances of possible felony violations, write a report and route to Investigation Division for review.

b. In instances involving possible misdemeanor violations, refer report to the Misdemeanor Complaint Unit\District Attorney's Office for review and possible criminal action.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.65**
	RELATED ORDERS: Contra Costa County Ordnance 54-12.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Demonstrations/Civil Disturbances**	

I. POLICY

A. It is neither the intention nor the desire of the Patrol or Special Operations Division to suppress or restrain lawful activity.

B. The Patrol and Special Operations Division will expend whatever resources are necessary to protect the rights of any person or group to conduct a peaceful and lawful demonstration.

C. However, unlawful activity, whatever its guise, requires prompt and effective action by the Patrol and Special Operations Division.

D. The Patrol and Special Operations Division will take appropriate legal steps to discourage unlawful conduct whenever it occurs.

II. GENERAL INFORMATION

A. DEMONSTRATIONS/CIVIL DISTURBANCES

1. Tactics employed by dissidents engaged in disruptive activities frequently include efforts to draw the police and other public officials into responses likely to produce violence and injury to participants and thus garner support for their cause.

2. Patrol and Special Operations members will resolve disruptive situations in a manner that will minimize the potential for violent confrontations by performing assigned tasks within the framework of the following principles.

III. PROCEDURE

A. FIRST DEPUTY AT SCENE

1. The first deputy at the scene of a disturbance should observe the situation from a distance and evaluate it before acting.

2. If the situation demands, the deputy will notify the area supervisor.

B. COORDINATION OF EFFORT

1. The patrol supervisor will coordinate deputy's actions.
2. Only requested units will respond to the scene.
    a. Deputies will report to the supervisor after parking their vehicles in one group in an area away from the crowd.
    b. One deputy will be assigned to guard the vehicles against damage.
    c. Individual deputies should avoid driving their cars into the center of the crowd and operating individually.
    d. If possible, patrol supervisor make contact with demonstration coordinator to negotiate peaceful resolution.

C. ORDER TO DISPERSE

1. A dispersal order must be given before a person can be guilty of remaining at a place of riot, rout, or unlawful assembly.
2. If the supervisor in charge at a disturbance scene decides to declare an unlawful assembly, such supervisor should go as near to the crowd as is safe and make an audible statement using a Legal Form of Dispersal Order. (Issued Dispersal Order Pocket Card)
3. Use public address system when issuing order to disperse
4. If possible have a unit at the back of the crowd to make sure dispersal order is able to be heard.
5. Ensure there is a safe exit route for demonstrators to leave the area

D. RESPONSE TO DEMONSTRATIONS

1. Deputies assigned to a demonstration will strive to maintain an outward appearance of calmness, whether the task involved is simply standing by, protecting demonstrators from hostile "on-lookers" or making necessary arrests of violent demonstrators.
2. Patrol and Special Operations members will treat demonstrators, "on-lookers," or counter demonstrators equally.

E. RESPONSE TO VIOLENT CONDUCT

1. Where a demonstrator uses physical violence upon another person or property, patrol members should promptly make an arrest unless the supervising sergeant at the scene concludes that making the arrest would be unnecessarily risky in reducing the ability of members to perform their duties effectively.

F. RESPONSE TO OTHER ILLEGAL CONDUCT

1. Arrests will occasionally have to be made because of a demonstrator's non-violent but nevertheless illegal conduct.
    a. Example: illegal obstruction of the streets or of a building entrance.
2. The supervisor in command at the scene will decide if such arrests are to be made.

3. Before any such arrest is made, demonstrators will be warned that they must move or risk arrest.

G. COORDINATION OF PATROL AND SPECIAL OPERATIONS ACTIONS

1. Deputies will maintain a disciplined and coordinated response at the scene of a demonstration.

2. Deputies will not act alone unless a loss of life or great bodily harm could result from the conduct of demonstrators.

3. When mere property damage is imminent, members will coordinate their response through assigned supervisors and act as directed.

4. Supervisors will remain at the scene and continually seek information concerning location and number of demonstrators, emotional condition of the crowd, and resources available to maintain order.

H. SUPPLEMENTARY INFORMATION

1. Riot experience throughout the United States has shown that in many cases minor incidents involving the police were responsible for initiating the trouble.

2. With this in mind, the following procedures will be observed unless specific orders to the contrary are issued by competent authority:

   a. Arrests must be "thoroughly" justified and only necessary force must be used in making them.

   b. Incidents must be handled as quickly as possible without creating a disturbance or attracting other persons.

   c. Areas of an incident or small riot should be closed off and ingress not allowed.

   d. Persons wishing to leave should be allowed to do so.

   e. The Patrol or Special Operations Division Commander or their designated alternative will be responsible for field operations involving civil disturbances.

3. Reports from the field will go directly to the Patrol or Special Operations Division Commander or designee in overall command.

   a. The employee in overall command will have the responsibility for deciding whether it is necessary to notify the Sheriff-Coroner.

Contra Costa County **Office of the Sheriff** Patrol Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.66**
	RELATED ORDERS:	
ISSUE DATE: 8-28-15 **REVISION DATE:** 04-03-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **General Information**	**SUBJECT:** **Automated External Defibrillator (AED)**	

I. POLICY.

A. The Automatic External Defibrillator (AED) will be available for emergency treatment of victims exhibiting sysmptoms of sudden cardiac arrest who are unresponsive and not breathing.

B. Staff will be familiar with the use of the AED as part of the regular CPR training.

C. This device is not meant to replace staff trained in CPR and does not eliminate the need for basic CPR.

II. PROCEDURE

A. AED Fixed Locations

1. Field Operations Building
   a. Second floor copy room mounted on wall
2. Bay Station
   a. Mounted on wall inside main office
3. Delta Station
   a. Mounted on the hallway wall outside of sergeant's office.
4. Muir Station
   a. First floor mounted on hallway wall next to J-Team offices.
5. Valley Station
   a. Mail room area hallway
6. Blackhawk Police
   a. Blackhawk office wall
7. Danville Police Department
   a. Mounted on wall between locker and restrooms
8. Lafayette Police Department
   a. Patrol work area

9. Orinda Police Department
    a. Mounted on wall outside of detective office
10. Marine Patrol
    a. Mounted on kitchen wall

B. AED Mobile Locations

1. The AED's will be assigned to designated patrol vehicles. The vehicle will have signage inside the driver's area stating that an AED is contained in the vehicle.
2. The AED will be inventoried and checked for serviceability by the driver of the patrol vehicle at the beginning of each shift and noted in the unit history when the vehicle is being used.
3. AED's shall be assigned to the following mobile locations:
    a. Station House supervisor vehicles
    b. Marine Patrol
    c. Resident Deputy vehicles
    d. SWAT
4. When advised by Dispatch of a medical call in a county patrol area, deputies should consider responding to the medical call when:
    a. Not assigned to another call for service
    b. When based on the nature of the medical call, the use of an AED could be of benefit. These types of calls are similar but not limited to:
        - Drowning
        - Heart attacks or strokes
        - Difficulty breathing

C. AED Maintenance

1. AED's shall be checked monthly to ensure they are properly functioning.
    a. Small window on front has a blinking green light
    b. Display stating AED is "OK" operating properly and battery level displays two or more bars
    c. Examine the case looking for damage and cracks, battery pins bent or discolored.
    d. Examine electrodes for damage and missing wires.

D. AED Use

1. Staff should be trained and recertified in the use of the AED.
2. When a medical emergency presents itself, trained staff should:
    a. Immediately notify Sheriff's Dispatch via radio or by phone (925-646-2441) of the medical emergency and start Emergency Medical Services (EMS).

b. Determine if the subject experiencing the medical emergency would benefit from use of the AED.

3. Turn on the AED by pressing the power button and follow the directions given by the AED.

4. Open the AED and place the electrodes according to the audible/written/pictured directions.

   a. **WARNING** – do not place the electrodes directly over implanted pacemaker. Place at least one inch from device.

5. Refrain from touching the patient after application to allow the AED to analyze cardiac rhythm.

6. If a shock is advised by the AED, stand clear and push button to deliver shock. This cycle will repeat until 3 shocks have been delivered as programmed or until stable cardiac rhythm is established.

7. Re-check for breathing and airway obstructions and evaluate for CPR.

8. Subject is to be transported by ambulance to medical facility

E. Documentation

1. Following the use of an AED, a police report will be written documenting the life saving measures taken on the patient by Sheriff's Office personnel.

   a. A copy of the report will be routed to the Assistant Patrol Division Commander.

Contra Costa County Office of the Sheriff
Patrol and Special Operations Division
Policy and Procedure

Specialized Units

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.68**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 09-19-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Specialized Units**	**SUBJECT:** **Marine Services Unit**	

I. POLICY

A. The Special Operations Division will maintain a Marine Services Unit to protect lives and property on the waterways while promoting boating safety through education and enforcement. Comprised of the Marine Patrol and the Infrastructure Protection Team, the Marine Services Unit exists to further the mission of the Office of the Sheriff by providing the most efficient and effective on-water law enforcement services posssible.

II. PROCEDURE

A. MARINE PATROL

1. The primary function of the Marine Patrol is to maintain a proactive approach towards the protection of the lives and property of persons on the waterways within Contra Costa County.

2. Additional responsibilities include, but are not limited to, the following:

   a. Enforce all applicable laws and regulations governing the operation of vessels.

   b. Investigate all boating accidents occurring on county waterways.

   c. Investigate thefts relative to on-water vessels and related equipment.

   d. Conduct safety inspections of vessels and provide boating safety education to the boating community.

   e. Remove hazards to navigation through continuous abandoned vessel abatement.

   f. Conduct search and rescue operations.

3. The administration of the Marine Patrol Unit including the care and maintenance of all patrol vessels, vehicles, and equipment will be at the direction of the Field Operations Bureau Assistant Sheriff, the Special

Operations Division Commander, and the Marine Services Unit Commander.

4. Marine Patrol members shall perform their duties as specified within the Marine Services Unit Manual.

5. Emergency Operation of patrol vessels and vehicles:

   a. The emergency operation of patrol vessels and vehicles shall be conducted in accordance with those procedures outlined in the Marine Services Unit Manual and CCCSO Policy 1.06.53, Code Three Vehicle Operation.

B. INFRASTRUCTURE PROTECTION TEAM

1. The primary function of the Infrastructure Protection Team is to enhance the security of the critical infrastructure within the Bay and Delta regions. The Infrastructure Protection Team works closely with the United States Coast Guard, allied agencies, and critical facilities to detect, deter, and defeat any potential threats to public safety.

2. Additional responsibilities include, but are not limited to, the following:

   a. Conduct waterborne patrols designed to establish a visible deterrent presence and obtain awareness of suspicious activity in the vicinity of critical infrastructure.

   b. Assist the United States Coast Guard by providing assistance with the escort of vessels containing extremely hazardous cargo within the county.

   c. Conduct scheduled and unscheduled enforcement of established security zones in waterways near critical infrastructure and key resources within the county.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.69**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 09-19-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Specialized Units**	**SUBJECT:** **Air Support Unit**	

I. POLICY

A. The mission of the Sheriff's Air Support Unit is to enhance community safety, protect life and property, and assist Sheriff's ground patrol and marine patrol units in their capabilities to provide law enforcement services.

B. The air crew will operate on a varied schedule based upon factors to include the time of year, weather conditions, and department needs. The air crew places an emphasis on safety above all other factors. As such, air crew members will not conduct air operations during periods of reduced visibility to include heavy rain, heavy fog, or low clouds

C. The Air Support Unit Lieutenant will provide all stations and Sheriff's Dispatch with a monthly schedule.

II. PROCEDURE

A. WATCH COMMANDER RESPONSIBILITIES

1. When Air Support crews are not on duty, the Watch Commander can authorize a call-out.

   a. Prior to authorizing a call-out, the Watch Commander should consider the following:

      - Type of incident (search and rescue, escapee, major felony incident, etc.).
      - Duration of incident.
      - The air crew will require approximately one hour to arrive on scene.

   b. The Watch Commander will notify Dispatch of the call-out authorization. Dispatch will need the following information:

      - Type and Location of incident.
      - Weather conditions at the scene.

- Any hazards to the aircraft (news aircraft, EMS aircraft, etc.).
- The phone number of the Incident Commander at the scene.
- The applicable radio channel.

2. The Tactical Flight Officer will check in with the incident commander via radio and request the following information:
    - Description of involved vehicles and persons (race, clothing description, color of hair, hats, etc.).
        - The descriptions should be of a type useful to an air crew.
    - Direction of travel, time element, etc.

B. PATROL SERGEANT/DEPUTY RESPONSIBILITIES

1. Call-Out
    a. Determine the availability of the Air Support Unit via Dispatch.
    b. State the type of incident (missing person, major felony, etc.).
    c. Request ETA to the scene.
    d. The Air Unit will monitor the proper frequency while en route to the incident.
    e. Communicate geographical location of request (use map coordinates and or major intersections/landmarks).
    f. Detailed descriptions of vehicles and directions of travel (color, body style, major damage, headlight out, etc.).
    g. Detailed descriptions of persons/suspects (clothing, hair color, race, hat, etc.).
2. Air Support Unit response to the scene:
    a. May use patrol unit roof number for unit identification.
    b. All directions will be referenced to left, right, or straight ahead, using the directing deputy's body as a reference point, as opposed to compass directions.
    c. During the hours of darkness, leave the patrol car amber lights on for easy recognition by the helicopter crew.
    d. After making radio contact with the Tactical Flight Officer, Deputies should use a flashlight to identify their location.
3. After Hours Call-Out by Sergeants/Deputies
    a. Notify Dispatch of the call-out request.
    b. Dispatch will notify the Watch Commander.
4. Off-Site Landings
    a. Determine suitability of landing zone (grass, dirt).

- The landing zone must be at least 100' by 100'.

b. Identify obstructions and hazards to aircraft via radio.

c. Set markers and assign patrol cars to the landing zone.

d. A flight officer may exit the helicopter after landing and position themselves at the rear of the helicopter for safety.

e. Deputies will not approach the helicopter until directed by the flight officer or pilot and, when directed, approach only from the front of the helicopter.

5. All flights originate at Buchanan Field in Concord. The flight operations office is located at 500 Sally Ride Dr. #500 (Buchanan Field), Concord.

a. The office phone number is 646-5135.

C. NOISE COMPLAINTS

1. If Dispatch receives any complaints from citizens about the noise created by a S.T.A.R.R. helicopter the dispatcher answering the call will advise the citizen of the nature of the call.

a. No information of a sensitive or compromising nature should be released.

b. Dispatch will obtain the citizen's name and phone number so that they can be contacted by the Watch Commander or his/her designee when time permits.

D. ON-DUTY RESPONSE

1. It will be the responsibility of the Tactical Flight Officer to monitor Sheriff's radio to be aware of pending details.

2. A S.T.A.R.R. helicopter will respond to details that can be handled by the air when appropriate, i.e. prowlers, area checks, 415 motorcycle, 602M vehicles, suspicious circumstances, etc.

3. The Tactical Flight Officer will notify Dispatch that they are on the channel and handling the call.

4. The air crew will decline any detail if safety is a concern.

E. REQUESTS BY OUTSIDE AGENCIES FOR AIR SUPPORT

1. Any request by outside agencies must be approved by the Air Support Unit lieutenant or the on-duty Watch Commander.

2. Information regarding the request will be documented by Dispatch on the S.T.A.R.R. Call-out Information Form.

3. Dispatch will contact the aircrew.

4. Only Contra Costa County Tactical Flight Officers will be used for after-hours call-outs, including requests made by other agencies.

F. LANDINGS

1. The air crew will advise Dispatch of any landings.

2. The types of landings include:

a. SCHEDULED LANDINGS

- When a S.T.A.R.R. helicopter lands at an airport.

b. OFF-SITE PRECAUTIONARY LANDINGS

- These landings are likely due to some type of urgent problem aboard the helicopter.
- The aircrew may request ground units to respond to the landing site.
- The ground units may be needed to provide security for the helicopter.
- Dispatch does not need to take any special action for these landings.

c. OFF-SITE ENFORCEMENT LANDINGS

- The air crew may make an off-site landing to perform enforcement actions, medical assists, or for deputy rescue.
    - Dispatch will be advised of the landing.

d. EMERGENCY LANDING

- If an emergency landing is declared, the aircrew will issue an 11-99 call and give the location of the incident if possible.
- Dispatch will have any patrol units in the area respond to the location Code 3, as well as dispatch fire and ambulance units.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.70**
	RELATED ORDERS: None.	
ISSUE DATE: 01-01-2006 **REVISION DATE:** 09-19-17	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Specialized Units**	**SUBJECT:** **Air Support Units-Outside Agency Requests**	

I. POLICY

A. In the event of a major medical emergency, where it is deemed necessary to request outside assistance from a Rescue Aircraft Unit, under normal circumstances, Fire Department Personnel will initiate the dispatch of the appropriate Rescue Aircraft needed.

B. In the event that Fire Department Personnel are not available or cannot respond to the location, Sheriff's Office Personnel may be required to determine if Rescue Aircraft is appropriate.

II. GENERAL INFORMATION

A. Due to procedural requirements the STARR air crew, the CHP helicopters, and the East Bay Regional Park EAGLE air crews are the only local area Rescue Aircraft listed on the call-up list

B. The STARR air crew and the CHP Helicopters have a "hoist" or “long line" rescue capability.

1. CHP unit should be requested in situations where this type of rescue is needed and the STARR air crew is unavailable.

2. ETA's to various areas will be dependent upon the location of the helicopter at the time of the request.

C. All other aircraft, including Sonoma County Sheriff and Coast Guard, must be requested using the request procedures for Auxiliary Medical Rescue Aircraft listed in this policy.

III. PROCEDURE

A. REQUEST OF LOCAL EMERGENCY MEDICAL/RESCUE HELICOPTER

1. Advise Dispatch that a Medical Helicopter is needed.

a. Dispatch will need the following information:

- Location and number of patients/victims

- Type and extent of injuries (if known)
- General location of nearest landing site
    - Map guide page number and coordinates and/or significant landmarks identifiable from the air, i.e.: burning building, patrol car lights, etc.
- Weather conditions on scene
- Obstacles/hazards to the helicopter
- Name of incident commander or on-scene contact
- If a hoist is requested, estimate the distance the patient will need to be lifted from the ground to the helicopter

b. Dispatch will provide the responding helicopter unit of the dispatch frequency and name of requesting agency.

c. If additional information is needed, Sheriff's Dispatch will facilitate contact with the on-scene contact person.

B. AUXILIARY MEDICAL RESCUE AIRCRAFT

1. This procedure is provided to obtain special resource assistance in inland search and rescue operations in the event local rescue aircraft is unavailable.

2. This procedure complies with the OES Law Enforcement Mutual Aid Search and Rescue System, provides coordination in obtaining infrequently used resources, and provides consistency in request procedures.

3. Auxiliary Rescue Aircraft may be used when non-disaster inland search and rescue operations exceed local and state capabilities.

    a. A minimum of one hour response time should be expected.

    b. An ETA can be given only after the request is made and an assessment of available resources has been completed.

4. The Incident Commander determines the need for a specialized resource

5. The on-scene agency will contact Contra Costa Sheriff's Dispatch (law enforcement mutual aid coordinator).

    a. Information that is to be given to Sheriff's Dispatch for relay to State OES Law Division:

        - Longitude and latitude of incident or map coordinates
        - Incident description, including number of injured, types of injuries and topography
        - If hoist is requested, estimate the distance the patient will need to be lifted from the ground to the helicopter
        - Altitude of incident, if known
        - Weather at the scene

- Air-to-ground frequency
- CALCORD 156.075.

b. If additional information is needed, Sheriff's Dispatch will facilitate contact with the on-scene agencies dispatch center, for direct communications.

- Sheriff's Dispatch contacts State OES Law Division:
  - Monday - Friday, 0800 hrs - 1700 hrs: (916) 262-1744
  - Nights, weekends, holidays: (916) 262-1621

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.71**
	RELATED ORDERS: CCCSO 1.03.63, 1.05.82, 1.06.36, 1.07.21.	
ISSUE DATE: 04-03-2009 **REVISION DATE:** **09-19-2017**	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Specialized Units**	**SUBJECT:** **Canine Unit**	

I. POLICY

A. The Canine Program has been established to provide assistance within policy anywhere within our Office or in support of surrounding public safety agencies.

B. The Canine Program mission is to provide assistance to all Sheriff's Office Divisions whenever necessary and within Department policy, as well as enhancing the overall effectiveness of the Department, along with supporting other Law Enforcement Agencies as needed.

II. GENERAL INFORMATION

A. Canine Unit Organization

1. Assistant Patrol Division Commander

   a. Shall participate in the selection for handlers, canines, and volunteers in the Canine Unit.

   b. Shall participate in the "Canine Bite Review" process.

   c. Ensure all canine teams remain in compliance with P.O.S.T. canine standards.

   d. Manage canine fund.

   e. Review all canine records and files annually.

2. Canine Sergeant

   a. The Canine Sergeant will report to the Assistant Patrol Division Commander.

   b. The Canine Sergeant will be responsible for the following:

   - Shall participate in the selection for handlers, canines, and volunteers in the Canine Unit.
   - Shall participate in the "Canine Bite Review" process.

- Report/document any discrepancies in the canine team performance of either canine or canine handler to the Assistant Patrol Division Commander.
- Report all canine injuries, canine deaths and handler injuries to the Assistant Patrol Division Commander as soon as possible.
- Schedule training with and through the Department contracted trainer.
- Evaluate the training and training programs when required to maximize the capabilities of the Canine Unit.
- Maintain training programs and complete performance evaluations of canine teams.
- Act as a liaison officer with other area law enforcement agencies that maintain canine programs to enhance inter-agency communication and cooperation.
- Act as a liaison officer with the public by scheduling public canine demonstrations, shows and contests, while ensuring the integrity of the unit and Department.
- Maintain canine records.
- Recommend and oversee the procurement of needed equipment and services for the unit.
- Order supplies, investigate the use of potential new products and keep inventory of the same.
- Conduct canine equipment inspections on a regular basis to ensure the serviceability of all equipment used by Canine Unit members. Report the results to the Assistant Patrol Division Commander quarterly.
- Act as a liaison with all canine related vendors (veterinary, trainer, equipment, canine supplier).
- Maintain a current list of available countywide emergency veterinary clinics and hours of operation (24 hours preferred).

3. Canine Handler

   a. Selection Process consists of the following:

      - Application containing the following elements:
        - Letter of Interest
        - Letter of Recommendation from current lieutenant and supervisor
        - Three arrest reports
        - Resume

- Interview
    - Conducted by the Canine Sergeant and the Department contracted trainer.
    - A DSA member will be invited to observe the process.
- Physical Assessment (Investigations Division handler exempt)
    - To assure the candidates can physically meet the challenges that a police service dog handler faces, an assessment of the candidate's physical endurance will be given and consist of the following:
    - 40 -yard run carrying an 80 lbs. weight
    - Lift an 80 lbs. weight over a six-foot-high fence
    - Completion of a 1.5 mile run in less than 15 minutes
- Canine Handler assessment
    - The canine handler must role-play during training as a decoy or agitator, so the candidate must have an affinity for animals and cannot be intimidated by the canines. To evaluate this trait/ability, the candidate will attend a canine training session where the contracted Department trainer will direct, supervise and evaluate the candidate based on his/her interaction with the police service dogs as an agitator, decoy and handler during obedience scenarios.
    - A DSA member will be invited to attend and observe the process.
    - Review of work history, including attendance, performance evaluations, self-motivation and report writing.
    - A second interview will be conducted by the Assistant Patrol Division Commander and Canine Sergeant. Second interviews for Investigations Division handler positions are conducted by the Investigations Division Commander.
- Home evaluation
    - To attempt to assure the compatibility between the canine, the handler, his/her family, along with protecting the Sheriff's Office property and as a risk management tool for the Department.

- The home evaluation will entail confirming the candidate rents or owns his/her residence. The dwelling has a fenced rear yard and the candidate's family is aware and accepting of the demand of being a canine handler.
- The yard must be approved by the Assistant Patrol Division Commander and Canine Sergeant as being suitable to house a dog.
- Candidates must verify there are no HOA restrictions on the building of a kennel consistent with CCCSO standards.

- A standardized interview/inspection form will be used and available to the DSA.

b. Minimum Qualifications

- Candidates to be considered must have a minimum of two years' experience in the Patrol or Special Operations Division.

c. Minimum Commitment

- A three-year commitment is required due to the substantial investment in the purchase of the police service dog, along with the associated costs (certification training, maintenance training and equipment).
- The handler will be exempt from forced rotation to the Detention Division consistent with the Memorandum of Understanding. The Sheriff reserves the right to employ Reverse Rotation for a Canine Deputy regardless of status.

d. Work Schedule

- The Canine Unit will either be assigned to the existing J-Team or as a separate unit assigned to the Patrol or Special Operations Division.
- A canine team assigned to the J-Team will work the J-Team schedule and hours.
- The Patrol Division Commander or respective Police Manager will make the final canine team schedule determination.
- The Investigations Division – Special Investigations Unit handler will work normal Investigations Division hours, or as designated by the SIU Sergeant.

e. Responsibilities

- The handler is required to rent or own a residence with a fenced rear yard.
- The handler shall ensure that the canine receives proper nutrition, grooming, training, medical care, affection and acceptable living conditions.
- When off-duty, the canine shall be maintained in the direct control of the handler or in a kennel. When the canine is kenneled at the handler's home, the gate shall be secured with a lock. When off-duty, canine may be let out of their kennels while under the direct supervision of their handler.
- Under no circumstances will the canine be lodged at another location unless approved by the Canine Sergeant.
    - When the handler anticipates extended time off that requires boarding of the canine, the Canine Sergeant will be given reasonable notification to make appropriate arrangements.
- The Canine Sergeant shall be notified as soon as practical of any illness or injury to the police service dog.
- Through Department sponsored training, each police service dog team shall be trained and certified to meet current P.O.S.T. standards prior to assignment.
    - Each police service dog team shall be re-certified to P.O.S.T. Police Service Dog standards on an annual basis.
- The handler shall maintain all Department equipment under his/her control in a clean and serviceable condition. Any deficiency shall be reported to the Canine Sergeant.
- Handlers shall permit the Assistant Patrol Division Commander or Canine Sergeant to conduct spontaneous on-site inspections of affected areas of their residence and equipment to verify that conditions and equipment conform to this policy.
- Any changes in the living status of the handler, which may affect the lodging or environment of the police service dog, shall be reported to the Canine Sergeant as soon as possible.
- The canine should be permitted to socialize in the home with the handler's family for short periods of time and under the direct supervision of the handler.

f. Uniform

- Canine handlers, while actively working a canine and assigned to county patrol, may wear a two-piece tan colored BDU type uniform with the nametag and badge sewn on. Canine handlers, while actively working a canine and assigned to a contract city, may wear a two-piece blue colored BDU type uniform with the nametag and badge sewn on. The back of the uniform shirt will have a patch reading "SHERIFF K9" or if working a contract city reading "POLICE K9." The canine shoulder patch is to be worn on the left sleeve ½" under the Office of the Sheriff patch.
- Class "A" uniform is the same as other Patrol Division members. While in the Class "A" uniform, the K-9 pin will be worn above the nametag.
- The Investigations Division – Special Investigations Unit handler will wear the unit's uniform of the day, unless the canine is being deployed for a search. During the searches, the SIU handler will wear a tactical vest with a patch reading "SHERIFF K9," or a uniform as described above.

g. Separation from the Canine Unit

- In the event the Department determines the canine handler's services are no longer needed, the canine will be evaluated for continued service. This evaluation will be conducted by the Department contracted trainer, Canine Sergeant and Assistant Division Patrol Commander. If after the evaluation, it is determined the canine has substantial service life remaining, it may be reassigned to another handler. The following factors will be considered during the evaluation:
  - Age of the canine
  - Years of service
  - Demeanor
  - Medical issues
- Reasons for handler separation include, but are not limited to:
  - Department contracted canine trainer or Patrol Division or Special Operations Division Commander determines handler is unfit for canine duty.
  - Handler abuses or neglects canine.
  - Handler misuses canine.

- Failure to meet the P.O.S.T. certification after sufficient number of attempts.
- Health or age prevents canine from performing tasks.
- Handler transfers out of unit.

- The Office of the Sheriff understands that a strong emotional bond develops between a handler and the canine. In the event the canine retires in good standing; the handler may purchase the dog from the Office of the Sheriff at an agreed upon fee. Ownership of the canine will be transferred over to the handler. The handler will then be responsible for any subsequent medical, feeding, housing, and licensing costs, and assume any liability resulting from actions of the canine.
- In the event the handler does not take over ownership of the canine, the Office of the Sheriff will determine where the canine is placed.

h. Compensation

- The police service dog handler shall be compensated for time spent in the care, feeding, grooming and other needs of the dog as provided in the Fair Labor Standards Act. The compensation shall be prescribed in the employee's MOU.

4. Canines

a. The police service dog will be selected, purchased, and trained as determined by the Office of the Sheriff.

B. Dogs in Public Areas

1. All police service dogs shall be kept under the handler's control when in areas that allow access to the public.

a. Exceptions would include specific police operations for which the police service dogs are trained.

2. Police service dogs shall not be left unattended in any area to which the public may have access. When the police service dog vehicle is left unattended all windows and doors shall be secured.

C. Medical Care of the Police Service Dog

1. In the event the police service dog is injured, the injury will be immediately reported to the Canine Sergeant, Assistant Patrol Division Commander, or O.D.

2. Depending on the severity of the injury, the police service dog shall either be treated by the designated veterinarian or transported to a designated emergency medical facility for treatment.

a. If the handler and dog are out of the area, the handler may use the nearest available veterinarian.

3. Non-emergency medical attention shall be coordinated through the Canine Sergeant.

4. Except in emergencies outlined above, all medical attention shall be rendered by the designated Department contracted veterinarian.

5. All records of medical treatment shall be maintained in the police service dog handler's canine training file.

D. Training

1. Before assignment in the field, each police service team shall be trained and certified to meet current P.O.S.T. standards.

2. Each police service dog team shall thereafter be re-certified to P.O.S.T. Police Service Dog standards on an annual basis, when needed to correct observed deficiencies, or at the discretion of the Assistant Patrol Division Commander or the Canine Sergeant.

3. Police service dog teams shall receive training as defined in the current contract with the Department's Police Service Dog training provider.

4. Police service dog handlers are encouraged to engage in additional training with the approval of the Canine Sergeant.

5. To ensure that all training is consistent, no handler, trainer or outside vendor is authorized to train Department canines.

6. All police service dog training shall be conducted while on-duty or otherwise specified in the employee's current MOU. The bi-monthly training is MANDATORY and any absences need to have prior approval from the Canine Sergeant or Assistant Patrol Division Commander.

7. No police service dog team failing P.O.S.T Police Service Dog certification shall be deployed in the field until certification is achieved. When practical, pending successful certification, the police service dog handler shall be reassigned to regular patrol duties.

8. Police service dog records shall be maintained in the canine handler's file for a period of two years. The exceptions shall be if the records in question pertain to ongoing litigation or at the discretion of the Assistant Patrol Division Commander.

E. Procedures for Maintenance and Control of Narcotics for K-9 Training

1. OBTAINING NARCOTICS

a. Narcotics must be obtained from the CCCSO Property Room in Concord. The narcotics must have been legally seized and the case adjudicated. The narcotics must be ordered in the name of the K-9 supervisor. Two sworn Deputy Sheriffs must sign for and pick-up the narcotics, in compliance with our current evidence policy.

2. INVENTORY PROCEDURES

a. Upon receiving the narcotics, the K-9 supervisor and a narcotic K-9 handler, together must immediately conduct an initial inventory. Each narcotic shall be weighed, and the following

information recorded in the K-9 Narcotics Inventory Book. Each initial entry is to be signed by the K-9 supervisor and the K-9 handler. The case number and lab results for the narcotics will also be maintained by the supervisor for review.

b. Source of narcotic, the case or lab number and by whom it was obtained.

- Date and time received
- Type of narcotic (marijuana, methamphetamine, heroin, etc)
- Form of narcotic (green leaf, pill, liquid, paste)
- Weight of the narcotic
- Any discrepancies noted during inventory will be immediately reported to the Assistant Patrol Division Commander, who will determine appropriate action to be taken.
- The designated narcotic K-9 handler, in the presence of the K-9 supervisor may separate the narcotics and repackage them suitably for narcotics training.
- Each re-packaged narcotic will be recorded in the K-9 Narcotics Inventory Book to reflect the following:
    - Identification number assigned or other marking
    - Date of packaging
    - Type of narcotic (marijuana, cocaine, heroin, methamphetamine)
    - Form of narcotic (powder, rock, tar)
    - Weight of narcotic
    - Weight of narcotic, including packaging/container
    - This entry is to be witnessed and signed by the K-9 supervisor and the designated narcotic K-9 handler.
- An inventory is to be conducted and recorded in the Narcotics Inventory Book by the K9 supervisor and a designated narcotic K-9 handler every January and June. An inventory can be done at any time, as requested by Management Staff, the K-9 supervisor, or a narcotic K-9 handler.
- All inventories are to be memorialized in writing by the K-9 supervisor and given to the Assistant Patrol Division Commander for review.

3. DESTROYING NARCOTICS

a. All narcotics should be routinely rotated every six months to one year to preserve the scent suitable for narcotics K-9 training. K-9 training narcotics must be destroyed by the following method:

- The K-9 supervisor will transport the narcotics to the Property Room for destruction, pursuant to Department Policy 1.06.37.

4. LOST OR STOLEN NARCOTICS

a. The K-9 supervisor is to be notified immediately in writing via memo, if any K-9 narcotics are lost or stolen.

b. The K-9 supervisor or the narcotic K-9 handler having possession of the narcotics at the time of the loss or theft will make a report.

c. The memo and report will be forwarded, via the chain of command, to the Patrol Division Commander.

5. DISSEMINATED NARCOTICS

a. In the event the narcotics are accidentally disseminated by the K-9 or the handler, the following procedure is to be followed by the K-9 handler.

- The narcotic handler will first attempt to contact the K-9 supervisor and have them respond to the location of the incident. If the K-9 supervisor is unavailable, the K-9 handler will contact a Patrol Division Supervisor and have them respond to the scene. The supervisor will interview the K-9 handler regarding what occurred, and the K-9 handler will write a report outlining the incident. An original case number will be issued and the report forwarded to the K-9 supervisor before the end of shift. The K-9 handler will also make a notation of the incident in the Narcotics Inventory Book with the corresponding case number. The K-9 handler will contact Dispatch to call-out Advance Crime Scene Restoration for a biohazard clean-up if necessary. The substance that can be retained will be packaged and weighed. The K-9 handler or supervisor will return the remaining substances to the Property Room for destruction.

- In the event the retained narcotics remain suitable for K-9 narcotics training, the K-9 supervisor along with a narcotic K-9 handler will repackage the narcotics, utilizing the same procedures as set forth in the previously addressed procedural item under “INVENTORY PROCEDURES.” A log entry shall be made, noting the new weight of the narcotics.

- A K-9 handler will write a memorandum for the K-9 supervisor's review and a copy will be retained in the K-9 narcotics inventory book. A copy of the memorandum will be forwarded, via the chain of command, to the Patrol Division Commander

6. STORAGE OF NARCOTICS

   a. Narcotics will be stored in an airtight container then placed in the locked K-9 safe.

   b. When narcotics are logged out or logged in by the supervisor or a narcotic K-9 handler, they are to be logged in the K-9 Narcotics Log Book under the following procedure:

      - Date taken
      - Time taken
      - Identification number or marking
      - Weight of narcotic and packaging (including container)
      - Signed initials and officer's identification number

7. TRANSPORTATION OF NARCOTICS

   a. Narcotics taken from the K-9 safe are to be placed in an airtight container (each type of narcotic stored separately) and placed in a locked, portable, metal box for transportation. The narcotics are to remain locked in these boxes, unless they are being used in training exercises.

   b. The K-9 supervisor and the narcotic K-9 handlers will retain keys or combinations to the transportation boxes.

   c. Training narcotics shall be returned to the locked K-9 safe and logged in upon completion of the training exercise.

F. Equipment and Supplies

1. Canine handling equipment will be furnished by the Department, but will be the handler's responsibility to monitor and inspect the serviceability of all assigned equipment. Equipment in need of repair or replacement should be immediately reported to the Canine Sergeant.

2. Canine Patrol vehicles will be assigned to handlers. It is the handler's responsibility to assure that the vehicle is in good repair and is cleaned/vacuumed as needed.

3. The Department will provide each new canine handler with a 10'x10' kennel and concrete pad.

4. The Department has contracted with private vendors for veterinary, equipment and food services. All purchases must have the approval of the Canine Sergeant prior to the transaction.

5. Purchases outside the contracted vendors are not authorized unless exigent circumstances exist and must have prior approval from the Canine Sergeant.

III. PROCEDURES

A. Police Service Dog Use

1. Requests

a. Department personnel are encouraged to freely solicit the use of the police service dogs.

b. When bureaus outside of the Patrol Division request to use a police service dog team, the request shall be made to the Canine Sergeant, Assistant Patrol Division Commander or the on-duty O.D.

2. Requests by Outside Agencies

a. The Assistant Patrol Division Commander, Canine Sergeant, or O.D. must approve all requests for police service dog assistance from outside agencies subject to the following provisions:

- Police service dog teams shall not be used outside the Department's jurisdiction to perform any assignment, which is not consistent with this policy.
- Upon arrival at the scene, the handler has the ultimate decision as to whether the police service dog is to be used for the specific assignment.
- Police service dog teams shall not be called out while off- duty or used outside the Office of the Sheriff's jurisdiction unless authorized by the Assistant Patrol Division Commander, Canine Sergeant, or O.D.

3. Considerations for Use of Dual Purpose Canines

a. Prior to the use of a police service dog to search for or apprehend any individual, the police service dog handler and/or the supervisor on scene shall carefully consider all pertinent information reasonably available at the time. The information shall include, but is not limited to the following:

- The individual's age or estimate thereof.
- The nature of the suspected offense.
- Any potential danger to the public and/or other officers at the scene if the police service dog is released.
- The degree of resistance, if any, the suspect has shown.
- The potential for escape or flight if the police service dog is not utilized.
- The potential for injury to officers or the public caused by the suspect if the police service dog is not utilized.

b. The police service dog handler shall have the ultimate authority not to deploy the dog. The handler will evaluate each situation and determine if the use of the police service dog is technically feasible. Generally, the decision to deploy the dog shall remain

with the handler; however, a supervisor sufficiently apprised of the situation may decide to not deploy the dog.

4. Narcotic-Detection Service Dog Use

   a. A narcotic detection trained police service dog may be used in accordance with current law to:

      - Assist in the search for narcotics during a search warrant service.
      - Support probable cause for a search warrant.
      - Search vehicles, buildings, bags and any articles deemed necessary.

   b. A narcotic detection police service dog will not be used to search a person for narcotics.

5. Warning Announcing Use

   a. Unless it would otherwise increase the risk of injury or escape, a clearly audible warning to announce that a police service dog will be released if the person does not come forth, shall be made prior to releasing the police service dog. The police service dog handler, when practical, shall first advise the supervisor of their decision if a verbal warning is not given prior to releasing the police service dog.

6. Guidelines for Use of Dual Purpose Canines

   a. A police service dog may be used to locate and apprehend a suspect if the police service dog handler reasonably believes that the individual has either committed or is about to commit any offense and if the following conditions exist:

      - There is a reasonable belief that the individual poses an immediate threat of violence or serious harm to the public, any officer, or the handler.
      - The individual is physically resisting arrest and the use of the police service dog reasonably appears to be necessary to overcome such resistance.
      - The individual(s) is/are believed to be concealed in an area where entry by other than the police service dog would pose a threat to the safety of officers or the public.
      - It is recognized that situations may arise which do not fall within the provisions set forth in this policy. In any such case, a standard of objective reasonableness shall be used to review the decision to use a police service dog in view of the totality of the circumstances.

   b. Absent the presence of one or more of the above conditions, mere flight from pursuing officer(s) shall not serve as good cause for the use of a police service dog to apprehend and individual.

7. Reporting

   a. Any use of the police canine team that results in damaged property will be reported in a Police Service Dog Use Report and submitted to the Assistant Patrol Division Commander as soon as reasonable.

   b. Use of Police Service Dog with Force

      - Any use of physical force by the police canine team will be documented completely and accurately in a Police Service Dog Use report and crime report.
      - If a bite or injury results from the use of a police service dog, that information shall be documented on a Police Service Dog Use Report. The report should include, at a minimum, the following:
      - In all cases of bites or injuries resulting from the use of a Police Service Dog, photographs shall be taken of the bite or injury after first tending to the immediate needs of the injured party. Photographs shall be downloaded into the report writing system and attached to the report.
      - If the injury requires medical attention, the subject should be transported to an appropriate medical facility. In the event an in-custody suspect requires medical attention, an officer should standby with the suspect until treatment has been rendered.
      - If the subject alleges an injury that is not visible, notification shall be made to a supervisor and the location of the alleged injury shall be photographed.

8. Bite Review

   a. In an attempt to monitor the appropriateness in the use of the canine, as well as identifying training issues, a “Bite Review Board” will review all police service dog engagements.

   b. The board will consist of the Canine Sergeant, Assistant Patrol Division Commander and Department contracted trainer. The finding or recommendation will then be forwarded to the Patrol Division Commander for review.

   c. The board will review the Police Service Dog Use Report. The board will sign off on the report indicating they have reviewed the report, its contents and the actions of the canine team.

   d. By establishing this review, the bite ratio compared to apprehensions can be monitored, thus in effect reducing officer and Department liability.

   e. Whenever a dog engages a subject and a bite review form and police report are initiated, a copy of those shall be forwarded to Risk Management, 2530 Arnold Dr. Suite 140, Martinez.

Contra Costa County **Office of the Sheriff** Patrol and Special Operations Division Policy and Procedure	**PATROL**	**NUMBER: 3.01.72**
	RELATED ORDERS: CCCSO 1.06.51 Vehicle Operations and Parking Procedures CCCSO 1.06.52 Code Three Vehicle Operation CCCSO 1.06.24 SWAT Team Operations	
ISSUE DATE: 7-25-2016 **REVISION DATE:** 09-19-2017	**CLEARANCE:** **Office of the Sheriff**	
CHAPTER: **Specialized Units**	**SUBJECT:** **Armored Vehicle Operations**	

I. POLICY

A. The armored vehicle (BEARCAT) is equipped to function as a ballistic shielded vehicle for the rescue and transport of citizens and law enforcement personnel during a critical incident where increased ballistic protection would asssist in their movement. The armored vehicle is under the control of the Patrol Division – SWAT.

B. This policy is designed to provide a level of auditing and accountablity to ensure the appropriate use of the armored vehicle through proper supervision.

II. GENERAL

A. DEFINITION. "BEARCAT" Ballistic Engineered Armored Response Counter Attack Truck.

B. DESCRIPTION. The BEARCAT is an armored personnel vehicle built on a Ford F-550 chassis that is designed to provide increased ballistic protection for those inside the vehicle. The vehicle is rated to stop up to .50 caliber ammunition, drive on and off road, capable of deploying chemical agents, and breaching. The vehicle has CBRNE capabilities (Chemical, Biological, Radiological, Nuclear, and Explosives) and is equipped with a radiological / chemical detector. The vehicle seats 10-12 people inside and is equipped with outer skids for rapid personnel deployment.

C. OPERATIONS. The SWAT Commander, Assistant SWAT Commander, or designee, will be responsible for the overall control and coordination of the armored vehicle. The Technical Services Division Fleet Maintenance Coordinator will be responsible for estabslishing maintenance schedules and ensuring all repairs are current. Only trained members of the SWAT Tactical and Hostage Negotiations Team will be authorized to drive and operate the armored vehicle. Under exigent circumstances, deputies with prior training and experience with the armored vehicle may be authorized as drivers.

III. PROCEDURES

A. EMERGENCIES AND URGENT EVENTS

1. The armored vehicle may be activated as needed with the approval of the SWAT Commander, Assistant SWAT Commander, or designee. In the event of a SWAT team call-out, the armored vehicle will also be deployed. The Patrol Division Commander will be notified of the deployment of the armored vehicle as soon as practical.

B. INTERNAL REQUESTS FOR BEARCAT

1. Requests will be made to the Patrol Division Commander via the SWAT Commander or Assistant SWAT Commander.

C. OUTSIDE AGENCY REQUESTS FOR BEARCAT

1. Requests will be reviewed by the SWAT Commander, Assistant Commander, or designee and a recommendation will be made to the Patrol Division Commander on whether to approve the request for the armored vehicle.
    a. If the use of the vehicle is approved by the Patrol Division Commander, two SWAT Tactical operators will accompany the armored vehicle to the incident location.
    b. The armored vehicle will be used in a manner which is consistent with Sheriff's Office Policy.
    c. The utilization of the armored vehicle during an outside request response will be at the discretion of CCCSO SWAT tactical operators.

D. SWAT OPERATION USE

1. The armored vehicle will be driven in a safe manner. Drivers will adhere to the Office of the Sheriff's Vehicle Operation and Parking (1.06.51) and Code Three Vehicle Operations (1.06.53) General Policy and Procedure.
2. Sound judgement will be used when utilizing the armored vehicle for pulling, pushing, breaching, blocking, or overcoming any obstruction that will delay or compromise the tactical operation. SWAT Command and/or the driver of the armored vehicle will have final say on the utilization and positioning of the vehicle.
3. Use of the armored vehicle in a vehicle pursuit is strictly prohibited.

E. TRAINING USE

1. The armored vehicle is authorized for all training events for the Sheriff's Office SWAT Team.
2. All requests by outside agencies to use the armored vehicle for training will be reviewed by the SWAT Commander and/or Assistant SWAT

Commander. The Patrol Division Commander will have final approval for the training use of the armored vehicle by outside agencies.

a. If the use of the vehicle is approved by the Patrol Division Commander, a minimum of one tactical operator will accompany the armored vehicle to the training location.

F. OTHER USES

1. Internal or outside requests for the use of the armored vehicle as a static display, public demonstrations, and/or safety events must be reviewed and approved by the Patrol Division Commander.

G. EFFECTIVENESS EVALUATION

1. Use of the armored vehicle will be documented in a report and the effectiveness will be noted.

IV. TRAINING REQUIREMENTS.

A. Operators are required initial and yearly training to demonstrate familiarity with the operation and controls of the armored vehicle.

1. Only those operators with initial and current annual training are authorized to operate the armored vehicle.

V. MAINTENANCE

A. An operator will conduct a safety inspection of the vehicle prior to all deployments and training. Any discrepancies in the inspection will be immediately corrected, or will be forwarded for repair via the Technical Services Division Fleet Maintenance Coordinator. Generally, the operator will check the condition function of the engine, steering, and braking systems. The safety inspection will also include a visual inspection of the following areas:

1. Lights: headlights, tail lights, stop lights, spot lights, and emergency lights.
2. Tire tread and inflation (run flats)
3. Hatch handles
4. Windshield wipers
5. Gun ports and turret
6. Public Announcement (PA) speakers